APOPKA DEVELOPMENT REVIEW COMMITTEE AGENDA

February 28, 2024 9:00 AM

Apopka City Hall Council Chambers

SITE PLAN:

CONSTRUCTION SITE PLAN

1. 529 Johns Road - Construction Site Plan (CSP), 1st Submittal

SUBDIVISION:

CONSTRUCTION SITE PLAN

1. The Ridge Parcel 2 - Revision to Construction Site Plan (CSP Revision), 1st Submittal

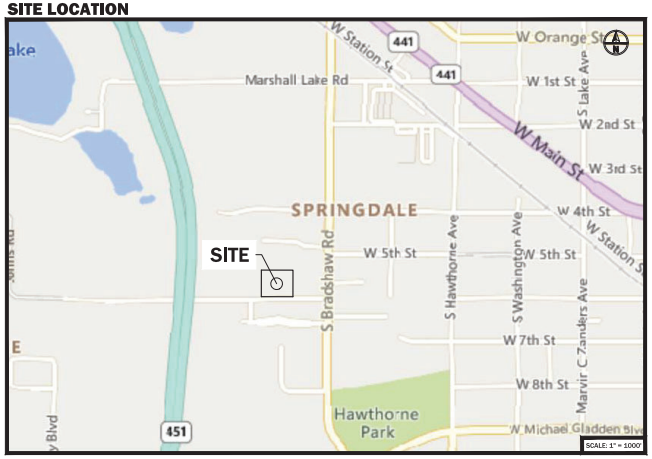
DISCUSSION

ADJOURNMENT

Individuals with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk at least two (2) working days in advance of the meeting date and time at (407) 703-1704. F.S. 286.0105 If a person decides to appeal any decision or recommendation made by Council with respect to any matter considered at this meeting, he will need record of the proceedings, and that for such purposes he may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

Any opening invocation that is offered before the official start of the Council meeting shall be the voluntary offering of a private person, to and for the benefit of the Council. The views or beliefs expressed by the invocation speaker have not been previously reviewed or approved by the City Council or the city staff, and the City is not allowed by law to endorse the religious or non-religious beliefs or views of such speaker. Persons in attendance at the City Council meeting are invited to stand during the opening ceremony. However, such invitation shall not be construed as a demand, order, or any other type of command. No person in attendance at the meeting shall be required to participate in any opening invocation that is offered or to participate in the Pledge of Allegiance. You may remain seated within the City Council Chambers or exit the City Council Chambers and return upon completion of the opening invocation and/or Pledge of Allegiance if you do not wish to participate in or witness the opening invocation and/or the recitation of the Pledge of Allegiance.

SITE LOCATION



AERIAL MAP

LEGAL DESCRIPTION FROM SURVEY PREPARED BY MCMAHON SURVEYING AND MAPPING LLC, DATED 09/24/23:

LOT 3, JOHNS ROAD COMMERCE PARK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 73, PAGE 36, OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.

529 JOHNS ROAD

CITY OF APOPKA, FL

SITE CONSTRUCTION PLANS

PARCEL ID #'S 09-21-28-3986-00-030 & 09-21-28-5233-00-001

PROJECT TEAM:

DEVELOPER / APPLICANT / OWNER

MCNULTY GROUP, INC
2315 LYNX LANE SUITE 6
ORLANDO, FL, 32804
EMAIL: CAM08756@EARTHLINK.NET

CIVIL ENGINEER

RITTER CIVIL, LLC
460 PINEY CROFT LANE
MAITLAND, FL 32751
PHONE: (407) 436 - 7276
EMAIL: GARTH@RITTERCIVIL.COM

SURVEYOR

MCMAHON SURVEYING & MAPPING, LLC
1690 TALL OAKS ROAD
DELAND, FL 32720
PHONE: (407) 399 - 2044
EMAIL: THOMASMCMAHONSURVEYOR@OUTLOOK.COM

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PREPARED BY:
RITTER CIVIL
ENGINEERING ■ PLANNING
460 PINEY CROFT LANE MAITLAND, FL 32751
407-436-7276 ■ WWW.RITTERCIVIL.COM

PREPARED FOR:
MCNULTY GROUP

COVER SHEET
529 JOHNS ROAD

ISSUE DATE: 02/02/2024 - FOR REVIEW

REVISION:
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REVISION:

GARTH R. RITTER
LICENSED
No. 73889
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY GARTH R. RITTER ON THE DATE INDICATED HERE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

CIVIL DISCIPLINE ONLY

DRAWN BY:	GPR
DESIGNED:	GPR
REVIEWED:	GRR
PROJECT NUMBER:	23034

SHEET:
C1.0

RITTER CIVIL, LLC PERFORMS THE COLLECTION OF CONTRACT AND PROCUREMENT RELATED DATA FROM ORIGINAL WORKS AND MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, AS TO THE ACCURACY OF SUCH DATA. RITTER CIVIL, LLC'S WRITTEN CONSENT.

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GENERAL:

1. THE FOLLOWING NOTES CONTAINED IN THE GENERAL NOTES SHEETS APPLY TO ALL WORK DETAILED IN THIS SET OF CONSTRUCTION DRAWINGS. THIS SET OF CONSTRUCTION DRAWINGS, INCLUDING ANY BELOW REFERENCED BOUNDARY AND TOPOGRAPHIC SURVEY(S), GEOTECHNICAL ENGINEERING REPORTS, AND ALL REQUIRED PERMITS ARE HEREBY INCORPORATED AS THE COMPLETE SET OF CIVIL SITE CONSTRUCTION DOCUMENTS, WHICH MAY ALSO BE REFERRED HEREIN AS "CONSTRUCTION DOCUMENTS."

   A. EXISTING TOPOGRAPHIC INFORMATION BASED ON THE FOLLOWING:

SURVEYOR:	MCMAHON SURVEYING AND MAPPING, LLC
DRAWING NUMBER:	JOHN3
DRAWING DATE:	09/24/2023
LATEST REVISION:	09/24/2023

   B. PROJECT BOUNDARY BASED ON THE FOLLOWING:

SURVEYOR:	MCMAHON SURVEYING AND MAPPING, LLC
DRAWING NUMBER:	JOHN3
DRAWING DATE:	09/24/2023
LATEST REVISION:	09/24/2023

2. GEOTECHNICAL SERVICES: GEOTECHNICAL DETAILS AND SPECIFICATIONS IF SHOWN IN THESE PLANS ARE PROVIDED FOR REFERENCE ONLY. GEOTECHNICAL RECOMMENDATIONS ARE NOT THE RESPONSIBILITY OF RITTER CIVIL, LLC. RITTER CIVIL HAS RELIED ON THE GEOTECHNICAL REPORT REFERENCED ABOVE IN PREPARATION OF THESE PLANS. ANY CONFLICT BETWEEN INFORMATION SHOWN WITHIN THE GEOTECHNICAL REPORT AND THES DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND OWNER IMMEDIATELY UPON DISCOVERY. RITTER CIVIL, LLC IS NOT RESPONSIBLE FOR THE COMPLETENESS, CORRECTNESS, OR ACCURACY OF THE GEOTECHNICAL INFORMATION.

3. VERTICAL DATUM: ELEVATIONS SHOWN WITHIN THESE PLANS ARE RELATIVE TO NGVD29 DATUM BASED ON BENCHMARKS SHOWN ON THE TOPOGRAPHIC SURVEY REFERENCED ABOVE. REFER TO TOPOGRAPHIC SURVEY FOR REFERENCED BENCHMARK DETAILS.

4. UNLESS OTHERWISE SPECIFIED, ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT PUBLICATION OF THE FOLLOWING CODES, STANDARDS, AND SPECIFICATIONS IN ADDITION TO THE LATEST EDITIONS OF ALL OTHER APPLICABLE STANDARDS AND SPECIFICATIONS: LOCAL CITY OR COUNTY, WATER MANAGEMENT DISTRICT, FLORIDA BUILDING CODE, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP), FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, AMERICANS WITH DISABILITIES ACT (ADA) BY U.S. DEPARTMENT OF JUSTICE, "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA), RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, AND FAIR HOUSING ACT BY U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD).

5. ALL CONSTRUCTION ACTIVITY SHALL BE GOVERNED BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, BUILDING AND SAFETY CODES, AND REQUIRED PERMIT CONDITIONS.

6. ALL STANDARDS AND SPECIFICATIONS SHALL BE OF THE LATEST REVISION. IN THE EVENT THAT ANY STANDARDS OR SPECIFCATIONS AS DESCRIBED HEREIN ARE IN CONFLICT WITH EACH OTHER, OR SHOWN IN CONFLICT ON THE PLANS, THE MORE STRINGENT CRITERIA SHALL USUALLY APPLY. CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD OF SUCH CONFLICT IN WRITING IMMEDIATELY. SHOULD THE MORE STRINGENT CRITERIA BE UNCLEAR, THE CONTRACTOR SHALL REQUEST IN WRITING THE ENGINEER'S INTERPRETATION OF THE MORE STRINGENT CRITERIA TO BE USED.

7. CONTRACTOR SHALL REVIEW ALL PLANS WITHIN THE CIVIL SITE WORK SCOPE IN THEIR ENTIRETY. ANY ERRORS, OMISSIONS, OR DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS, THE CONSTRUCTION PLANS, OR APPLICABLE SPECIFICATIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO DEVIATIONS OR FIELD CHANGES FROM THE CONSTRUCTION DRAWINGS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND ENGINEER.

8. IF ANY ITEMS APPEARING TO BE HISTORICAL OR ARCHEOLOGICAL ARTIFACTS ARE DISCOVERED DURING CONSTRUCTION ACTIVITY WITHIN THE PROJECT LIMITS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE ENGINEER, AND THE BUREAU OF HISTORICAL PRESERVATION, DIVISION OF HISTORICAL RESOURCES R.A. GRAY BUILDING, 500 S. BRONOUGH ST. TALLAHASSEE, FLORIDA, 32399-0250.

9. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY, INCLUDING THOSE WHERE NO SPECIFIC IMPROVEMENTS ARE SHOWN, SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION, WITH BAHIA SOD AT A MINIMUM, UNLESS OTHERWISE SPECIFIED.

CONTRACTOR RESPONSIBILITIES:

1. EXISTING CONDITIONS:

A. THE CONTRACTOR SHALL CONDUCT A SITE INVESTIGATION TO THOROUGHLY ANALYZE THE SITE, INCLUDING ALL SURFACE AND SUBSURFACE CONDITIONS, THE WORK DETAILED IN THE CONSTRUCTION DOCUMENTS, AND ALL OTHER CONDITIONS THAT MAY AFFECT THE DESIGN OR SUCCESSFUL COMPLETION OF THE PROJECT PRIOR TO COMMENCEMENT OF WORK.

B. THE LOCATION OF EXISTING UTILITIES, FACILITIES, STRUCTURES, AND OTHER FEATURES SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE BEST INFORMATION AVAILABLE AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF THE LOCATION INFORMATION PROVIDED. ANY INACCURACY OR OMISSION IN SUCH INFORMATION SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROTECT EXISTING FEATURES FROM DAMAGE OR UNSCHEDULED INTERRUPTION OF SERVICE. IF DISCREPANCIES ARISE BETWEEN ACTUAL FIELD CONDITIONS AND THE PLANS THAT WOULD RESULT IN A NECESSARY CHANGE TO THE CONSTRUCTION DESIGN, THE CONTRACTOR SHALL STOP ALL CONSTRUCTION IN THE AFFECTED AREA AND NOTIFY THE OWNER & ENGINEER IMMEDIATELY. FAILURE TO NOTIFY THE OWNER & ENGINEER, AND CONTINUING CONSTRUCTION SHALL MAKE THE CONTRACTOR LIABLE FOR ALL SUBSEQUENT ERRORS AND NECESSARY CORRECTIONS.

C. THE CONTRACTOR SHALL PROTECT ALL PROPERTIES SURROUNDING THE JOB SITE FROM DAMAGE DUE TO CONSTRUCTION RELATED ACTIVITY OR SEDIMENTATION.

D. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUNENTATION AND TAKE ALL REASONABLE PRECAUTIONS NECESSARY TO AVOID DAMAGE TO ITEMS INCLUDING, BUT NOT LIMITED TO: PERMANENT REFERENCE MONUMENTS, PERMANENT CONTROL POINTS, PERMANENT BENCHMARKS, PROPERTY CORNERS, POINTS OR MARKERS. ANY DAMAGE OR DISTURBANCE TO EXISTING SURVEY MONUMENTATION DURING CONSTRUCTION SHALL BE RESTORED BY A FLORIDA LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.

2. PERMITS:

A. THE CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED, WITH HARD COPIES AVAILABLE AT THE JOB SITE PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL ABIDE BY ALL REQUIRED PERMIT CONDITIONS. PERMITS INCLUDED (BUT NOT LIMITED TO) ARE:

- WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMIT (E.R.P.) OR M.S.S.W.
- WATER MANAGEMENT DISTRICT CONSUMPTIVE USE (WATER USE) FOR CONSTRUCTION DEWATERING (C.U.P.)
- A.C.O.E. NATIONWIDE OR INDIVIDUAL DREDGE AND FILL
- FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION TORTOISE INCIDENTAL TAKE OR RELOCATION
- F.D.E.P. WATER DISTRIBUTION
- F.D.E.P. SANITARY SEWER COLLECTION AND TRANSMISSION
- LOCAL/STATE RIGHT OF WAY USE
- LOCAL/STATE UNDERGROUND UTILITIES
- F.D.E.P. N.P.D.E.S. STORMWATER

B. THE CONTRACTOR SHALL REVIEW ALL PERMITS PRIOR TO CONSTRUCTION FOR ANY CHANGES TO THE DESIGN INCLUDED THEREIN. CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF ANY REQUIRED CHANGES PRIOR TO COMMENCING CONSTRUCTION.

3. PRE-CONSTRUCTION:

A. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES, TAKE-OFF MEASUREMENTS, NEEDED MATERIALS AND NECESSARY REMOVAL & REPAIR OF IMPROVEMENTS AT POINTS OF CONNECTION TO EXISTING INFRASTRUCTURE DURING THE BID PROCESS. ALL NECESSARY WORK TO COMPLETE THE PROJECT SHALL BE INCLUDED ON THE CONTRACTOR'S BID. ANY EXCLUSIONS FROM THE BID SHALL BE CLEARLY ITEMIZED AND DESCRIBED ON THE BID.

B. UPON NOTICE OF AWARD, THE CONTRACTOR SHALL ARRANGE AND ATTEND A REQUIRED PRE-CONSTRUCTION MEETING WITH THE AUTHORITY HAVING JURISDICTION'S STAFF, OWNER, ENGINEER OF RECORD, AND ANY OTHER APPLICABLE PARTIES.

C. THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER A CONSTRUCTION SCHEDULE FOR ALL INCLUDED SITE WORK ELEMENTS TO FACILITATE COORDINATION OF PERIODIC SITE VISITS TO ENSURE TIMELY ISSUANCE OF CERTIFICATION OF COMPLETION OR CERTIFICATION OF OCCUPANCY.

4. LABOR & MATERIALS:

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIALS AND LABOR TO CONSTRUCT THE PROJECT AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DRAWINGS IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCIES, SPECIFICATIONS, AND REQUIREMENTS.

B. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE APPROPRIATE GOVERNING AGENCIES AND ENGINEER FOR REVIEW PRIOR TO MATERIAL PROCUREMENT AND DELIVERY TO JOB SITE. CONTRACTOR SHALL CONFIRM COMPATIBILITY OF MATERIALS, PIPE SLOPES AND INVERTS AND ADVISE ENGINEER OF ANY DISCREPANCIES.

C. NO EXISTING MATERIALS SHALL BE USED IN NEW CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE ENGINEER. EXISTING ITEMS CALLED OUT TO BE RELOCATED IN THE PLANS SHALL BE EVALUATED IN THE FIELD BY THE CONTRACTOR TO DETERMINE IF RELOCATION IS FEASIBLE OR IF A SUITABLE REPLACEMENT IS REQUIRED.

D. ALL WORK SHALL BE COMPLETED IN REASONABLE CONFORMANCE WITH THE LINES, GRADES, CROSS SECTIONS, AND DIMENSIONS SPECIFIED IN THE CONSTRUCTION DOCUMENTS. ALL PROVIDED MATERIALS AND THEIR INSTALLATION SHALL MEET THE MOST STRINGENT SPECIFICATIONS AND TESTING REQUIREMENTS OF THE APPROPRIATE GOVERNING AGENCY, FDOT, FDEP, UTILITY PROVIDER, GEOTECHNICAL REPORT, AND/OR OWNER REQUIREMENTS.

E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACTIONS OR INACTIONS OF THE CONTRACTOR'S EMPLOYEES, SUBCONTRACTORS, AGENTS OR ANY OTHER PERSONS OR ENTITY PERFORMING WORK ON BEHALF OF THE CONTRACTOR.

F. ANY HAULING OR MOVEMENT OF MATERIALS OR EQUIPMENT TO AND FROM THE JOB SITE SHALL COMPLY WITH ALL LEGAL LOAD RESTRICTIONS ON PUBLIC ROADS. THE CONTRACTOR SHALL BE HELD LIABLE FOR ANY DAMAGE THAT MAY OCCUR FROM HAULING OR MOVING MATERIALS & EQUIPMENT.

G. THE CONTRACTOR SHALL ARRANGE FOR DAILY REMOVAL OF TRASH AND DEBRIS FROM THE SITE OR AT MORE FREQUENT INTERVALS AS NEEDED TO REDUCE ACCUMULATION OF POTENTIAL FIRE & SAFETY HAZARDS OR ENVIRONMENTAL CONCERNS. TRASH AND DEBRIS SHALL BE PLACED IN SEALED CONTAINERS, COVERED OR TIED DOWN AS NECESSARY TO PREVENT LEAVING THE CONSTRUCTION SITE BY WIND, STORMWATER DISCHARGE, OR OTHER MEANS. ALL TRASH AND DEBRIS SHALL BE DISPOSED OF BY THE CONTRACTOR IN A LEGAL MANNER.

5. CONSTRUCTION LAYOUT:

A. THE CONTRACTOR SHALL HAVE THE DESIGN/PLATTING SURVEYOR SET AND/OR VERIFY PROPERTY CORNER AND BENCHMARK LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.

B. ANY SUPPLEMENTAL DIGITAL FILES, INCLUDING BUT NOT LIMITED TO COMPUTER AIDED DRAFTING (CAD) FILES, DESIGN FILES, OR SIMILAR FILES ARE PROVIDED AT THE DISCRETION OF RITTER CIVIL, LLC FOR INFORMATIONAL PURPOSES ONLY. RITTER CIVIL, LLC BEARS NO RESPONSIBILITY FOR THE COMPATIBILITY OF SUPPLEMENTAL DIGITAL FILES WITH THE RECIPIENT'S SOFTWARE OR SYSTEM. THE CONTRACTOR SHALL LAYOUT PROPOSED IMPROVEMENTS BASED ON THE SITE BOUNDARY PROVIDED BY SURVEYOR AND THE DIMENSIONS, NOTES AND OTHER APPLICABLE INFORMATION CONTAINED IN THE SIGNED AND SEALED CONSTRUCTION PLANS.

C. THE CONTRACTOR SHALL COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS SHOWN ON THE CONSTRUCTION PLANS TO ENSURE ADEQUATE HORIZONTAL AND VERTICAL POSITIONING PRIOR TO INSTALLING ANY IMPROVEMENT.

D. ANY BUILDING FOOTPRINT SHOWN IS PROVIDED FOR CONVENIENCE ONLY. CONTRACTOR TO VERIFY BUILDING GEOMETRY WITH ARCHITECT AND/OR BUILDING CONTRACTOR PRIOR TO STAKING ANY BUILDING CORNERS PER THIS PLAN. THE CONTRACTOR SHALL VERIFY BUILDING LAYOUT MEETS ALL MINIMUM REQUIRED BUILDING SETBACKS.

6. NOTIFICATIONS & UTILITY COORDINATION:

A. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE APPROPRIATE GOVERNMENTAL AGENCIES, UTILITY SERVICE PROVIDERS, AND CORPORATIONS OWNING OR CONTROLLING ANY ROADWAY, UTILITY, OR STORMWATER INFRASTRUCTURE AND FACILITIES IN CLOSE PROXIMITY TO THE WORK AREA OR OTHERWISE AFFECTED BY CONSTRUCTION ACTIVITIES AT A MINIMUM OF 3 WORKING DAYS UNLESS OTHERWISE REQUIRED BY SUCH ENTITY. CONTRACTOR TO COORDINATE WITH APPROPRIATE ENTITIES TO PROPERLY LOCATE, SUPPORT, AND PROTECT SUCH FACILITIES FROM ANY UNAUTHORIZED DISTURBANCE, INTERRUPTION OF SERVICE, OR DAMAGE. CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE CALL OF FLORIDA, INC. (800-432-4770) PRIOR TO PLANNED EXCAVATION OR DEMOLITION ACTIVITIES.

7. JOB SITE SAFETY & SECURITY:

A. THE CONTRACTOR SHALL ADHERE TO ALL REASONABLE & COMMONLY ACCEPTED SAFETY PRACTICES AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, ORDINANCES AND GUIDELINES GOVERNING JOB SAFETY, HEALTH, SAFE USE OF EQUIPMENT AND MATERIAL HANDLING AS PUBLISHED BY THE RESPECTIVE MANUFACTURERS. SUCH REGULATIONS SHALL INCLUDE BUT ARE NOT LIMITED TO: OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, STANDARDS 29 C.F.R., 1926, SUBPART P, EXCAVATION, AND ALL SUBSEQUENT REVISIONS OR UPDATES AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY, AND WITH SECTION 553.62, FLORIDA STATUTES.

B. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, LIGHTS, WARNING SIGNS, AND PAVEMENT MARKINGS FOR HAZARDS AND TRAFFIC CONTROL THROUGH WORK ZONES IN ACCORDANCE WITH FDOT, LOCAL CITY OR COUNTY OR OTHER AGENCIES HAVING JURISDICTION IN ORDER TO PREVENT ACCIDENT OR INJURY AT ALL LOCATIONS WHERE CONSTRUCTION ACTIVITY CREATES ANY FORM OF HAZARD TO THE PUBLIC OR INTERRUPTS NORMAL TRAFFIC FLOW. WHEN REQUIRED, A MAINTENANCE OF TRAFFIC PLAN SHALL BE PREPARED BY AN FDOT CERTIFIED DESIGNER RETAINED BY THE CONTRACTOR AND SUBMITTED BY THE CONTRACTOR TO THE OWNER/ENGINEER AND AUTHORITY HAVING JURISDICTION FOR APPROVAL.

C. WHEN COMBUSTIBLE MATERIALS ARE BROUGHT ON SITE, ACCESS ROADS AND A TEMPORARY OR PERMANENT SUPPLY OF WATER SHALL BE PROVIDED AND MAINTAINED AS REQUIRED BY THE GOVERNING FIRE DEPARTMENT.

D. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SECURITY AND SHALL TAKE EVERY PRECAUTION NECESSARY TO ENSURE THE COMPLETED WORK, EQUIPMENT, AND MATERIALS ARE SECURED & STORED ON-SITE IN SUCH A MANNER TO PREVENT UNAUTHORIZED ACCESS, USE, OR THEFT. SIGNAGE, FENCING AND ANY OTHER APPLICABLE SECURITY MEASURES WILL BE PROVIDED AT CONTRACTOR'S EXPENSE.

E. ANY WORK IN PLACE SUBJECT TO DAMAGE DUE TO ONGOING CONSTRUCTION ACTIVITY SHALL BE COVERED, BOARDED UP OR OTHERWISE SUFFICIENTLY PROTECTED BY THE CONTRACTOR AT THEIR EXPENSE.

8. INSPECTIONS & TESTING:

A. THE OWNER, OWNER'S REPRESENTATIVES, ENGINEER, & INSPECTORS OF APPLICABLE PERMITTING AGENCIES SHALL HAVE ACCESS TO THE JOB SITE AT ALL TIMES TO MONITOR WORK COMPLETED OR WORK IN PROGRESS.

B. THE CONTRACTOR SHALL RETAIN A QUALIFIED GEOTECHNICAL ENGINEER FOR INSPECTIONS, TESTING, REPORTS, AND CERTIFICATIONS.

C. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL TESTING AS REQUIRED BY CITY / AND OR COUNTY, FDOT, UTILITY PROVIDER, FDEP, GEOTECHNICAL ENGINEER, AND AS REQUIRED BY THE OWNER / ENGINEER. TEST RESULTS SHALL BE SUPPLIED BY THE CONTRACTOR IN A TIMELY MANNER TO THE OWNER / ENGINEER FOR REVIEW, ACCEPTANCE AND CERTIFICATIONS.

D. THE CONTRACTOR SHALL PROVIDE THE ENGINEER A MINIMUM NOTICE OF TWO BUSINESS DAYS FOR THE FOLLOWING CONSTRUCTION AND OBSERVATION ACTIVITIES:

- SANITARY SEWER VIDEO INSPECTION
- CONNECTION TO EXISTING STORMWATER OR UTILITY SYSTEMS
- STORM AND SANITARY LAMPING
- INLET TOP POURS
- WATER, RECLAIM, AND FORCE MAIN PRESSURE TESTS
- BACTERIOLOGICAL SAMPLING
- BASE INSPECTION
- PLACEMENT OF ASPHALT LIFTS
- PRE-FINAL SITE INSPECTIONS
- FINAL SITE INSPECTIONS

E. IF ANY INSPECTIONS OR TEST RESULTS REVEAL DEFECTIVE WORK, THE CONTRACTOR SHALL NOT BE ELIGIBLE FOR ANY PAYMENT ASSOCIATED WITH THE DEFECTIVE WORK UNTIL IT MEETS THE REQUIRED SPECIFICATIONS AND STANDARDS INDICATED IN THE PLANS. THE CONTRACTOR SHALL COVER ALL REINSTALLATION, ADDITIONAL TESTING AND ASSOCIATED COSTS AS A RESULT OF REMEDYING THE DEFECTIVE WORK.

F. ALL WORK RESULTING FROM REQUIREMENTS OR RECOMMENDATIONS FROM INSPECTION PERSONNEL MUST BE REPORTED TO THE OWNER / ENGINEER FOR REVIEW AND AUTHORIZATION PRIOR TO COMMENCEMENT. NO COMPENSATION WILL BE GRANTED TO THE CONTRACTOR FOR ADDITIONAL WORK THAT WAS NOT APPROVED BY THE OWNER / ENGINEER.

SEDIMENTATION AND EROSION CONTROL:

1. REFER TO SEDIMENTATION AND EROSION CONTROL PLAN SHEET FOR SEDIMENTATION AND EROSION CONTROL NOTES AND DETAILS.

DEMOLITION AND CLEARING:

1. THE CONTRACTOR SHALL CLEARLY DELINEATE THE LIMITS OF CONSTRUCTION ON SITE PRIOR TO CONSTRUCTION. ALL WORK SHALL REMAIN WITHIN THE LIMITS OF CONSTRUCTION.
2. ALL EXISTING STRUCTURES, SLABS, FENCING, ASPHALT, SIGNS, OR OTHER EXISTING IMPROVEMENTS OR DEBRIS PILES WITHIN THE PROJECT LIMITS ARE TO BE REMOVED BY THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE PLANS. SOME ITEMS REQUIRING REMOVAL MAY NOT BE SHOWN ON THE PLANS OR SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE EXISTING CONDITIONS OF THE SITE AND PROPOSED IMPROVEMENTS TO DETERMINE THE EXTENT OF ITEMS TO BE REMOVED. THE CONTRACTOR SHALL CONTACT THE OWNER PRIOR TO REMOVAL IF THERE IS ANY QUESTION AS TO WHETHER OR NOT AN ITEM SHOULD BE REMOVED. CONTRACTOR SHALL REMOVE ALL NON-REUSABLE WASTE MATERIAL, AT THE OWNERS DIRECTION, FOR DISPOSAL OFF-SITE. DISPOSAL SHALL CONFORM TO ALL APPLICABLE REGULATIONS.
3. THE CONTRACTOR SHALL APPLY FOR AND OBTAIN ALL NECESSARY PERMITS FOR DEMOLITION, AND COMPLY WITH THE REQUIREMENTS OF SUCH PERMITS IN THEIR ENTIRETY.
4. ANY SIDEWALKS OR CURBING DISTURBED BY THE WORK SHALL BE RESTORED TO THE CONDITION OF THE ORIGINAL STRUCTURE. SIDEWALK PANELS SHALL BE RESTORED TO FULL PANEL WIDTHS AND LENGTHS (DEFINED BY EDGES OF SIDEWALK AND THE NEAREST CONTROL JOINTS OR EXPANSION JOINTS). PARTIAL PATCHING OF SIDEWALKS SHALL NOT BE ACCEPTABLE. PAVEMENT FINISHES, THICKNESSES AND GRADES SHALL MATCH THE EXISTING SIDEWALK.
5. THE CONTRACTOR SHALL COMPLY WITH ALL TREE PROTECTION REQUIREMENTS BY THE AGENCY HAVING JURISDICTION. THE CONTRACTOR SHALL USE EXTRA CARE WHEN WORKING NEAR EXISTING TREES DESIGNATED TO BE SAVED ON THE PLANS OR OTHERWISE NOTED IN THE FIELD. ALL PRACTICAL AND REASONABLE MEASURES SHALL BE TAKEN TO AVOID UNNECESSARY TREE REMOVAL.
6. TREE PROTECTION FENCING SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL PERMITTING AGENCY REQUIREMENTS.
7. ANY EXISTING TREE DESIGNATED TO REMAIN THAT IS DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. REPLACEMENT TREE TO MEET LOCAL PERMITTING AGENCY REQUIREMENTS.
8. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD STAKE AND ROPE OFF ALL CONSERVATION AREA BOUNDARIES.
9. THE CONTRACTOR SHALL STRIP OR OTHERWISE REMOVE ALL EXISTING VEGETATION, RUBBISH OR DELETERIOUS MATERIAL IN AREAS REQUIRING FILL MATERIAL.

PAVING, GRADING AND DRAINAGE NOTES:

1. GENERAL

A. ALL EARTHWORK FILL, STORMWATER SYSTEM, AND PAVEMENT MATERIALS AND THEIR INSTALLATION / PLACEMENT SHALL MEET THE MOST STRINGENT REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LOCAL PERMITTING AGENCIES, OR GEOTECHNICAL RECOMMENDATIONS. IN THE EVENT OF A CONFLICT BETWEEN REQUIREMENTS, CONTRACTOR TO REQUEST CLARIFICATION FROM THE ENGINEER IN WRITING.

B. ALL EXISTING TOPOGRAPHY, VERTICAL CONTROL AND BOUNDARY INFORMATION IS SHOWN AS PROVIDED BY SURVEYOR. CONTRACTOR TO VERIFY ALL EXISTING GRADES PRIOR TO BEGINNING WORK & NOTIFY ENGINEER IMMEDIATELY SHOULD ANY DISCREPANCIES OCCUR BETWEEN THE TOPOGRAPHIC SURVEY AND FIELD CONDITIONS.

C. INFORMATION PROVIDED IN THE GEOTECHNICAL REPORT AND GEOTECHNICAL ENGINEER'S RECOMMENDATIONS WERE RELIED UPON DURING PREPARATION OF THESE CONSTRUCTION DRAWINGS. RITTER CIVIL, LLC ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THE GEOTECHNICAL REPORT OR OTHER INFORMATION PROVIDED BY THE GEOTECHNICAL ENGINEER.

D. FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL RESTORE AND REGRADE ANY WASHOUTS THAT MAY OCCUR UNTIL ADEQUATE STABILIZATION IS ACHIEVED.

2. GEOTECHNICAL TESTING & INSPECTIONS:

A. THE CONTRACTOR/OWNER SHALL RETAIN A QUALIFIED FLORIDA-REGISTERED GEOTECHNICAL ENGINEER AND TESTING COMPANY FOR INSPECTION, TESTING, LAB REPORTS, AND CERTIFICATIONS.

B. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL TESTING REQUIRED BY THE LOCAL CITY OR COUNTY, FDOT, GEOTECHNICAL ENGINEER OR OWNER.

C. ALL EARTHWORK ACTIVITIES SHALL BE INSPECTED AND TESTED BY THE GEOTECHNICAL ENGINEER OR AGENT UNDER THE GEOTECHNICAL ENGINEER'S RESPONSIBLE CHARGE. THE GEOTECHNICAL ENGINEER SHALL INSPECT AND TEST THE EXCAVATION, PLACEMENT, AND COMPACTION OF FILL AREAS, AND THE BACKFILL AND COMPACTION OF ANY STORM/UTILITY TRENCHES.

D. ALL TESTING AND LAB REPORTS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE OWNER / ENGINEER AS THEY ARE GENERATED.

E. THE CONTRACTOR'S GEOTECHNICAL ENGINEER SHALL MONITOR ONGOING CONSTRUCTION CONDITIONS AND PROVIDE RECOMMENDATIONS TO THE OWNER / ENGINEER FOR ROADWAY UNDERDRAINS OR ADDITIONAL ROADWAY UNDERDRAINS AS NECESSARY.

F. THE CONTRACTOR'S GEOTECHNICAL ENGINEER SHALL PROVIDE THE FOLLOWING CERTIFICATIONS TO OWNER / ENGINEER:

- OBSERVATIONS AND TESTS WERE CONDUCTED BY THE GEOTECNICAL ENGINEER OR AGENT UNDER THEIR SUPERVISION, AND IN THE GEOTECHNICAL ENGINEER'S OPINION, ALL EXCAVATIONS AND EMBANKMENTS WERE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE GEOTECHNICAL REPORT AND THAT ALL EXCAVATIONS AND EMBANKMENTS ARE SUITABLE FOR THEIR INTENDED USE.
- POND BERMS HAVE BEEN CONSTRUCTED BASED ON THE RECCOMMENDATIONS OF THE DESIGN GEOTECHNICAL ENGINEER AND CIVIL ENGINEERING PLANS AND SPECIFICATIONS.

G. ANY ROADWAY IMPROVEMENTS THAT HAVE NOT BEEN TESTED BY A FLORIDA-REGISTERED GEOTECHNICAL ENGINEER AND REPORTED TO CONFORM TO THE PROJECT'S SPECIFICATIONS IS SUBJECT TO WITHHOLDING AUTHORIZATION OF PAYMENT UNTIL SATISFACTORY TEST RESULTS ARE PROVIDED.

3. EARTHWORK

A. IF PROVIDED, EARTHWORK QUANTITIES DETERMINED BY RITTER CIVIL, LLC ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL CONFIRM REQUIRED EARTHWORK QUANTITIES WITH INDEPENDENT ANALYSIS, FIELD VERIFICATION AND CALCULATIONS AS NECESSARY DURING THE BID PROCESS. ALL REQUIRED EARTHWORK, INCLUDING ANY IMPORTED OR EXPORTED FILL MATERIAL SHALL BE INCLUDED IN THE CONTRACTOR'S BID. UNLESS OTHERWISE SPECIFIED BY THE OWNER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL IMPORT OR EXPORTED FILL MATERIAL REQUIRED BUT NOT INCLUDED ON THE INITIAL BID.

B. ALL AREAS REQUIRING FILL SHALL BE PREPARED IN ACCORDANCE WITH GEOTECHNICAL REPORT'S SPECIFICATIONS.THE CONTRACTOR SHALL REMOVE ANY MUCK, VEGETATIVE OR DELETERIOUS MATERIAL FROM THE SURFACE OF THE AREA REQUIRING PLACEMENT OF FILL. LOOSE FILL AND ALLUVIAL SOILS SHALL BE REMOVED TO SUITABLE, FIRM NATURAL GROUND.

C. ALL FILL MATERIALS SHALL BE FREE OF UNSUITABLE MATERIALS INCLUDING BUT NOT LIMITED TO MUCK, STUMPS, ROOTS, BRUSH OR VEGETATIVE MATTER.

D. ALL EXCESS FILL MATERIAL SHALL BE HAULED OFF-SITE UNLESS OTHERWISE SHOWN IN THE PLANS TO BE STOCKPILED ON-SITE.

4. GRADING

A. THE CONTRACTOR SHALL GRADE THE SITE TO PROVIDE POSITIVE DRAINAGE IN ALL AREAS, AND AVOID DAMAGE TO ADJOINING PROPERTIES OR WORK RELATED TO CONSTRUCTION ACTIVITY BY THE CONTROL OF SURFACE WATER. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN THE SPOT GRADES, CONTOURS, AND FLOW LINES DEPICTED ON THE CONSTRUCTION PLANS.

B. ALL CUT OR FILL SLOPES SHALL BE MAXIMUM 4:1 (HORIZONTAL:VERTICAL) UNLESS OTHERWISE SHOWN ON THE PLANS.

C. ALL ELEVATIONS PROVIDED IN GRASSED AREAS ARE SET AT TOP OF SOD OR SEEDED SURFACE.

D. ALL ELEVATIONS PROVIDED IN PAVED AREAS ARE SET AT EDGE OF PAVEMENT UNLESS OTHERWISE NOTED ON THE PLANS.

E. GRADING OF ROADWAY CORRIDORS SHALL INCLUDE ANY ADJACENT UTILITY, DRAINAGE, OR ACCESS EASEMENTS WITHIN FUTURE LOTS. SAID EASEMENTS SHALL BE GRADED TO WITHIN 6 INCHES OF FINAL DESIGN GRADE.

5. DEWATERING

A. THE CONTRACTOR SHALL INCLUDE DEWATERING AS REQUIRED BY THE MORE STRINGENT OF THE GEOTECHNICAL RECOMMENDATIONS OR LOCAL AUTHORITY HAVING JURISDICTION.

B. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR DEWATERING, ADHERE TO SAID PERMIT CONDITIONS AND ALL LOCAL CITY, COUNTY, FDEP, FDOT, WATER MANAGEMENT DISTRICT, OR OTHER ENVIRONMENTAL REGULATIONS.

C. THE CONTRACTOR SHALL COORDINATE DEWATERING WITH OTHER SITE ACTIVITIES.

D. ALL DEWATERING EFFLUENT SHALL BE RETAINED ON SITE, WITHIN TEMPORARY HOLDING CELLS CONSTRUCTED BY THE CONTRACTOR. UNDER NO CIRCUMSTANCE SHALL DEWATERING EFFLUENT BE DISCHARGED TO PROPOSED DRY RETENTION AREAS PLANNED FOR PERMANENT OPERATION WITHOUT ENGINEER'S WRITTEN APPROVAL.

E. IF THE CONTRACTOR PROPOSES TO DISCHARGE DEWATERING EFFLUENT OFF-SITE, HE SHALL DO SO IN ACCORDANCE WITH "FDEP'S "GENERIC PERMIT FOR DISCHARGE OF PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED SITE ACTIVITY". PERMIT REQUIREMENTS CAN BE OBTAINED FROM FDEP AT (407)-894-7555 EXT 3985. THIS PERMIT IS INDEPENDENT OF AND IN ADDITION TO THE WATER MANAGEMENT DISTRICT'S PERMITS FOR CONSTRUCTION DEWATERING.

6. WALLS

A. THE CONTRACTOR / OWNER SHALL RETAIN A QUALIFIED STRUCTURAL ENGINEER FOR STRUCTURAL DESIGN OF ANY RETAINING WALLS OR SCREEN WALLS. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW & ACCEPTANCE. ALL NECESSARY PERMITS FOR WALL CONSTRUCTION SHALL BE APPLIED FOR AND OBTAINED BY THE CONTRACTOR.

7. STORMWATER MANAGEMENT SYSTEM

A. ALL DRAINAGE STRUCTURES, WITH THE EXCEPTION OF CONTROL STRUCTURES, ARE IDENTIFIED BY THE TYPE OF STRUCTURE TOP ONLY. CONTRACTOR SHALL PROVIDE FDOT STANDARD DITCH BOTTOM INLETS, J OR P STRUCTURE BOTTOMS AS NECESSARY TO MEET PIPE SIZE AND ORIENTATION DEPICTED ON THE CONSTRUCTION DRAWINGS. ALL STRUCTURE BOTTOMS UTILIZED SHALL BE CLEARLY DETAILED ON THE SHOP DRAWINGS.

B. THE CONTRACTOR SHALL ENSURE THAT ALL INLETS IN PAVEMENT AREAS ARE ALIGNED WITH PAVEMENT FLOW LINES AS APPLICABLE. ANY PONDING AROUND INLETS WILL NOT BE ACCEPTED.

C. STORMWATER PIPE LENGTHS CALLED OUT ON THE PLANS ARE MEASURED FROM THE CENTERLINES OF CONNECTED DRAINAGE STRUCTURES AND TO THE INVERTS OF END SECTIONS OR ENDWALLS. CONTRACTOR SHALL ADJUST PIPE LENGTHS ACCORDINGLY DURING THE BID PROCESS.

D. ALL STORMWATER PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC IN ACCORDANCE WITH FDOT SPECIFICATIONS.

E. ONLY RIGID PIPE MATERIAL SHALL BE USED BENEATH PUBLICLY MAINTAINED ROADWAYS UNLESS OTHERWISE APPROVED BY THE AUTHORITY HAVING JURISDICTION.

F. ANY NEW STORMWATER PIPE CONNECTIONS TO EXISTING PIPES SHALL BE AT AN EXISTING FACTORY-MADE JOINT. PARTIAL PIPES TO BE REMOVED AS NECESSARY.

G. ALL ENDWALLS, MITERED END SECTIONS, FLARED END SECTIONS OR SIMILAR DRAINAGE STRUCTURES SHALL BE STABILIZED AND PROTECTED FROM EROSION UNTIL THE BANK SLOPES OF THE RECEIVING WATER BODY HAVE BEEN ADEQUATELY STABILIZED AND ACCEPTED FOR MAINTENANCE.

H. THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES AND FILTER SOCKS FOR CURB INLETS FOR THE DURATION OF THE PROJECT. ALL STORMWATER DRAINAGE SYSTEM STRUCTURES AND PIPES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE CLEANED OF SEDIMENT AND DEBRIS AS FREQUENTLY AS REQUIRED BY THE LOCAL PERMITTING AGENCY OR AT THE END OF CONSTRUCTION.

I. MAINTAIN 3' SEPARATION BETWEEN STORM STRUCTURES AND PRESSURE PIPES.

J. INLET STATION AND OFFSET REFERENCES ARE TO THE CENTERLINE PER FDOT STANDARD PLANS.

K. ALL STORM SEWER PIPES SHALL BE TESTED AND INSPECTED BY THE LOCAL CITY / COUNTY OR FDOT REQUIREMENTS, INCLUDING BUT NOT LIMITED TO VIDEO TAPING, CLEANING, AND MANDREL TESTING.

8. STORMWATER POND CONSTRUCTION

A. THE FOLLOWING CONSTRUCTION PROCEDURES SHALL BE IMPLEMENTED TO AVOID DEGRADATION OF THE STORMWATER POND'S INFILTRATION CAPACITY:

- INITIALLY UNDER-EXCAVATE THE STORMWATER POND BOTTOM AND SIDES TO APPROXIMATELY 12 INCHES ABOVE FINAL GRADE.
- AFTER THE SITE OR DRAINAGE AREAS CONTRIBUTING TO THE STORMWATER POND HAVE ACHIEVED FULL STABILIZATION, EXCAVATE THE STORMWATER POND BOTTOM AND SIDES TO FINAL GRADE. ANY EXCESS SOIL AND UNDESIRABLE MATERIALS SHALL BE CAREFULLY REMOVED FROM THE STORMWATER POND TO ELIMINATE ALL ACCUMULATED SILTS, CLAYS, ORGANICS, AND OTHER FINE SEDIMENTS. DISPOSE OF THE EXCAVATED MATERIAL BEYOND THE LIMITS OF THE DRAINAGE AREA OF THE STORMWATER POND.
- AFTER THE STORMWATER POND HAS BEEN EXCAVATED TO FINAL GRADE, THE POND BOTTOM SHALL BE DEEP-RAKED AND LOOSENED.

9. PAVEMENT

A. ALL PAVEMENT AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, WITH SMOOTH TRANSITIONS BETWEEN SPOT ELEVATIONS, LOW POINTS, FLOW LINES OR CONTOURS PROVIDED ON THE PLANS. INTERSECTIONS SHALL BE TRANSITIONED APPROPRIATELY TO ACHIEVE A SMOOTH DRIVING SURFACE WHILE MAINTAINING POSITIVE DRAINAGE PER THE GRADING INTENT DEPICTED ON THE PLANS. ANY AREAS OF POOR DRAINAGE OBSERVED IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR REVIEW & RECOMMENDATION OF FIELD ADJUSTMENTS PRIOR TO PLACEMENT OF CURB OR PAVEMENT.

B. ALL PROPOSED PAVEMENT AREAS SHALL BE CONSTRUCTED PER THE APPLICABLE TYPICAL SECTIONS PROVIDED ON THE PLANS, AND PER THE RECOMMENDATIONS AND REQUIREMENTS OF THE GEOTECHNICAL ENGINEERING REPORT.

C. ALL SIDEWALKS, CROSSWALKS, AND DESIGNATED ACCESSIBLE ROUTES SHALL NOT HAVE ANY RUNNING SLOPES EXCEEDING 5%, AND CROSS SLOPES EXCEEDING 2%; AND HANDICAPPED PARKING SPACES SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION, IN ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.

D. WHERE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT, THE CONTRACTOR SHALL SAW CUT A MINIMUM OF 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT. MATCH EXISTING PAVEMENT ELEVATION UNLESS OTHERWISE NOTED ON THE PLANS.

E. IF EXISTING PAVEMENT IS CALLED OUT FOR REMOVAL AND REPLACEMENT, THE CONTRACTOR SHALL SAW CUT A MINIMUM OF 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT. MATCH EXISTING PAVEMENT DEPTH AND MATERIALS UNLESS OTHERWISE NOTED ON THE PLANS.

F. THE CONTRACTOR SHALL NOT COMPACT, STABILIZE (WITH THE EXCEPTION OF 1' BEYOND BACK OF CURB) OR CONSTRUCT BASE COURSE WITHIN LANDSCAPE ISLANDS, TRACTS OR MEDIANS.

G. AFTER ROADWAY SUBGRADE HAS BEEN CONSTRUCTED, IT SHALL BE PROOF-ROLLED TO ENSURE PROPER COMPACTION HAS BEEN ACHIEVED. PROOF ROLLING AND COMPACTION TO BE INSPECTED AND TESTED BY GEOTECHNICAL ENGINEER.

H. ALL CONCRETE WORK SHALL EXHIBIT A 3,000 PSI MINIMUM COMPRESSIVE STRENGTH, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL ENGINEER OR MORE STRINGENT LOCAL REQUIREMENT.

UTILITY NOTES:

1. GENERAL

A. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. PRIOR TO ORDERING MATERIALS FOR TAPPING OR INITIATING CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AT POINTS OF CONNECTION AND AREAS OF CONFLICT. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY SIGNIFICANT DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE PLANS..

B. THE CONTRACTOR SHALL NOTIFY ALL UTILITY PROVIDERS AND SUNSHINE STATE ONE CALL OF FLORIDA, INC AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING ANY UTILITY WORK. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY LOCATE FLAGS AND MARKINGS FOR THE DURATION OF THE PROJECT.

C. THE OPERATION OF ALL EXISTING UTILITY VALVES SHALL BE BY APPROPRIATE UTILITY PROVIDER ONLY.

D. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXCAVATING IN THE PROXIMITY OF EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES. SHOULD ANY EXISTING UTILITY NEED TO BE RELOCATED OR ADJUSTED, THE CONTRACTOR SHALL NOTIFY AND COORDINATE WORK WITH THE APPROPRIATE UTILITY PROVIDER.

E. IN THE EVENT OF ANY WATER MAIN OR GRAVITY SEWER BREAK OR DAMAGE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE APPROPRIATE UTILITY COMPANY BY PHONE AS LISTED ON THE COVER SHEET. ALL DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR IMMEDIATELY AT THE CONTRACTOR'S EXPENSE, OR BY THE UTILITY PROVIDER AT THE CONTRACTOR'S EXPENSE. ANY REQUIRED VALVE CLOSING, PUMP STATION OPERATION OR SHUT DOWN SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY PROVIDER'S REPRESENTATIVE.

F. ALL UNDERGROUND UTILITIES SHALL BE MARKED, TAPED, PAINTED AND WIRED PER THE UTILITY PROVIDER'S REQUIREMENTS.

G. ALL NEW UTILITY MAINS SHALL BE INSTALLED WITH A MINIMUM 3 FEET OF COVER, AS MEASURED FROM THE TOP OF PIPE TO TOP OF PROPOSED GRADE.

H. ALL UTILITIES SHALL MAINTAIN A MINIMUM OF 5 FEET SEPARATION FROM TREES OR AS REQUIRED BY THE APPROPRIATE UTILITY PROVIDER.

I. ALL UTILITIES TO PROVIDE MINIMUM SEPARATIONS BASED ON THE MOST STRINGENT REQUIREMENTS OF THE UTILITY PROVIDER OR FDEP.

J. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE UTILITY MAIN ALIGNMENT AS SHOWN ON THE CONSTRUCTION PLANS. FITTINGS AS MAY BE REQUIRED TO COMPLY WITH UTILITY PROVIDER DEFELCTION CRITERIA MAY NOT BE SHOWN. THE CONTRACTOR SHALL INCLUDE ALL REQUIRED FITTINGS IN THEIR BID TO ENSURE PROPER VERTICAL AND HORIZONTAL ALIGNEMNT SHOWN ON THESE PLANS WHILE MEETING UTILITY PROVIDER DEFLECTION CRITERIA.

K. ALL BURIED PRESSURE PIPES SHALL HAVE RESTRAINING DEVICES INSTALLED AT ALL DIRECTION CHANGES AND IN ACCORDANCE WITH UTILITY PROVIDER REQUIREMENTS.

L. ANY UTILITY SERVICES TO PROPOSED BUILDINGS SHALL TERMINATE 5 FEET OUTSIDE THE BUILDING UNLESS OTHERWISE NOTED ON THE PLANS. SERVICES SHALL BE CAPPED, BURIED AND MARKED AT THE POINT OF TERMINATION.

M. THE CONTRACTOR SHALL REVIEW APPLICABLE ARCHITECTURAL AND PLUMBING PLANS TO ENSURE COORDINATION WITH THE CIVIL SITE CONSTRUCTION PLANS FOR SIZE, LOCATION, AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES ARE FOUND.

N. THE CONTRACTOR SHALL COORDINATE WITH POWER, GAS, AND/OR COMMUNICATION UTILITY SERVICE PROVIDERS TO ENSURE CONSTRUCTION IS PHASED TO ALLOW INSTALLATION OF STREET CROSSINGS, SLEEVES, POLES, TRANSFORMERS, PULL BOXES, OR OTHER REQUIRED EQUIPMENT. THE OWNER SHALL ACQUIRE ANY NECESSARY EASEMENTS BASED ON THE UTILITY SERVICE PROVIDER'S INSTALLATION LOCATIONS.

O. THE CONTRACTOR SHALL COORDINATE THE FINAL DESIGNS OF ALL SERVICE PROVIDER'S UTILITIES AND THEIR INSTALLATIONS IN ACCORDANCE WITH THE SERVICE PROVIDER'S REQUIREMENTS AND ENSURE MINIMUM SEPARATION REQUIREMENTS ARE MET.

P. ALL PIPE BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH THE MOST STRINGENT OF THE UTILITY PROVIDER OR FDEP REQUIREMENTS. BEDDING AND BACKFILLING SHALL NOT CAUSE DAMAGE TO THE PIPE OR ITS JOINTS AND FITTINGS, CREATE EXCESSIVE SIDE FILL PRESSURES, IMPAIR FLOW CAPACITY, IMPEDE MAINTENANCE OPERATIONS OR FUTURE TAPPING.

Q. ALL NEW PIPE CONNECTIONS TO EXISTING PIPES SHALL OCCUR AT AN EXISTING, FACTORY MADE JOINT. PARTIAL PIPES TO BE REMOVED AS NECESSARY.

R. BACKFLOW PREVENTERS, MASTER METER ASSEMBLIES OR OTHER ABOVE-GROUND UTILITY STRUCTURES MAY NOT BE DRAWN TO SCALE. CONTRACTOR TO ADJUST LOCATION AS NEEDED IN THE FIELD AND NOTIFY ENGINEER OF ANY CONFLICTS. ABOVE-GROUND UTILITY STRUCTURES SHALL BE SCREENED WITH LANDSCAPING.

S. UTILITY VALVES SHALL NOT BE LOCATED IN CURB AREAS OR SIDEWALK RAMPS.

T. ALL UTILITY STRUCTURES, VALVE BOXES & COVERS IN PAVEMENT AREAS SHALL BE TRAFFIC BEARING.

U. ALL GATE VALVES SHALL BE INSTALLED IN THE VERTICAL POSITION, UNLESS OTHERWISE NOTED ON THE PLANS.

V. UNLESS OTHERWISE DIRECTED BY THE UTILITY PROVIDER'S REPRESENTATIVE, CONTRACTOR SHALL FURNISH AND INSTALL ALL UTILITY SERVICES, PRIVATE METERING DEVICES AND METER BOXES, AND BACKFLOW PREVENTORS SHOWN ON THE PLANS.

W. CONCRETE CURBS SHALL BE CHISELED OR IMPRINTED TO LOCATE WATER AND SEWER SERVICE LATERALS. ALL MARKINGS TO CONFORM WITH LOCAL UTILITY PROVIDER STANDARDS.

X. THE CONTRACTOR SHALL PROTECT EXISTING WATER MAINS FROM CONTAMINATION DURING CONSTRUCTION AND TESTING OF THE WATER SYSTEM.

Y. THE CONTRACTOR SHALL ADHERE TO THE MOST STRINGENT OF UTILITY COMPANY, LOCAL GOVERNMENT AND FDOT REQUIREMENTS FOR ALL JACK AND BORING AND DIRECTIONAL DRILLING OPERATIONS.

2. POTABLE WATER

A. THE CONTRACTOR SHALL KEEP EXISTING WATER MAINS AND SERVICE LINES IN OPERATION DURING CONSTRUCTION.

B. ALL NEW OR ALTERED MAINS SERVING FIRE HYDRANTS SHALL BE AT LEAST 6 INCHES INSIDE DIAMETER. NEW OR ALTERED FIRE HYDRANT LEADS SHALL BE AT LEAST 6 INCHES INSIDE DIAMETER AND INCLUDE AN AUXILIARY VALVE.

C. ALL FIRE HYDRANTS THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL HAVE UNPLUGGED, UNDERGROUND DRAINS WILL BE LOCATED AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., OR VACUUM-TYPE SANITARY SEWER;AT LEAST SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN,OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-10, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."

D. AT HIGH POINTS WHERE AIR CAN ACCUMULATE IN NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT, PROVISIONS WILL BE MADE TO REMOVE THE AIR BY MEANS OF AIR RELIEF VALVES, AND AUTOMATIC AIR RELIEF VALVES WILL NOT BE USED IN SITUATIONS WHERE FLOODING OF THE VALVE MANHOLE OR CHAMBER MAY OCCUR.

E. THE OPEN END OF THE AIR RELIEF PIPE FROM ALL AUTOMATIC AIR RELIEF VALVES INSTALLED UNDER THIS PROJECT WILL BE EXTENDED TO AT LEAST ONE FOOT ABOVE GRADE AND WILL BE PROVIDED WITH A SCREENED, DOWNWARD-FACING ELBOW.

F. NEW OR ALTERED CHAMBERS, PITS, OR MANHOLES THAT CONTAIN VALVES, BLOW-OFFS, METERS, OR OTHER SUCH WATER DISTRIBUTION SYSTEM APPURTENANCES AND THAT ARE INCLUDED IN THIS PROJECT WILL NOT BE CONNECTED DIRECTLY TO ANY SANITARY OR STORM SEWER, AND BLOW-OFFS OR AIR RELIEF VALVES INSTALLED UNDER THIS PROJECT WILL NOT BE CONNECTED DIRECTLY TO ANY SANITARY OR STORM SEWER.

G. NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE INSTALLED IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS OR IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDED PROCEDURES.

H. A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT; BACKFILL MATERIAL WILL BE TAMPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE; AND UNSUITABLY SIZED STONES (AS DESCRIBED IN APPLICABLE AWWA STANDARDS OR MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES) FOUND IN TRENCHES WILL BE REMOVED FOR A DEPTH OF AT LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT.

I. ALL WATER MAIN TEES, BENDS, PLUGS, AND HYDRANTS INSTALLED UNDER THIS PROJECT WILL BE PROVIDED WITH THRUST BLOCKS OR RESTRAINED JOINTS TO PREVENT MOVEMENT.

J. NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL BE CONSTRUCTED OF ASBESTOS-CEMENT OR POLYVINYL CHLORIDE PIPE WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C603 OR C605, RESPECTIVELY, AS INCORPORATED INTO RULE 62-555.330, F.A.C., AND ALL OTHER NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600 AS INCORPORATED INTO RULE 62-555.330.

K. NEW OR ALTERED WATER MAINS, INCLUDING FIRE HYDRANT LEADS AND INCLUDING SERVICE LINES THAT WILL BE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER, WILL BE DISINFECTED AND BACTERIOLOGICALLY EVALUATED IN ACCORDANCE WITH RULE 62-555.340, F.A.C.

L. NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL BE INSTALLED IN AREAS WHERE THERE ARE KNOWN AGGRESSIVE SOIL CONDITIONS WILL BE PROTECTED THROUGH USE OF CORROSION-RESISTANT WATER MAIN MATERIALS,THROUGH ENCASEMENT OF THE WATER MAINS IN POLYETHYLENE, OR THROUGH PROVISION OF CATHODIC PROTECTION.

M. NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUMTYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITYTYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER); A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."

N. NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE; AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURETYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE.

O. AT THE UTILITY CROSSINGS DESCRIBED IN THE NOTE ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

P. NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ABOVE SURFACE WATER WILL BE ADEQUATELY SUPPORTED AND ANCHORED, PROTECTED FROM DAMAGE AND FREEZING, AND ACCESSIBLE FOR REPAIR OR REPLACEMENT.

Q. NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS UNDER SURFACE WATER WILL HAVE A MINIMUM COVER OF TWO FEET.

R. NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS UNDER SURFACE WATER COURSES GREATER THAN 15 FEET IN WIDTH WILL HAVE FLEXIBLE OR RESTRAINED, WATERTIGHT PIPE JOINTS AND WILL INCLUDE VALVES AT BOTH ENDS OF THE WATER CROSSING SO THE UNDERWATER MAIN CAN BE ISOLATED FOR TESTING AND REPAIR; THE AFOREMENTIONED ISOLATION VALVES WILL BE EASILY ACCESSIBLE AND WILL NOT BE SUBJECT TO FLOODING; THE ISOLATION VALVE CLOSEST TO THE WATER SUPPLY SOURCE WILL BE IN A MANHOLE; AND PERMANENT TAPS WILL BE PROVIDED ON EACH SIDE OF THE ISOLATION VALVE WITHIN THE MANHOLE TO ALLOW FOR INSERTION OF A SMALL METER TO DETERMINE LEAKAGE FROM THE UNDERWATER MAIN AND TO ALLOW FOR SAMPLING OF WATER FROM THE UNDERWATER MAIN.

S. THE CONTRACTOR SHALL NOT PLACE THE POTABLE WATER SYSTEM INTO SERVICE UNTIL FDEP CLEARANCE HAS BEEN RECEIVED BY THE OWNER.

3. RECLAIM WATER

A. NO HOSE BIBS SHALL BE USED FOR RECLAIM WATER.

B. FOR IRRIGATION WITHIN 100 FEET OF ANY OUTDOOR EASTING, DRINKING OR BATHING ESTABLISHMENTS, LOW TRAJECTORY NOZZELS ARE REQUIRED.

4. SANITARY SEWER

A. ALL GRAVITY MAIN LENGTHS SHOWN ARE MEASURED TO THE MANHOLE'S CENTERLINE.

B. ALL SANITARY SEWER MAINS AND LATERALS ARE DESIGNED AT MINIMUM ACCEPTABLE SLOPE. THE CONTRACTOR SHALL VERIFY PIPE SLOPES PRIOR TO INSTALLATION TO ENSURE NO SUBSTANDARD PIPE SLOPES WILL OCCUR.

C. MANHOLE LIFT HOLES AND GRADE ADJUSTMENT RINGS SHALL BE SEALED WITH NON-SHRINKING MORTAR OR OTHER APPROPRIATE MATERIAL ACCEPTABLE TO THE UTILITY PROVIDER.

D. INLET AND OUTLET PIPES SHALL BE JOINED TO THE MANHOLE WITH A GASKETED FLEXIBLE WATERTIGHT CONNECTION OR ANOTHER WATERTIGHT CONNECTION ARRANGEMENT THAT ALLOWS DIFFERENTIAL SETTLEMENT OF THE PIPE AND MANHOLE WALL.

E. IF APPLICABLE, THE CONTRACTOR SHALL COORDINATE AND ATTEND A LIFT STATION STARTUP WITH THE UTILITY PROVIDER, OWNER, ENGINEER, AND ALL OTHER APPLICABLE PARTIES. COPIES OF THE LIFT STATION'S OPERATION AND MAINTENANCE MANUAL AND A START-UP REPORT SHALL BE FURNISHED TO THE UTILITY PROVIDER, OWNER & ENGINEER.

F. THE CONTRACTOR SHALL NOT PLACE THE WASTEWATER SYSTEM INTO SERVICE UNTIL FDEP CLEARANCE HAS BEEN ISSUED.

5. UTILITY TESTING AND INSPECTION

A. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING ALL TESTING REQUIRED BY UTILITY PROVIDER AND FDEP REQUIREMENTS.

B. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 3 WORKING DAYS IN ADVANCE OF ALL TESTING. ENGINEER, UTILITY INSPECTOR OR THEIR REPRESENTATIVES SHALL BE PRESENT FOR TESTING AND INSPECTIONS. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER IN A TIMELY MANNER AND UPON REQUEST.

C. ANY DEFECTIVE MATERIALS OR WORKMANSHIP DISCOVERED AS A RESULT OF FAILED TESTING SHALL BE REPLACED OR REPAIRED AS DETERMINED BY THE ENGINEER AND/OR UTILITY PROVIDER UNTIL SATISFACTORY RESULTS ARE ACHIEVED FOR ALL REQUIRED TESTING AND INSPECTION.

D. POTABLE WATER SYSTEM TESTING, AT A MINIMUM, SHALL INCLUDE:

- PRESSURE AND LEAKAGE TEST: THE CONTRACTOR SHALL PERFORM A HYDROSTATIC PRESSURE AND LEAKAGE TEST OF THE WATER SYSTEM IN ACCORDANCE WITH AWWA STANDARDS C600, C605, OR M23 AS APPLICABLE TO PIPE MATERIAL, FDEP, LOCAL AND/OR UTILITY PROVIDER REGULATIONS. WATER MAINS SHALL BE TESTED AT 150 PSI FOR A MINIMUM OF 2 HOURS, AND MEET AWWA STANDARDS FOR THEIR RESPECTIVE MATERIAL.
- DISINFECTION & BACTERIOLOGICAL SAMPLE TESTS: THE CONTRACTOR SHALL FLUSH AND DISINFECT ALL WATER MAINS IN ACCORDANCE WITH AWWA C651, LOCAL JURIDICTION OR UTILITY PROVIDER REQUIREMENTS. ALL WATER SAMPLE LOCATIONS FOR BACTERIOLOGICAL TESTING SHALL BE IN ACCORDANCE WITH FDEP PERMIT REQUIREMENTS.

GENERAL NOTES CONTINUED ON NEXT SHEET

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GENERAL NOTES
529 JOHNS ROAD

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GARTH R. RITTER
LICENSE
No. 79364
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY GARTH R. RITTER ON THE DATE INDICATED HERE.

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E. RECLAIM WATER SYSTEM TESTING, AT A MINIMUM, SHALL INCLUDE:

- PRESSURE AND LEAKAGE TEST: THE CONTRACTOR SHALL PERFORM A HYDROSTATIC PRESSURE AND LEAKAGE TEST OF THE WATER SYSTEM IN ACCORDANCE WITH AWWA STANDARDS C600, C605, OR M23 AS APPLICABLE TO PIPE MATERIAL, LOCAL AND/OR UTILTIY PROVIDER REGULATIONS. RECLAIM WATER MAINS SHALL BE TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS, AND MEET AWWA STANDARDS FOR THEIR RESPECTIVE MATERIAL.

F. SANITARY GRAVITY SEWER SYSTEM TESTING AND INSPECTION, AT A MINIMUM, SHALL INCLUDE:

- LAMPING & VIDEO INSPECTION: THE CONTRACTOR SHALL LAMP AND VIDEO INSPECT EACH MAIN IN ACCORDANCE WITH THE UTILITY PROVIDER REQUIREMENTS, FOR ALIGNMENT, GRADE VARIATIONS, JOINT SEPARATION, LEAKS, DEFLECTION, DAMAGE OR OTHER DEFECTS IN THE PIPE MATERIALS OR THEIR INSTALLATION.
- DEFLECTION TESTS: AFTER FINAL BACKFILL IS IN PLACE FOR AT LEAST 30 DAYS, THE CONTRACTOR SHALL CONDUCT A DEFLECTION TEST UTILIZING A RIGID BALL OR MANDREL IN NOT LESS THAN 95% OF THE MAIN'S BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER AS SPECIFIED IN THE ASTM SPECIFICATIONS AND APPENDICES. NO MECHANICAL PULLING DEVICES SHALL BE USED FOR TESTING. ALL PIPES SHALL NOT EXCEED A 5% DEFLECTION.
- VACCUM TESTING: ALL WASTEWATER MANHOLES SHALL BE VACUUM TESTED PER ASTM C1244 FOR CONCRETE MANHOLES.
- LEAKAGE TESTS: THE CONTRACTOR SHALL PERFORM LOW-PRESSURE AIR TESTS ON ALL GRAVITY MAINS AND LATERALS IN ACCORDANCE PROCEDURES DESCRIBED WITH ASTM F1417 FOR PLASTIC PIPE. MAINS SHALL BE TESTED BETWEEN MANHOLES WITH TESTING SECTIONS NOT TO EXCEED 400 FEET IN LENGTH.

G. SANITARY FORCE MAIN TESTING, AT A MINIMUM, SHALL INCLUDE:

- PRESSURE AND LEAKAGE TEST: THE CONTRACTOR SHALL PERFORM A HYDROSTATIC PRESSURE AND LEAKAGE TEST OF THE FORCE MAIN SYSTEM IN ACCORDANCE WITH AWWA STANDARDS C600, C605, OR M23 AS APPLICABLE TO PIPE MATERIAL, FDEP, LOCAL AND/OR UTILTIY PROVIDER REGULATIONS. FORCE MAINS SHALL BE TESTED AT 150 PSI FOR A MINIMUM OF 2 HOURS, AND MEET AWWA STANDARDS FOR THEIR RESPECTIVE MATERIAL.

SIGNAGE AND PAVEMENT MARKINGS:

1. ALL SIGNAGE AND PAVEMENT MARKING MATERIALS AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, THE FHWA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", AND LOCAL CODE.
2. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED AND APPROVED ON THE PLANS. ALL THERMOPLASTIC AND PAINT MATERIALS SHALL BE CERTIFIED FREE OF LEAD.
3. ALL HANDICAP PARKING SPACES SHALL BE DESIGNATED WITH PAVEMENT MARKINGS AND SIGNAGE IN ACCORDANCE WITH ADA REQUIREMENTS.
4. ALL REGULATORY TRAFFIC SIGNS SHALL BE INSTALLED PRIOR TO FINAL INSPECTION OF ROADWAY IMPROVEMENTS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS DEPICTED ON THE CONSTRUCTION PLANS.
6. FIRE HYDRANTS SHALL BE LOCATED WITH BLUE REFLECTIVE PAVEMENT MARKERS, PLACED OPPOSITE FIRE HYDRANTS IN THE CENTER OF THE NEAREST TRAVEL LANE.

AS-BUILTS & CERTIFICATION:

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REQUEST THE MINIMUM AS-BUILT REQUIREMENTS OF THE APPLICABLE PERMITTING AGENCIES AND/OR UTILITY PROVIDER AND BECOME FAMILIAR WITH THESE REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILTS OF INSTALLED IMPROVEMENTS SATISFYING THE MINIMUM SUBMITTAL REQUIREMENTS OF THE APPLICABLE PERMITTING AGENCIES AND/OR UTILITY PROVIDER.
2. AS-BUILT DRAWINGS SHALL BE PREPARED AND CERTIFIED AS CORRECT BY A FLORIDA LICENSED LAND SURVEYOR AND PROVIDED TO THE ENGINEER FOR REVIEW.
3. IN ADDITION TO THE MINIMUM AS-BUILT REQUIREMENTS OF THE APPLICABLE PERMITTING AGENCIES AND/OR UTILITY PROVIDER, AS-BUILT DRAWINGS SHALL CONTAIN THE FOLLOWING INFORMATION:

A. SANITARY SEWER SYSTEM

- HORIZONTAL LOCATION TOP ELEVATIONS OF EACH MANHOLE/STRUCTURE FRAME AND COVER
- PIPE SIZE AND MATERIAL (IF ALTERNATE MATERIAL WAS APPROVED)
- INVERTS OF ALL PIPES ENTERING AND/OR LEAVING EACH MANHOLE/STRUCTURE
- LENGTHS OF EACH RUN OF MAIN BETWEEN MANHOLES/STRUCTURES, MEASURED CENTER TO CENTER
- INVERTS OF PIPE CONNECTIONS TO EXISTING MANHOLES/STRUCTURES
- AS-BUILT SLOPE OF PIPE BETWEEN MANHOLES/STRUCTURES
- LENGTH OF ALL SERVICE WYES, LOCATION AND DEPTH AT LOT LINE OR INVERT AT CLEAN-OUT LOCATION.
- LOCATION & ELEVATION OF ALL FITTINGS AND ACCESSORIES NOT VISIBLE TO THE SURFACE.

B. STORM SEWER SYSTEM

- HORIZONTAL LOCATION & TOP ELEVATIONS OF EACH MANHOLE/STRUCTURE FRAME, COVER OR GRATE
- OUTFALL AND CONTROL STRUCTURE COMPONENTS INCLUDING BUT NOT LIMITED TO WEIR ELEVATIONS, DIMENSIONS, ORIFICE PIPE SIZE AND INVERTS, AND SKIMMER DIMENSIONS
- PIPE SIZE AND MATERIAL (IF ALTERNATE MATERIAL FROM THE PLANS WAS APPROVED)
- INVERTS OF ALL PIPES ENTERING AND/OR LEAVING EACH MANHOLE/STRUCTURE, INCLUDING UNDERDRAINS
- INVERTS OF MITERED END SECTIONS, ENDWALLS, OR INVERT OF PIPE CONNECTIONS TO EXISTING SYSTEMS
- AS-BUILT GRADE OF PIPE BETWEEN MANHOLES/STRUCTURES
- LOCATION AND INVERT ELEVATION OF ALL STORM STUB-OUTS
- UNDERDRAIN LOCATIONS

C. PRESSURE SYSTEMS (WATER/ RECLAIM /FORCE MAIN)

- LOCATION AND TOP ELEVATION OF ALL MAINS, SERVICE LINES AND FIRE APPARATUS
- LOCATION AND TOP ELEVATION OF ALL VALVES AND FITTINGS
- PIPE SIZE AND MATERIAL (IF ALTERNATE MATERIAL FROM THE PLANS WAS APPROVED)
- ALL UTILITY CROSSINGS WITH CLEARANCES MEASURED FROM OUTSIDE OF PIPE. AS-BUILTS SHALL CLEARLY DEMONSTRATE COMPLIANCE WITH MINIMUM SEPARATION DISTANCES.

D. GRADING & STORMWATER FACILITIES

- POND ELEVATIONS INCLUDING TOP OF BANK, GRADE BREAKS, AND POND BOTTOM
- SWALE / DITCH TOP AND BOTTOM ELEVATIONS
- ELEVATIONS FOR ALL SPOT GRADES SHOWN IN PROPOSED PAVEMENT AREAS
- ELEVATIONS ON RESIDENTIAL LOT CORNERS, GRADE BREAKS ON LOT LINES, AND CENTER OF BUILDING PAD
- TOP AND BOTTOM OF RETAINING WALL ELEVATIONS
- ALONG ALL PROPOSED ROADWAYS, SPOT GRADES AT EVERY MAJOR STATION AND PVI SHALL BE PROVIDED AT CROWN, EDGE OF PAVEMENT, TOP OF CURB, AND BACK OF SIDEWALK OR RIGHT OF WAY LINE.

4. AS-BUILTS FOR ALL UNDERGROUND STORMWATER DRAINAGE AND UTILITY IMPROVEMENTS MUST BE SUBMITTED TO THE ENGINEER AND ACCEPTED PRIOR TO CONSTRUCTION OF PAVING IMPROVEMENTS.
5. NO ENGINEER'S CERTIFICATION OF COMPLETION WILL BE ISSUED UNTIL COMPLETE AS-BUILT DRAWINGS HAVE BEEN PROVIDED AND ACCEPTED. PARTIAL AS-BUILTS MAY BE PROVIDED FOR SPECIFIC PURPOSES SUCH AS FDEP CLEARANCES.
6. THE ENGINEER RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER, RETEST OR PERFORM ANY NECESSARY ACTION TO CONFIRM THAT ALL IMPROVEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

REVISIONS:

CLOUDED REVISIONS ARE INTENDED TO AID THE CONTRACTOR, BUT DO NOT RELIEVE THE CONTRACTOR FROM IDENTIFYING ANY ADDITIONAL CHANGES AS A RESULT OF THE CLOUDED REVISIONS. THE CONTRACTOR SHALL REVIEW THE REVISION CHANGES IN RELATION TO THE CONSTRUCTION PLANS IN THEIR ENTIRETY BEFORE PROCEEDING.

MATERIAL SPECIFICATIONS:

1. GENERAL:

A. THE CONTRACTOR SHALL REVIEW THESE MATERIAL SPECIFICATIONS AGAINST THOSE OF THE AUTHORITY HAVING JURISDICTION (AHJ). WHEREVER THE BELOW STANDARDS DIFFER FROM THE REQUIREMENTS OF THE AHJ, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION. TYPICALLY THE AHJ REQUIREMENT SHALL APPLY.

B. MATERIAL FURNISHED UNDER THESE REQUIREMENTS SHALL BE IN NEW CONDITION, FREE OF DEFECTS, AND HIGH GRADE.

2. PAVING AND DRAINAGE:

A. ALL STORM PIPE SHALL BE REINFORCED CONCRETE PIPE, PER ASTM C-76 CLASS III. LIFTING HOLES SHALL NOT BE USED. WHERE LOCAL MUNICIPALITIES ALLOW, HIGH DENSITY POLYPROPYLENE (HP) PIPE MAY BE SUBSTITUTED AS AN ALTERNATE TO RCP. HP STORM PIPE, 12 INCH THROUGH 60 INCH, SHALL HAVE A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS AND SHALL MEET ASTM F2881 OR AASHTO M330. PIPES SHALL BE JOINED USING A BELL AND SPIGOT JOINT. JOINTS SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212. GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477. GASKETS SHALL BE INSTALLED BY THE PIPE MANUFACTURER AND COVERED WITH A REMOVABLE PLASTIC WRAP TO ENSURE THE GASKET IS FREE FROM DEBRIS. A JOINT LUBRICANT AVAILABLE FROM THE MANUFACTURER SHALL BE USED ON THE GASKET AND BELL DURING ASSEMBLY. EXTERIOR BELL WRAPS SHALL BE INSTALLED BY THE MANUFACTURER. ALL STORM PIPES SHALL BE INSTALLED, LASER PROFILED AND VIDEOED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS.

B. STORM CLEANOUTS LOCATED IN PAVED AREAS SHALL BE TRAFFIC BEARING. STORM STRUCTURES AND MANHOLES SHALL HAVE TRAFFIC BEARING GRATES OR LIDS. ALL GRATES AND LIDS SHALL BE SET FLUSH WITHOUT MOVEMENT WHEN SUBJECTED TO VEHICLE TRAFFIC.

C. ALL YARD DRAINS SHALL BE NDS IN-LINE DRAINS AND DRAIN BASINS WITH WATER TIGHT ADAPTER CONNECTIONS, OR ENGINEER APPROVED EQUAL. CATCH BASIN RISER (NDS#1216) SHALL BE USED IN SHRUB AREAS, 12" SQUARE FLAT GRATES (NDS#1211) SHALL BE USED IN TURF AREAS. REFER TO LANDSCAPE PLANS FOR GRATE TYPE SUITABLE FOR THE LOCATION.

D. YARD DRAIN PIPING UNDER PAVEMENT AREAS SHALL BE ASTM D3034 SDR 35 PVC OR ENGINEER APPROVED EQUAL. YARD DRAIN PIPING OUTSIDE OF PAVEMENT AREAS SHALL BE ASTM D3034 SDR 35 PVC OR HEAVY DUTY CORRUGATED POLYETHYLENE (HDPE). SELECTED MATERIALS SHALL BE CONSISTENT THROUGHOUT THE PROJECT.

E. ALL TYPE "P" STRUCTURE BOTTOMS SHALL BE ROUND UNLESS OTHERWISE NOTED AND SHALL HAVE A 4 FOOT DIAMETER.

F. ALL UNDERDRAIN SHALL BE ADVANCED DRAINAGE SYSTEMS (ADS) HEAVY-DUTY CORRUGATED POLYETHYLENE PIPE WITH FACTORY INSTALLED FILTER FABRIC, OR APPROVED EQUAL.

G. ALL UNDERDRAIN DISCHARGE PIPE SHALL BE NON-PERFORATED ASTM D3034 SDR 35 PVC WITH ELASTOMERIC JOINTS.

H. AGGREGATE USED FOR ANY EXFILTRATION TRENCH SHALL BE NON-LIMESTONE BASED NATURALLY OCCURRING MATERIAL. CRUSHED OR RECYCLED CONCRETE IS NOT PERMITTED FOR USE IN THE EXFILTRATION TRENCH.

I. STORM CLEANOUTS LOCATED IN PAVED AREAS SHALL BE TRAFFIC BEARING. STORM STRUCTURES AND MANHOLES SHALL HAVE TRAFFIC BEARING GRATES OR LIDS. ALL GRATES AND LIDS SHALL BE SET FLUSH WITHOUT MOVEMENT WHEN SUBJECTED TO VEHICLE TRAFFIC.

J. ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE MINIMUM CLASS III UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS.

3. POTABLE WATER:

A. WATER MAINS, FITTINGS, VALVES, AND APPURTENANCES SHALL MEET ALL APLICABLE UTILITY PROVIDER CRITERIA. IF UTILITY PROVIDER CRITERIA DOES NOT APPLY, MINIMUM MATERIAL SPECIFICATIONS SHALL BE AS FOLLOWS:

B. WATER MAINS 1-1/2" TO 3" AND FITTINGS LESS THAN 4" SHALL BE PVC MEETING ASTM D2241 AND ASTM D1784 CLASS 200, SDR 21, AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

C. WATER MAINS 4" TO 12" SHALL BE PVC (UNLESS OTHERWISE CALLED FOR) MEETING THE REQUIREMENTS OF AWWA C900 CLASS 150 DR18 AND ASTM D1784 AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

D. WATER MAINS SHALL BE DUCTILE IRON WHEN CALLED FOR, WITH MIN PRESSURE CLASS 350 PER AWWA C150, WITH INTERIOR LINING OF CEMENT MORTAR AND ASPHALTIC MATERIAL SEAL COAT IN ACCORDANCE WITH ANSI/AWWA C104/A21.4, AND EXTERIOR COATING PER ANSI/AWWA C151/A21.51 OF 1.0 MIL MIN THICKNESS.

E. FITTINGS 4" AND OVER SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C110/A21.10, 250 PSI, WITH CEMENT MORTAR LINING CONFORMING TO ANSI/AWWA C104/A21.4, STANDARD THICKNESS, WITH COMPRESSION TYPE JOINTS/MECHANICAL JOINTS AS RESPECTIVELY SPECIFIED IN ASTM D3139 AND ANSI/AWWA C110/A21.11

F. VALVES 2" AND SMALLER SHALL BE BRONZE, WEDGE DISC, NON-RISING STEM TYPE, 150 PSI MIN WORKING PRESSURE, WITH WROUGHT STEEL OR CAST IRON HANDWHEELS AND WITH SUITABLE ENDS FOR JOINTING TO THE SELECTED PIPE.

G. VALVES 3" TO 12" SHALL BE RESILIENT SEAT GATE VALVES AT 250 PSI RATING, CONFORMING TO ANSI/AWWA C509 OR C515 OPENING COUNTERCLOCKWISE, WITH O-RING STEM SEAL AND OPENING EQUAL TO OR GREATER THAN THE NOMINAL DIAMETER OF THE VALVE.

H. VALVE BOXES SHALL BE ADJUSTABLE, CAST IRON, WITH MINIMUM INTERIOR DIAMETER OF 5 INCHES WITH COVERS LEGIBLY CAST WITH THE INSCRIPTION "WATER" ON THE TOP, AND WITH A HEAVY COATING OF BITUMINOUS PAINT. BOXES SHALL BE SUITABLE FOR THE APPLICABLE SURFACE LOADING AND VALVE SIZE. ALL VALVES SHALL HAVE BOXES.

I. FIRE HYDRANTS SHALL CONFORM TO AWWA C502, PAINTED IN ACCORDANCE WITH AHJ REQUIREMENTS.

J. BACKFLOW PREVENTION DEVICES: SHALL BE REDUCED PRESSURE ZONE TYPE UNLESS OTHERWISE SPECIFIED.

K. DOUBLE DETECTOR CHECK VALVE ASSEMBLY (DDCVA) AND DOUBLE CHECK VALVE ASSEMBLY (DCVA) SHALL CONFORM TO ASSE STANDARD 1015 AND AWWA C510 WATTS 709 SERIES OR ENGINEER APPROVED EQUAL. DEVICES TO INCLUDE OS&Y GATE VALVES AT BOTH ENDS AND EPOXY COATED STRAINER. ALL CAST/DUCTILE IRON PARTS TO BE EPOXY COATED. DDCVA TO INCLUDE METER BYPASS WITH DOUBLE CHECK VALVE (ALSO CONFORMING TO THIS SPECIFICATION).

L. REDUCED PRESSURE BACKFLOW PREVENTION DEVICES SHALL CONFORM TO ASSE STANDARD 1015 AND AWWA C511 HERSEY MODEL 6 CM OR ENGINEER APPROVED EQUAL. DEVICES TO INCLUDE OS&Y GATE VALVES AT BOTH ENDS AND EPOXY COATED STRAINER. ALL CAST/DUCTILE IRON PARTS TO BE EPOXY COATED.

M. ALL WATER SYSTEM COMPONENTS INSTALLED THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61 AS ADOPTED IN RULE 62-555.335, F.AC. OR OTHER APPLICABLE STANDARDS, REGULATIONS OR REQUIREMENTS REFERENCED IN PARAGRAPH 62-555.320(3)(B), F.A.C.

N. ALL PIPE, FITTINGS, SOLDER OR FLUX USED IN CONSTRUCTION SHALL CONTAIN NO LEAD.

O. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62-555.320(21)(B)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE WILL BE SOLID-WALL BLUE PIPE, WILL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR WILL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE WILL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE WILL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT WILL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT WILL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE WILL BE PAINTED BLUE OR WILL BE COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.)

4. RECLAIMED WATER:

A. RECLAIMED WATER MAINS, FITTINGS, VALVES, AND APPURTENANCES SHALL MEET ALL APPLICABLE UTILITY PROVIDER CRITERIA. IF UTILITY PROVIDER CRITERIA DOES NOT APPLY, MINIMUM MATERIAL SPECIFICATIONS SHALL BE AS FOLLOWS:

B. RECLAIMED WATER MAINS 1-1/2" TO 3" AND FITTINGS LESS THAN 4" SHALL BE PVC MEETING ASTM D2241 AND ASTM D1784 CLASS 200, SDR 21, AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

C. RECLAIMED WATER MAINS 4" TO 12" SHALL BE PVC (UNLESS OTHERWISE CALLED FOR) MEETING THE REQUIREMENTS OF AWWA C900 CLASS 150 DR18 AND ASTM D1784 AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

D. RECLAIMED WATER MAINS SHALL BE DUCTILE IRON WHEN CALLED FOR, WITH MIN PRESSURE CLASS 50 PER AWWA C150, WITH INTERIOR LINING OF CEMENT MORTAR AND ASPHALTIC MATERIAL SEAL COAT IN ACCORDANCE WITH ANSI/AWWA C104/A21.4, AND EXTERIOR COATING PER ANSI/AWWA C151/A21.51 OF 1.0 MIL MIN THICKNESS.

E. FITTINGS 4" AND OVER SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C110/A21.10, 250 PSI, WITH CEMENT MORTAR LINING CONFORMING TO ANSI/AWWA C104/A21.4, STANDARD THICKNESS, WITH COMPRESSION TYPE JOINTS/MECHANICAL JOINTS AS RESPECTIVELY SPECIFIED IN ASTM D3139 AND ANSI/AWWA C110/A21.11

F. VALVES 2" AND SMALLER SHALL BE BRONZE, WEDGE DISC, NON-RISING STEM TYPE, 150 PSI MIN WORKING PRESSURE, WITH WROUGHT STEEL OR CAST IRON HANDWHEELS AND WITH SUITABLE ENDS FOR JOINTING TO THE SELECTED PIPE.

G. VALVES 3" TO 12" SHALL BE RESILIENT SEAT GATE VALVES AT 250 PSI RATING, CONFORMING TO ANSI/AWWA C509 OR C515 OPENING COUNTERCLOCKWISE, WITH O-RING STEM SEAL AND OPENING EQUAL TO OR GREATER THAN THE NOMINAL DIAMETER OF THE VALVE.

H. VALVE BOXES SHALL BE ADJUSTABLE, CAST IRON, WITH MINIMUM INTERIOR DIAMETER OF 5 INCHES WITH COVERS LEGIBLY CAST WITH THE INSCRIPTION "RECLAIMED WATER" ON THE TOP, AND WITH A HEAVY COATING OF BITUMINOUS PAINT. BOXES SHALL BE SUITABLE FOR THE APPLICABLE SURFACE LOADING AND VALVE SIZE. ALL VALVES SHALL HAVE BOXES.

I. ALL PIPING VALVES AND OUTLETS SHALL BE COLOR CODED PANTONE 522C PURPLE AND MARKED PER LOCAL AND STATE CODES TO DIFFERENTIATE RECLAIMED WATER FROM POTABLE WATER OR OTHER WATER SOURCES.

5. WASTEWATER COLLECTION & TRANSMISSION:

A. GRAVITY SEWER LINES AND FITTINGS TO BE PVC SDR 35 PER ASTM D3034 WITH ELASTOMERIC JOINTS PER ASTM D3212.

B. MANHOLES TO MEET ASTM C478 WITH A 5" MINIMUM CONCRETE WALL WITH 4,000 PSI COMPRESSIVE STRENGTH.

C. FORCE MAINS 4" TO 12" SHALL BE PVC DR 18 CLASS 100 PER AWWA C900 WITH ELASTOMERIC PUSH-ON JOINTS PER ASTM D3139.

D. FORCE MAIN FITTINGS AND PIPE 1-1/2" TO 3" AND FITTINGS LESS THAN 4" SHALL BE PVC MEETING ASTM D2241 AND ASTM D1784 CLASS 200, SDR 21, AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

E. FORCE MAIN FITTINGS 4" AND OVER SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C110/A21.10, 250 PSI, WITH CEMENT MORTAR LINING CONFORMING TO ANSI/AWWA C104/A21.4, STANDARD THICKNESS, WITH COMPRESSION TYPE JOINTS/MECHANICAL JOINTS AS RESPECTIVELY SPECIFIED IN ASTM D3139 AND ANSI/AWWA C110/A21.11

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GENERAL NOTES
529 JOHNS ROAD

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GARTH R. RITTER
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STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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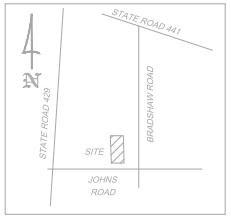
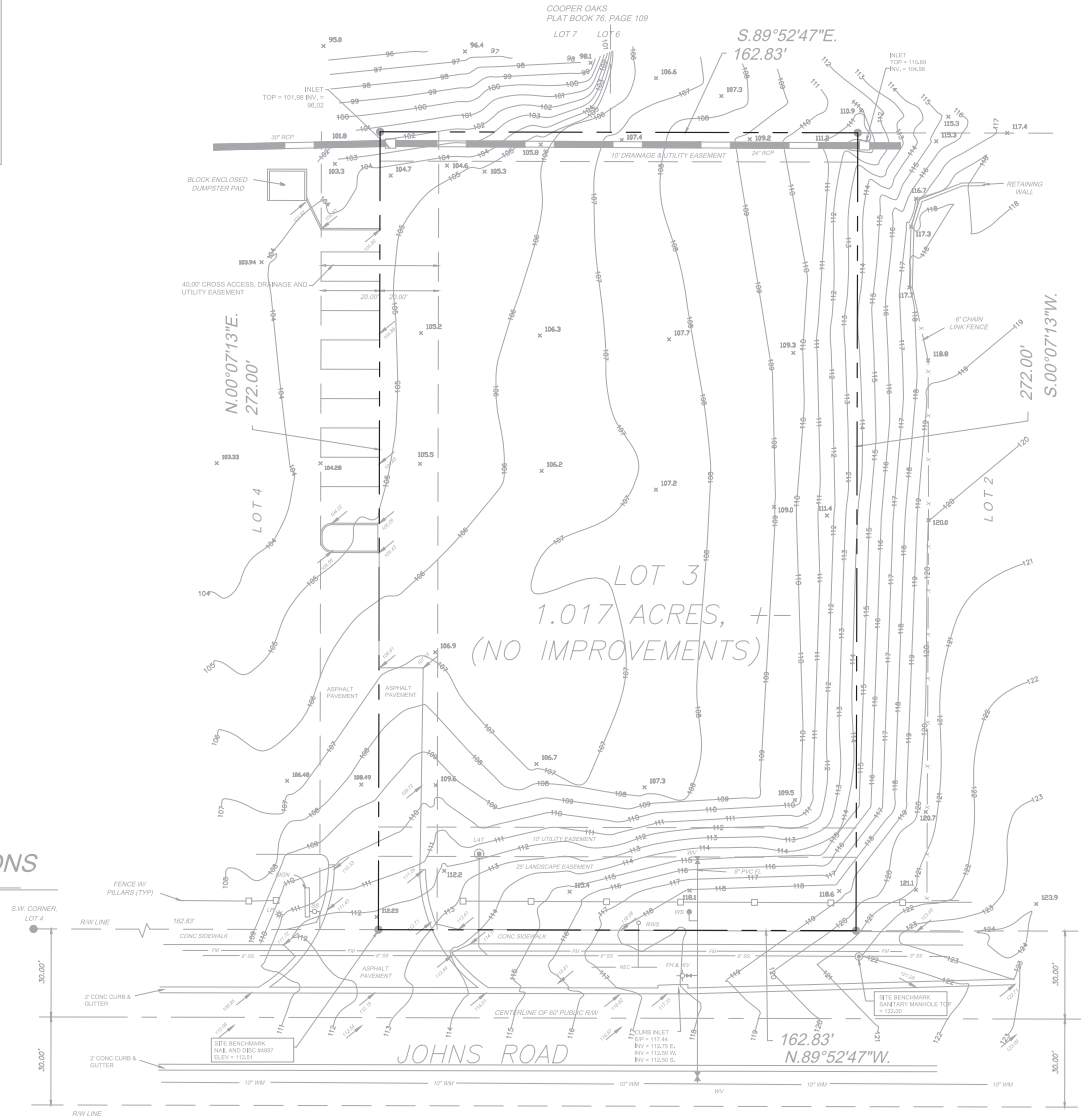
SECTION 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST
CITY OF APOPKA, ORANGE COUNTY, FLORIDA



LOCATION MAP
(NOT TO SCALE)

SCALE 1" = 20'



SURVEYOR'S NOTES:

1. Bearings based on the S. line of the S.W. 1/4 of Section 9-21-28 as being S.89°52'47"E. (assumed).
2. Underground improvements not located, except as shown.
3. Subject to easements and restrictions of record, no Title provided.
4. Subject property lies in Zone "X" per Flood Insurance Rate Map Panel number 12095C0120H, dated 9/14/2021, and lies outside the 500-year flood plain.
5. Date of field survey: 9/24/23.
6. Elevations shown hereon based on Orange County Benchmark #S-1361-002, relative to the National Geodetic Vertical Datum of 1929. NGVD 29 is being used in order to match the Subdivision Engineering Plans of record. The conversion to NAVD 88 is -0.91 feet.

LEGAL DESCRIPTION

LOT 3, JOHNS ROAD COMMERCE PARK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 73, PAGE 36, OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.

LEGEND / ABBREVIATIONS

CONC	=	CONCRETE
R/W	=	RIGHT-OF-WAY
LP	=	LIGHT POLE
SS	=	STOP SIGN
TRA	=	ELEC TRANSFORMER
INL	=	DRAINAGE INLET
WS	=	1" POLY WATER LINE
OHW	=	OVERHEAD WIRES
F.F.E.	=	FINISHED FLOOR ELEVATION
BFP	=	BACK FLOW PREVENTER
P.O.B.	=	POINT OF BEGINNING
●	=	SET 5/8" IRON ROD #4887 UNLESS NOTED OTHERWISE
WM	=	WATER METER
RWM	=	RECLAIM WATER METER
WV	=	8" GATE VALVE
CO	=	SANITARY CLEANOUT
SAN	=	4" PVC SANITARY SERVICE
RCP	=	REINFORCED CONC PIPE

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EXISTING CONDITIONS
529 JOHNS ROAD

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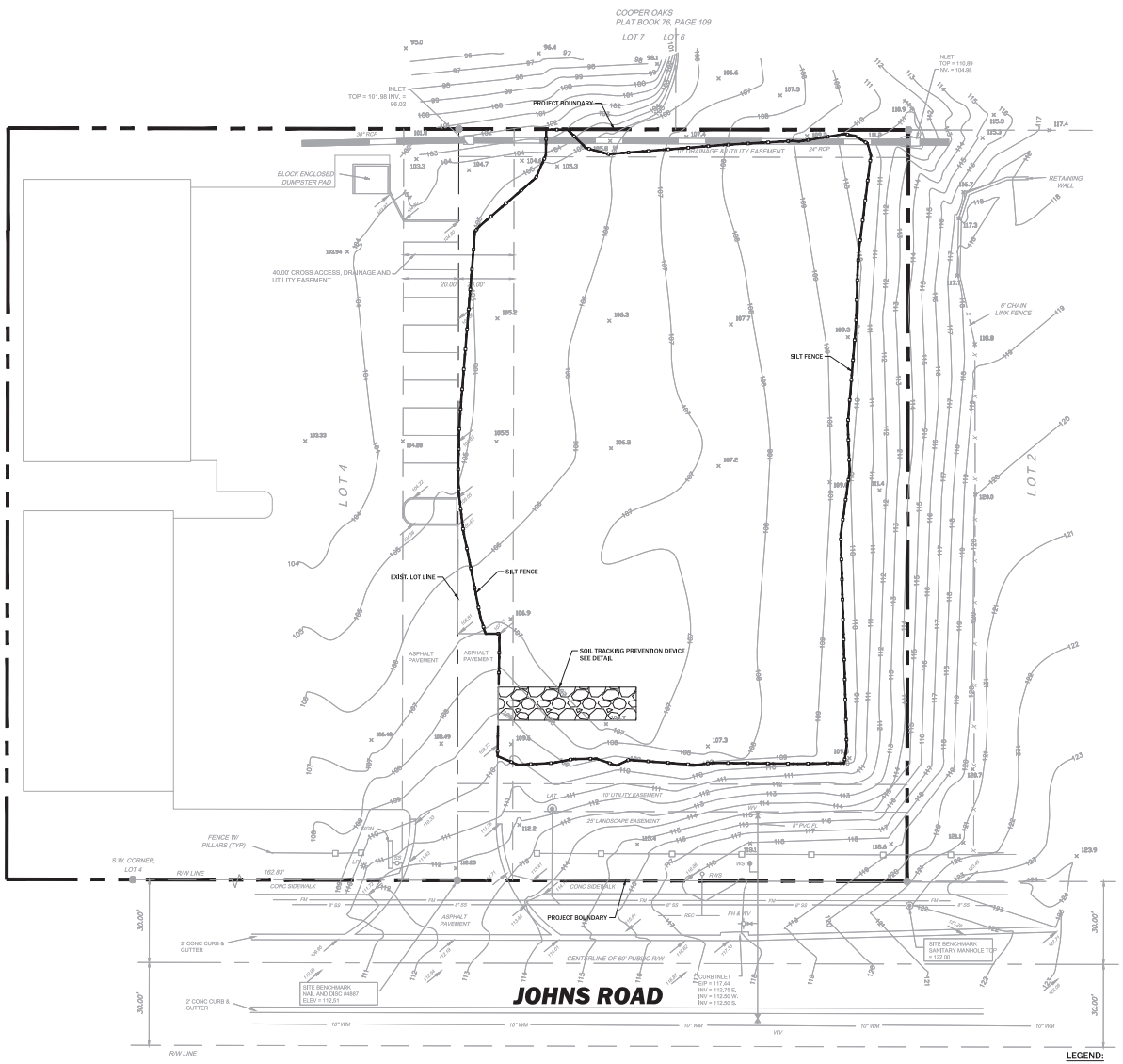

LEGEND:

- SOIL TRACKING PREVENTION DEVICE, SEE DETAIL
- SCHEMATIC LOCATION OF SILT FENCE. CONTRACTOR TO ADJUST LOCATION TO CONSTRUCTION LIMITS OR PER EXISTING CONDITIONS AS NECESSARY
- SOCK DRAIN CURB INLET PROTECTION. SEE DETAIL

0 20' 40'
GRAPHIC SCALE: 1" = 20'

SEDIMENTATION AND EROSION CONTROL NOTES:

1. THIS SEDIMENTATION AND EROSION CONTROL PLAN AND ASSOCIATED DETAILS ARE PROVIDED AS A GUIDE TO THE CONTRACTOR. THE CONTRACTOR SHALL PREPARE AND IMPLEMENT THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) WHICH DEMONSTRATES THE MEANS AND METHODS THAT WILL BE UTILIZED TO PROTECT THE CONSTRUCTION SITE AND SURROUNDING AREAS AND WETLANDS DURING CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS. THE PLAN SHALL INCLUDE AT A MINIMUM, THE LOCATION OF SOIL TRACKING PREVENTION DEVICES, SILT SCREENS AND FENCING, TURBIDITY BARRIERS, TEMPORARY SHEETING, EMERGENCY RESPONSE PRACTICES, AND ALL OTHER NECESSARY MEANS AND METHODS TO PREVENT POLLUTION.
2. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL LAWS, AND ALL REGULATIONS PERTAINING TO POLLUTION OF THE ENVIRONMENT.
3. FOR CONSTRUCTION ACTIVITIES THAT DISTURB 1 ACRE OR MORE OF LAND. OR DISTURB LESS THAN ONE ACRE OF LAND BUT ARE PART OF A COMMON PLAN OF DEVELOPMENT OR SALE, THE CONTRACTOR SHALL SUBMIT TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) A "NOTICE OF INTENT TO USE THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES" (NOI) A MINIMUM OF 2 CALENDAR DAYS BEFORE COMMENCEMENT OF CONSTRUCTION BY CLEARING, GRADING, EXCAVATING, DEMOLITION, OR OTHER CONSTRUCTION ACTIVITIES DISTURBING SOIL.
4. PRIOR TO SUBMITTING THE NOI, THE CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH EPA/FDEP NPDES AS WELL AS THE LOCAL AUTHORITY HAVING JURISDICTION'S MINIMUM EROSION CONTROL REQUIREMENTS.
5. ALL CONTRACTORS AND SUBCONTRACTORS INCLUDED ON THE STORMWATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE SWPPP AND THE NPDES PERMIT AND ABIDE BY THE REQUIREMENTS THEREIN.
6. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE SWPPP TO LIMIT SEDIMENTATION OUTSIDE OF THE PROJECT LIMITS. SITE CONDITIONS MAY NECESSITATE THE IMPLEMENTATION OF ADDITIONAL BMP'S WHICH SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
7. ALL BMP'S SHALL BE PROVIDED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, LOCAL REQUIREMENTS, MANUAL OF PRACTICE, AND/OR AS DIRECTED BY THE AGENCY HAVING JURISDICTION.
8. ALL BMP'S SHALL BE IN PLACE PRIOR TO CONSTRUCTION ACTIVITY AND MONITORED FOR ADEQUATE FUNCTION AND ANY NEEDED MAINTENANCE UNTIL THE PROJECT OR PHASE OF THE PROJECT IS FULLY COMPLETED AND ACCEPTED.
9. THE SITE SHALL BE INSPECTED BY A QUALIFIED INSPECTOR PROVIDED BY THE CONTRACTOR / OWNER AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN TWENTY-FOUR HOURS OF THE END OF A RAINFALL EVENT 6 INCHES OR GREATER.
10. INSPECTIONS OF THE BMPS SHALL COVER THE FOLLOWING:
    - ALL STORMWATER DISCHARGES FROM THE SITE TO ENSURE BMPS ARE NOT CAUSING OR CONTRIBUTING TO VIOLATIONS OF WATER QUALITY STANDARDS OR RESULTING IN OFFSITE SEDIMENTATION
    - THE BMP'S IDENTIFIED IN THE SWPPP ARE INSTALLED, MAINTAINED, AND OPERATING CORRECTLY AND EFFECTIVELY
    - BMP'S ARE BEING USED AND MAINTAINED PROPERLY FOR ALL AREAS USED FOR STORAGE OF MATERIALS EXPOSED TO RAINFALL AND RUNOFF
    - ANY EVIDENCE OF OFFSITE SEDIMENT TRACKING AT ALL LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE, NOTE ANY ACTIONS NEEDED TO REMOVE SEDIMENTS FROM THE ROADWAY AND TO PREVENT IT IN THE FUTURE.
    - ANY VISIBLE SIGNS OF EROSION AND SEDIMENTATION IN ALL DISTURBED AREAS AND DISCHARGE POINTS.
11. ANY CORRECTIVE ACTION TO THE BMP'S SHALL BE FULLY DOCUMENTED. A COPY OF THE APPROVED NOI, ACKNOWLEDGEMENT LETTER, SWPPP, INSPECTION REPORTS, RECORDS AND ALL NOTIFICATIONS FROM FDEP SHALL BE KEPT ON SITE AT ALL TIMES FOR REVIEW BY THE NPDES INSPECTOR, OWNER OR OTHER AUTHORIZED PARTIES.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIRT AND DUST ABATEMENT, AND SHALL WATER THE SITE OR USE OTHER APPROPRIATE MEASURES FOR CONTROL. NO USE OF PETROLEUM BASED OR OTHER TOXIC SUBSTANCES SHALL BE PERMITTED FOR DUST ABATEMENT.
13. THE CONTRACTOR SHALL PROVIDE SOIL TRACKING PREVENTION DEVICES AT DESIGNATED CONSTRUCTION ENTRANCES IN ACCORDANCE WITH THE FDOT EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL.
14. IF PROVIDED CONSTRUCTION ENTRANCES ARE NOT SUFFICIENT TO REMOVE DIRT AND MUD FROM THE TIRES OF VEHICLES AND EQUIPMENT LEAVING THE CONSTRUCTION SITE, THE TIRES MUST BE WASHED PRIOR TO THE VEHICLES LEAVING THE SITE AND ENTERING A PUBLIC ROAD.
15. ALL WATER USED FOR CLEANING CONCRETE TRUCKS, VEHICLES, EQUIPMENT OR OTHER CLEANING ACTIVITY SHALL BE PROPERLY DETAINED AND TREATED OR DISPOSED OF IN A LEGAL MANNER.
16. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ON TO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED AS SOON AS POSSIBLE.
17. SILT FENCING SHOWN ON THE PLANS IS SCHEMATIC AND MAY NEED TO BE ADJUSTED DUE TO SITE CONDITIONS. CONTRACTOR SHALL PLACE SILT FENCING ALONG THE LIMITS OF CONSTRUCTION BASED ON THE CONSTRUCTION PLANS IN THEIR ENTIRETY.
18. EXISTING CURB AND DITCH INLETS SHALL BE PROTECTED FROM SEDIMENTATION DUE TO SURFACE RUNOFF UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETE. FILTER FABRIC SHALL BE PLACED UNDER THE GRATE OF DITCH INLETS, AND FILTER SOCKS SHALL BE PLACED IN FRONT OF THE THROAT OF CURB INLETS.
19. TURBIDITY BARRIERS SHALL BE INSTALLED IN ALL EXISTING WATER BODIES WHERE CONSTRUCTION ACTIVITIES COULD CAUSE THE TRANSFER OF SEDIMENTS AND SUSPENDED SOLIDS. TURBIDITY BARRIERS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACTIVITY IS COMPLETE AND THE GROUND IS STABILIZED WITH A DENSE STAND OF VEGETATION.
20. THE CONTRACTOR SHALL REMOVE SEDIMENT IN STORMWATER PONDS AND ANY SEDIMENT THAT MAY HAVE ACCUMULATED IN THE STORMWATER DRAINAGE SYSTEM.
21. ALL RIGHT OF WAY, POND SLOPES, OR SLOPES 5:1 OR GREATER SHALL BE SODDED, ALL SODDED AREAS SHALL BE WATERED, FERTILIZED OR OTHERWISE MAINTAINED BY THE CONTRACTOR AS NECESSARY UNTIL FINAL ACCEPTANCE OF THE PROJECT.
22. IF CONSTRUCTION ACTIVITY HAS CEASED FOR ANY REASON, ALL DISTURBED AREAS SHALL BE SEEDED & MULCHED OR OTHERWISE STABILIZED NO LATER THAN 7 DAYS FROM THE LAST CONSTRUCTION ACTIVITY.

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SEDIMENTATION & EROSION CONTROL PLAN
529 JOHNS ROAD

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GARY R. RITTER
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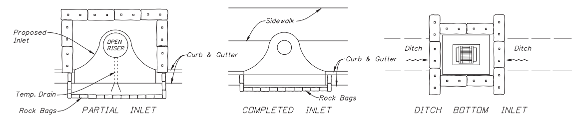
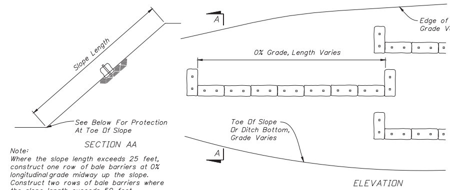
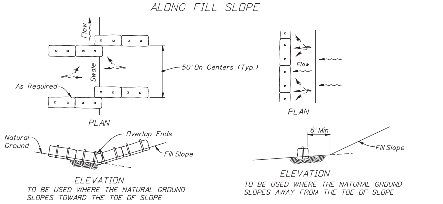


PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

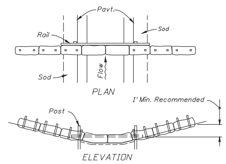


Note:
Where the slope length exceeds 25 feet, construct one row of bale barriers at 0% longitudinal grade midway up the slope. Construct two rows of bale barriers where the slope length exceeds 50 feet.

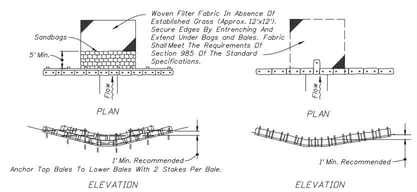
ALONG FILL SLOPE



AT TOE OF SLOPE
BARRIERS FOR FILL SLOPES



SYNTHETIC BALES OR BALE
TYPE BARRIERS FOR PAVED DITCHES

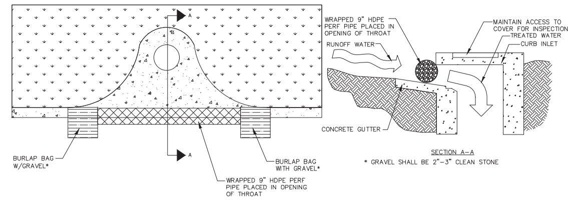


SYNTHETIC BALES OR BALE TYPE BARRIERS FOR UNPAVED DITCHES

NOTES FOR SYNTHETIC BALES OR BALE TYPE BARRIERS

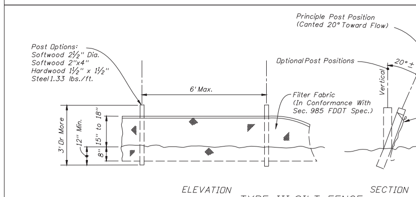
1. Type I and II Synthetic Barrier should be spaced in accordance with Chart 1, Sheet 1.
2. Bales shall be anchored with 2-1" x 2" (or 1" dia.) x 4' wood stakes. Stakes of other material or shape providing equivalent strength may be used if approved by the Engineer. Stakes other than wood shall be removed upon completion of the project.
3. Rails and posts shall be 2" x 4" wood. Other materials providing equivlalent strength may be used if approved by the Engineer.
4. Adjacent bales shall be butted firmly together.
5. Where used in conjunction with silt fence, bales shall be placed on the upstream side of the fence.
6. Bales to be paid for under the contract unit price for Synthetic Bales, LF. The unit price shall include the cost of filter fabric for Type I and II Barriers. Sandbags shall be paid for under the unit price for Sandbagging, CY. Rock bags to be paid for under the contract unit price for Rock Bags, EA.

2010 FDOT Design Standards	Last Revision	Sheet No.
TEMPORARY EROSION AND SEDIMENT CONTROL	07/01/09	2 of 3
	Index No.	102

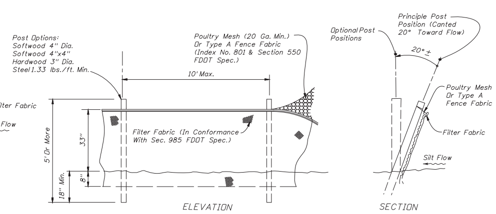


SOCK DRAIN INLET SEDIMENT FILTER
NTS

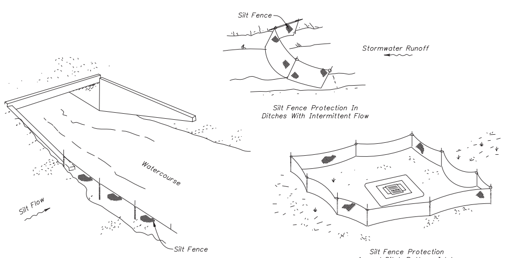
NOTE: THE PERFORATED PIPE MUST EXTEND AT LEAST 1' BEYOND THE CURB OPENING ON EACH SIDE AND BE ANCHORED WITH GRAVEL BAGS, OR SIMILAR, ON EACH END. A SPACER MUST BE PROVIDED FOR BETWEEN THE INLET OPENING AND THE PIPE TO ALLOW FOR OVERFLOW, PREVENT FLOODING AND TO PREVENT THE PIPE FROM FALLING INTO THE INLET.



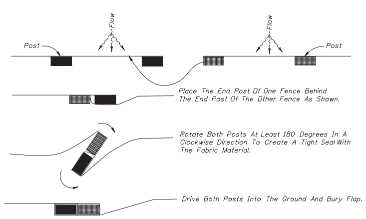
TYPE III SILT FENCE



TYPE IV SILT FENCE



SILT FENCE APPLICATIONS



PLAN VIEW
JOINING TWO SILT FENCES

NOTES FOR SILT FENCES

1. Type III Silt Fence to be used at most locations. Where used in ditches, the spacing for Type III Silt fence shall be in accordance with Chart 1, Sheet 1.
2. Type IV Silt Fence to be used where large sediment loads are anticipated. Suggested use is where fill slope is 1:2 or steeper and length of slope exceeds 25 feet. Avoid use where the detained water may back into travel lanes or off the right of way.
3. Do not construct silt fences across permanent flowing watercourses. Silt fences are to be at upland locations and turbidity barriers used at permanent bodies of water.
4. Where used as slope protection, Silt Fence is to be constructed on 0% longitudinal grade to avoid channelizing runoff along the length of the fence.
5. Silt Fence to be paid for under the contract unit price for Staked Silt Fence, (LF).

2010 FDOT Design Standards	Last Revision	Sheet No.
TEMPORARY EROSION AND SEDIMENT CONTROL	07/01/05	3 of 3
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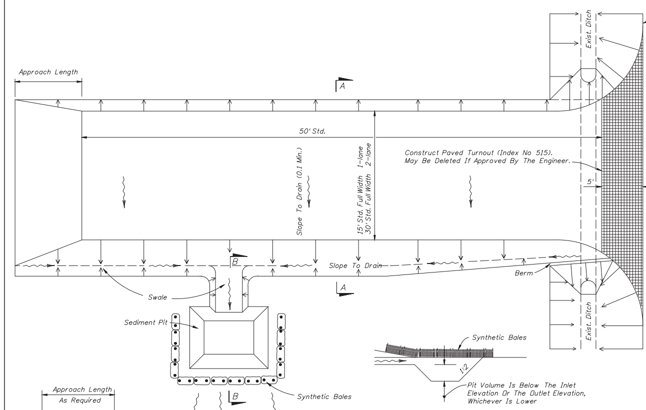

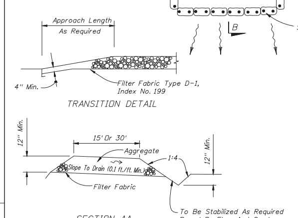

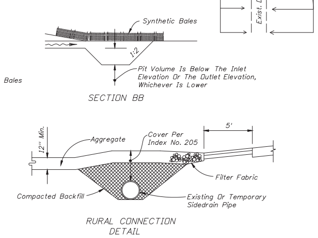

GENERAL NOTES

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The Contractor may propose an alternative technique to minimize off-site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
3. All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregates shall be as described in Section 901 excluding 901-2.3. Aggregates shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are unsuitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
   $15' \times 50' = 100\ ft.^3$ $30' \times 50' = 200\ ft.^3$
   As an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, synthetic bales or silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.02% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent off-site tracking, the STPD shall be rinsed (daily when in use) to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit the mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD; including but not limited to excavation, grading, temporary pipe (including MES when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Synthetic Bale or Bale Type Barrier shall be paid for under the contract unit price for Synthetic Bales, LF. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, LF.
10. The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and existing vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

2010 FDOT Design Standards	Last Revision	Sheet No.
SOIL TRACKING PREVENTION DEVICE TYPE A	07/01/07	1 of 1
	Index No.	106

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PREPARED FOR:
MCNULTY GROUP

SEDIMENTATION & EROSION CONTROL PLAN
529 JOHNS ROAD

ISSUE DATE: 02/02/2024 - FOR REVIEW
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GARTH R. RITTER
LICENSE No. 79364
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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PROJECT NUMBER:	23034

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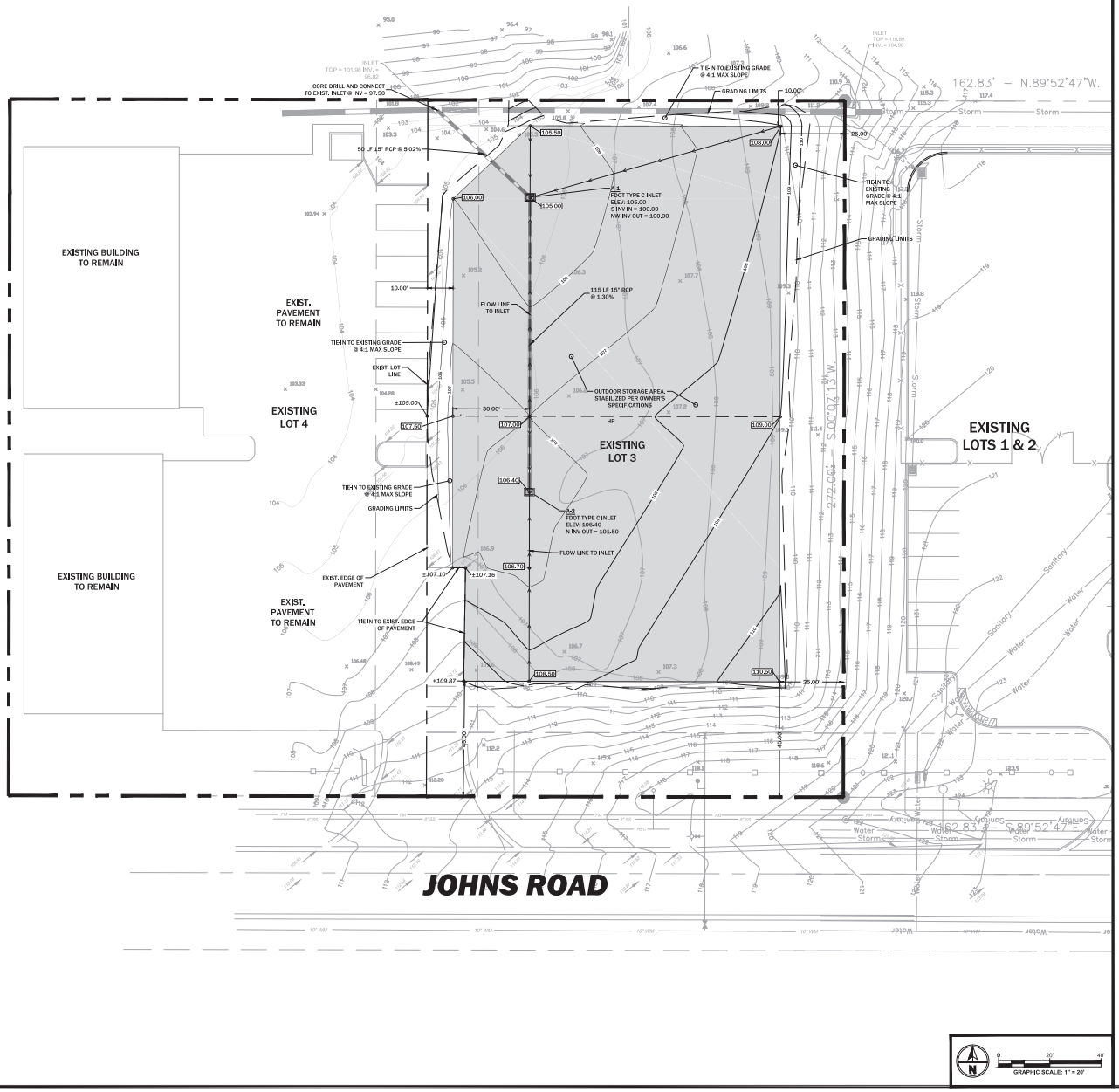
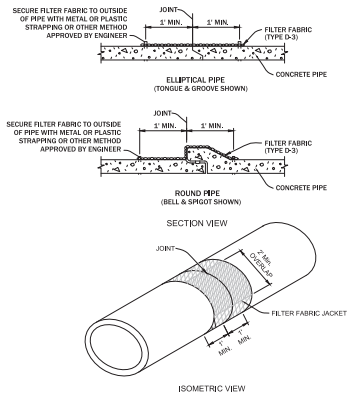
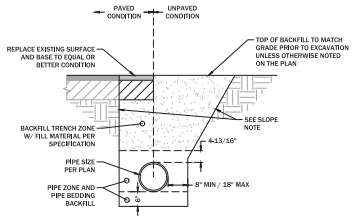




NOTES:
1. COST OF FILTER FABRIC JACKET TO BE INCLUDED IN COST OF PIPE CULVERTS
2. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.

FILTER FABRIC JACKET
NTS



SLOPE NOTE:
SHORE OR BRACE TRENCH WALLS WHERE SAFE SLOPES WOULD INTERFERE WITH EXISTING UTILITIES OR IMPROVEMENTS, OR EXTEND BEYOND THE EASEMENT / R.O.W. LIMITS.

TYPICAL TRENCH DETAIL
NTS

PLAN LEGEND:

	PROPERTY LINE / PROJECT BOUNDARY
	PROPOSED STABILIZATION
	GRADING LIMITS
	PAVEMENT SAWCUT LINE
98	EXISTING GRADE CONTOUR
111.00	PROPOSED SPOT ELEVATION
±111.00	APPROXIMATE EXISTING SPOT ELEVATION
20	PROPOSED CONTOUR
23	EXISTING CONTOUR

NOTE:

LOTS 3 AND 4 ARE PROPOSED TO BE COMBINED THROUGH ORANGE COUNTY PROPERTY APPRAISER LOT AGGREGATION

PREPARED BY:
RITTER CIVIL ENGINEERING ■ PLANNING
460 PINEY CROFT LANE MAITLAND, FL 32751
407-436-7276 ■ WWW.RITTERCIVIL.COM

PREPARED FOR:
MCNULTY GROUP

PAVING, GRADING & DRAINAGE PLAN
529 JOHNS ROAD

ISSUE DATE:	02/02/2024 - FOR REVIEW
REVISION:	
REVISION:	
REVISION:	
REVISION:	
REVISION:	
REVISION:	
REVISION:	

GARY R. RITTER
LICENSED
No. 73004
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY GARY R. RITTER ON THE DATE INDICATED HERE.
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
CIVIL DISCIPLINE ONLY
2024.02.02 13:51:54 -05'00'

DRAFTED:	GPR
DESIGNED:	GPR
REVIEWED:	GRR
PROJECT NUMBER:	23034

SHEET:
C5.0

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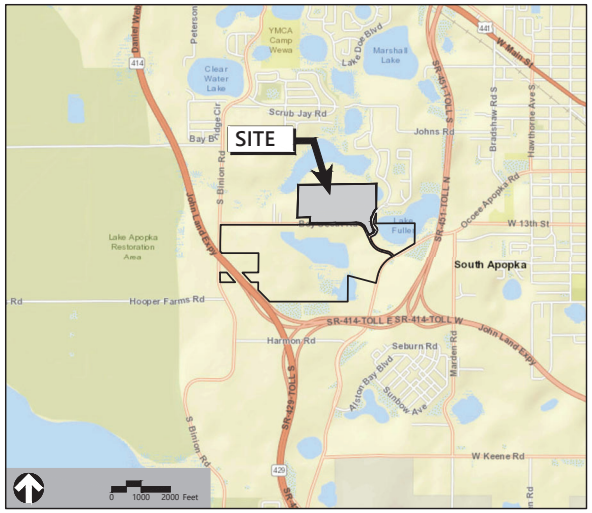
Construction Site Plan

Issued for	Construction Plan Approval
Date Issued	February 25, 2022
Latest Issue	January 17, 2024

The Ridge PD - Parcel 2

City of Apopka, Florida

Parcel IDs: 17-21-28-0000-00-006, 17-21-28-0000-00-017, 17-21-28-0000-00-018, 17-21-28-0000-00-023



vhb.com

225 E. Robinson Street
Suite 300
Orlando, FL 32801
407.839.4006
Certificate of Authorization
Number FL #3932

Owner

DRP FL 5 LLC
590 Madison Ave, 13th Floor
New York, NY 10022
P 212·751·5950

Applicant

Toll Brothers Inc.
2966 Commerce Park Drive
Suite 100
Orlando, Florida 32809
P 407·345·6006

Sheet Index

No.	Drawing Title	Latest Issue
C1.00	Legend, Abbreviations & Notes	November 22, 2023
C1.01	Existing Conditions & Erosion Control Plan	November 22, 2023
C1.02	Erosion Control Details	November 22, 2023
C1.05	Master Site Plan & Site Data	January 17, 2024
C1.10 - C1.11	Typical Sections & Details	November 22, 2023
C2.01-C2.04	Lot Grading Plan	November 22, 2023
C2.05	Grading Details	November 22, 2023
C2.10 - C2.11	Control Structure Details	November 22, 2023
C3.01-C3.04	Drainage & Wastewater Plan	January 17, 2024
C4.01-C4.04	Water Distribution Plan	January 17, 2024
C4.05-C4.08	Reclaimed Water Distribution Plan	January 17, 2024
C5.01-C5.04	Layout & Materials Plan	January 17, 2024
C6.01-C6.14	Plan & Profile	January 17, 2024
C7.00	Fire Access Plan	November 22, 2023
C9.00-C9.02	Standard F.D.O.T. Details	November 22, 2023
C9.03-C9.06	Standard Utility Details	November 22, 2023

No.	Drawing Title	Latest Issue
Shts. 1-8	ALTA/NSPS Land Title Boundary & Topographic Survey	November 9, 2020

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P 407·774·9383 - 407·478·8978

Allen & Company
16 E. Plant Street
Winter Garden, Florida 34787
P 407·654·5355

Environmental
Bio-Tech Consulting Inc.
3025 E. South Street
Orlando, Florida 32803
P 407·894·5969 - 407·894·5970

Development Scope
This development generally includes "Parcel 2" of the PD for The Ridge. Improvements include roadways, sidewalks, utilities, grading, stormwater, and site layout for a residential subdivision.

Land Use Attorney
Gray Robinson P.A.
301 E. Pine Street
Suite 1400
Orlando, Florida 32801
P 407·843·8880

John B. Prowell, PE

Digitally signed by John B. Prowell, PE
Date: 2024.02.07 08:47:25 -05'00'

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

VHB Project : 63534.03
Issued for : Construction Site Plan

\\VHB.COM\GBL\PROJ\ORLANDO\63534.03 TOLL BROS-THE RIDGE P-2\CAD\LD\PLANSET\PSP\63534.03-CDV 17 January 2024

Legend

Exist.	Prop.	
		PROPERTY LINE
		PROJECT LIMIT LINE
		RIGHT-OF-WAY/PROPERTY LINE
		EASEMENT
		BUILDING SETBACK
		PARKING SETBACK
10+00	10+00	BASELINE
		CONSTRUCTION LAYOUT
		ZONING LINE
		TOWN LINE
		LIMIT OF DISTURBANCE
		WETLAND LINE WITH FLAG
		FLOODPLAIN
BLSF		BORDERING LAND SUBJECT TO FLOODING
BZ		WETLAND BUFFER ZONE
NDZ		NO DISTURB ZONE
200'RA		200' RIVERFRONT AREA
		GRAVEL ROAD
EOP	EOP	EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
	CG	CURB AND GUTTER
CC	ECC	EXTRUDED CONCRETE CURB
CC	MCC	MONOLITHIC CONCRETE CURB
CC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
		LIMIT OF CURB TYPE
		SAWCUT
		BUILDING
	EN	BUILDING ENTRANCE
	LD	LOADING DOCK
		BOLLARD
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
		PATH
		TREE LINE
		WIRE FENCE
		FENCE
		STOCKADE FENCE
		STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DETENTION BASIN
		HAY BALES
		SILT FENCE
		SILT SOCK / STRAW WATTLE
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
10	10	PARKING COUNT
	C10	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SL	SL	STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING

Exist.	Prop.	
		CONCRETE
		HEAVY DUTY PAVEMENT
		BUILDINGS
		RIPRAP
		CONSTRUCTION EXIT
27.35 TC ×	27.35 TC ×	TOP OF CURB ELEVATION
26.85 BC ×	26.85 BC ×	BOTTOM OF CURB ELEVATION
132.75 ×	132.75 ×	SPOT ELEVATION
45.0 TW 38.5 BW ×	45.0 TW 38.5 BW ×	TOP & BOTTOM OF WALL ELEVATION
		BORING LOCATION
		TEST PIT LOCATION
MW	MW	MONITORING WELL
UD	UD	UNDERDRAIN
12"D	12D	STORM DRAIN
6"RD	6RD	ROOF DRAIN
12"S	12S	SEWER
FM	FM	FORCE MAIN
OHW	OHW	OVERHEAD WIRE
6"W	6W	WATER
4"FP	4FP	FIRE PROTECTION
	2DW	DOMESTIC WATER
3"G	G	GAS
E	E	ELECTRIC
STM	STM	STEAM
T	T	TELEPHONE
FA	FA	FIRE ALARM
CATV	CATV	CABLE TV
		CATCH BASIN CONCENTRIC
		CATCH BASIN ECCENTRIC
		DOUBLE CATCH BASIN CONCENTRIC
		DOUBLE CATCH BASIN ECCENTRIC
		GUTTER INLET
D		DRAIN MANHOLE CONCENTRIC
D		DRAIN MANHOLE ECCENTRIC
TD		TRENCH DRAIN
		PLUG OR CAP
CO	CO	CLEANOUT
		FLARED END SECTION
		HEADWALL
S		SEWER MANHOLE CONCENTRIC
S		SEWER MANHOLE ECCENTRIC
CS	CS	CURB STOP & BOX
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		SIAMESE CONNECTION
HYD	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
W	W	WATER WELL
GG	GG	GAS GATE
GM	GM	GAS METER
E	EMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
		LIGHT POLE
T	TMH	TELEPHONE MANHOLE
T	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
HH	HH	HAND HOLE
PB	PB	PULL BOX
MATCH LINE SEE SHEET C1.01		MATCHLINE

Abbreviations

General

APPROX	APPROXIMATE	MAX	MAXIMUM	TOS	TOE OF SLOPE
CONC	CONCRETE	MIN	MINIMUM	TOB	TOP OF BANK
EL	ELEVATION	NTS	NOT TO SCALE	TYP	TYPICAL
ELEV	ELEVATION	PROP	PROPOSED		
EX	EXISTING	REM	REMOVE		
FFE	FINISHED FLOOR ELEVATION	RET	RETAIN		

Utility

CB	CATCH BASIN	FES	FLARED END SECTION	I=	INVERT ELEVATION	R=	RIM ELEVATION
CMP	CORRUGATED METAL PIPE	FM	FORCE MAIN	LP	LIGHT POLE	RIM=	RIM ELEVATION
CO	CLEANOUT	GI	GUTTER INLET	MES	MITERED END SECTION	SMH	SEWER MANHOLE
DCB	DOUBLE CATCH BASIN	GV	GATE VALVE	PIV	POST INDICATOR VALVE	UG	UNDERGROUND
DMH	DRAINAGE MANHOLE	HDPE	HIGH DENSITY POLYETHYLENE PIPE	PVC	POLYVINYLCHLORIDE PIPE	UP	UTILITY POLE
CIP	CAST IRON PIPE	HYD	HYDRANT	PV	PLUG VALVE		
DIP	DUCTILE IRON PIPE	INV	INVERT ELEVATION	RCP	REINFORCED CONCRETE PIPE		

GENERAL NOTES:

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST STANDARDS OF CITY OF APOPKA, FLORIDA.
2. PAVEMENT STRIPING TO BE IN ACCORDANCE WITH ORANGE COUNTY SPECIFICATIONS AND WITH THE FLORIDA D.O.T. STANDARD PLANS FOR ROAD CONSTRUCTION, INDEX 711-001.
3. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION AND AT ALL POSSIBLE AREAS OF CONFLICT. THEY ARE DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR 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 CONTRACTORS 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 PLANS 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.
4. WHERE MUCK OR OTHER ORGANIC MATERIAL IS FOUND, IT SHALL BE REPLACED WITH GOOD QUALITY BACKFILL MATERIAL OBTAINED FROM THE GRADING OPERATIONS OR OTHER SOURCE APPROVED BY THE GEOTECHNICAL ENGINEER. THE ORGANIC MATERIAL SHALL BE THEN USED AS TOP DRESSING WHEN MIXED WITH CLEAN BACKFILL SOIL AS APPROVED BY THE GEOTECHNICAL ENGINEER OR PLACED AS APPROVED BY OWNER.
5. ALL FINISHED GRADES AND ELEVATIONS ARE AS DENOTED BY THE APPLICABLE LEGEND.
6. AS PART OF THE CLEARING AND GRUBBING OPERATION, THE CONTRACTOR IS TO REMOVE ALL FENCING AND/OR EXISTING FACILITIES FROM THE SITE.
7. FOR BENCHMARKS CONTACT ALLEN & COMPANY.
8. ANY STRUCTURES IN THE RECREATION AREA ARE TO BE PERMITTED SEPARATELY THROUGH THE CITY OF APOPKA BUILDING DEPARTMENT.
9. SIDEWALKS SHALL BE CONSTRUCTED TO BE FLORIDA ACCESSIBILITY AND ADA COMPLIANT INCLUDING HANDICAP RAMPS AT ALL INTERSECTIONS.
10. THE ORANGE COUNTY ENVIRONMENTAL PROTECTION DIVISION MUST BE NOTIFIED IN WRITING BY THE APPLICANT OF THE START AND COMPLETION OF THE PUBLIC ROAD IMPROVEMENTS.
11. THE LIMITS OF POND TRACTS SHALL BE SODDED UNLESS OTHERWISE NOTED.
12. CONCRETE SIDEWALKS (AS SPECIFIED BY APPROPRIATE ROADWAY SECTION) ADJACENT TO ALL LOTS TO BE INSTALLED BY HOME BUILDER. SIDEWALKS ADJACENT TO PONDS, PARKS, AND OPEN SPACE, AS SHOWN ON PLANS, ARE TO BE CONSTRUCTED WITH INFRASTRUCTURE.
13. EARTHWORK TO BE DONE IN ACCORDANCE WITH GEOTECHNICAL ENGINEERING EVALUATION REPORT: AS PREPARED BY YOVAISH ENGINEERING SERVICES LLC..
14. ALL UTILITIES LOCATED OUTSIDE PUBLIC RIGHT-OF-WAYS AND PUBLIC EASEMENTS SHOULD BE PRIVATELY OWNED AND MAINTAINED.
15. THE CONTRACTOR SHALL NOTIFY CITY OF APOPKA UTILITIES DIVISION 48-HOURS PRIOR TO ANY UTILITIES CONSTRUCTION.
16. THE CONSTRUCTION OF ALL UTILITIES CONNECTING TO CITY OF APOPKA UTILITY SYSTEMS SHALL CONFORM TO THE CITY OF APOPKA UTILITIES DESIGN AND CONSTRUCTION STANDARDS MANUAL, 2016 EDITION.
17. CONTRACTOR IS RESPONSIBLE FOR OBTAINING FDEP GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED SITE ACTIVITY IN ACCORDANCE OF FLORIDA ADMINISTRATIVE CODE 62-621.300 (2), 62-620, AND FLORIDA STATUTES CHAPTER 403.
18. CONTRACTOR SHALL NOT WILLFULLY INSTALL OR CONSTRUCT ITEMS AS SHOWN ON THE DRAWINGS WHEN IT IS APPARENT IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN EQUIPMENT, INFRASTRUCTURE, OR AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED PRIOR TO INSTALLATION OR CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

SANITARY SEWER NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN COMPLIANCE WITH CITY OF APOPKA UTILITIES DESIGN AND CONSTRUCTION STANDARDS MANUAL, 2016 EDITION.
2. ALL MANHOLES SHALL BE 4 FT. INSIDE DIAMETER.
3. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCES BETWEEN MANHOLE CENTERLINE.
4. ALL SANITARY SERVICE LATERALS SHALL BE 6 INCH DIAMETER.
5. INVERTS OF SANITARY SERVICE LATERALS AT THEIR CONNECTION TO SANITARY MANHOLES SHALL BE NO MORE THAN ONE (1) FOOT ABOVE THE MANHOLE INVERT.
6. MINIMUM AS BUILT 8" PVC SEWER LINE SLOPE WILL BE 0.28%. MINIMUM AS BUILT 10" PVC SEWER LINE SLOPE WILL BE 0.21%. MINIMUM AS BUILT 12" PVC SEWER LINE SLOPE WILL BE 0.17%. MINIMUM AS BUILT 15" PVC SEWER LINE SLOPE WILL BE 0.12%. MINIMUM AS BUILT 18" PVC SEWER LINE SLOPE WILL BE 0.10%. MINIMUM AS BUILT 24" PVC SEWER LINE SLOPE WILL BE 0.08%. IF MINIMUM PIPE SLOPE IS NOT MET, THE PIPE WILL BE RELAYED BY CONTRACTOR TO MEET THE MINIMUM REQUIREMENT AT NO ADDITIONAL COST.
7. MARK LATERALS WITH 6' HIGH PIECE OF 2" X 4" PLANK PAINTED GREEN WITH LOT NUMBER CLEARLY MARKED AND AN 'S' IMPRINTED IN THE CURB.
8. LEAKAGE TESTS ARE SPECIFIED REQUIRING THAT:
   1) THE LEAKAGE EXFILTRATION OR INFILTRATION DOES NOT EXCEED 150 GALLONS PER DAY, PER INCH OF PIPE DIAMETER PER MILE PER DAY AS MEASURED BETWEEN ADJACENT MANHOLES OVER A TWO (2) HOUR TESTING PERIOD.
   2) EXFILTRATION OR INFILTRATION TESTS BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET; AND
   3) LOW PRESSURE AIR LEAKAGE TEST, SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURE FOR "RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" AS ESTABLISHED BY THE UNIBELL PVC PIPE ASSOCIATION. PASSING THIS TEST SHALL BE PRESUMED TO ESTABLISH LEAKAGE TEST LIMITS OF FIFTY (50) GALLONS PER DAY, PER INCH OF DIAMETER PER MILE OF SEWER.
9. DESIGN REQUIRES:
   1) MANHOLE LIFT HOLES AND GRADE ADJUSTMENT RINGS BE SEALED WITH NON-SHRINKING MORTAR OR OTHER APPROPRIATE MATERIAL;
   2) INLET AND OUTLET PIPES BE JOINED TO THE MANHOLE WITH A GASKETED FLEXIBLE WATERTIGHT CONNECTION OR ANOTHER WATERTIGHT CONNECTION ARRANGEMENT THAT ALLOWS DIFFERENTIAL SETTLEMENT OF THE PIPE AND MANHOLE WALL; AND
   3) WATERTIGHT MANHOLE COVERS BE USED WHEREVER THE MANHOLE TOPS MAY BE FLOODED BY STREET RUNOFF OR HIGH WATER.
10. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SERVICES AT EACH LOT. SERVICES SHALL HAVE 3' MIN. AND 5' MAX. COVER AT LOT CLEAN OUT.

PAVING AND DRAINAGE NOTES:

1. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCE BETWEEN CENTERLINES OF DRAINAGE STRUCTURES.
2. ALL MEDIANS AND ISLANDS TO BE FILLED WITH CLEAN SOIL.
3. ALL PAVEMENT RETURN RADII SHALL BE 25' AND MEASURED FROM THE INNERFACE TO THE CONCRETE CURB AND PAVEMENT SURFACE UNLESS OTHERWISE NOTED.
4. DITCH BOTTOM AND CONTROL STRUCTURE INLET GRATES SHALL BE SECURED WITH CHAIN AND EYEBOLT.

PAVING AND DRAINAGE NOTES (CONTINUED):

5. FIVE (5) FEET OF SOD IS REQUIRED AROUND ALL DITCH BOTTOM INLETS, MANHOLES, HEADWALLS AND MITERED END SECTIONS.
6. TOP ELEVATIONS OF MANHOLES IN GRASSED AREAS SHALL BE AT MINIMUM 3 INCHES ABOVE FINISHED GRADE.
7. ALL CONCRETE DRAINAGE STRUCTURES TO BE CONSTRUCTED PER D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL PLACE BLUE REFLECTIVE MARKERS ON PAVEMENT IN FRONT OF FIRE HYDRANTS.
9. MINIMUM LONGITUDINAL SLOPE OF CURB SHALL BE 0.3%.
10. THE CONTRACTOR SHALL INSTALL, AS PART OF THE INFRASTRUCTURE AND PRIOR TO CERTIFICATE OF COMPLETION, DROP CURBS AND HANDICAP RAMPS AT ALL INTERSECTIONS OF THE SIDEWALK WITH THE PROPOSED PAVEMENT TO MEET CITY OF APOPKA AND A.D.A.

EROSION CONTROL NOTES:

1. SODDING OF DETENTION POND SIDE SLOPES SHOULD BE ACCOMPLISHED WITHIN 48 HOURS OF THE COMPLETION OF GRADING TO MINIMIZE EROSION POTENTIAL.
2. AT A MINIMUM, THE RETENTION/DETENTION STORAGE AREA MUST BE EXCAVATED TO ROUGH GRADE PRIOR TO BUILDING CONSTRUCTION OR PLACEMENT OF IMPERVIOUS SURFACE WITHIN THE AREA TO BE SERVED BY THOSE FACILITIES. TO PREVENT REDUCTION IN STORAGE VOLUME AND PERCOLATION RATES, ALL ACCUMULATED SEDIMENT MUST BE REMOVED FROM THE STORAGE AREA PRIOR TO FINAL GRADING AND STABILIZATION.
3. AT A MINIMUM SILT BARRIERS SHALL BE PLACED AS SHOWN ON THE CONSTRUCTION PLANS TO INSURE AGAINST POLLUTING, SILTING OR DISTURBING TO SUCH AN EXTENT AS TO CAUSE AN INCREASE IN TURBIDITY TO THE EXISTING WETLAND. IF DURING CONSTRUCTION THE PROPOSED EROSION CONTROL SYSTEM DOES NOT PERFORM SATISFACTORILY, ALTERNATIVES AND ADDITIONAL MEASURES SHALL BE IMPLEMENTED BY THE CONTRACTOR IN ORDER TO COMPLY WITH CITY OF APOPKA AND S.J.R.W.M.D EROSION PROTECTION STANDARDS. THE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MUST ALSO MEET FDEP'S MINIMUM SPECIFICATIONS, SEE PART 5.1 OF THE CGP, WHICH REFERENCES THE 2013 STATE OF FLORIDA E&SC DESIGNER AND REVIEWER MANUAL.
4. CONTRACTOR IS RESPONSIBLE TO SUBMIT EROSION CONTROL PLAN TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO THE SCHEDULING OF PRE-CONSTRUCTION CONFERENCE.
5. CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR ALL EROSION PROTECTION COSTS, INCLUDING ANY COSTS ASSOCIATED WITH COMPLIANCE ISSUES AND ENFORCEMENT ACTIONS.
6. DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO ENSURE AGAINST POLLUTING, SILTING OR DISTURBING TO SUCH AN EXTENT AS TO CAUSE AN INCREASE IN TURBIDITY TO THE EXISTING PONDS AND WETLAND/CONSERVATION AREAS ON OR OFF-SITE. SUCH MEASURES SHALL BE APPROVED BY THE PROJECT ENGINEER AND MAY INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION OF TEMPORARY EROSION CONTROL STRUCTURES SUCH AS SEDIMENT BASINS, SEDIMENT CHECKS, OR SILT BARRIERS.
7. A TWO FEET STRIP OF SOD SHALL BE PLACED BEHIND BACK OF CURB OR AS OTHERWISE DETAILED IN THE APPROPRIATE SECTION. A TEMPORARY SOD STRIP OF 4' MIN. SHALL BE USED DURING CONSTRUCTION.
8. CONTRACTOR IS RESPONSIBLE FOR PREPARING AND ADHERING TO A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE TO THE REQUIREMENTS OF THE NPDES CONSTRUCTION GENERIC PERMIT (CGP). REFER TO PART 4 OF THE CGP, 62-621.300(4)(A), FOR ADDITIONAL INFORMATION.
9. ALL PERMANENT EROSION CONTROL MEASURES SHALL BE COMPLETED WITHIN 7 DAYS OF ANY AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE EITHER TEMPORARILY OR PERMANENTLY CEASED (PART 5.4). ALL TEMPORARY EROSION CONTROL SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE COMPLETED AND ESTABLISHED.
10. DISCHARGE OF GROUNDWATER FROM DEWATERING OPERATIONS REQUIRES APPROVAL FROM FDEP AND THE APPLICABLE WATER MANAGEMENT DISTRICT. THE DEVELOPER/CONTRACTOR SHALL OBTAIN AN FDEP GENERIC PERMIT FOR THE DISCHARGE OF GROUND WATER FROM DEWATERING OPERATIONS PURSUANT TO THE REQUIREMENTS OF 62-621.300(2)(A) AND 62-620 F.A.C. AND FLORIDA STATUTES CHAPTER 403. DISCHARGES DIRECTED TO THE COUNTY'S MS4 REQUIRE AN ORANGE COUNTY RIGHT-OF-WAY UTILIZATION PERMIT FOR DEWATERING PRIOR TO THE START OF ANY DISCHARGES. TO OBTAIN RIGHT-OF-WAY APPROVAL, COPIES OF THE FDEP PERMIT, NOI, DOCUMENTATION SHOWING DEWATERING AT THE SITE IS NOT WITHIN 500 FT OF KNOWN CONTAMINATION, AND A DEWATERING PLAN SHALL BE SUBMITTED TO ALEXIS CLARK, ORANGE COUNTY ENVIRONMENTAL PROTECTION DIVISION (407-836-1433) AND ORANGE COUNTY PUBLIC WORKS DEVELOPMENT ENGINEERING PERMITTING SECTION. ANALYTICAL SAMPLING OF GROUNDWATER MAY BE REQUESTED BY ORANGE COUNTY ON A CASE-BY-CASE BASIS TO CONFIRM SITE CONTAMINATION STATUS.

RECORD DRAWING NOTES:

NOT LESS THAN THREE (3) WORKING DAYS PRIOR TO THE FINAL INSPECTION BY THE CITY, THE DEVELOPER'S ENGINEER SHALL PROVIDE A WRITTEN CERTIFICATION SIGNED, SEALED AND DATED, THAT ALL RECORD DRAWING PLANS, ACCURATELY AND COMPLETELY REFLECT ANY AND ALL DEVIATIONS FROM OR CHANGES MADE TO THE CITY APPROVED CONSTRUCTION PLANS. THE SUBMITTAL SHALL INCLUDE ONE (1) COMPLETE SET OF SIGNED, SEALED, AND DATED RECORD DRAWING PLANS. IN ADDITION TO THE PLANS THE DEVELOPER'S ENGINEER MUST ALSO SUBMIT ONE (1) ELECTRONIC COPY IN TIFF FORMAT (NOT PDF) AND ONE (1) ELECTRONIC COPY IN AUTOCAD 2013 (OR EARLIER VERSION) OF THE RECORD DRAWINGS TO THE CITY PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF ACCEPTANCE FOR THE IMPROVEMENTS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR RECORDING INFORMATION ON THE APPROVED PLANS AS CONSTRUCTION PROGRESSES. RECORD DRAWINGS SUBMITTED TO THE CITY AS PART OF THE PROJECT ACCEPTANCE SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. DRAWINGS SHALL BE LEGIBLY MARKED TO RECORD ACTUAL CONSTRUCTION.
2. DRAWINGS SHALL SHOW ACTUAL LOCATION OF ALL UNDERGROUND AND ABOVE GROUND WATER, RECLAIMED WATER STORM DRAINAGE AND WASTEWATER PIPING AND RELATED APPURTENANCES. ALL CHANGES SHALL BE BASED HORIZONTAL CONTROL DATUM NAD1983 STATE PLANE FLORIDA EAST (US FEET) AND VERTICAL CONTROL DATUM NAVD88. DRAWINGS SHALL SHOW ACTUAL INSTALLED PIPE SIZE, TYPE OF MATERIAL AND PRESSURE CLASS.
3. DRAWINGS SHALL CLEARLY SHOW ALL FIELD CHANGES OF DIMENSION AND DETAIL.
4. DRAWINGS SHALL CLEARLY SHOW ALL DETAILS NOT ON THE ORIGINAL CONTRACT DRAWINGS BUT CONSTRUCTED IN THE FIELD. ALL EQUIPMENT AND PIPING RELOCATION SHALL BE SHOWN.
5. LOCATION OF ALL MANHOLES, HYDRANTS, VALVES, AND VALVE BOXES SHALL BE SHOWN. ALL VALVES SHALL BE REFERENCED FROM AT LEAST TWO AND PREFERABLY THREE PERMANENT POINTS.
6. DIMENSIONS BETWEEN ALL MANHOLES SHALL BE FIELD VERIFIED AND SHOWN. THE INVERTS, GRADE ELEVATIONS AND SLOPE OF ALL MANHOLES SHALL BE SHOWN. SEWER LATERALS SHALL BE LOCATED ALONG THE MAINS MEASURED FROM THE NEAREST DOWNSTREAM MANHOLE.
7. THE DEPTH FROM FINISH GRADE OF POTABLE WATER, RECLAIMED WATER, AND SEWER FORCE MAINS SHALL BE INDICATED AT ALL VALVE LOCATIONS.
8. THE INFORMATION LISTED IN ITEM 2, 5, 6 AND 7, SHALL BE COMPLETED BY A CERTIFIED PROFESSIONAL LAND SURVEYOR. SIGNED AND SEALED CERTIFICATION PREPARED BY THE SURVEYOR SHALL BE SUBMITTED TO THE CITY.
9. THE CERTIFIED RECORD DRAWINGS SHALL BE PRESENTED IN DIGITAL FORMAT. THE FORMAT SHALL BE A HIGH RESOLUTION TIFF IMAGE AS WELL AS AUTOCAD, AT THE SAME SIZE AND SCALE AS THE DEVELOPMENT PLAN. THE RECORD DRAWINGS SHALL CONSIST OF EACH SHEET THAT APPEARS IN THE APPROVED FINAL DEVELOPMENT PLAN, PLUS ANY ADDITIONAL PLAN SHEETS NECESSARY TO COMPLETE THE PROJECT CONSTRUCTION.
10. EACH SHEET OF THE PLANS SHALL BE SIGNED, SEALED, AND DATED BY THE DEVELOPER'S ENGINEER AS BEING RECORD DRAWINGS. CONSTRUCTION PLANS SIMPLY STAMPED RECORD DRAWINGS NOT CERTIFYING THE ACCURACY OF THE LOCATION, ELEVATION AND CONFIRMATION OF SUCH UTILITIES WILL NOT BE ACCEPTED AND SHALL BE RETURNED TO THE DEVELOPER'S ENGINEER. THE "CERTIFICATE OF ACCEPTANCE" WILL NOT BE ISSUED UNTIL CORRECT RECORD DRAWINGS HAVE BEEN SUBMITTED.

RECORD DRAWING NOTES (CONTINUED):

11. COPIES OF ALL TESTING RESULTS AND SYSTEM CLEARANCE DOCUMENTATION FROM REGULATORY AGENCIES SHALL ALSO BE SUBMITTED TO THE CITY PRIOR TO THE ISSUANCE OF THE "CERTIFICATION OF ACCEPTANCE."
12. THE FOLLOWING STATEMENT SHALL APPEAR ON EACH SHEET OF RECORD:

"RECORD DRAWINGS CONTAIN INFORMATION FURNISHED BY OTHERS. THE INFORMATION PROVIDED HAS BEEN REVIEWED BY ME OR BY INDIVIDUALS UNDER MY DIRECT SUPERVISION AND FOUND TO BE CORRECT AND ACCURATE, CONSISTENT WITH THE PERMIT AND THE APPROVED DRAWINGS AND SPECIFICATIONS. ANY ADJUSTMENTS AND MINOR DEVIATIONS, WHICH ARE DEPICTED, WERE MADE WITH PRIOR APPROVALS AND IN MY JUDGEMENT DO NOT ALTER THE MAIN INTENT OF THE DESIGN, THE SAFETY OR THE STRUCTURAL INTEGRITY OF THE CONSTRUCTED WORK AND WILL NOT PREVENT THE PROJECT FROM FUNCTIONING IN ACCORDANCE WITH THE RULE REQUIREMENTS."

WATER NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN COMPLIANCE WITH AWWA STANDARDS AS WELL AS ORANGE COUNTY MANUAL OF STANDARDS AND SPECIFICATIONS FOR WATER MAIN AND WASTEWATER MAIN CONSTRUCTION.
2. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCES BETWEEN FITTINGS OF BRANCHES AND MAINS.
3. ALL GATE VALVES SHALL BE EQUIPPED WITH AN ADJUSTABLE CAST IRON VALVE BOX WITH COVER, WITH THREADED CAST BRONZE EXTENSIONS WHERE NEEDED.
4. ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FIRE HYDRANTS, THAT WILL BE INSTALLED UNDER THIS PROJECT, AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61 AND WILL BE MARKED WITH THE NSF SEAL OF APPROVAL.
5. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL BE COLOR CODED IN ACCORDANCE WITH SUB PARAGRAPH 62-555.320, F.A.C. USING BLUE AS A PREDOMINANT COLOR. ALL DUCTILE IRON WATER MAINS SHALL BE MARKED WITH A CONTINUOUS STRIPE LOCATED WITHIN THE TOP 90 DEGREES OF THE PIPE. SAID STRIPE SHALL BE A MINIMUM 2 INCHES IN WIDTH AND SHALL BE BLUE IN COLOR. BACKFILL SHALL NOT BE PLACED FOR 30 MINUTES FOLLOWING PAINT APPLICATION. FOR PIPE WITH AN INTERNAL DIAMETER OF 24" OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES A LONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE.
7. ALL NON-METALLIC WATER MAINS SHALL BE INSTALLED WITH A CONTINUOUS, INSULATED 10 GAUGE COPPER WIRE INSTALLED DIRECTLY ON TOP OF THE PIPE FOR LOCATION PURPOSES. SEE STANDARD DRAWINGS. IN ADDITION, ALL PVC WATER MAINS SHALL BE A SOLID BLUE COLOR. ALL LETTERING SHALL APPEAR LEGIBLY ON PIPE AND SHALL RUN THE ENTIRE LENGTH OF THE PIPE. LETTERING SHALL READ AS IS ACCEPTABLE FOR THE INTENDED USE.
8. HYDROSTATIC TESTING AND THE DISINFECTION OF THE WATER DISTRIBUTION SYSTEM SHALL BE DONE IN ACCORDANCE WITH THE AWWA STANDARDS. HYDROSTATIC TESTING TO BE DONE IN ACCORDANCE WITH AWWA C-600 FOR DUCTILE IRON PIPE AND C-605 FOR PVC PIPE. DISINFECTING TO BE DONE IN ACCORDANCE WITH AWWA C-651 AND RULE 62-555.340 F.A.C.
9. MARK SERVICES WITH 6' HIGH PIECE OF 2" X 4" PLANK PAINTED BLUE.
10. PIPE MATERIALS:
    PVC - ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT SHALL CONFORM TO APPLICABLE AWWA STANDARDS AND SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900, LATEST EDITION. PVC SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900. THE PVC SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI AND SHALL HAVE A DIMENSION RATIO (DR) OF 18. PIPE SHALL BE THE SAME O.D. AS DUCTILE IRON PIPE.

    PVC JOINT - SHALL BE IN ACCORDANCE WITH ASTM D3139.

    DUCTILE IRON - SHALL CONFORM TO ANSI/AWWA C150/C151. A MINIMUM OF CLASS 50 PIPE SHALL BE SUPPLIED.

    DUCTILE IRON JOINT - SHALL BE IN ACCORDANCE WITH ANSI A21.11 AND AWWA C111.

    SERVICES - SHALL BE IN ACCORDANCE WITH AWWA C901/C800 STANDARDS FOR POLYETHYLENE TUBING, CLASS 160.
11. WATER MAIN CONNECTION SHALL BE MADE UNDER THE SUPERVISION OF THE CITY OF APOPKA UTILITIES DIVISION. ALL VALVES SHALL BE OPERATED BY CITY OF APOPKA PERSONNEL ONLY. WATER MAINS ARE TO BE DISINFECTED PER ANSI/AWWA C651-92 AND CITY OF APOPKA UTILITIES DESIGN AND CONSTRUCTION STANDARDS MANUAL SECTION 52.2 WHICH INCLUDES A FULL DIAMETER FLUSH.
12. IN NO INSTANCE SHALL THE WATER MAIN BE LESS THAN 6" ABOVE OR 12" BELOW GRAVITY SEWER MAIN CROSSINGS. WHERE WATER AND GRAVITY SANITARY SEWER MAINS CROSS WITH LESS THAN 18 INCHES VERTICAL CLEARANCE OR THE SEWER MAIN IS ABOVE THE WATER MAIN, THE SANITARY SEWER WILL BE 20 FEET, CENTERED ON POINT OF CROSSING, OF PVC PIPE UPGRADED TO WATER MAIN STANDARDS AND PRESSURE TESTED. ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE PIPELINE SO THE WATER MAIN IS AS FAR AWAY AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-310, F.A.C. AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY - OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, FAC.
13. IN NO INSTANCE SHALL THE WATER MAIN BE LESS THAN 6" ABOVE OR 12" BELOW STORM SEWER CROSSINGS. WHERE WATER MAINS AND STORM SEWER PIPES CROSS WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, OR THE STORM MAIN IS ABOVE THE WATER MAIN, THE WATERMAIN SHALL BE 20 FEET OF DUCTILE IRON PIPE CENTERED ON THE POINT OF CROSSING.
14. IN NO INSTANCE SHALL THE WATER MAIN BE LESS THAT 6" ABOVE OR 12" BELOW THE REUSE MAIN CROSSINGS. WHERE WATER MAINS AND UNRESTRICTED ACCESS REUSE PIPES CROSS WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, THE UNRESTRICTED ACCESS REUSE MAIN SHALL BE UPGRADED AND HYDROSTATICALLY TESTED IN THE SAME MANNER AS GRAVITY SEWER MAINS.
15. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

    AT THE UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
16. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL CONTAIN NO MORE THAN 8.0% LEAD, AND ANY SOLDER OR FLUX USED IN THIS PROJECT SHALL CONTAIN NO MORE THAN 0.2% LEAD.
17. NEW OR ALTERED DEAD-END WATER MAINS INCLUDED IN THIS PROJECT SHALL BE PROVIDED WITH A FIRE OR FLUSHING HYDRANT OR BLOW-OFF FOR FLUSHING PURPOSES.
18. FIRE HYDRANT LEADS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 6" AND SHALL INCLUDE AN AUXILIARY VALVE.
19. IF AGGRESSIVE SOIL CONDITIONS ARE FOUND DURING CONSTRUCTION, WATER MAINS SHALL BE PROTECTED THROUGH THE USE OF CORROSION RESISTANT MATERIALS, THROUGH ENCASEMENT OF THE WATER MAINS IN POLYETHYLENE, OR THROUGH PROVISION OF CATHODIC PROTECTION.

CONTRACTOR BIDS:

1. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY AND INCLUDE ALL LINE ITEMS AND QUANTITIES IN THEIR BID WHICH ARE NECESSARY TO COMPLETE THIS PROJECT AS DETAILED ON THE CONSTRUCTION PLANS.

SURVEY AND GEOMETRY:

1. BOUNDARY BASED ON THE FOLLOWING:
   SURVEYOR: ALLEN & COMPANY
   16 E. PLANT STREET
   WINTER GARDEN, FLORIDA 34787
   (407) 654-5355
2. EXISTING TOPOGRAPHY AND CONTOURS BASED ON THE FOLLOWING:
   SURVEYOR: ALLEN & COMPANY
   DRAWING NO.(S): "20200618.dwg"
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SURVEY MONUMENTATION. DISTURBED MONUMENTATION SHALL BE RESTORED BY A FLORIDA-LICENSED LAND SURVEYOR SELECTED BY THE OWNER AT CONTRACTOR'S EXPENSE.
4. VERTICAL DATUM: NAVD, 1988

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The Ridge PD
Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH

Issued for: Construction Site Plan
Date: Feb. 25, 2022

Vertical Datum NAVD 1988

Drawing Title

Legend, Abbreviations & Notes

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C1.00

Sheet of

Project Number: 63534.03

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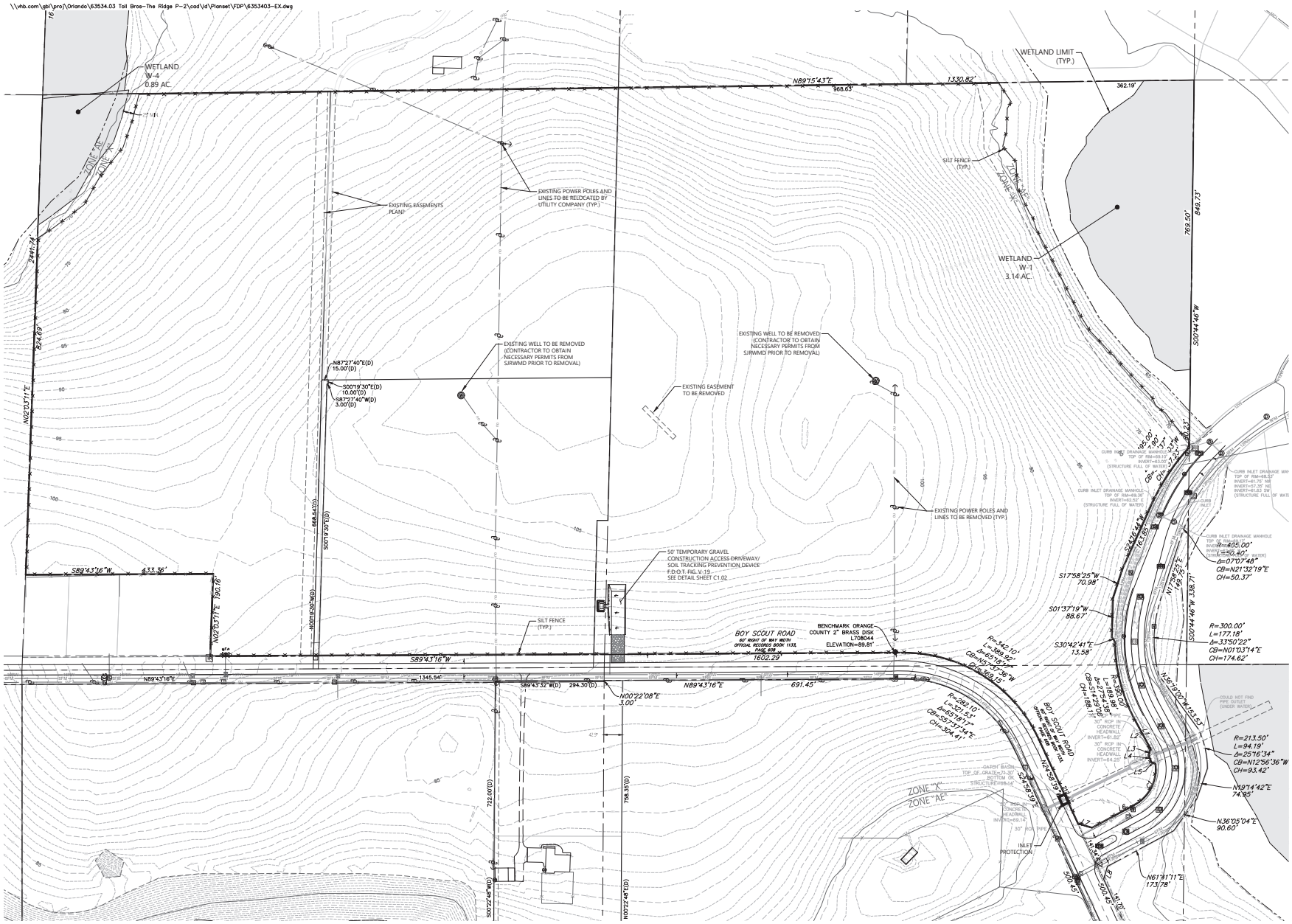

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LEGEND

- PROJECT BOUNDARY
- WETLAND
- UPLAND BUFFER
- SILT FENCE
- INLET PROTECTION

0 50 100 200 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Approv.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH

Issued for: **Construction Site Plan**
Vertical Datum NAVD 1988

Date: Feb. 25, 2022

Drawing Title: **Existing Conditions & Erosion Control Plan**

Drawing Number: **C1.01**

Sheet of

Project Number: 63534.03

CERTIFIED PROFESSIONAL ENGINEER LICENSE NO. 59469 STATE OF FLORIDA

John B. Prowell, P.E.
P.E. # 59469
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STATE OF FLORIDA E&SC DESIGNER & REVIEWER MANUAL; LATEST EDITION: JULY 2013

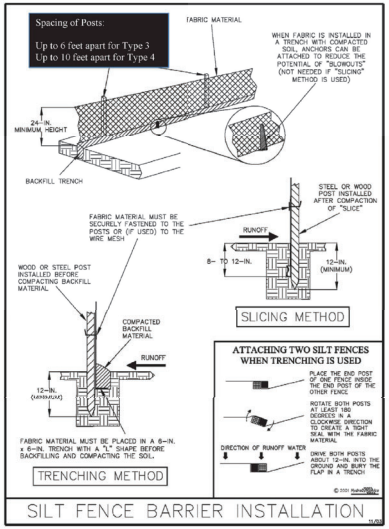

Figure V-2: Illustration of a Silt Fence Barrier

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NOTES

- Silt fence barriers are not to be used where concentrated flows of water are anticipated such as in drainage ditches, around inlets, or above/below where culverts discharge.
- When installed properly, silt fence barriers can create Type-2 sediment containment systems to allow for deposition of suspended particles, especially on vertical/big box construction sites.
- Silt fence barriers do not filter small-suspended particles in runoff waters.
- Using wire backing for support is discouraged due to disposal problems.
- Compacting trench fill material is very critical.

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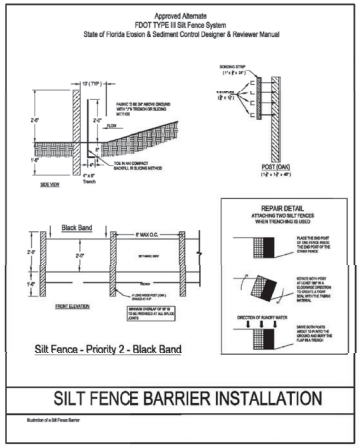

Figure V-3: Illustration of Silt Fence Priority 2 – Black Band

NOTES

- The life of the product is determined at the point in which it is no longer effective or needed to do the job for which it is designed (Approximately one year).
- Installation Specifications: The method of installation for the Priority 2 Silt Fence is an integral part of the system and is unlike other installation practices. The specifically designed process includes wood (oak) stakes and wood bonding strips placed at six (6') foot intervals. The silt fence shall be installed in a trench 4" wide and 8" deep. Installation of trenches over 4" wide are not recommended. Stakes are driven to a depth, which allows 24" of fabric to be above ground. The bonding strips (typically 1" x 3/8" x 24") are attached to the stake with 1" x 1 ¼" staples. Four staples are used to secure the fabric in place against the 1 1/8" x 1 1/8" oak post. This installation bonds the fabric to the vertical support post. The remaining fabric is now tucked into the trench forming a "J" and when filled with dirt creates a "ground foot". With this attachment to each post, the load is now spread to the total linear strength of all the posts within the system.
- *Any variance from the material specifications installation requirements may alter the performance of this product.* The product is available pre-staked to these specifications.

STATE OF FLORIDA E&SC DESIGNER & REVIEWER MANUAL; LATEST EDITION: JULY 2013

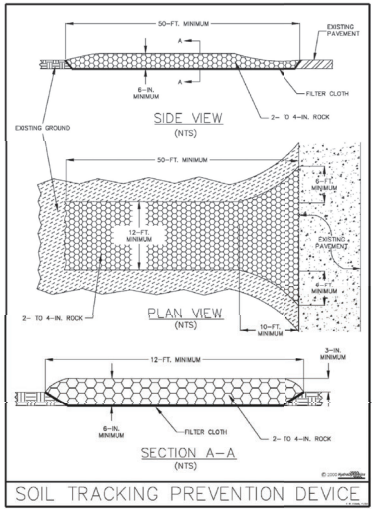

Figure V-19: Illustration of a Soil Tracking Prevention Device

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NOTE:
EROSION AND SEDIMENT CONTROL MEASURES TO BE IN ACCORDANCE WITH F.D.O.T. "EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL", LATEST EDITION.

The Ridge PD
Parcel 2

Apopka, Florida

No.	Revision	Date	Approved
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

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Checked by: JRH
Issued for: **Construction Site Plan**
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title
Erosion Control Details

Drawing Number
C1.02

Sheet of

Project Number
63534.03

CHARLES PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER
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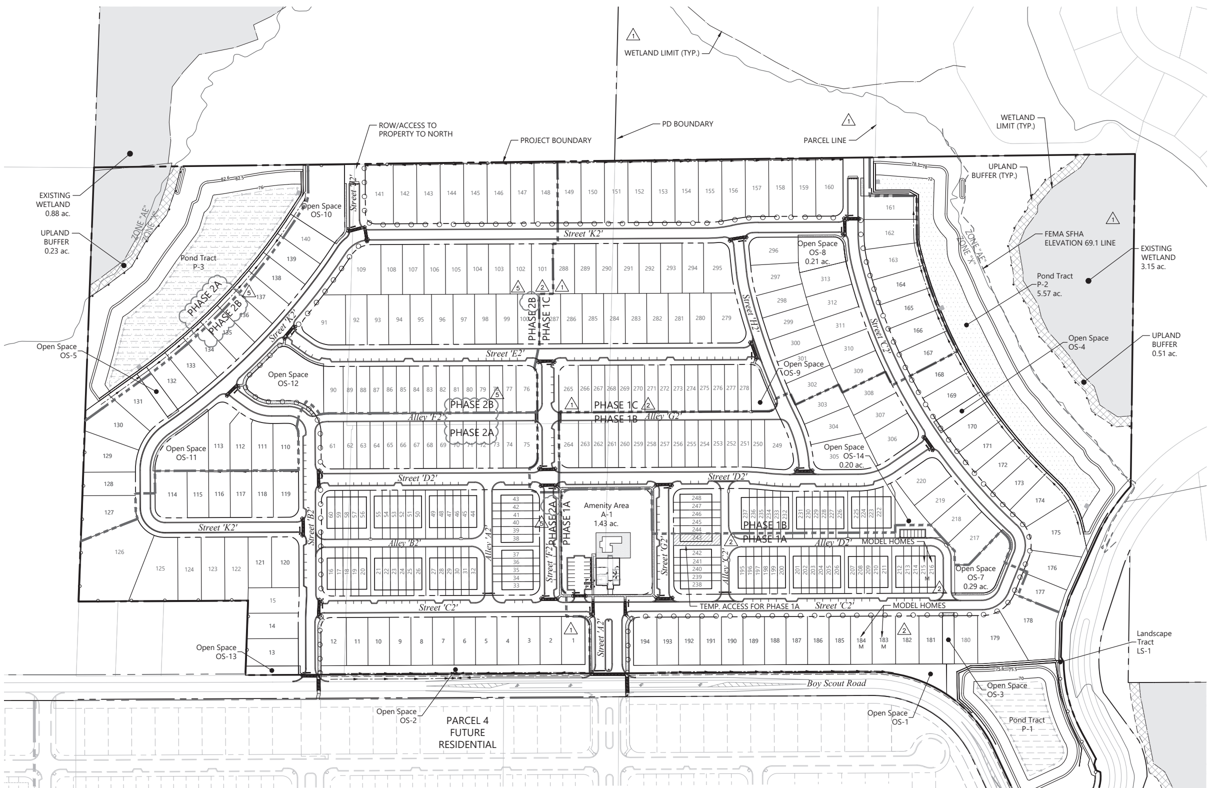

SIGNAGE:

RESIDENTIAL COMMUNITY SIGNAGE SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 5.10.9 AND NON-RESIDENTIAL STANDARDS SHALL COMPLY WITH 5.10.7 OF THE CITY OF APOPKA LAND DEVELOPMENT CODE.

LIGHTING:

EXTERIOR LIGHTING SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 5.6 OF THE CITY OF APOPKA LAND DEVELOPMENT CODE.

GARBAGE PICKUP:

FRONT LOADED SINGLE-FAMILY UNITS TO BE PICKED UP AT FRONT (R/W). REAR LOADED SINGLE-FAMILY UNITS AND TOWNHOME UNITS TO BE PICKED UP AT REAR ALLEY.

FIRE:

1. FIRE HYDRANTS SHALL BE INSTALLED SO THAT THE DESIGN AND CALCULATIONS MEET THE REQUIREMENTS IN THE CITY OF APOPKA CODE OF ORDINANCES AND THE FLORIDA FIRE PREVENTION CODE 7th EDITION (2020).
2. FIRE ACCESS SHALL BE FROM THE FRONT OF THE PROPOSED DWELLING UNITS. ACCESS SHALL BE IN ACCORDANCE WITH CHAPTER 18 NFPA 1 & 101, 2021 EDITION, FFPC 7TH EDITION (2020).
3. NEEDED FIRE FLOW FOR SINGLE FAMILY DWELLINGS SHALL BE AS FOLLOWS: HOMES 5,000 SQUARE FEET OR LESS 1,000 GPM; HOMES EXCEEDING 5,000 SQUARE FEET SHALL PROVIDE FIRE FLOW IN ACCORDANCE WITH TABLE 18.4.5.1.2 OF NFPA 1 & 101, 2021 EDITION, FFPC 7TH EDITION (2020). REDUCTION OF FIRE FLOW MAY BE PERMITTED IF DWELLING IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM OR SEPARATED FROM OTHER STRUCTURES BY AT LEAST 30 FEET, BUT IN NO CASE SHALL THE FLOW BE LESS THAN 500 GPM PER 18.4.5 NFPA1, 2021 EDITION, FFPC 7TH EDITION (2020).
4. ANY COMMERCIAL STRUCTURE OR RESIDENTIAL BUILDING OF THREE OR MORE STORIES MAY BE REQUIRED TO HAVE AN AUTOMATIC FIRE SPRINKLER PROTECTION DEPENDING UPON THE BUILDING CONSTRUCTION TYPE, OCCUPANCY CLASSIFICATION, AND ADDITIONAL BUILDING OR FIRE CODE REQUIREMENTS.

ARCHITECTURAL:

ARCHITECTURAL DESIGN SHALL MEET THE INTENT OF THE CITY OF APOPKA'S DEVELOPMENT DESIGN GUIDELINES.

LANDSCAPE:

1. LANDSCAPING AND BUFFER STANDARDS SHALL BE IN ACCORDANCE WITH TABLE 5.2.5.B.3.D-1: BUFFERYARD APPLICATION OF THE CITY OF APOPKA LAND DEVELOPMENT CODE. INTERIOR LANDSCAPE BUFFERS BETWEEN ABUTTING PROPERTY BOUNDARIES MAY HAVE A TEN (10) FOOT WIDE LANDSCAPE BUFFER. LANDSCAPING STANDARDS FOR RESIDENTIAL DEVELOPMENT SHALL ADHERE TO SECTION 5.2.2(B) OF THE CITY OF APOPKA LAND DEVELOPMENT CODE

OWNERSHIP/MAINTENANCE:

ROADWAYS	PUBLIC:	TO BE OWNED AND MAINTAINED BY THE CITY OF APOPKA. WHERE PARKING SPACE STRIPING IS PROVIDED IN THE ROW, THE STRIPING SHALL BE MAINTAINED BY THE HOME OWNERS ASSOCIATION
STORMWATER TRACTS	PUBLIC:	TO BE OWNED AND MAINTAINED BY THE HOME OWNERS ASSOCIATION, WITH EASEMENTS TO THE CITY OF APOPKA
DRAINAGE EASEMENTS	PUBLIC:	TO BE DEDICATED TO THE CITY OF APOPKA AND THE HOME OWNERS ASSOCIATION
UTILITY EASEMENTS	PUBLIC:	TO BE DEDICATED TO THE CITY OF APOPKA
SANITARY SEWER, RECLAIMED WATER & POTABLE WATER SYSTEM	PUBLIC:	TO BE OWNED AND MAINTAINED BY THE CITY OF APOPKA
STORM SEWER SYSTEM	PUBLIC:	TO BE OWNED AND MAINTAINED BY THE CITY OF APOPKA
PARK TRACTS	PUBLIC:	TO BE OWNED AND MAINTAINED BY THE COMMUNITY DEVELOPMENT DISTRICT
OPEN SPACE/LANDSCAPE TRACTS	PUBLIC:	TO BE OWNED AND MAINTAINED BY THE HOME OWNERS ASSOCIATION
RETAINING WALLS	PUBLIC:	TO BE OWNED AND MAINTAINED BY THE HOME OWNERS ASSOCIATION

Saved Wednesday, December 20, 2023 9:58:26 AM GGEORGY Plotted Wednesday, January 17, 2024 3:02:17 PM Jordan Fisher

GENERAL SITE DATA:

GENERAL:

ZONING	PD
PROPOSED UNITS:	313
SINGLE FAMILY	218
TOWNHOMES	95
TOTAL GROSS ACRES	79.57 Ac.
TOTAL WETLAND ACRES	4.08 Ac.
IMPACTED WETLAND ACRES	0.00 Ac.
PRESERVED WETLAND ACRES	4.08 Ac.
TOTAL DEVELOPABLE ACRES	75.49 Ac.
OPEN SPACE	28.83 Ac.
TOTAL STORMWATER PROVIDED	6.84 Ac.
DEDICATED PUBLIC ROW	13.90 Ac.

DEVELOPMENT PLAN CHART

PARCEL ID NUMBERS	17-21-28-0000-00-006, 17-21-28-0000-00-017, 17-21-28-0000-00-018, 17-21-28-0000-00-023	
FUTURE LAND USE	MIXED USE	
ZONING	PD	
ADJACENT FUTURE LAND USE	NORTH (CITY): RESIDENTIAL LOW	
	EAST (CITY): RESIDENTIAL MEDIUM, RESIDENTIAL LOW, INDUSTRIAL	
	SOUTH (CITY): MIXED-USE	
	WEST (CITY AND COUNTY): RESIDENTIAL LOW, COUNTY ROAD, MIXED USE	
ADJACENT ZONING	NORTH (CITY): RSF-1B (RESIDENTIAL SINGLE FAMILY DISTRICT - LARGE LOT), T (TRANSITIONAL), COUNTY A-1 (CITRUS RURAL) AND MU-ES-GT	
	EAST (CITY): RMF (RESIDENTIAL MULTI-FAMILY), PD, I-L (LIGHT INDUSTRIAL)	
	SOUTH (CITY): T AND MU-ES-GT	
	WEST (CITY AND COUNTY): T AND MU-ES-GT	
ACREAGE/SQUARE FOOTAGE	79.57 ac.	
BUILDING SEPARATION (townhome)	MIN. 20'	
BUILDING HEIGHT (single-family)	PROPOSED: 2 STORIES	MAX: 2 STORIES/35'
BUILDING HEIGHT (townhome)	PROPOSED: 2 STORIES	MAX: 3 STORIES/40'
NET DENSITY	PROPOSED: 3.9 Du/ac.	MAX: 4.3 Du/ac.
BUILDING SETBACKS (single-family front loaded)	PROPOSED: FRONT: 20'(1) SIDE: 5' REAR: 20'(2) PORCH: 10'	
	REQUIRED: FRONT: 20'(1) SIDE: 5' REAR: 20'(2) PORCH: 10'	
BUILDING SETBACKS (single-family rear loaded)	PROPOSED: FRONT: 15' SIDE: 5' REAR: 20'(3) PORCH: 10'	
	REQUIRED: FRONT: 15' SIDE: 5' REAR: 20'(3) PORCH: 10'	
BUILDING SETBACKS (townhomes)	PROPOSED: FRONT: 15'(1) SIDE: 0' REAR: 20'(3) PORCH: 10'	
	REQUIRED: FRONT: 15'(1) SIDE: 0' REAR: 20'(3) PORCH: 10'	
PARKING SPACES	PROVIDED: 1252	
	REQUIRED: 636 (10 for TH visitors)	
NUMBER OF EMPLOYEES	N/A	
PROPOSED NUMBER OF BEDS	N/A	
WAIVER REQUEST	YES: NO: X	
VARIANCE REQUEST	YES: NO: X	
MIN. LOT WIDTH & DEPTH(single-family)	55' x 100' (front loaded) and 32' x 110' (rear loaded)	
MIN. LOT WIDTH & DEPTH(townhome)	18' x 100'	

NOTES:
(1) SEE SECTION SEC 3.04.06 (10) (a) (1) FOR FRONT LOADED GARAGE DOORS SETBACKS.
(2) MIN. 20' BUILDING SETBACK ASSUMES NO ALLEY. THE MIN. REAR BUILDING SETBACK FOR ALLEYS IS 5'. GARAGES WITH DIRECT ACCESS FROM AN ALLEY SHALL BE SET BACK WITH A MINIMUM OF 22 FEET FROM THE PROPERTY LINE. SEC 3.04.06 (10) (a) (3).
(3) MIN. 3' REAR PRIMARY STRUCTURE SETBACK WITH DETACHED GARAGE.
(4) MINIMUM LIVING AREA IS DEFINED AS HEATED AND COOLED AREA OF HOUSE, NOT INCLUDING GARAGES OR OTHER STRUCTURES.
(5) CORNER SIDE SETBACK IS 15' FOR SINGLE FAMILY LOTS AND 10' FOR TOWNHOME LOTS.

PHASING:

THIS PROJECT WILL BE DEVELOPED IN FIVE (5) PHASES.

MISCELLANEOUS:

POTABLE WATER SERVICE:	CITY OF APOPKA	
WASTEWATER, RECLAIMED SERVICE:	CITY OF APOPKA	
ELECTRIC SERVICE:	DUKE ENERGY	
FIRE PROTECTION:	CITY OF APOPKA	
SCHOOL AGE POPULATION:	80	(313 UNITS)
AVERAGE DAILY TRAFFIC PER ITE 210 (10TH EDITION):	3,049	
P.M. PEAK HOUR TRIPS:	685	

PUBLIC OPEN SPACE CALCULATIONS:

20% REQUIRED PUBLIC OPEN SPACE HAS BEEN ACCOUNTED FOR WITHIN THE POND TRACKS, BUFFERS, AND GREEN SPACE

TOTAL DEVELOPABLE ACRES	REQUIRED (20%) ACRES	OPEN SPACE ACRES	
75.49	15.10	OPEN SPACE TRACT	3.66 ac.
		STORMWATER TRACT (P-1)	2.13 ac.
		STORMWATER TRACT (P-2)	5.57 ac.
		STORMWATER TRACT (P-3)	3.73 ac.
		UPLAND BUFFER	0.74 ac.
		TOTAL	**15.83 ac.**

Green Building Standards - Parcel 2	Points
Minimum Points Required	4.00
Potential Standards to be Implemented with CSP	
Use central air conditioners that are Energy Star qualified	0.50
Use only solar or tank-less water heaters	0.50
Use pervious pavement on at least 50% of parking lot and driveway area development	1.00
Install operable windows to allow for natural ventilation in the even of power failures	0.25
Pre-wire minimum 50% of units for solar panels	0.75
Provide rain gardens, street side swales, or other appropriate storm water infiltration system(s) that capture a minimum of 25% of site stormwater runoff	1.00
Potential Point Total	**4.00**

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LEGEND

- PROPERTY BOUNDARY
- PROJECT BOUNDARY
- PHASE LINE
- WETLAND
- UPLAND BUFFER
- PROPOSED TRAIL
- M — MODEL HOME

0 75 150 300 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by DMK — Checked by JRH

Issued for: Construction Site Plan — Date: Feb. 25, 2022

Vertical Datum NAVD 1988

Drawing Title: **Master Site Plan & Site Data**

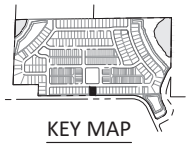
JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

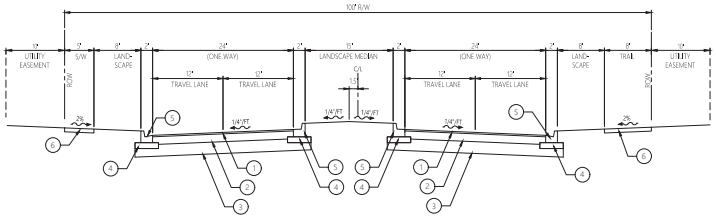
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C1.05

Sheet of

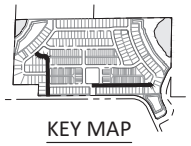
Project Number: 63534.03

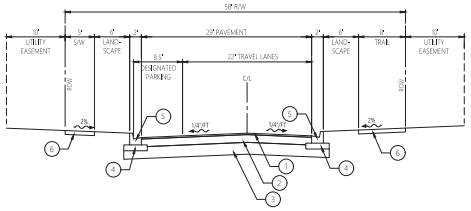




A - Typical Entrance Road Section (100' ROW)

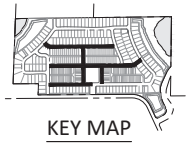
N.T.S.

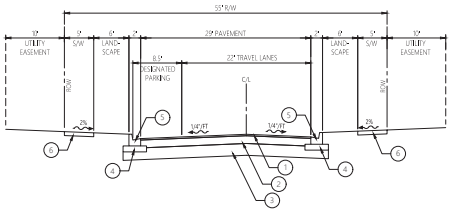




B - Typical Road Section - Parking One Side (58' ROW)

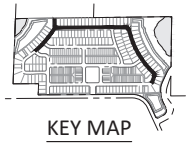
N.T.S.

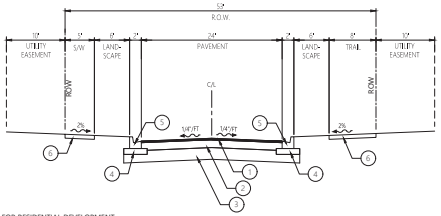




C - Typical Road Section - Parking One Side (55' ROW)

N.T.S.

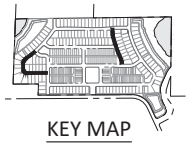


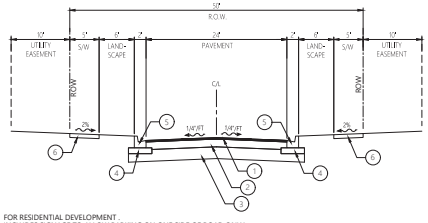


FOR RESIDENTIAL DEVELOPMENT.
INCLUDES SIGNAGE TO ALLOW PARKING ON ONE SIDE OF ROAD ONLY.

D - Typical Road Section - (53' ROW)

N.T.S.

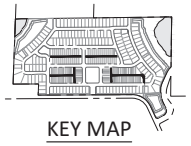


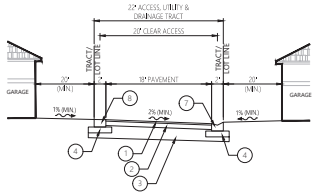


FOR RESIDENTIAL DEVELOPMENT.
INCLUDES SIGNAGE TO ALLOW PARKING ON ONE SIDE OF ROAD ONLY.

E - Typical Road Section - (50' ROW)

N.T.S.





NOTES:
1. THERE SHALL BE NO STRUCTURE OR ANY KIND OF PERMANENT OBSTRUCTION IN REAR ALLEY ACCESS TRACT.
2. A MINIMUM 35-FOOT TURNING RADIUS SHALL BE PROVIDED WITHIN ALLEYWAYS AND AT INTERSECTIONS BETWEEN ALLEYWAYS. A MINIMUM 25-FOOT TURNING RADIUS SHALL BE PROVIDED WHERE ALLEYWAYS INTERSECT ROADWAYS. THE TURNING RADIUS SHALL BE MEASURED FROM THE INSIDE OF THE CURB.

F - Typical Alley Road Section - Two Way

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LEGEND:

1. 1 1/2" (IN.) SP 9.5 ASPHALT (COMPACTED TO 93% OF LABORATORY MAXIMUM DENSITY)
2. 8" (IN.) CRUSHED CONCRETE BASE (LBR 150) (COMPACTED TO A DENSITY OF MIN. 98% MODIFIED PROCTOR PER AASHTO T-180) ALTERNATE: 8" (IN.) LIMEROCK BASE (LBR 100) (COMPACTED TO A DENSITY OF MIN. 98% MODIFIED PROCTOR PER AASHTO T-180)
3. 12" (IN.) STABILIZED SUBGRADE (LBR 40) (COMPACTED TO MIN. 98% OF MODIFIED PROCTOR MAX. DRY DENSITY PER AASHTO T-180)
4. 6" (IN.) STABILIZED SUBGRADE IN CURB AREA TO EXTEND 12" (IN.) EACH SIDE TO 50 FBV
5. TYPE 'F' CONCRETE CURB
6. 4" (IN.) CONC. SIDEWALK (3000 P.S.I.)
7. TYPE 'DROP CURB' CONCRETE CURB
8. 2' RIBBON CURB

* FOR DETAILS ON PAVEMENT SECTIONS, SEE REPORT BY DEVO ENGINEERING, DATED OCTOBER 10, 2019.
**CRUSHED CONCRETE BASE WITHIN PUBLIC RIGHTS OF WAY SHALL MEET THE REQUIREMENTS OF SECTION 204-2 OF THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
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5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

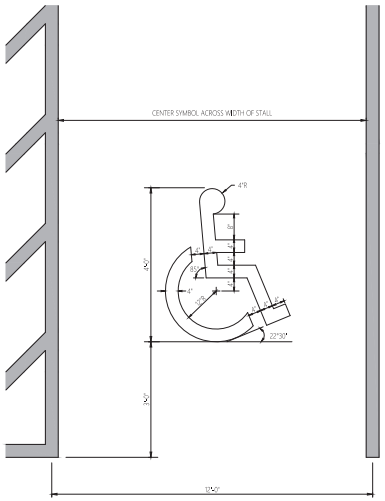
Drawing Title: Typical Sections

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

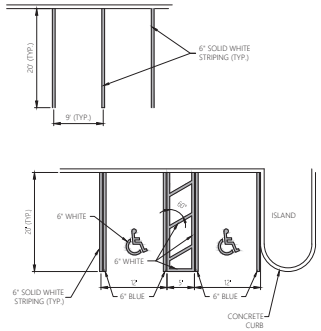
Drawing Number: C1.10
Sheet of
Project Number: 63534.03

Saved Tuesday, October 15, 2022 8:07:28 AM CDERLACH Plotted Wednesday, January 17, 2024 2:18:43 PM Jordan Fisher



Accessible Parking Space Symbol

N.T.S.

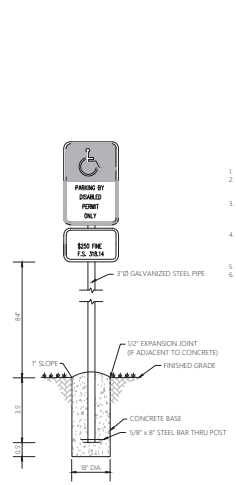


Notes:

1. BLUE PAVEMENT MARKINGS SHALL BE TINTED TO MATCH SHADE 15180 OF FEDERAL STANDARDS 595a.
2. THE FTP-22-06 PANEL SHALL BE MOUNTED BELOW THE FTP-21-06 SIGN.
3. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
4. ALL SLOPES THROUGHOUT THE ACCESSIBLE PARKING AND AISLE AREAS SHALL NOT EXCEED 1.5%.

Typical Pavement Markings - Stall Layout

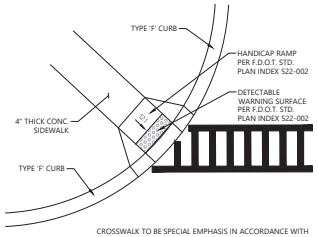
N.T.S.



1. ALL LETTERS ARE 1" SERIES "C" PER M.U.T.C.D.
2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WITH BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
4. FINE NOTIFICATION SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND & BORDER.
5. ONE (1) SIGN REQUIRED FOR EACH PARKING SPACE.
6. INSTALLATION HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL (M.U.T.C.D.)

Accessibility Sign Detail

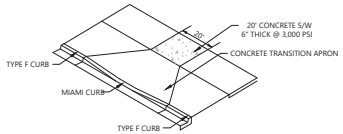
N.T.S.



CROSSWALK TO BE SPECIAL EMPHASIS IN ACCORDANCE WITH F.D.O.T. STD. PLAN INDEX 711-001.

Crosswalk Detail

N.T.S.



Pond Access Apron Detail

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Number FL #3932

The Ridge PD
Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: **Construction Site Plan**
Date: **Feb. 25, 2022**
Vertical Datum NAVD 1988

Drawing Title
Typical Sections & Details

Drawing Number
C1.11

Sheet of

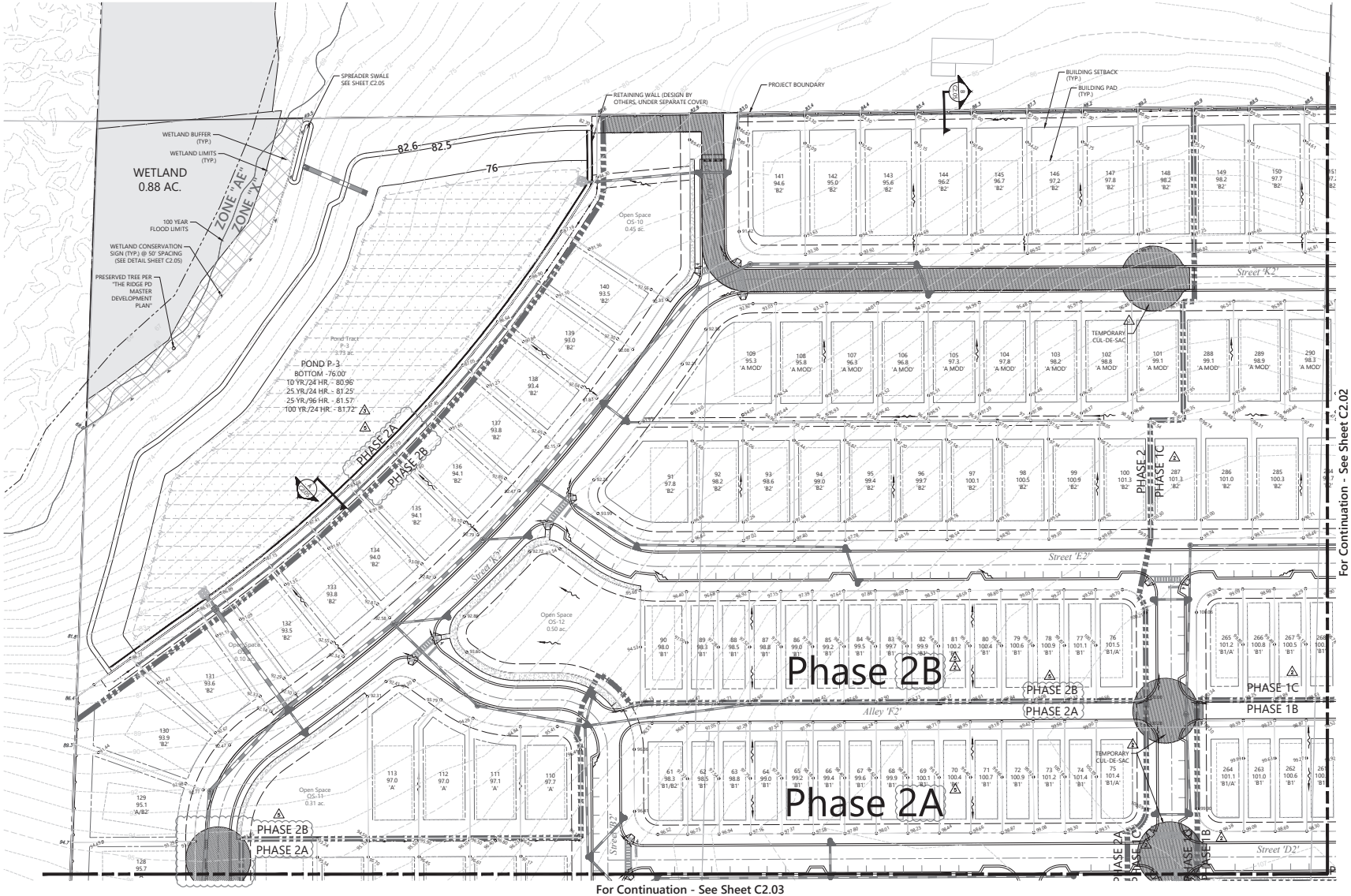
JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number
63534.03

Saved Tuesday, October 18, 2022 8:07:28 AM CIBERLACH Plotted Wednesday, January 17, 2024 2:18:48 PM Jordan Fisher

\\vhb.com\gbi\proj\Orlando\63534.03 Toll Bros-The Ridge P-2\cad\ld\Planset\FDP\6353403-GD.dwg



LOT NUMBER
PROP. FIN. FL. ELEV.
LOT GRADE TYPE

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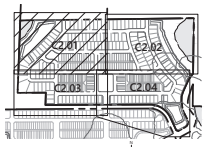

Key Map

N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED STORM DRAIN, CURB INLET, MANHOLE
- EXISTING TOPOGRAPHIC CONTOUR
- PROPOSED GRADE
- EXISTING GRADE
- FLOW DIRECTION

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

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1	City of Apopka Comments	05/17/2022	
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Designed by: DMK
Checked by: JRH

Issued for: **Construction Site Plan**
Date: **Feb. 25, 2022**
Vertical Datum NAVD 1988

Drawing Title: **Lot Grading Plan**

Drawing Number: **C2.01**

Sheet of

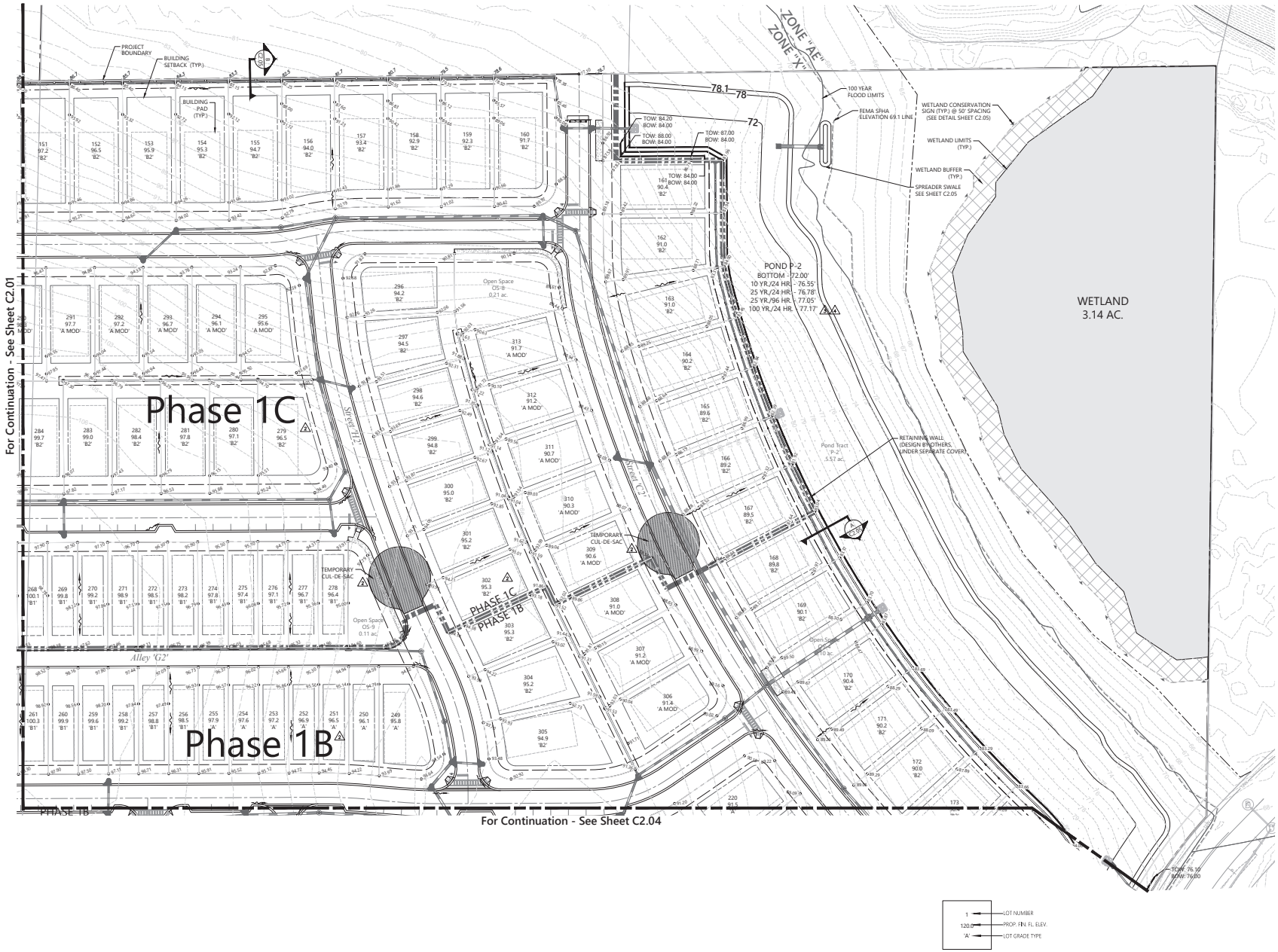
Project Number: **63534.03**

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER NO. 59469

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Saved Tuesday, December 19, 2023 4:35:34 PM GGEORGY Plotted Wednesday, January 17, 2024 2:20:41 PM Jordan Fisher

\\vhb.com\gbi\proj\Orlando\63534.03 Toll Bros-The Ridge P-2\cad\ld\Planset\FDP\6353403-GD.dwg



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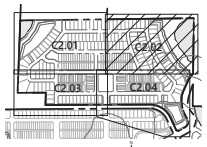

Key Map

N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED STORM DRAIN, CURB INLET, MANHOLE
- EXISTING TOPOGRAPHIC CONTOUR
- PROPOSED GRADE
- EXISTING GRADE
- FLOW DIRECTION

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

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Designed by: DMK
Checked by: JRH

Issued for: **Construction Site Plan**
Vertical Datum NAVD 1988

Date: Feb. 25, 2022

Drawing Title: **Lot Grading Plan**

Drawing Number: **C2.02**

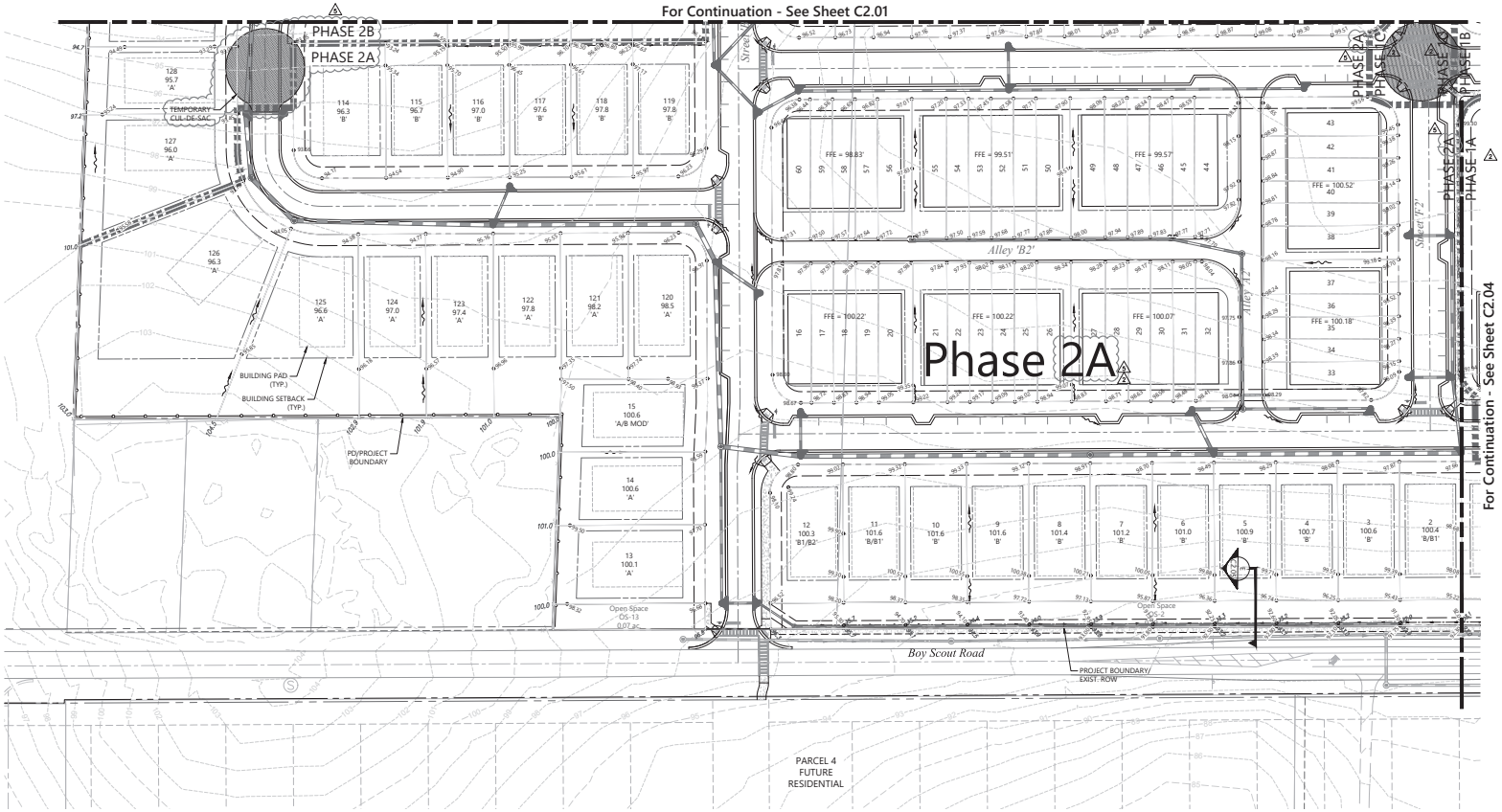
Sheet of

Project Number: 63534.03

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Saved Tuesday, December 19, 2023 4:35:34 PM GGEORGY Plotted Wednesday, January 17, 2024 2:21:27 PM Jordan Fisher



1 — LOT NUMBER
120.0 — PROP. FIN. FL. ELEV.
'A' — LOT GRADE TYPE

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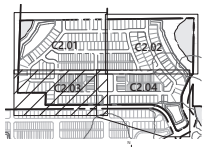

Key Map

N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED STORM DRAIN, CURB INLET, MANHOLE
- EXISTING TOPOGRAPHIC CONTOUR
- PROPOSED GRADE
- EXISTING GRADE
- FLOW DIRECTION

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Approd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title: Lot Grading Plan

Drawing Number: C2.03

Sheet of

CHRIS B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number: 63534.03

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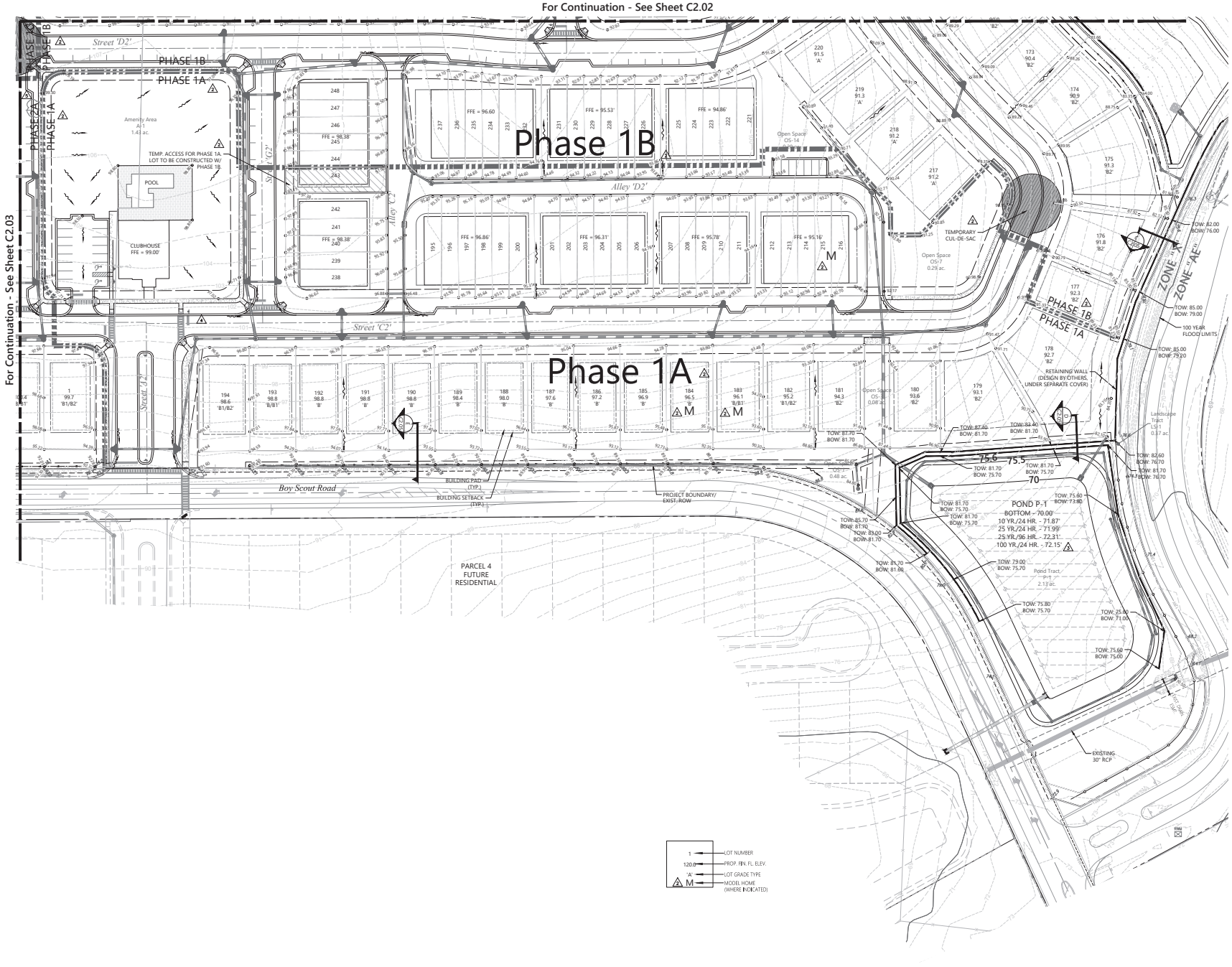

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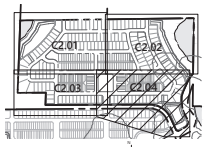
407.839.4006
Certificate of Authorization
Number FL #3932



Key Map

N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED STORM DRAIN, CURB INLET, MANHOLE
- EXISTING TOPOGRAPHIC CONTOUR
- PROPOSED GRADE
- EXISTING GRADE
- FLOW DIRECTION
- POLLUTION ABATEMENT SWALE

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Approv.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH

Issued for: **Construction Site Plan**
Date: **Feb. 25, 2022**
Vertical Datum NAVD 1988

Drawing Title: **Lot Grading Plan**

Drawing Number: **C2.04**

Sheet of

Project Number: 63534.03

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

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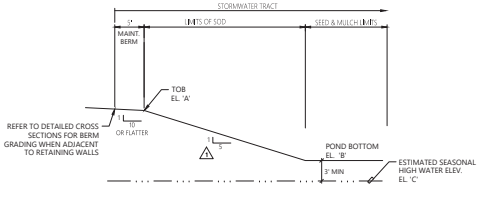
Dry Pond Summary Chart

Pond #	El. 'A'	El. 'B'	El. 'C'
1	75.5	70.0	60.0
2	78.0	72.0	61.0
3	82.5	76.0	65.0

1



POND SLOPES & MAINTENANCE BERMS SHALL BE IN ACCORDANCE WITH CITY OF APOPKA LDC SECTION 6.025.00 D.1.a

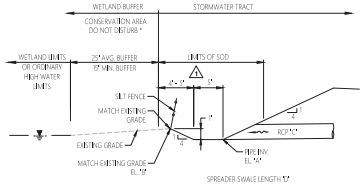
Typical Dry Pond Detail

N.T.S.

Spreader Swale Chart

Swale #	El. 'A'	El. 'B'	RCP 'C'	Length 'D'
P-2	67.8	69.1	24.0	50
P-3	69.0	70.0	48.0	70

1

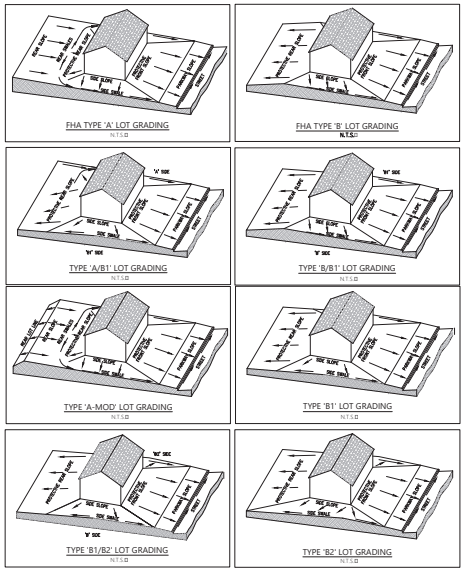


POND SLOPES & MAINTENANCE BERMS SHALL BE IN ACCORDANCE WITH CITY OF APOPKA LDC SECTION 6.025.00 D.1.a

* NO GRADING SHALL BE PERFORMED IN THE BUFFER OR WETLAND

Typical Spreader Swale Grading Section

N.T.S.



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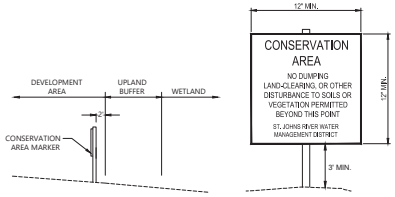
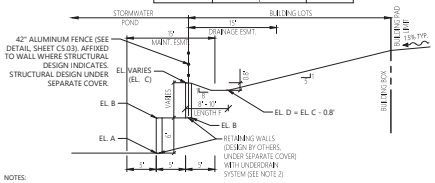


NOTES:
1. CONSERVATION SIGNS TO BE PLACED ON 150' CENTERS ALONG COMMON AREAS AND AT THE REAR CORNER OF EVERY OTHER LOT.
2. THE SIGN SHALL BE PLACED ON THE UPLAND MOST EDGE OF THE WETLAND BUFFER OR UPLAND PRESERVATION AREA.

Typical Wetland Conservation Sign Detail

N.T.S.

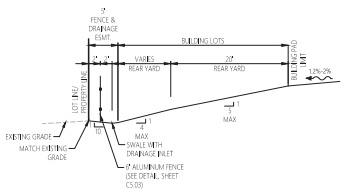
EL.	El. 'A'	El. 'B'	LENGTH F
P-2	72.0	78.0	8'-0"
P-3	76.0	82.0	10'-0"



NOTES:
1. "LENGTH F" MEASURES THE DISTANCE TO THE STORM SEWER INLETS WITHIN THE SWALE. INLETS SHALL BE LOCATED NO CLOSER TO THE WALL THAN "LENGTH F".
2. ALL WALLS SHALL HAVE UNDERDRAIN SYSTEMS, INSTALLED ACCORDING TO THE STRUCTURAL ENGINEERING PLANS. UNDERDRAINS SHALL BE 6" PVC DRAIN PIPE WITH FILTER SOCK, SURROUNDED BY 3" GRAVEL FOR A MINIMUM OF 6" OUTSIDE THE PIPE WALLS, WITH A FILTER FABRIC WRAP ENCASING THE GRAVEL. UNDERDRAINS SHALL CONNECT TO THE OUTFALL STRUCTURE OR PIPE AT THE ASSOCIATED WALL SYSTEM.
3. THE WALL, STORM SEWER, AND UNDERDRAIN SHALL ALL BE INSTALLED AT THE SAME TIME, TO AVOID DISRUPTING THE STRUCTURAL SUPPORTS OF THE WALL SYSTEM.
4. THE STORM SEWER AND UNDERDRAIN SHALL NOT INTERFERE WITH THE STRUCTURAL COMPONENTS OF THE WALL SYSTEM.

A - Typical Grading Detail

N.T.S.



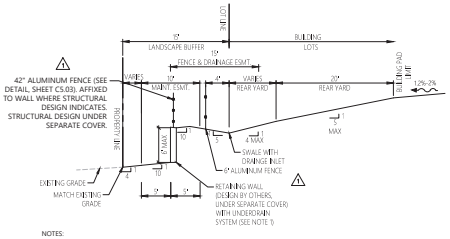
1

NOTES:
FOR ANY CONDITION WHERE THE STRUCTURAL ENGINEERING PLANS OR GEOTECHNICAL PLANS FOR THE WALL DESIGN DIFFER FROM THE CIVIL CONSTRUCTION PLANS, THE STRUCTURAL DESIGN AND GEOTECHNICAL DESIGN SHALL GOVERN. SUBSTANTIAL CHANGES TO THE CIVIL CONSTRUCTION PLANS BASED ON THE THESE DESIGNS SHALL BE REVIEWED AND APPROVED BY THE CONSTRUCTION PLAN ENGINEER AND, AS NECESSARY, THE CITY ENGINEER.

B - Typical Grading Detail

N.T.S.

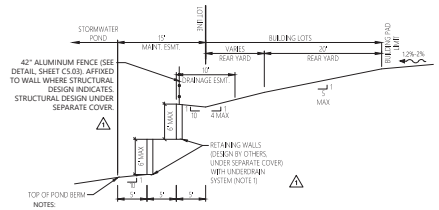
1



NOTES:
1. ALL WALLS SHALL HAVE UNDERDRAIN SYSTEMS, INSTALLED ACCORDING TO THE STRUCTURAL ENGINEERING PLANS. UNDERDRAINS SHALL BE 6" PVC DRAIN PIPE WITH FILTER SOCK, SURROUNDED BY 3" GRAVEL FOR A MINIMUM OF 6" OUTSIDE THE PIPE WALLS, WITH A FILTER FABRIC WRAP ENCASING THE GRAVEL. UNDERDRAINS SHALL CONNECT TO THE OUTFALL STRUCTURE OR PIPE AT THE ASSOCIATED WALL SYSTEM.
2. THE WALL, STORM SEWER, AND UNDERDRAIN SHALL ALL BE INSTALLED AT THE SAME TIME, TO AVOID DISRUPTING THE STRUCTURAL SUPPORTS OF THE WALL SYSTEM.
3. THE STORM SEWER AND UNDERDRAIN SHALL NOT INTERFERE WITH THE STRUCTURAL COMPONENTS OF THE WALL SYSTEM.

C - Typical Grading Details

N.T.S.



NOTES:
1. ALL WALLS SHALL HAVE UNDERDRAIN SYSTEMS, INSTALLED ACCORDING TO THE STRUCTURAL ENGINEERING PLANS. UNDERDRAINS SHALL BE 6" PVC DRAIN PIPE WITH FILTER SOCK, SURROUNDED BY 3" GRAVEL FOR A MINIMUM OF 6" OUTSIDE THE PIPE WALLS, WITH A FILTER FABRIC WRAP ENCASING THE GRAVEL. UNDERDRAINS SHALL CONNECT TO THE OUTFALL STRUCTURE OR PIPE AT THE ASSOCIATED WALL SYSTEM.
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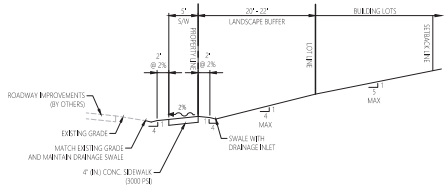
3. THE STORM SEWER AND UNDERDRAIN SHALL NOT INTERFERE WITH THE STRUCTURAL COMPONENTS OF THE WALL SYSTEM.

D - Typical Grading Detail

N.T.S.



E - Typical Grading Details

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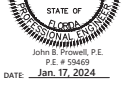
The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title: Grading Details



John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C2.05
Sheet of
Project Number: 63534.03

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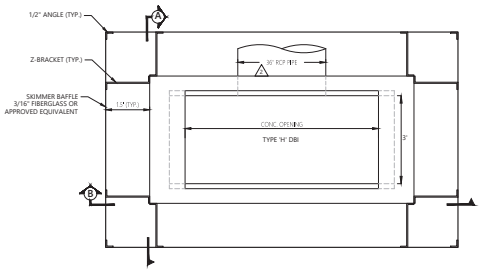
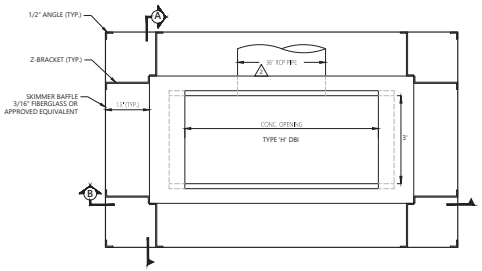
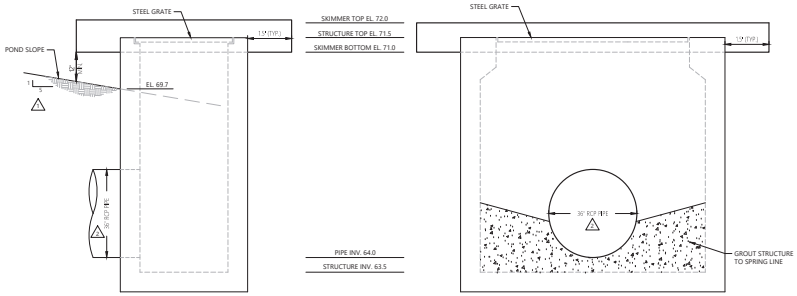


PLAN VIEW



PLAN VIEW



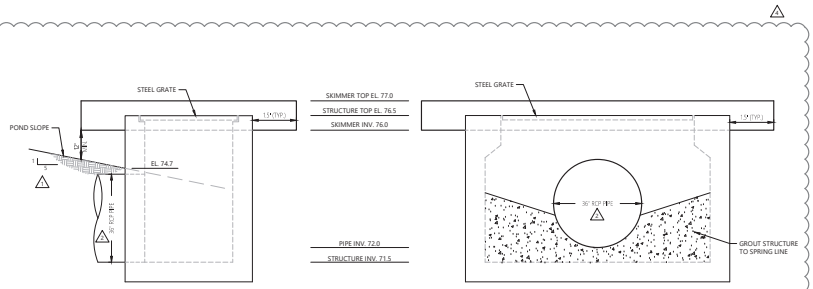
SECTION VIEW A

SECTION VIEW B

NOTE:SKIMMER TO BE MOUNTED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

Outfall Control Structure Detail - #CS-1

N.T.S.



SECTION VIEW A

SECTION VIEW B

NOTE:SKIMMER TO BE MOUNTED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

Outfall Control Structure Detail - #CS-2

N.T.S.

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

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Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title: Control Structure Details

Drawing Number: C2.10

Sheet of

Project Number: 63534.03

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

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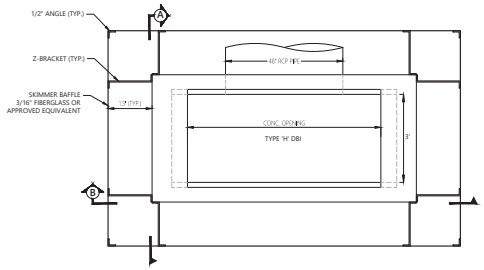
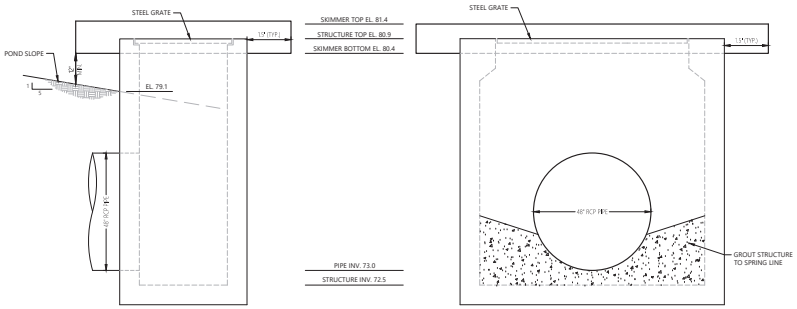


PLAN VIEW



SECTION VIEW A

SECTION VIEW B

NOTE:SKIMMER TO BE MOUNTED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

Outfall Control Structure Detail - #CS-3

N.T.S.

The Ridge PD
Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title
Control Structure Details

Drawing Number
C2.11

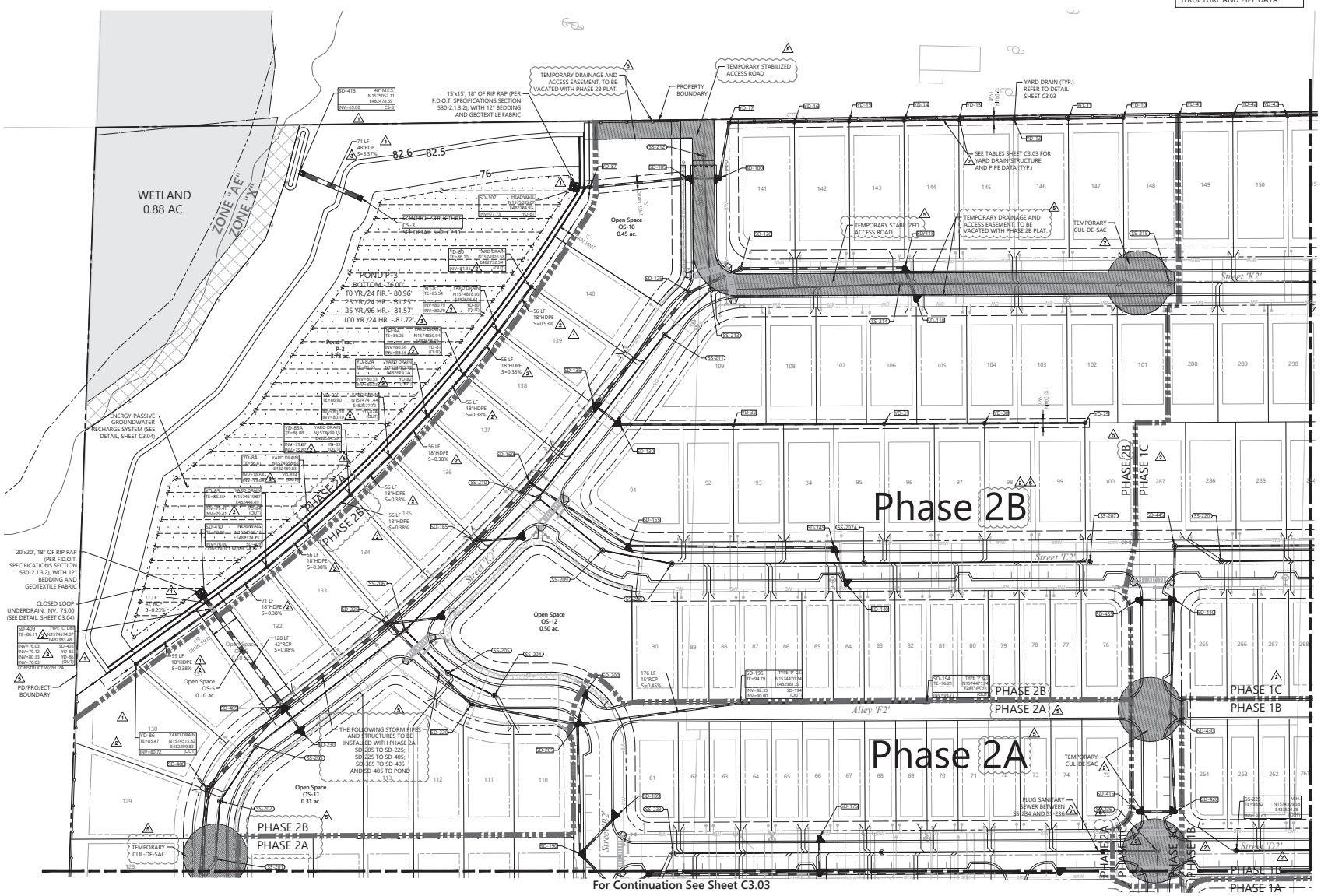
Sheet of

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number
63534.03

SEE SHEET C3.03 FOR YARD DRAIN STRUCTURE AND PIPE DATA



For Continuation See Sheet C3.02

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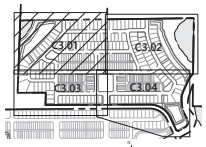

Key Map

N.T.S.

LEGEND

- PROPERTY BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED STORM DRAIN, CURB INLET, MANHOLE
- PROPOSED SANITARY SEWER & MANHOLE
- PROPOSED FORCEMAIN

NOTES:
1. ALL SANITARY SEWER MAIN TO BE 8" UNLESS OTHERWISE NOTED.
2. UTILITY EASEMENTS SHOWN ADJACENT TO ROW TO BE 10' UNLESS OTHERWISE NOTED.

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Adjust.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title: Drainage & Wastewater Plan

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER NO. 59469

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C3.01
Sheet of
Project Number: 63534.03

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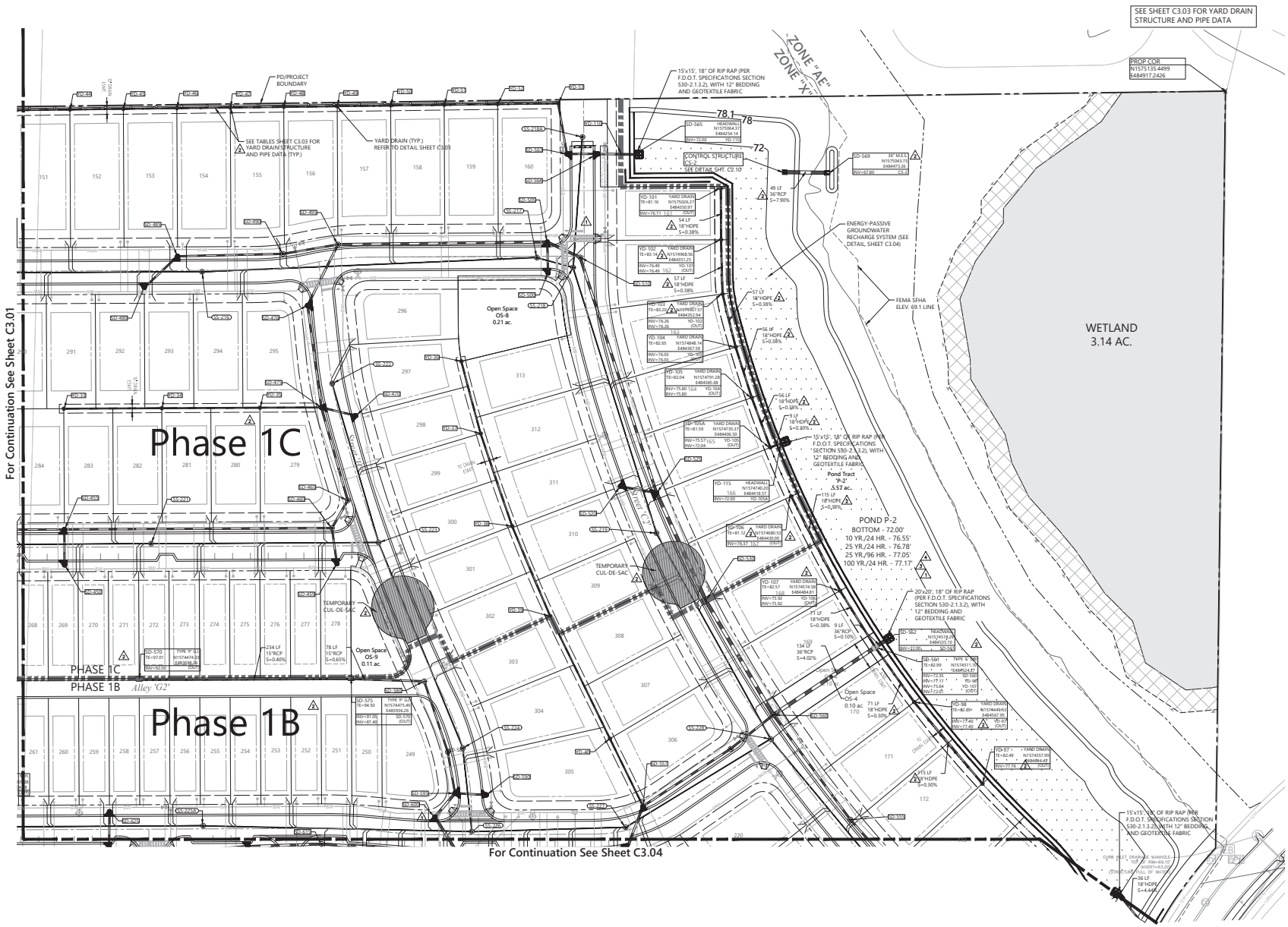

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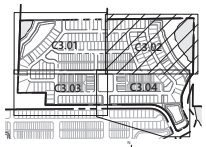

Key Map

N.T.S.

LEGEND

- PROPERTY BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED STORM DRAIN, CURB INLET, MANHOLE
- PROPOSED SANITARY SEWER & MANHOLE

NOTES:
1. ALL SANITARY SEWER MAIN TO BE 8" UNLESS OTHERWISE NOTED.
2. UTILITY EASEMENTS SHOWN ADJACENT TO ROW TO BE 10' UNLESS OTHERWISE NOTED.

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

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2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by DMK
Checked by JRH

Issued for **Construction Site Plan**
Date Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title
Drainage & Wastewater Plan

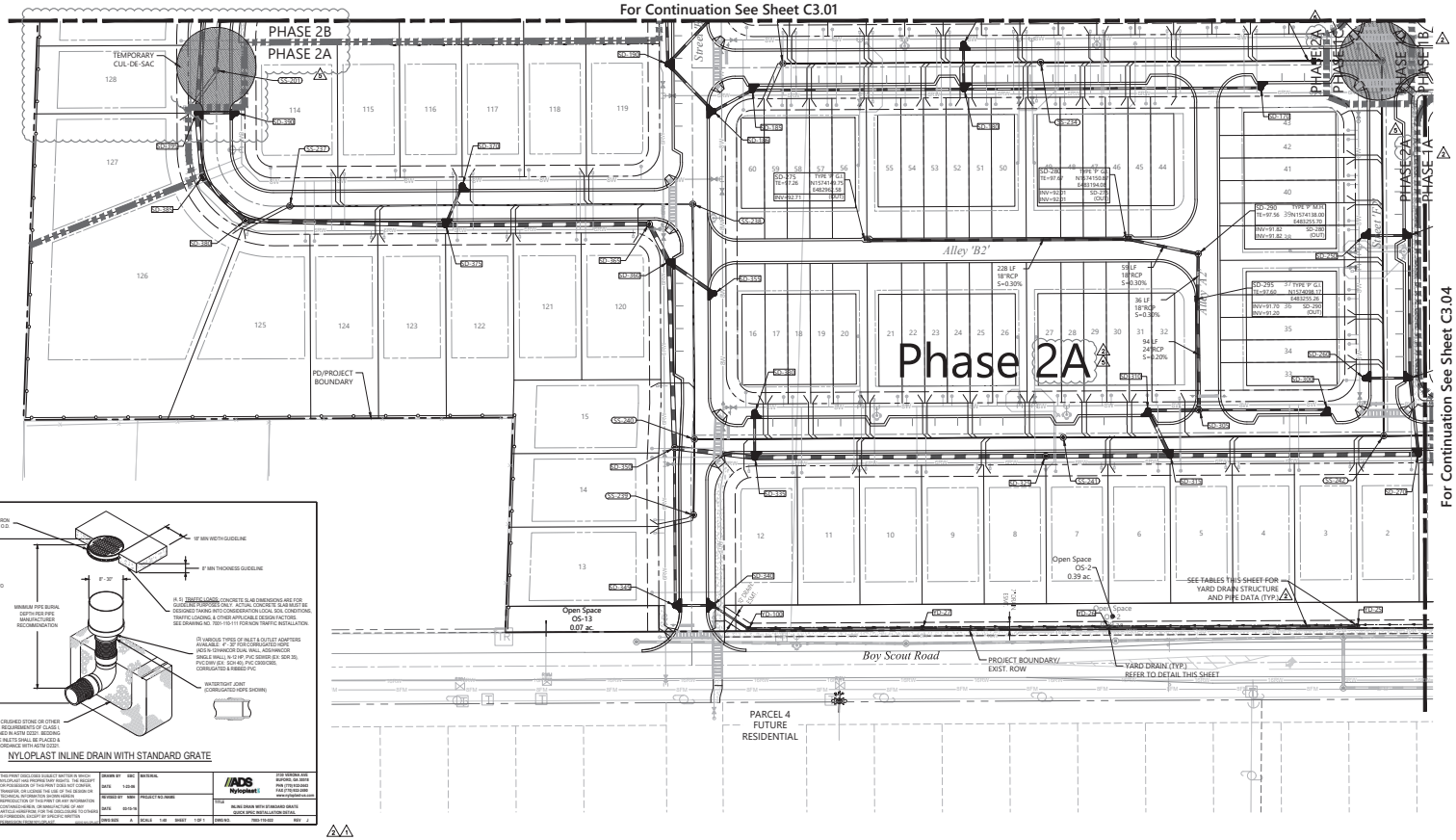
Drawing Number
C3.02

Sheet of

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number 63534.03

Saved Wednesday, December 20, 2023 9:56:28 AM GGEORGY Plotted Wednesday, January 17, 2024 2:26:36 PM Jordan Fisher



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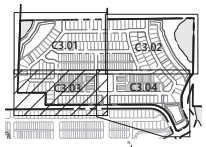
Certificate of Authorization
Number FL #3932



Key Map N.T.S.

LEGEND

- PROPERTY BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED STORM DRAIN, CURB INLET, MANHOLE
- PROPOSED SANITARY SEWER & MANHOLE
- PROPOSED FORCEMAIN

NOTES:
1. ALL SANITARY SEWER MAIN TO BE 8" UNLESS OTHERWISE NOTED.
2. UTILITY EASEMENTS SHOWN ADJACENT TO ROW TO BE 10' UNLESS OTHERWISE NOTED.

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Adjust.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by DMK
Checked by JRH
Issued for Construction Site Plan
Date Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title Drainage & Wastewater Plan

Drawing Number C3.03
Sheet of

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number 63534.03

Storm Sewer Structure Schedule

Number	Type	Top	Height	Northing	Easting
SD-786	DMH	80.91	10.41	1573794.08	484680.25
YD-10	DMH	88.90	4.50	1575111.66	483380.55
YD-11	DMH	87.90	4.50	1575110.89	483320.55
YD-12	DMH	87.00	4.50	1575110.12	483260.55
YD-13	DMH	86.00	4.50	1575109.34	483200.55
YD-14	DMH	85.20	4.50	1575108.57	483140.56
YD-15	DMH	84.30	4.50	1575107.80	483080.56
YD-16	DMH	83.30	4.50	1575107.03	483020.56
YD-17	DMH	83.00	4.50	1575106.10	482949.04
YD-18	DMH	91.10	4.50	1573810.31	483695.49
YD-19	DMH	89.80	4.50	1573811.38	483915.49
YD-20	DMH	89.45	5.91	1573812.18	484080.48
YD-21	DMH	88.80	6.91	1573812.98	484245.48
YD-21A	DMH	84.80	4.50	1573783.51	484417.49
YD-21B	DMH	85.80	5.61	1573812.47	484415.24
YD-22	DMH	82.10	8.10	1573845.12	484712.68
YD-25	DMH	91.30	4.50	1573800.85	483396.49
YD-26	DMH	91.30	5.34	1573807.78	483176.49
YD-27	DMH	94.10	8.77	1573806.98	483011.50
YD-29	DMH	98.05	4.50	1574777.58	483338.70
YD-30	DMH	97.07	4.50	1574777.05	483228.70
YD-31	DMH	96.10	4.50	1574776.51	483118.70
YD-32	DMH	94.14	7.60	1574775.71	482953.70
YD-33	DMH	97.30	4.75	1574778.92	483613.69
YD-34	DMH	96.29	5.02	1574779.46	483723.69

Storm Sewer Structure Schedule

Number	Type	Top	Height	Northing	Easting
YD-35	DMH	94.70	7.50	1574779.99	483833.69
YD-36	DMH	91.63	4.50	1574832.11	484059.75
YD-37	DMH	91.35	4.54	1574751.05	484081.39
YD-38	DMH	91.04	4.72	1574647.07	484116.78
YD-39	DMH	91.86	6.10	1574545.89	484159.53
YD-40	DMH	91.53	6.53	1574408.44	484226.53
YD-41	DMH	89.30	4.50	1575112.44	483440.54
YD-42	DMH	89.20	5.20	1575113.21	483500.54
YD-43	DMH	88.20	5.70	1575113.98	483560.54
YD-44	DMH	86.40	5.00	1575114.78	483620.53
YD-45	DMH	85.40	5.15	1575115.53	483680.53
YD-46	DMH	84.15	4.90	1575116.30	483740.53
YD-47	DMH	83.15	4.80	1575117.07	483800.52
YD-48	DMH	82.25	4.60	1575117.85	483860.52
YD-49	DMH	81.55	4.90	1575118.62	483920.52
YD-50	DMH	80.55	5.10	1575119.39	483980.51
YD-51	DMH	79.35	4.75	1575120.16	484040.51
YD-52	DMH	78.50	4.50	1575120.94	484100.51
YD-53	DMH	78.39	4.98	1575121.81	484168.51
YD-61	DMH	85.25	4.50	1573963.73	484722.99
YD-62	DMH	85.00	5.85	1574020.50	484742.66
YD-63	DMH	82.12	7.03	1574104.95	484780.75
YD-65	DMH	90.89	4.50	1574237.01	484353.20
YD-66	DMH	90.71	4.60	1574187.01	484394.88
YD-100	DMH	95.60	10.85	1573806.23	482857.59

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
YD-10	YD-11	15	HDPE	60.002	1.67%	84.40	83.40
YD-11	YD-12	15	HDPE	60.002	1.50%	83.40	82.50
YD-12	YD-13	15	HDPE	60.002	1.67%	82.50	81.50
YD-13	YD-14	15	HDPE	60.002	1.33%	81.50	80.70
YD-14	YD-15	15	HDPE	60.002	1.50%	80.70	79.80
YD-15	YD-16	15	HDPE	60.002	1.67%	79.80	78.80
YD-16	YD-17	15	HDPE	71.527	0.42%	78.80	78.50
YD-17	SD-100	18	RCP	61.205	0.50%	78.50	78.19
YD-18	YD-19	15	HDPE	220.000	0.59%	86.60	85.30
YD-19	YD-20	15	HDPE	165.000	1.00%	85.30	83.65
YD-20	YD-21	15	HDPE	165.000	1.00%	83.54	81.89
YD-21	YD-21B	15	HDPE	169.761	1.00%	81.89	80.19
YD-21A	YD-21B	15	HDPE	29.045	0.38%	80.30	80.19
YD-21B	SD-760	15	HDPE	34.992	0.38%	80.19	80.06
YD-22	SD-766	18	HDPE	60.475	5.79%	74.00	70.50
YD-25	YD-26	15	HDPE	220.000	0.38%	86.80	85.96
YD-26	YD-27	15	HDPE	165.000	0.38%	85.96	85.33
YD-27	YD-100	15	HDPE	153.912	0.38%	85.33	84.75
YD-29	YD-30	15	HDPE	110.000	0.89%	93.55	92.57
YD-30	YD-31	15	HDPE	110.000	0.88%	92.57	91.60
YD-31	YD-32	15	HDPE	165.000	1.19%	91.60	89.64
YD-32	SD-130	15	HDPE	124.448	1.00%	86.54	85.30
YD-33	YD-34	15	HDPE	110.000	1.00%	92.55	91.45
YD-34	YD-35	15	HDPE	110.000	1.20%	91.27	89.95
YD-35	SD-475	15	HDPE	69.030	0.58%	87.20	86.80

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
YD-36	YD-37	15	HDPE	83.899	0.38%	87.13	86.81
YD-37	YD-38	15	HDPE	109.839	0.45%	86.81	86.32
YD-38	YD-39	15	HDPE	109.839	0.50%	86.32	85.77
YD-39	YD-40	15	HDPE	152.909	0.50%	85.76	85.00
YD-40	SD-557	15	HDPE	84.364	0.38%	85.00	84.68
YD-41	YD-42	15	HDPE	60.002	0.50%	84.80	84.50
YD-42	YD-43	15	HDPE	60.002	0.83%	84.00	83.50
YD-43	YD-44	15	HDPE	60.002	1.00%	82.50	81.90
YD-44	YD-45	15	HDPE	60.002	0.83%	81.40	80.90
YD-45	YD-46	15	HDPE	60.002	1.00%	80.25	79.65
YD-46	YD-47	15	HDPE	60.002	1.00%	79.25	78.65
YD-47	YD-48	18	HDPE	60.002	1.00%	78.35	77.75
YD-48	YD-49	18	HDPE	60.002	1.00%	77.65	77.05
YD-49	YD-50	18	HDPE	60.002	1.00%	76.65	76.05
YD-50	YD-51	18	HDPE	60.002	1.00%	75.45	74.85
YD-51	YD-52	18	HDPE	60.002	1.00%	74.60	74.00
YD-52	YD-53	18	HDPE	68.002	0.87%	74.00	73.41
YD-53	SD-563	18	HDPE	57.824	0.62%	73.41	73.05
YD-61	YD-62	18	HDPE	60.085	1.00%	80.75	80.15
YD-62	YD-63	18	HDPE	92.636	1.50%	79.15	77.76
YD-63	YD-116	18	HDPE	49.732	1.24%	75.09	74.48
YD-65	YD-66	15	HDPE	65.096	0.38%	86.39	86.14
YD-66	SD-730	15	HDPE	65.445	0.38%	86.11	85.86
YD-100	SD-340	15	HDPE	37.931	0.38%	84.75	84.61

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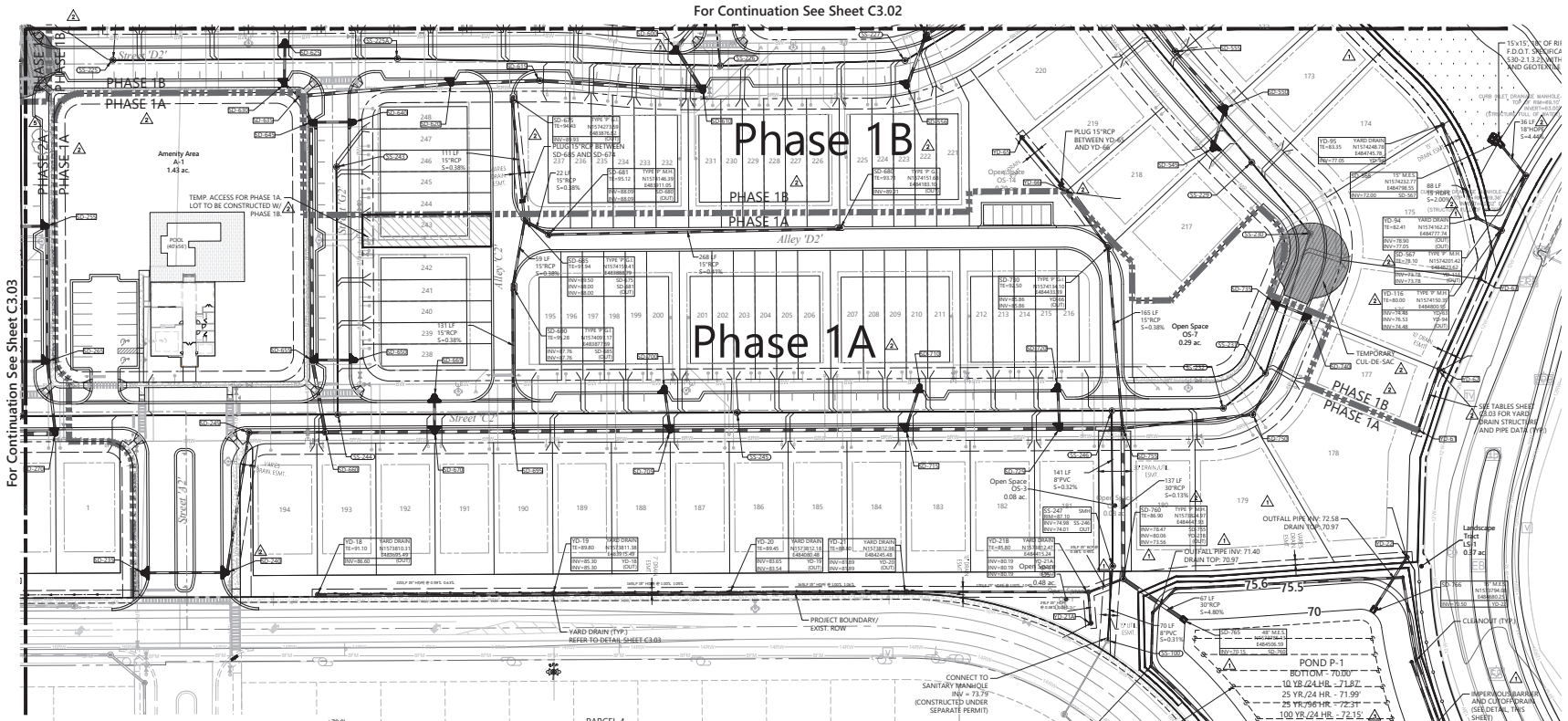
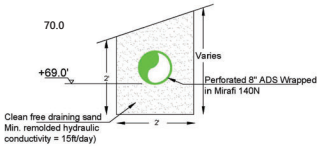
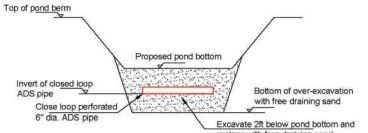


IMPERVIOUS BARRIER & CUTOFF DRAIN DETAIL (YOVAISH ENGINEERING)
(N.T.S)



POND 1
Interceptor Trench - Section B - B'
NTS



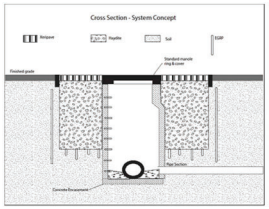
Typical Over-Excavated Pond Bottom with Closed Loop Underdrain
(Ponds 1 and 3)
N.T.S.

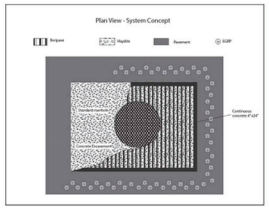
Specifications

Name: EGRP® (Energy-Passive Groundwater Recharge Product)
Base lengths: 5' (1.524 m), 10' (3.048 m), 20' (6.096 m) & 40' (12.192 m)
Diameter: 1 ¾" (31.75 mm)
Color: Natural Transparent Clear, Colorless
Material: 100% Polyethylene

Each EGRP® has a central core with four crescents around the central core. EGRPs® are made of polyethylene and are chemically inert so as not to degrade in the soil. The plastic is rigid but flexible enough to meet the contraction and expansion required. The EGRP® has a smooth surface restricting siltration and/or clogging. Each EGRP® is capped to restrict the conduit for water free flow. The EGRP®s are placed underground, generally two to three feet below the surface in lengths of 5' (1.524m), 10' (3.048 m), 20' (6.096 m) and 40' (12.192 m). The diameter of the hole is 1 ¾" (31.75 mm).

Energy-Passive Groundwater
Recharge Product (EPGRP)





ENERGY-PASSIVE GROUNDWATER RECHARGE PRODUCT DETAILS - TYPICAL CONCEPT

ECT Environmental Consulting & Technology, Inc.
WWW.ECTINC.COM

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Suite 300
Orlando, FL 32801
407.839.4006
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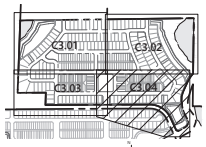

Key Map
N.T.S.

LEGEND

- PROPERTY BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED STORM DRAIN, CURB INLET, MANHOLE
- PROPOSED SANITARY SEWER & MANHOLE

NOTES:
1. ALL SANITARY SEWER MAIN TO BE 8" UNLESS OTHERWISE NOTED.
2. UTILITY EASEMENTS SHOWN ADJACENT TO ROW TO BE 10' UNLESS OTHERWISE NOTED.

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: **Construction Site Plan**
Date: Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title: **Drainage & Wastewater Plan**

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER LICENSE NO. 59469
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: **C3.04**
Sheet of
Project Number: 63534.03

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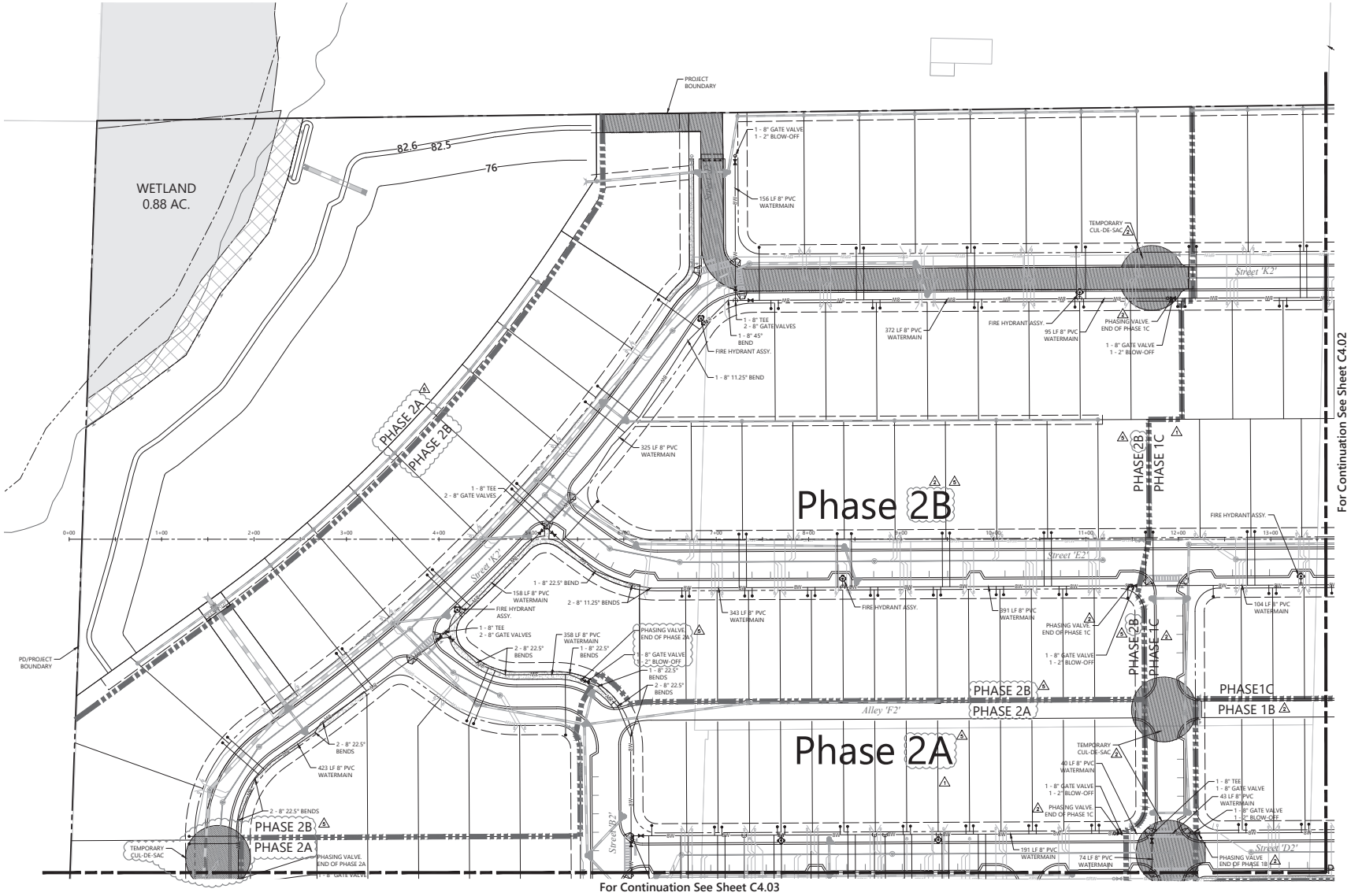

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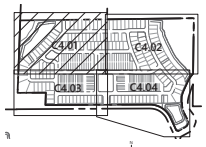

Key Map N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED WATERMAIN & GATE VALVE
- PROPOSED FIRE HYDRANT ASSEMBLY
- FIRE DEPARTMENT CONNECTION (FDC)

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Approv.
1	City of Apopka Comments	05/17/2022	
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Designed by DMK
Checked by JRH
Issued for **Construction Site Plan**
Date **Feb. 25, 2022**
Vertical Datum NAVD 1988

Drawing Title
Water Distribution Plan

Drawing Number **C4.01**
Sheet of

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number 63534.03

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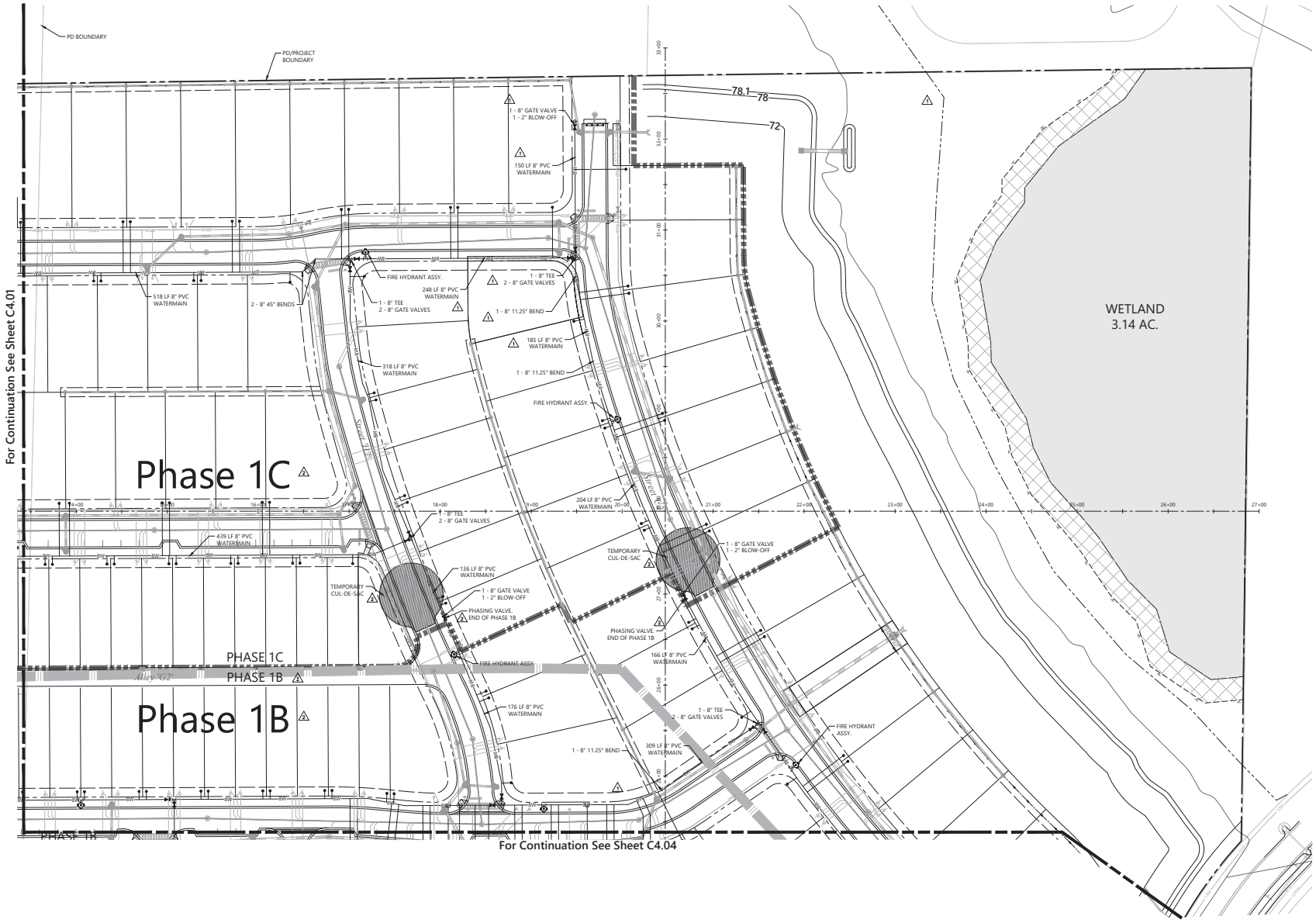

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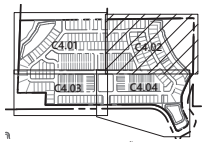

Key Map N.T.S.

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0 25 50 100 Feet

The Ridge PD
Parcel 2

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Designed by DMK
Checked by JRH
Issued for **Construction Site Plan**
Date **Feb. 25, 2022**
Vertical Datum NAVD 1988

Drawing Title
Water Distribution Plan

Drawing Number **C4.02**
Sheet of
Project Number 63534.03

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

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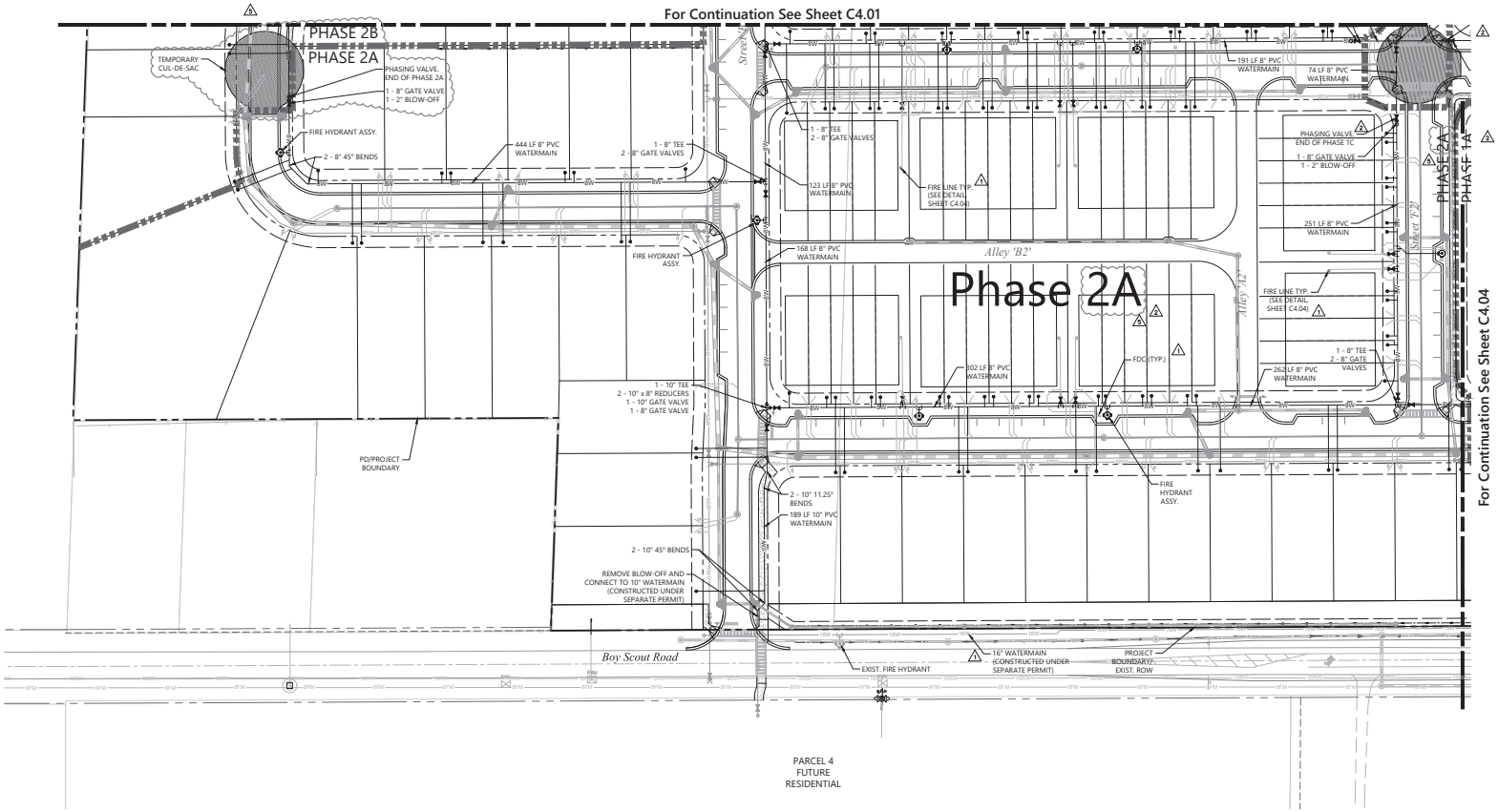

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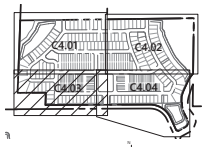

Key Map

N.T.S.

LEGEND

- PROJECT BOUNDARY
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0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

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Designed by: DMK
Checked by: JRH

Issued for: **Construction Site Plan**
Date: **Feb. 25, 2022**

Vertical Datum NAVD 1988

Drawing Title: **Water Distribution Plan**

Drawing Number: **C4.03**

Sheet of

CHRIS B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number: **63534.03**

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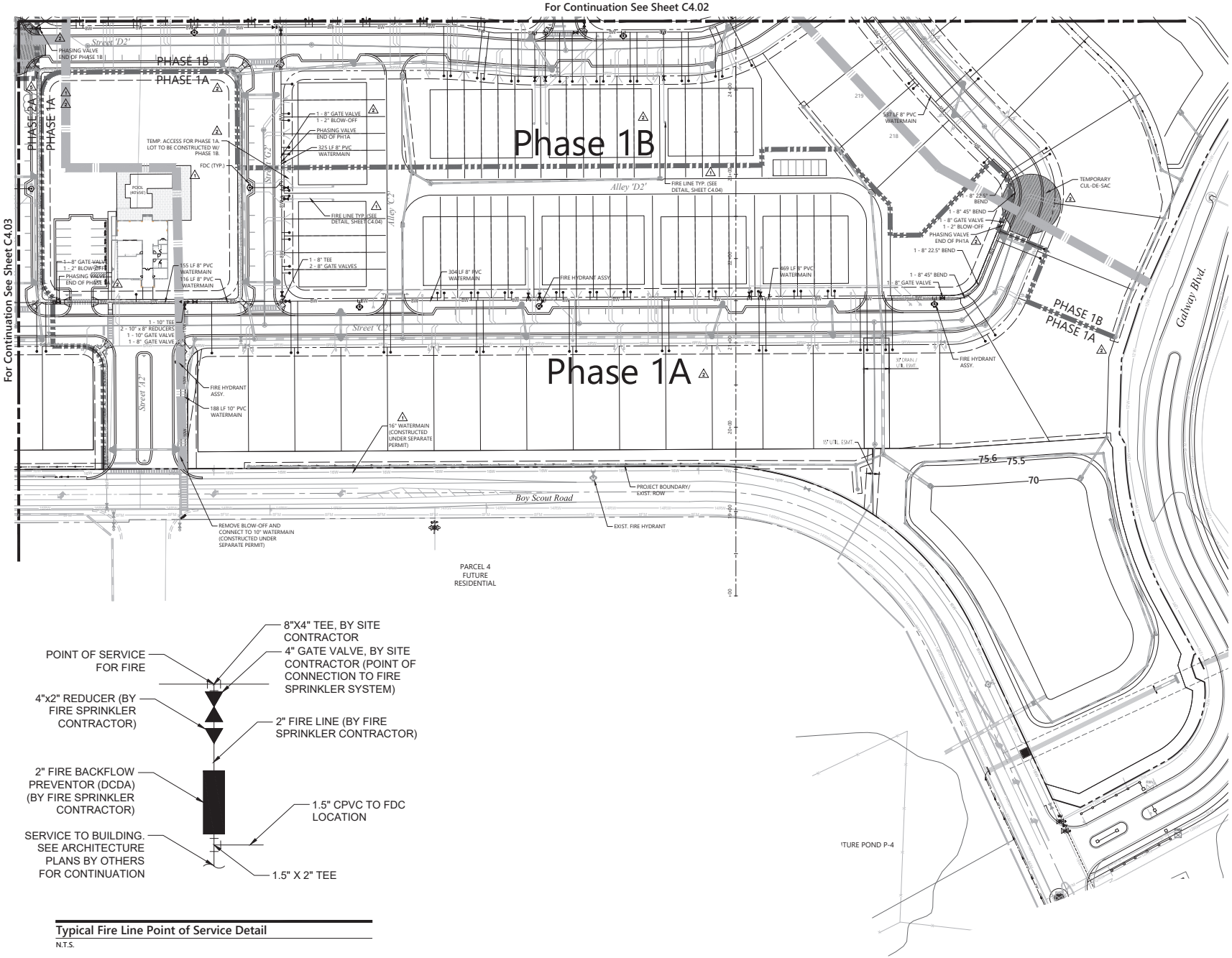

Typical Fire Line Point of Service Detail

N.T.S.

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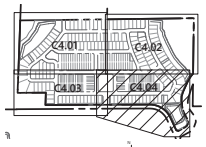
Number FL #3932



Key Map

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- FIRE DEPARTMENT CONNECTION

0 25 50 100 Feet

The Ridge PD
Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH

Issued for: **Construction Site Plan**
Date: **Feb. 25, 2022**
Vertical Datum NAVD 1988

Drawing Title: **Water Distribution Plan**

Drawing Number: **C4.04**

Sheet of

Project Number: 63534.03

CHRIS B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Saved Wednesday, December 20, 2023 9:55:55 AM GGEORGY Plotted Wednesday, January 17, 2024 2:30:05 PM Jordan Fisher

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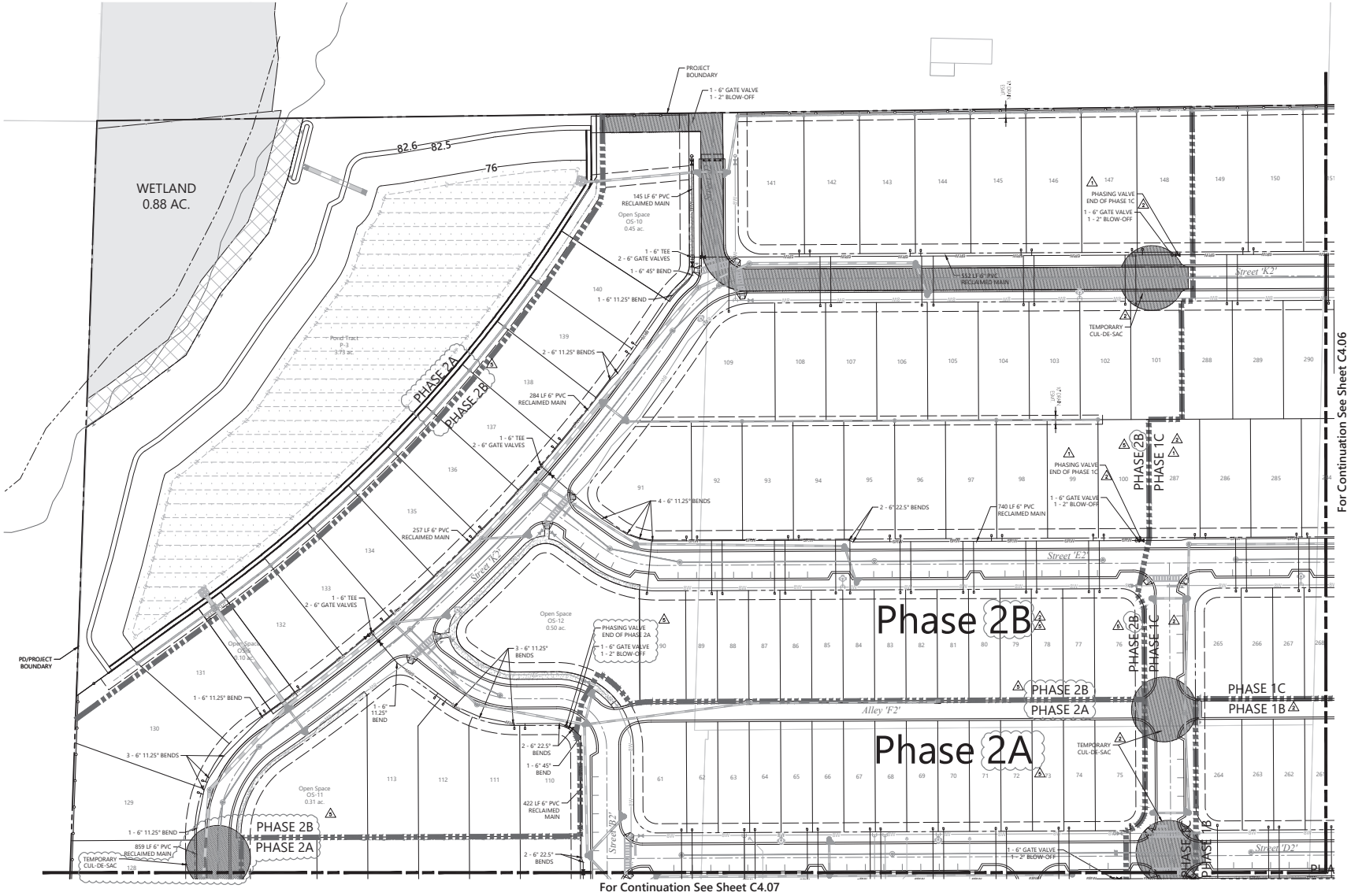

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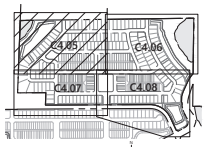
Certificate of Authorization
Number FL #3932



Key Map

N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED RECLAIMED WATER & GATE VALVE

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by DMK
Checked by JRH

Issued for **Construction Site Plan**
Date **Feb. 25, 2022**
Vertical Datum NAVD 1988

Drawing Title
Reclaimed Water Distribution Plan

Drawing Number
C4.05

Sheet of

Project Number
63534.03

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Saved Tuesday, December 19, 2023 5:16:36 PM GGEORGY Plotted Wednesday, January 17, 2024 2:31:39 PM Jordan Fisher

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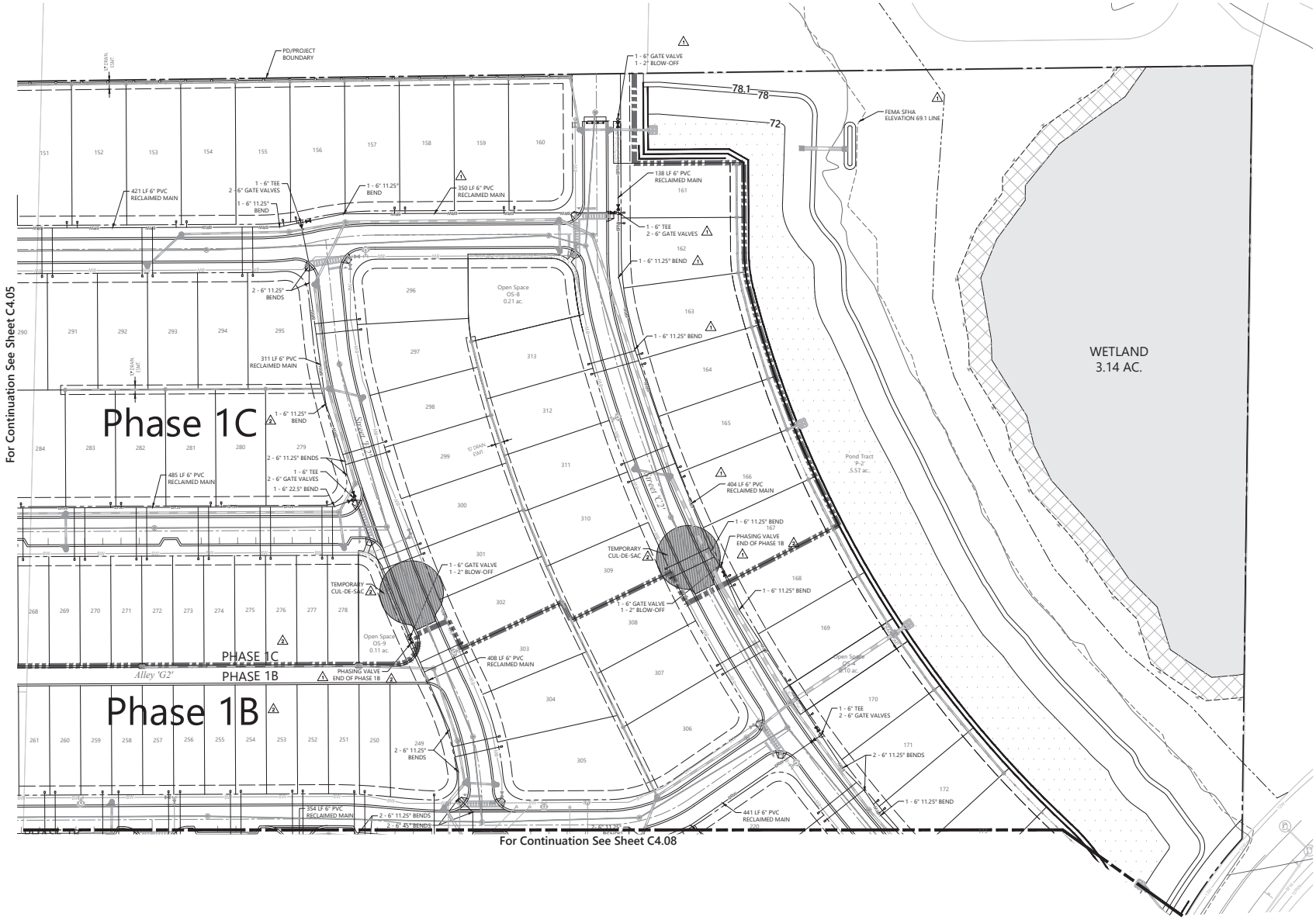

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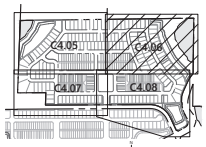
Number FL #3932



Key Map

N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED RECLAIMED WATER & GATE VALVE

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH

Issued for: **Construction Site Plan**
Vertical Datum NAVD 1988

Date: Feb. 25, 2022

Drawing Title: **Reclaimed Water Distribution Plan**

Drawing Number: **C4.06**

Sheet of

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number: 63534.03

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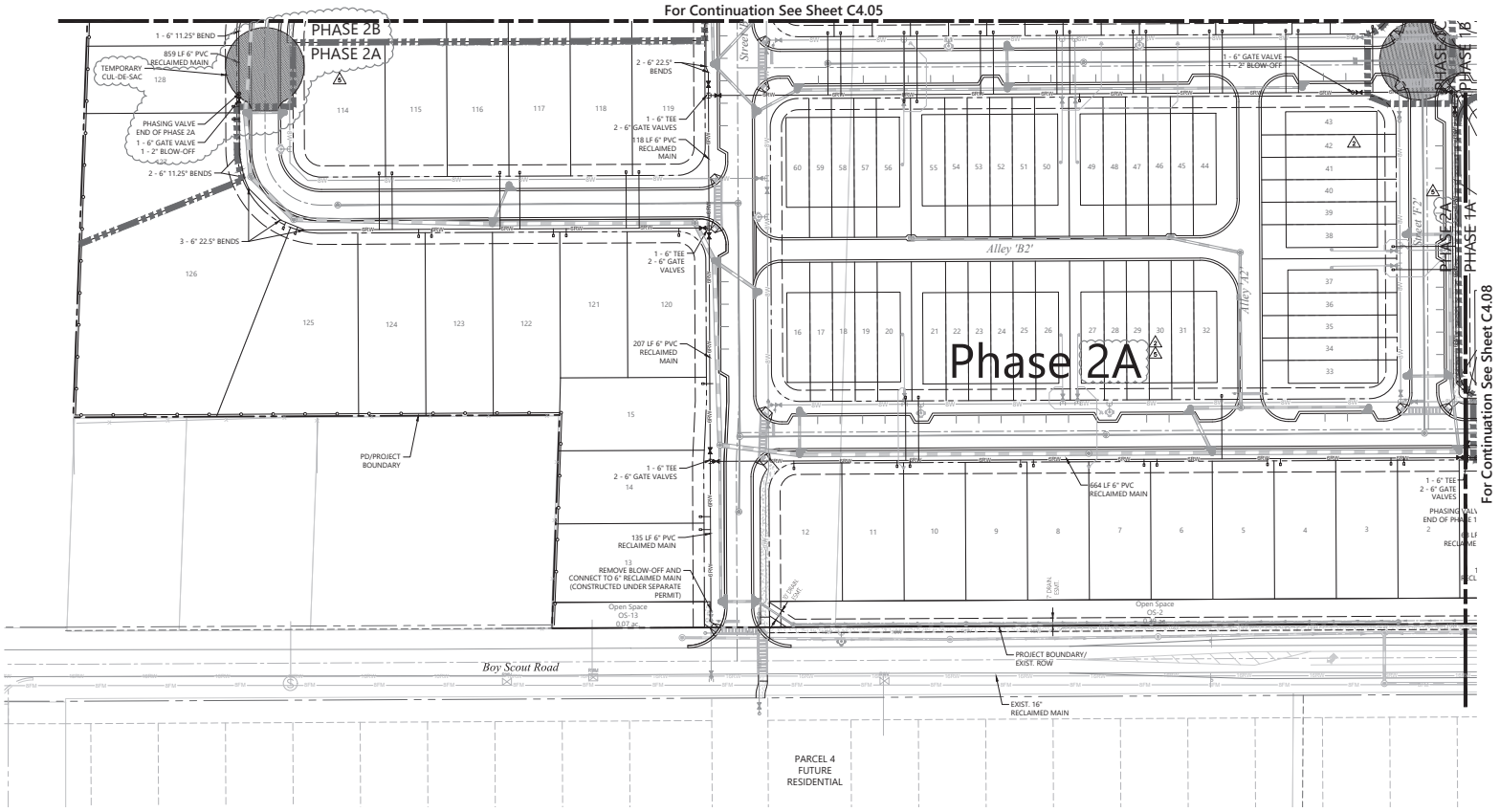

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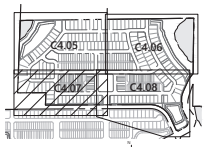

Key Map

N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED RECLAIMED WATER & GATE VALVE

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Approved
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH

Issued for: **Construction Site Plan**
Date: **Feb. 25, 2022**

Vertical Datum NAVD 1988

Drawing Title: **Reclaimed Water Distribution Plan**

Drawing Number: **C4.07**

Sheet of

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number: 63534.03

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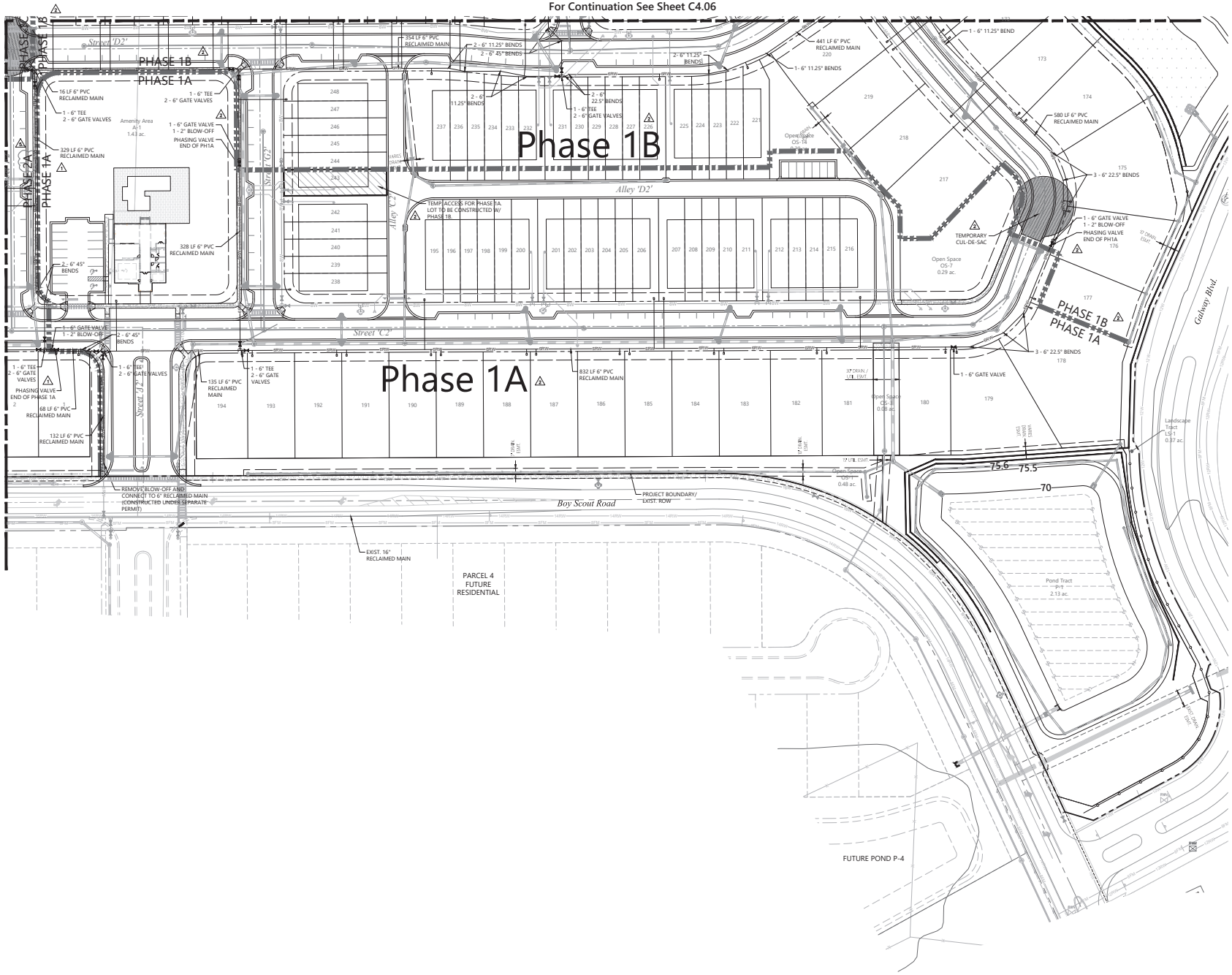
For Continuation See Sheet C4.06

For Continuation See Sheet C4.07



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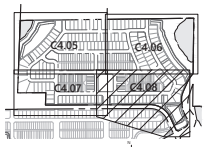

Key Map

N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- PRESERVED WETLAND
- UPLAND BUFFER
- PROPOSED RECLAIMED WATER & GATE VALVE

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
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5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH

Issued for: **Construction Site Plan**
Vertical Datum NAVD 1988

Date: Feb. 25, 2022

Drawing Title: **Reclaimed Water Distribution Plan**

Drawing Number: **C4.08**

Sheet of

Project Number: 63534.03

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Saved Tuesday, December 19, 2023 5:16:36 PM GGEORGY Plotted Wednesday, January 17, 2024 2:52:55 PM Jordan Fisher

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Sign Summary

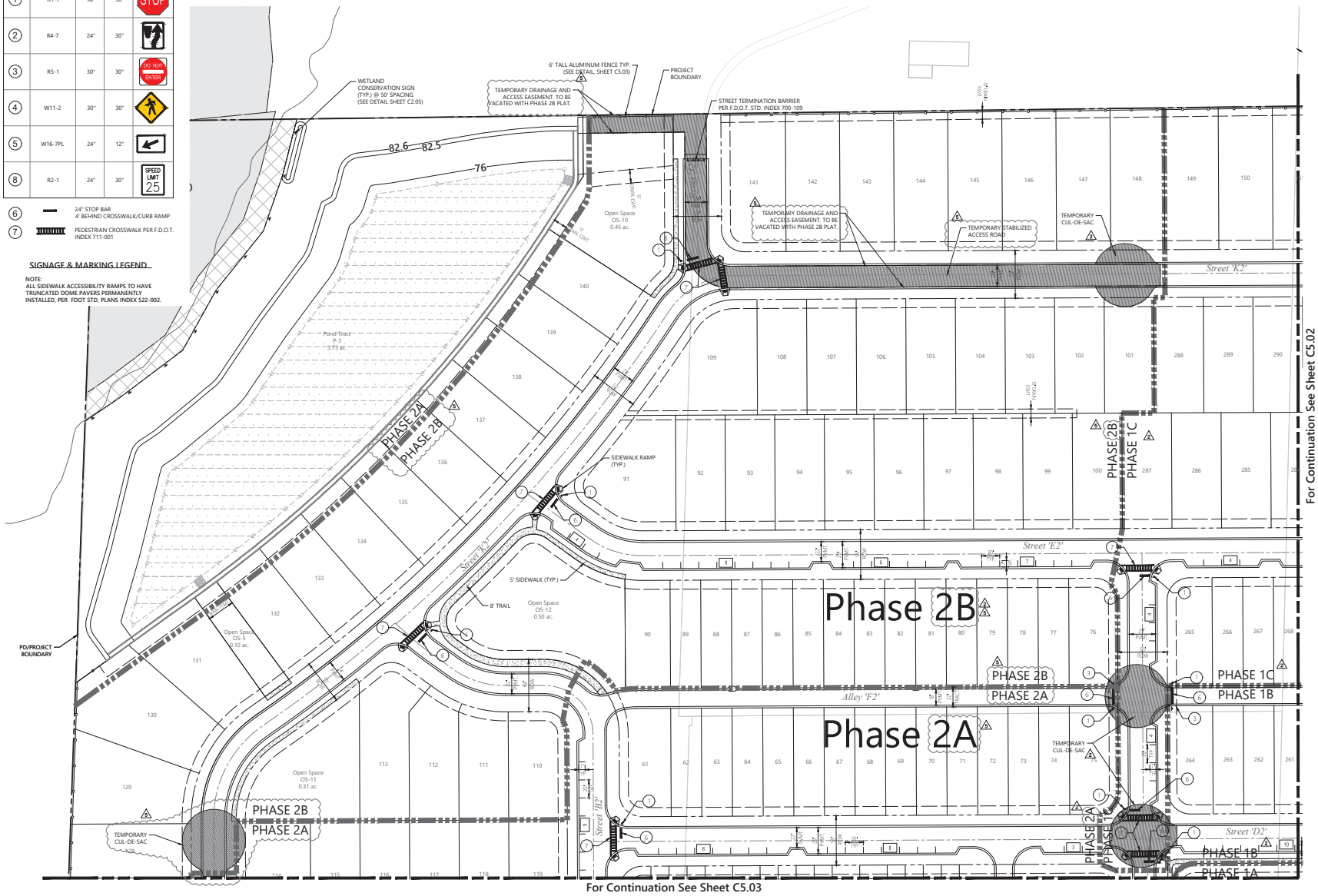
	M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
1	R1-1	30"	30"	STOP
2	R4-7	24"	30"	
3	R5-1	30"	30"	DO NOT ENTER
4	W11-2	30"	30"	
5	W16-7PL	24"	12"	
8	R2-1	24"	30"	SPEED LIMIT 25

6 — 24" STOP BAR 4' BEHIND CROSSWALK/CURB RAMP

7 — PEDESTRIAN CROSSWALK PER F.D.O.T. INDEX 711-001

SIGNAGE & MARKING LEGEND

NOTE:
ALL SIDEWALK ACCESSIBILITY RAMPS TO HAVE TRUNCATED DOME PAVERS PERMANENTLY INSTALLED, PER FDOT STD. PLANS INDEX 522-002.



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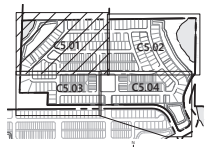


Key Map

N.T.S.

LEGEND

PROJECT BOUNDARY
PHASE LINE
PARKING SPACE COUNTS

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by DMK
Checked by JRH
Issued for Construction Site Plan
Date Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title
Layout & Materials Plan

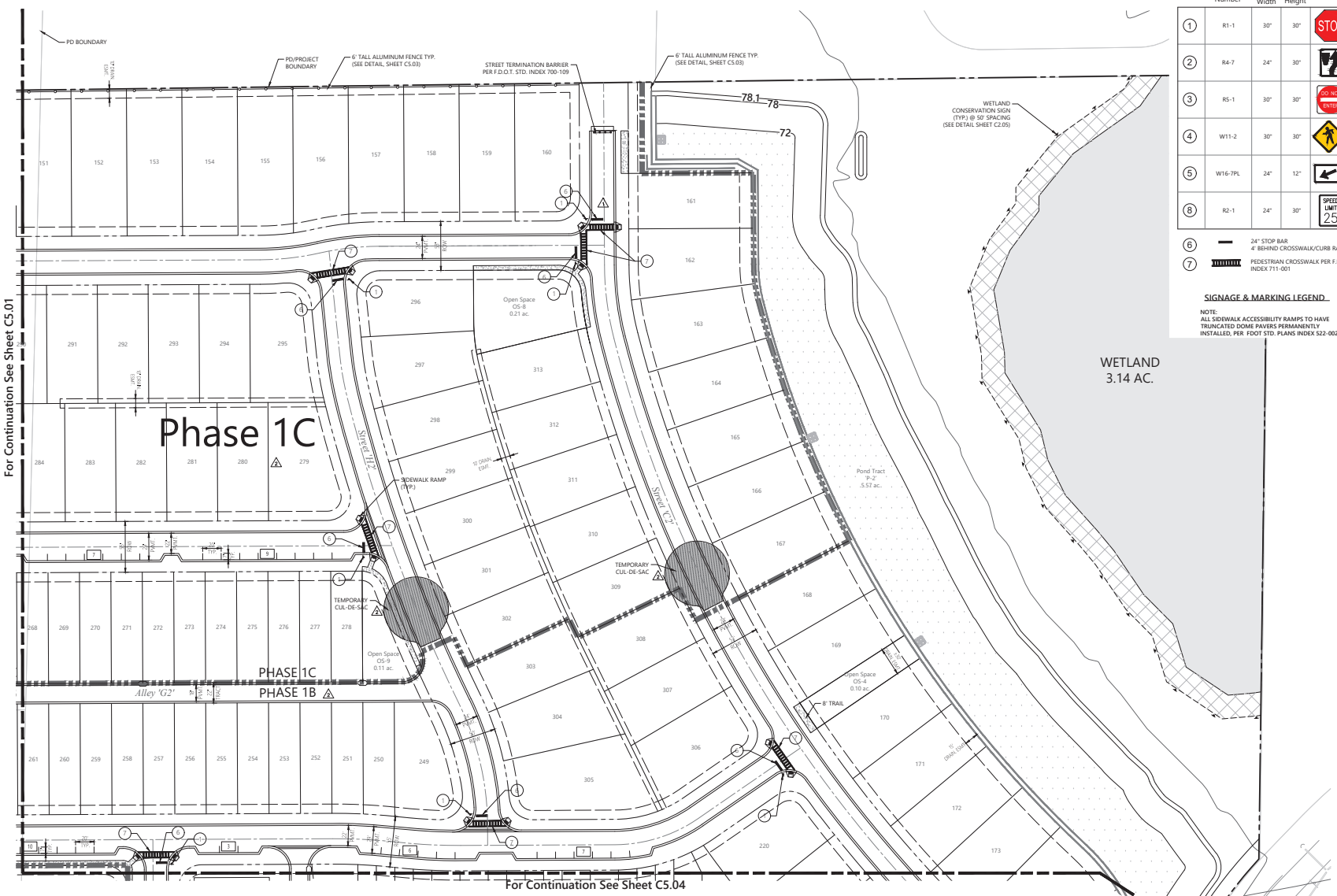
CERTIFIED PROFESSIONAL ENGINEER LICENSE NO. 59469 STATE OF FLORIDA
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number
C5.01

Sheet of

Project Number
63534.03

Saved Tuesday, December 19, 2023 5:22:16 PM GGEORGY Plotted Wednesday, January 17, 2024 2:34:04 PM Jordan Fisher



Sign Summary

	M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
1	R1-1	30"	30"	STOP
2	R4-7	24"	30"	
3	R5-1	30"	30"	DO NOT ENTER
4	W11-2	30"	30"	
5	W16-7PL	24"	12"	
8	R2-1	24"	30"	SPEED LIMIT 25

6 — 24" STOP BAR 4' BEHIND CROSSWALK/CURB RAMP

7 — PEDESTRIAN CROSSWALK PER F.D.O.T. INDEX 711-001

SIGNAGE & MARKING LEGEND

NOTE:
ALL SIDEWALK ACCESSIBILITY RAMPS TO HAVE TRUNCATED DOME PAVERS PERMANENTLY INSTALLED, PER FDOT STD. PLANS INDEX 522-002.

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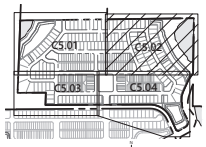

Key Map N.T.S.

LEGEND

- PROJECT BOUNDARY
- PHASE LINE
- 10 PARKING SPACE COUNTS

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
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4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

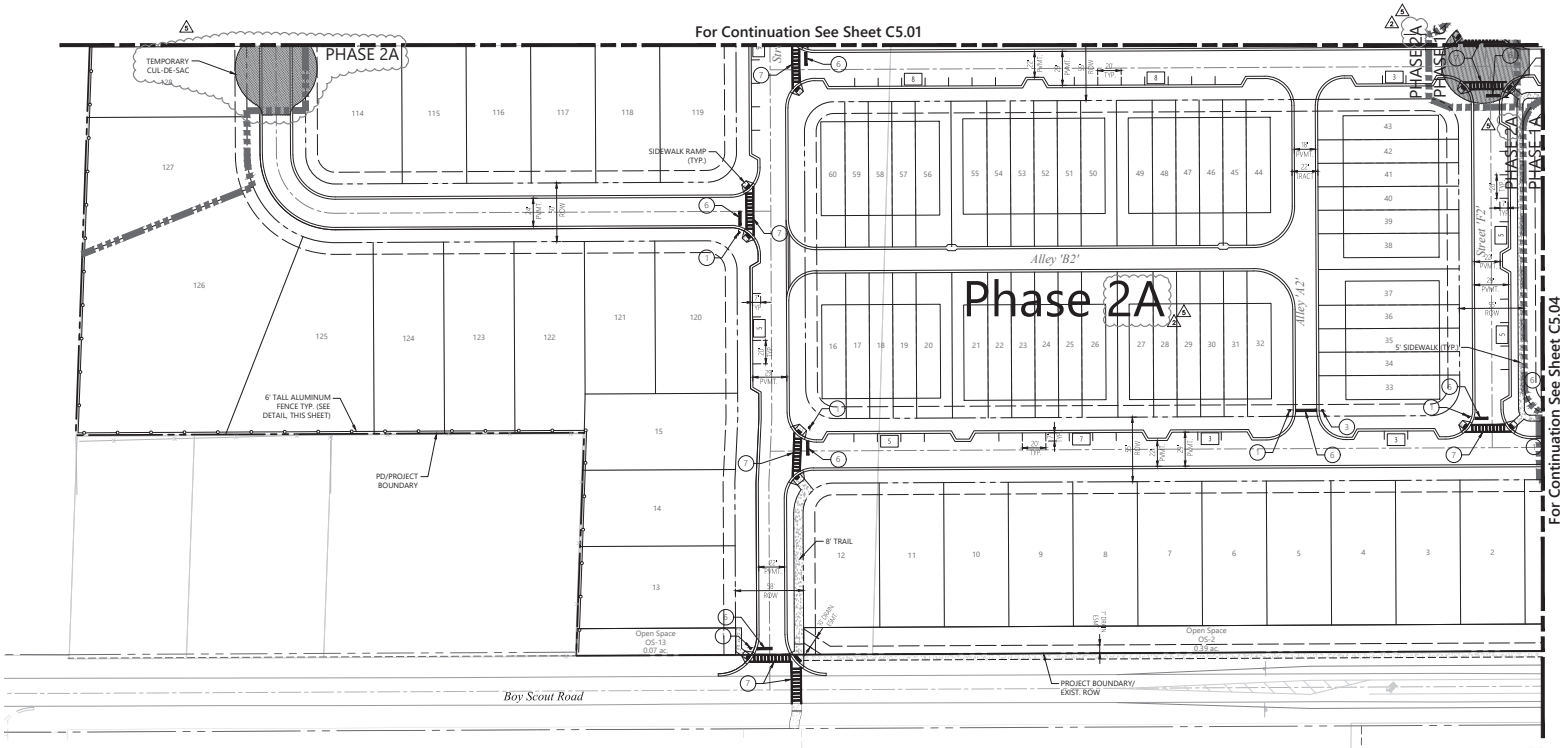
Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title: Layout & Materials Plan

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

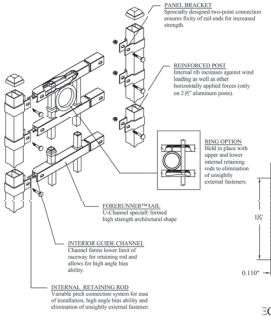
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

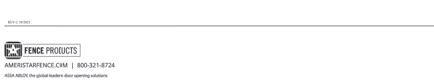
Drawing Number: C5.02
Sheet of
Project Number: 63534.03

Saved Tuesday, December 19, 2023 5:22:16 PM GGEORGY Plotted Wednesday, January 17, 2024 2:34:13 PM Jordan Fisher

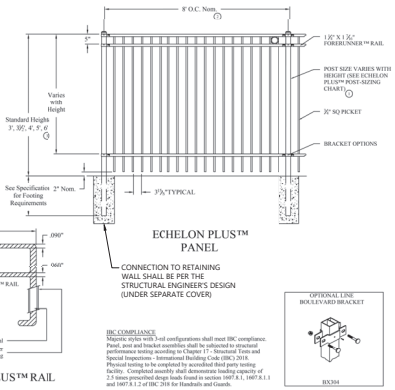


NOTES:
1. Post size and gauge depends on fence height and wind loads. See ECHELON PLUS™ specifications for post sizing chart.
2. Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.
3. Additional heights available by request.





ECHELON PLUS™ RAIL



IBC COMPLIANCE
Majestic styles with 3-rail configurations shall meet IBC compliance. Panel, post and bracket assemblies shall be subjected to structural performance testing according to Chapter 17 - Structural Tests and Special Inspections - International Building Code (IBC) 2018. Physical testing to be completed by accredited third party testing facility. Completed assembly shall demonstrate loading capacity of 2.5 times prescribed design loads found in section 1607.8.1, 1607.8.1.1 and 1607.8.1.2 of IBC 2018 for Handrails and Guards.

REV C 10/2021

ECHELON PLUS™ MAJESTIC 3-RAIL PANEL

FENCE PRODUCTS
AMERISTARFENCE.CIM | 800-321-8724
ASSA ABLOY, the global leaders door opening solutions

AMERISTAR
ASSA ABLOY

Perimeter and Fall Protection Fence Detail

N.T.S.

Sign Summary

	M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
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6 — 24" STOP BAR
4' BEHIND CROSSWALK/CURB RAMP

7 — PEDESTRIAN CROSSWALK PER F.D.O.T. INDEX 711-001

SIGNAGE & MARKING LEGEND

NOTE:
ALL SIDEWALK ACCESSIBILITY RAMPS TO HAVE TRUNCATED DOME PAVERS PERMANENTLY INSTALLED, PER FDOT STD. PLANS INDEX 522-002.

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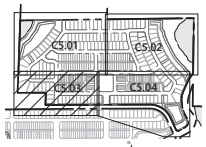

Key Map
N.T.S.

LEGEND
PROJECT BOUNDARY
PHASE LINE

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
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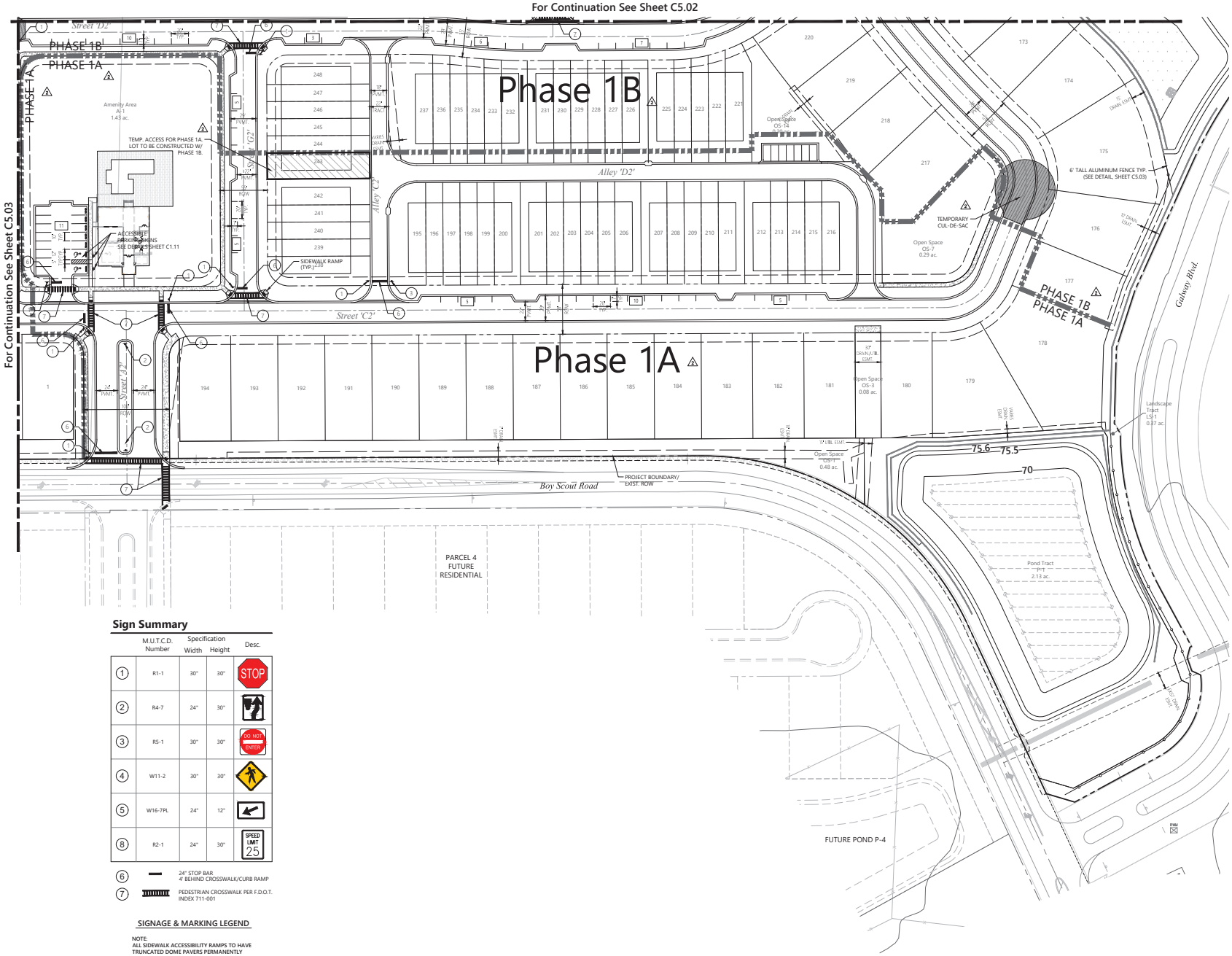
Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title: Layout & Materials Plan

CHRIS B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C5.03
Sheet of
Project Number: 63534.03

Saved Tuesday, December 19, 2023 5:22:16 PM GEORGY Plotted Wednesday, January 17, 2024 2:34:24 PM Jordan Fisher



Sign Summary

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3	R5-1	30"	30"	DO NOT ENTER
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8	R2-1	24"	30"	SPEED LIMIT 25

6 — 24" STOP BAR 4' BEHIND CROSSWALK/CURB RAMP

7 — PEDESTRIAN CROSSWALK PER F.D.O.T. INDEX 711-001

SIGNAGE & MARKING LEGEND

NOTE:
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Orlando, FL 32801
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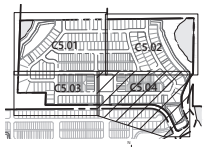
Number FL #3932



Key Map

N.T.S.

LEGEND

PROJECT BOUNDARY
PHASE LINE
10 PARKING SPACE COUNTS

0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
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Designed by DMK
Checked by JRH
Issued for Construction Site Plan
Date Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title
Layout & Materials Plan

Drawing Number
C5.04

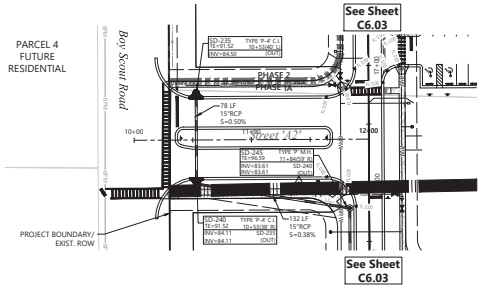
Sheet of

Project Number 63534.03

REGISTERED PROFESSIONAL ENGINEER LICENSE NO. 59469 STATE OF FLORIDA

John B. Prewett, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Saved Tuesday, December 19, 2023 5:22:16 PM GGEORGY Plotted Wednesday, January 17, 2024 2:34:34 PM Jordan Fisher



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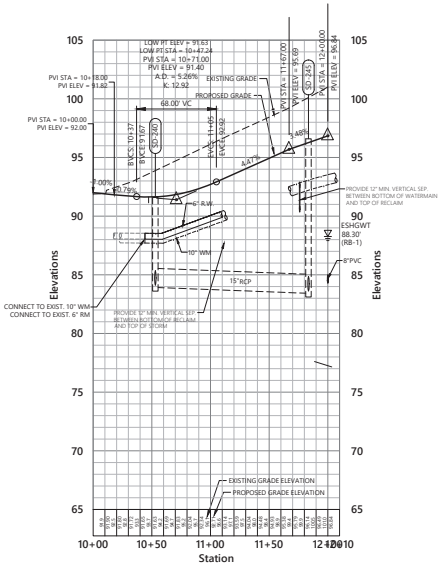
Key Map N.T.S.

Street 'A2'



1. PROVIDE 3' MINIMUM HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND EDGE OF PAVEMENT.
2. WHERE GRAVITY SANITARY SEWER MAIN CROSSES UNDERNEATH RCP STORMWATER PIPE WITH LESS THAN 12" OF VERTICAL SEPARATION, A FIELD REVISION APPROVED BY CITY OF APOPKA WILL BE REQUIRED PRIOR TO CONSTRUCTION.
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Vert. 0 2.5 5 10 Feet
Horiz. 0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title: Plan & Profile Street 'A2'

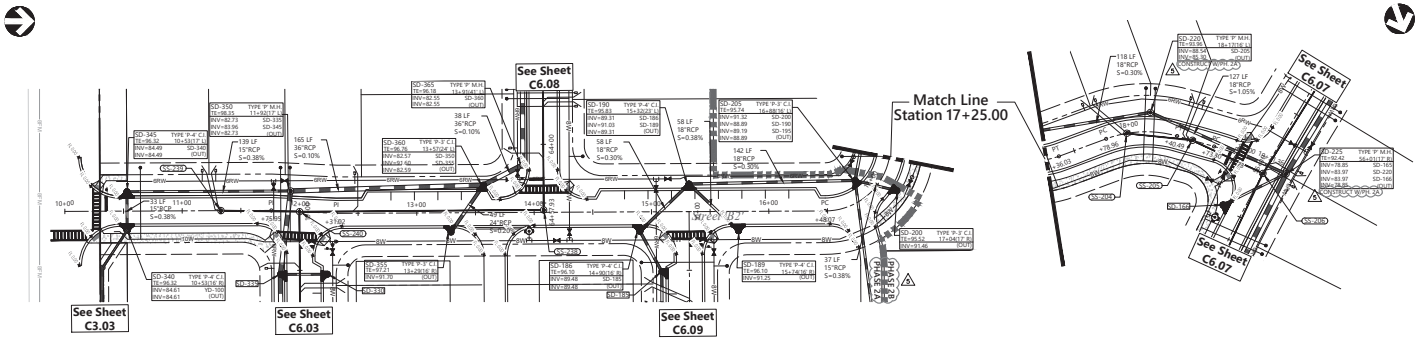
Drawing Number: C6.01
Sheet of

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number: 63534.03

Saved Wednesday, December 20, 2023 9:52:47 AM GGEORGY Plotted Wednesday, January 17, 2024 2:37:15 PM Jordan Fisher



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Number FL #3932

Key Map

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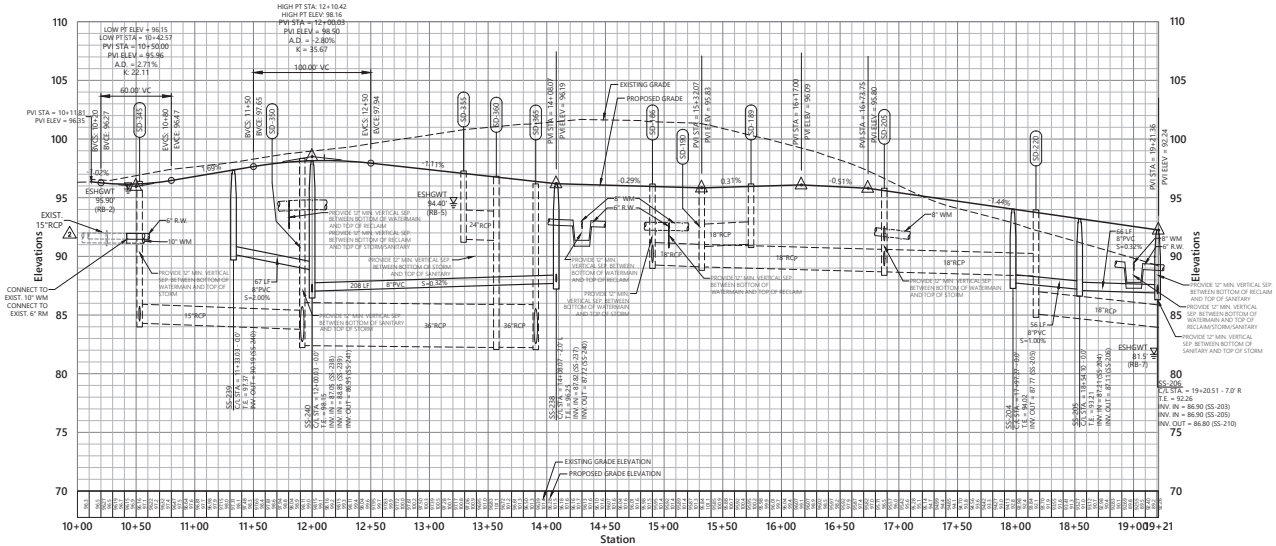
Vert. 0 2.5 5 10 Feet
Horiz. 0 25 50 100 Feet

Street 'B2'



The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Adjust.
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Drawing Title: Plan & Profile Street 'B2'

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER NO. 59469
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C6.02
Sheet of
Project Number: 63534.03

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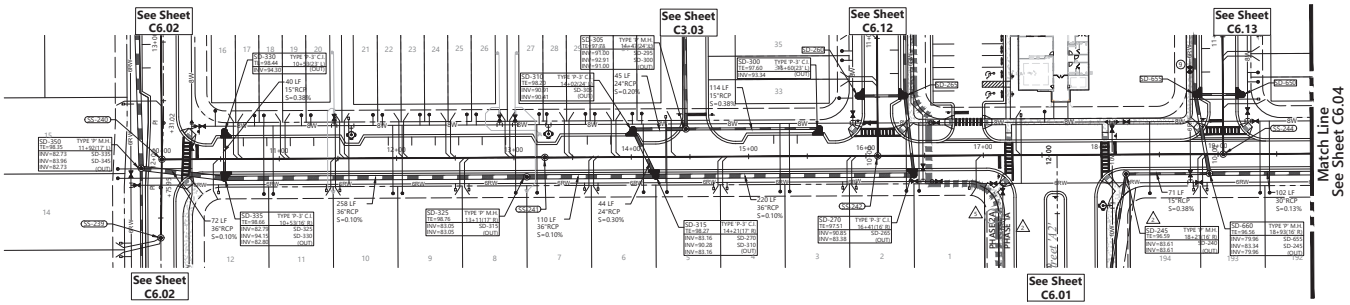

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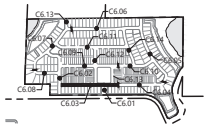

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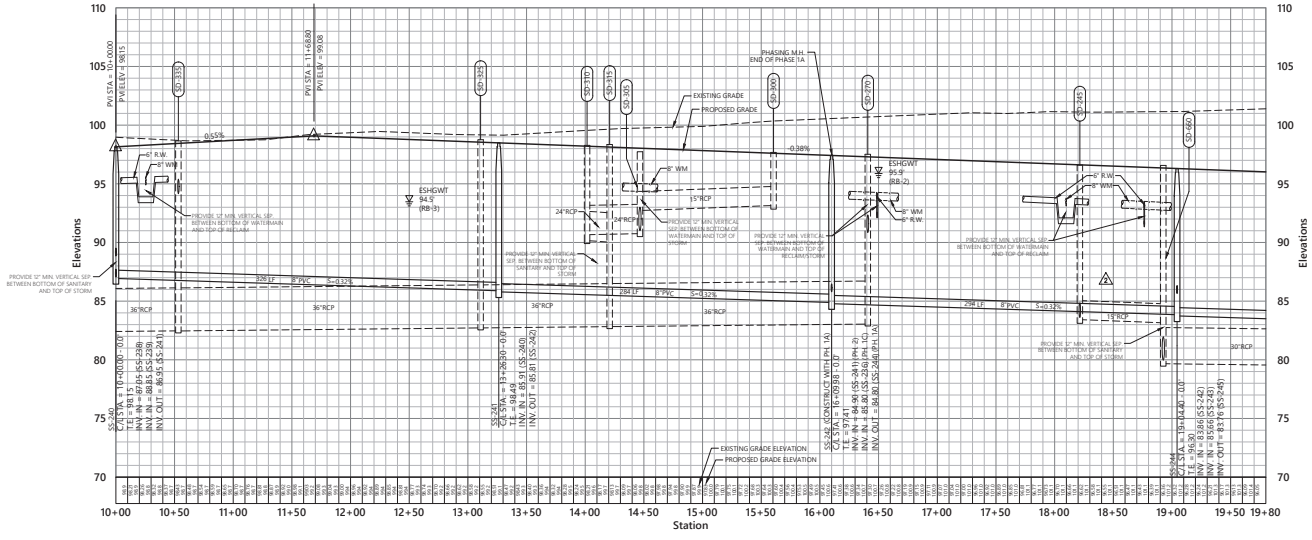
Vert. 0 2.5 5 10 Feet
Horiz. 0 25 50 100 Feet

Street 'C2'



The Ridge PD
Parcel 2

Apopka, Florida

No.	Revision	Date	Approved
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Designed by DMK
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Drawing Title
Plan & Profile
Street 'C2'

Drawing Number C6.03

Sheet of

Project Number 63534.03

LICENSED PROFESSIONAL ENGINEER LICENSE NO. 59469 STATE OF FLORIDA

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Saved Monday, December 4, 2023 9:32:30 AM JPISKER Plotted Wednesday, January 17, 2024 2:39:04 PM Jordan Fisher

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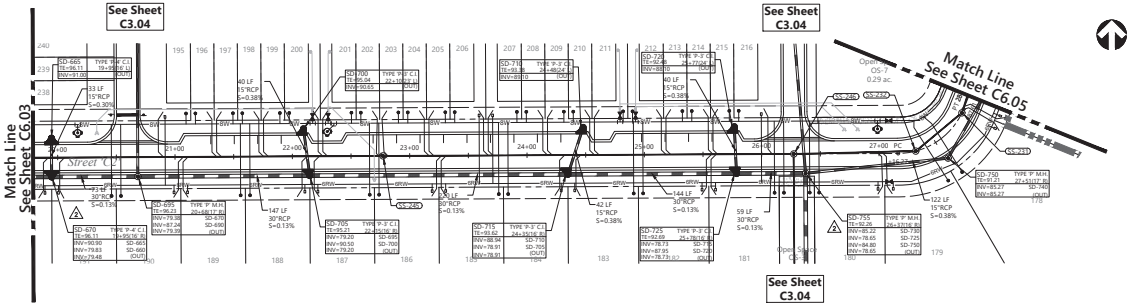

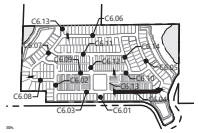

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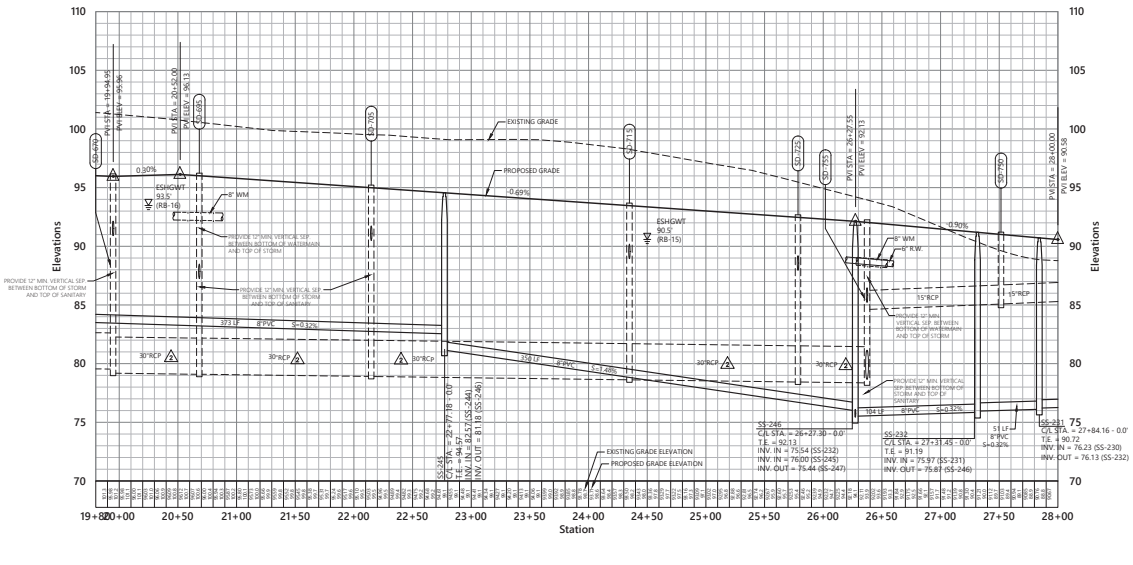
Street 'C2'



Vert. 0 2.5 5 10 Feet

Horiz. 0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

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Designed by DMK

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Issued for **Construction Site Plan**

Date Feb. 25, 2022

Vertical Datum NAVD 1988

Drawing Title **Plan & Profile Street 'C2'**

Drawing Number **C6.04**

Sheet of

Project Number 63534.03

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER NO. 59469

John B. Prowell, P.E.
P.E. # 59469

DATE: Jan. 17, 2024

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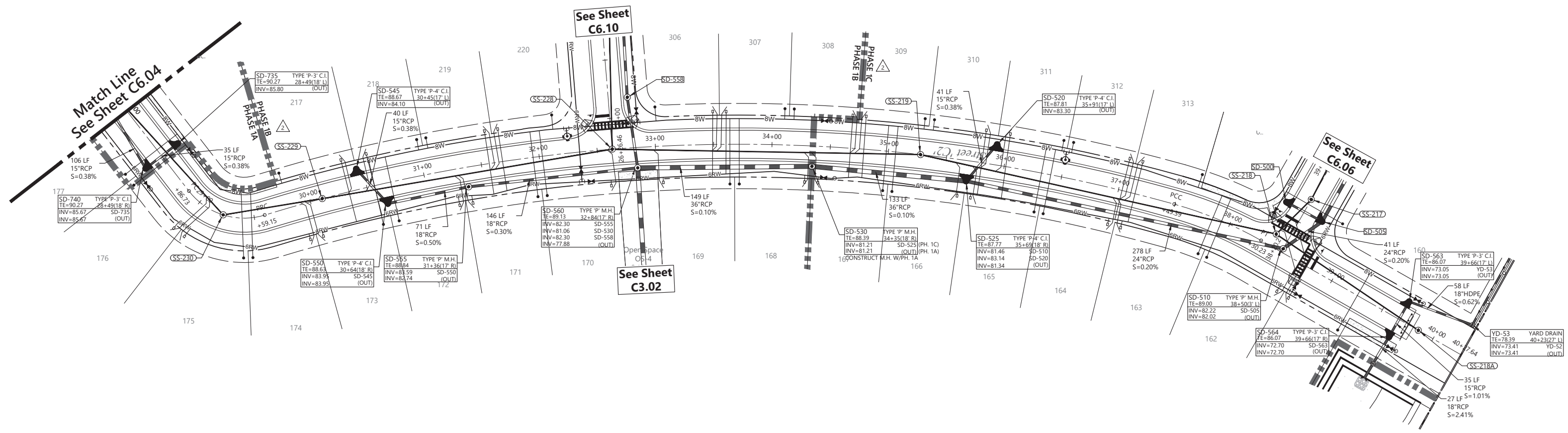

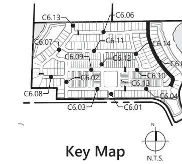

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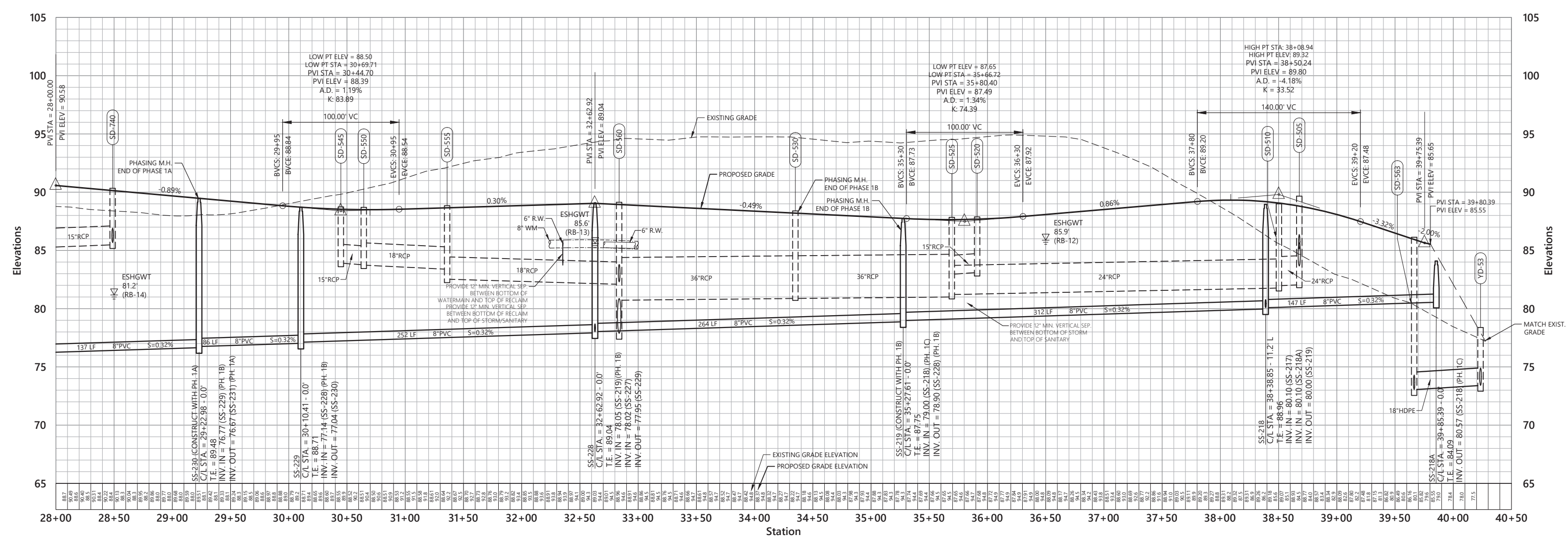
Street 'C2'

Vert. 0 2.5 5 10 Feet

Horiz. 0 25 50 100 Feet



The Ridge PD
Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
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Designed by DMK

Checked by JRH

Issued for: Construction Site Plan

Date: Feb. 25, 2022

Vertical Datum NAVD 1988

Drawing Title

Plan & Profile
Street 'C2'

Drawing Number

C6.05

Sheet of

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number
63534.03

Saved Monday, December 4, 2023 9:32:30 AM JFISHER Plotted Wednesday, January 17, 2024 2:39:47 PM Jordan Fisher

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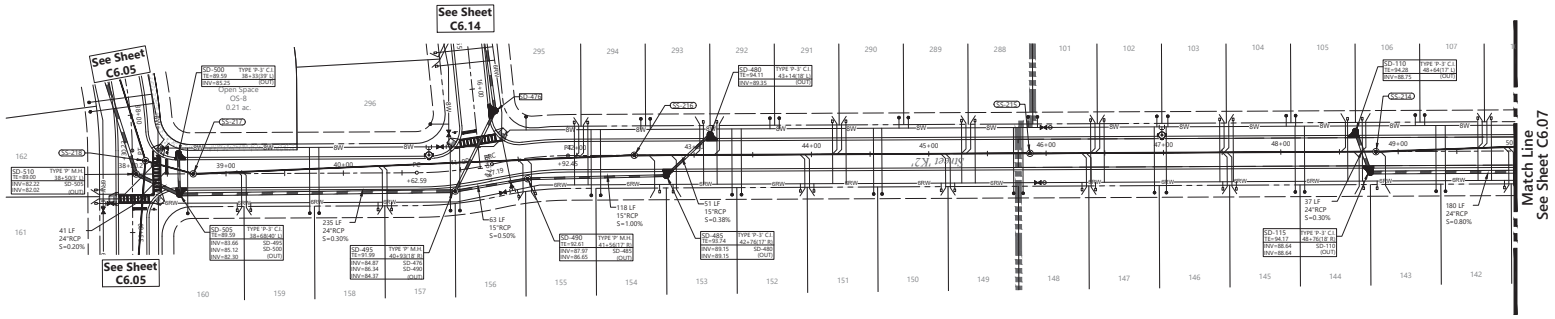

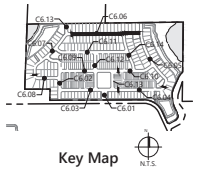

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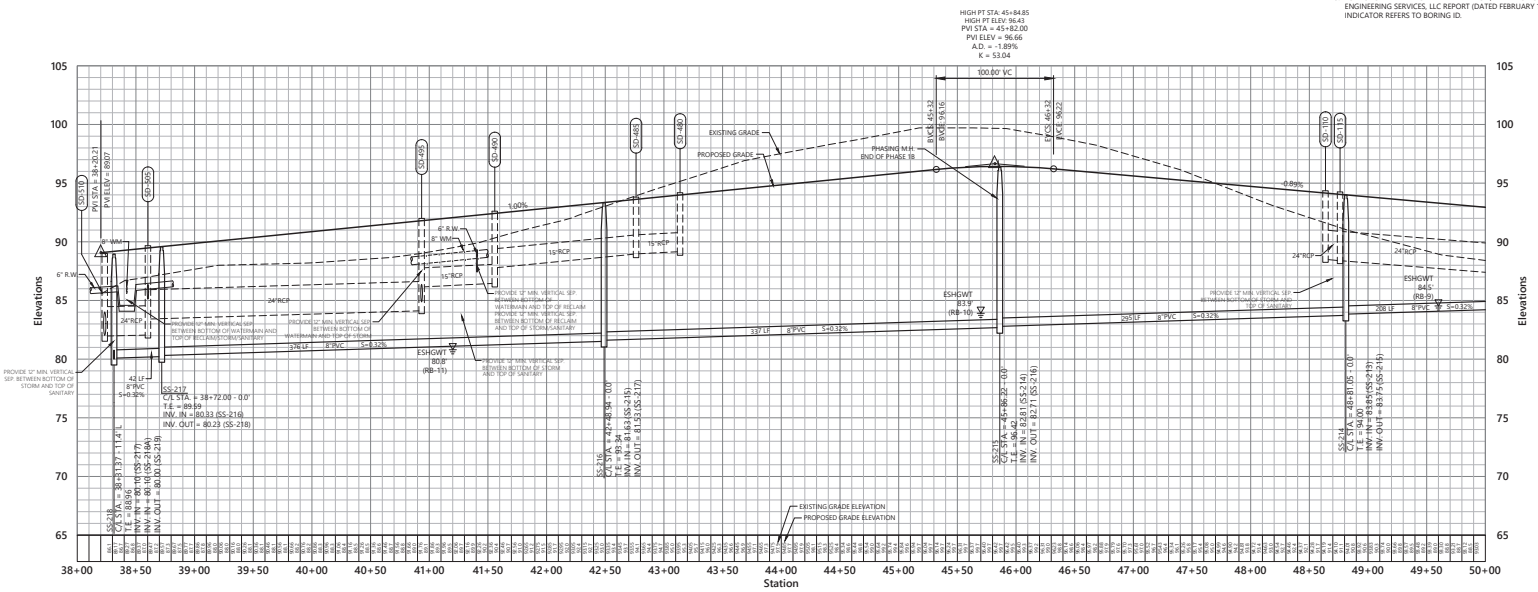
Street 'K2'



Vert. 0 2.5 5 10 Feet
Horiz. 0 25 50 100 Feet

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Key Map N.T.S.

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Approved
1	City of Apopka Comments	05/17/2022	
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Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title: Plan & Profile Street 'K2'

CERTIFICATE OF AUTHORIZATION LICENSE NO.59469 STATE OF FLORIDA PROFESSIONAL ENGINEER
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C6.06
Sheet of
Project Number: 63534.03

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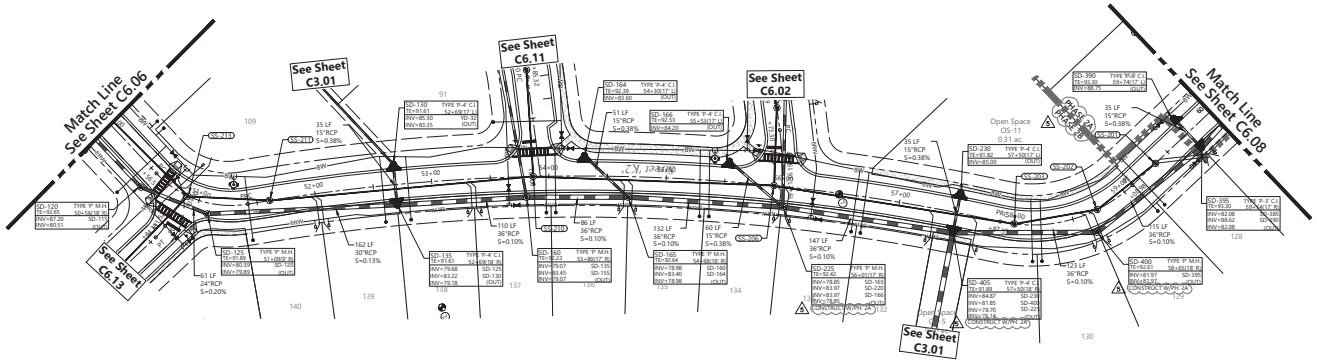

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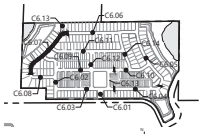

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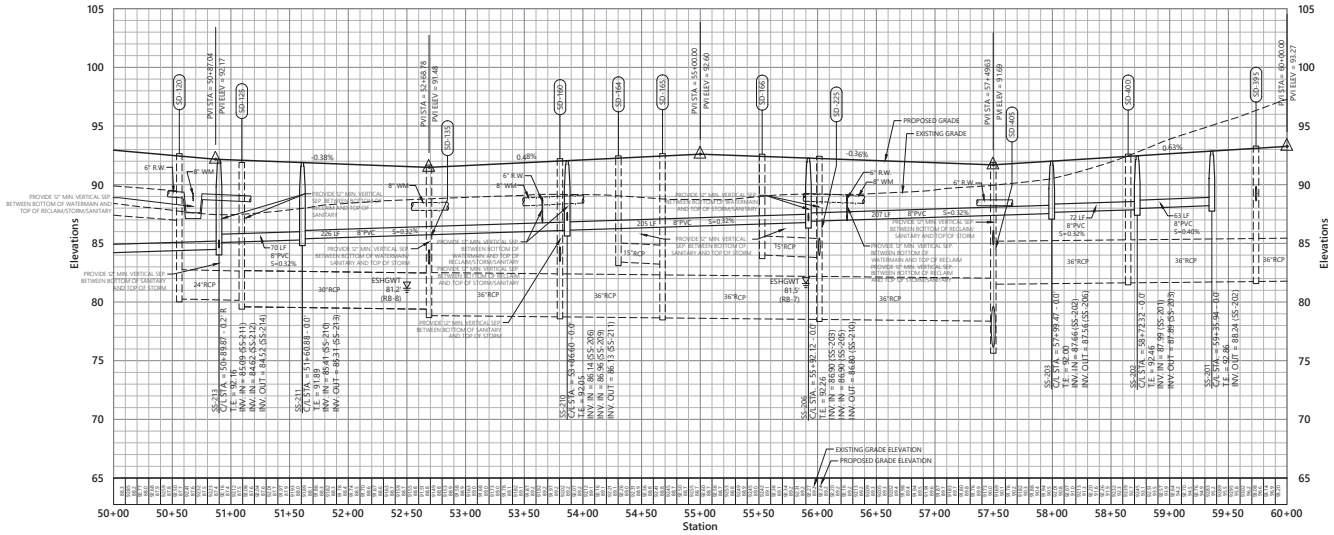
Vert. 0 2.5 5 10 Feet

Horiz. 0 25 50 100 Feet

Street 'K2'



The Ridge PD Parcel 2

Apopka, Florida

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Checked by: JRH
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Drawing Title: Plan & Profile Street 'K2'

Drawing Number: C6.07

Sheet of

Project Number: 63534.03

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER NO. 59469

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P.E. # 59469
DATE: Jan. 17, 2024

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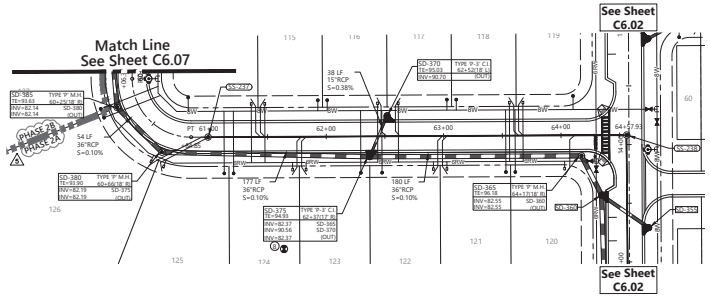

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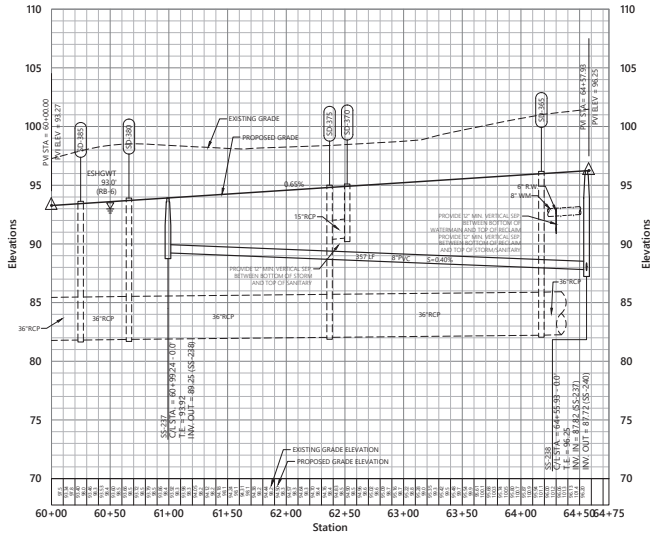

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The Ridge PD
Parcel 2

Apopka, Florida

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Drawing Title
Plan & Profile
Street 'K2'

Drawing Number
C6.08

Sheet of

Project Number
63534.03

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Number FL #3932

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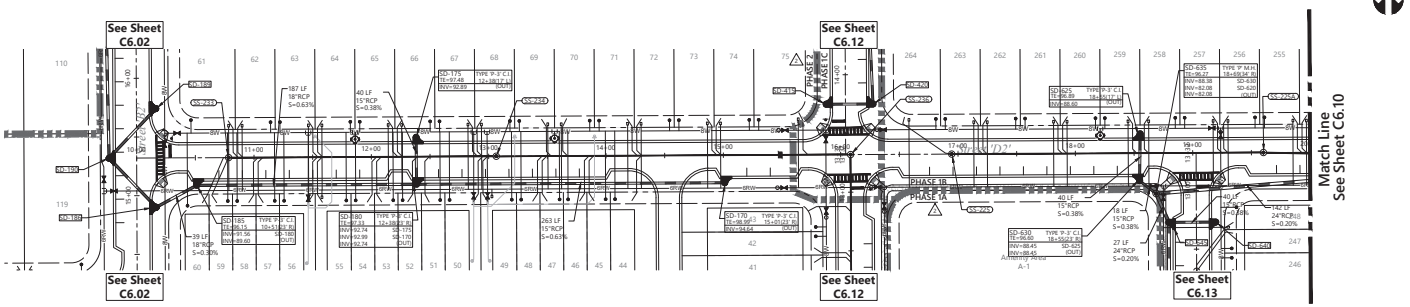

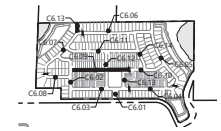

Key Map

N.T.S.

1. PROVIDE 3' MINIMUM HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND EDGE OF PAVEMENT.
2. WHERE GRAVITY SANITARY SEWER MAIN CROSSES UNDERNEATH RCP STORMWATER PIPE WITH LESS THAN 12" OF VERTICAL SEPARATION, A FIELD REVISION APPROVED BY CITY OF APOPKA WILL BE REQUIRED PRIOR TO CONSTRUCTION.
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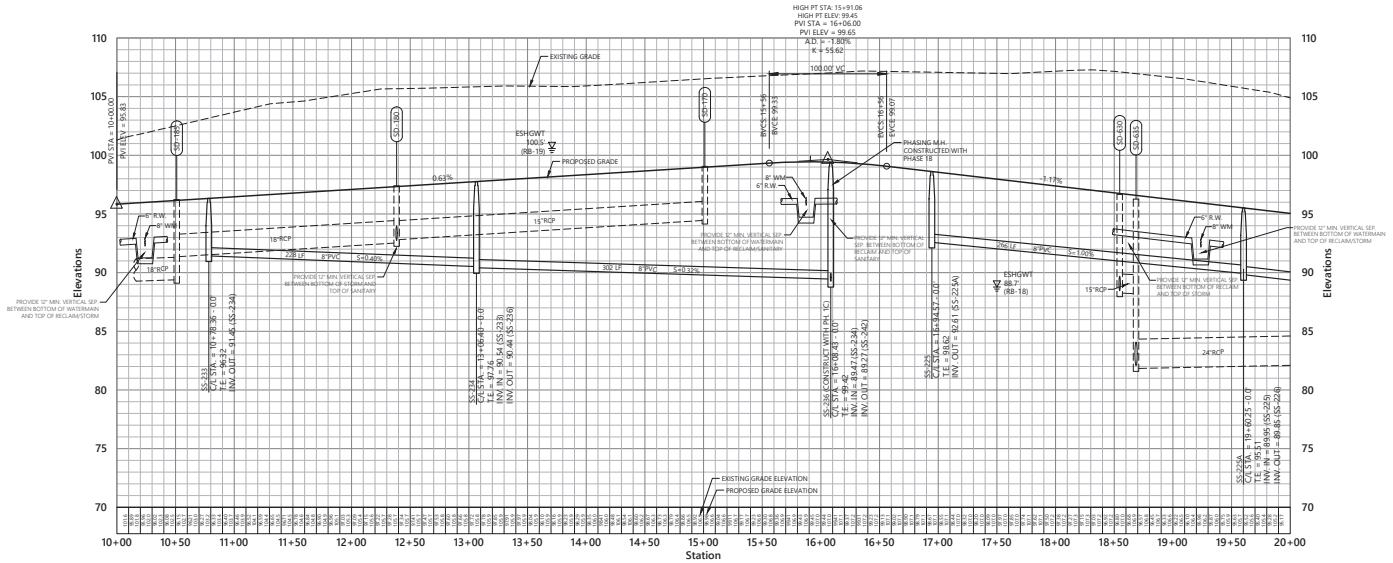
Street 'D2'



Vert. 0 2.5 5 10 Feet

Horiz. 0 25 50 100 Feet

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Suite 300
Orlando, FL 32801
407.839.4006
Certificate of Authorization
Number FL #3932

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title: Plan & Profile Street 'D2'

Drawing Number: C6.09

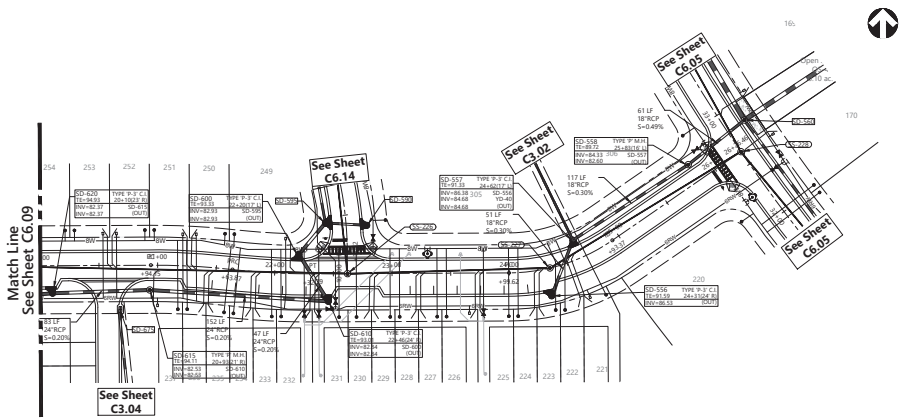
Sheet of

Project Number: 63534.03

CERTIFICATE OF AUTHORIZATION LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Saved Tuesday, November 21, 2023 3:21:03 PM JFISHER Plotted Wednesday, January 17, 2024 2:43:51 PM Jordan Fisher



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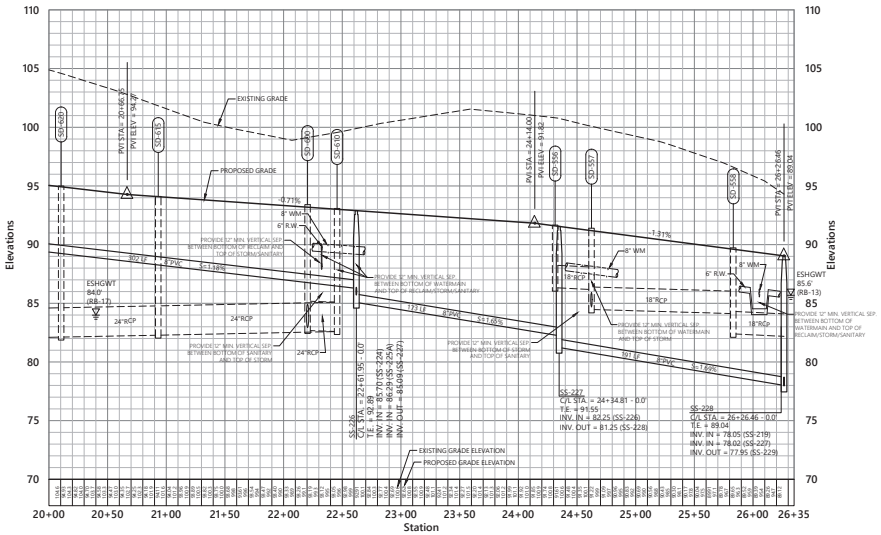
Street 'D2'



Vert. 0 2.5 5 10 Feet
Horiz. 0 25 50 100 Feet

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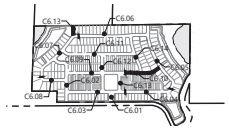
Certificate of Authorization
Number FL #3932



Key Map N.T.S.

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Adjust.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

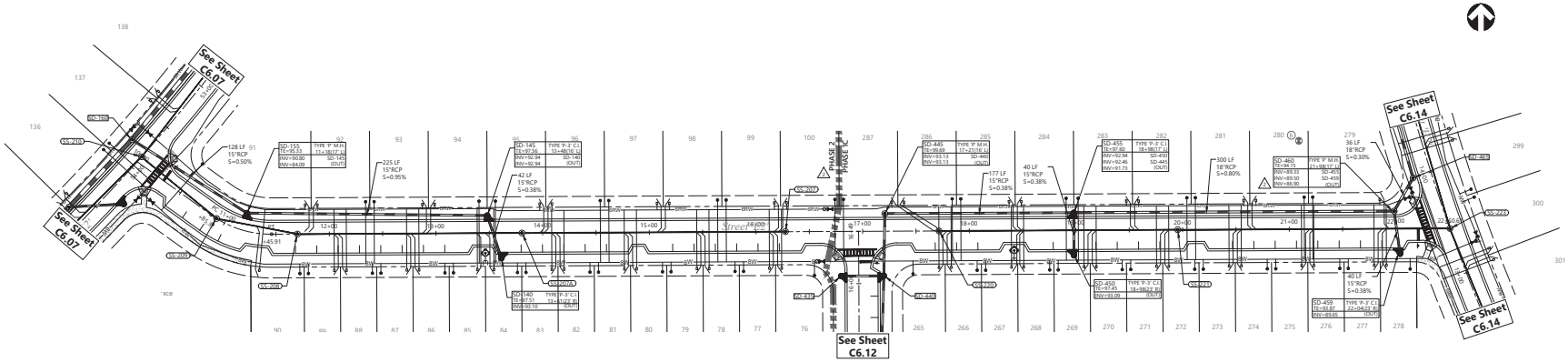
Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title: Plan & Profile Street 'D2'

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER LICENSE NO. 59469
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C6.10
Sheet of
Project Number: 63534.03

Saved Tuesday, November 21, 2023 3:21:03 PM JFISHER Plotted Wednesday, January 17, 2024 2:43:59 PM Jordan Fisher

\\vhb.com\gbi\proj\Orlando\63534.03 Toll Bros-The Ridge P-2\cad\ld\Planset\FDP\6353403-PP-STD-E.dwg



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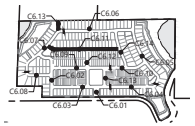

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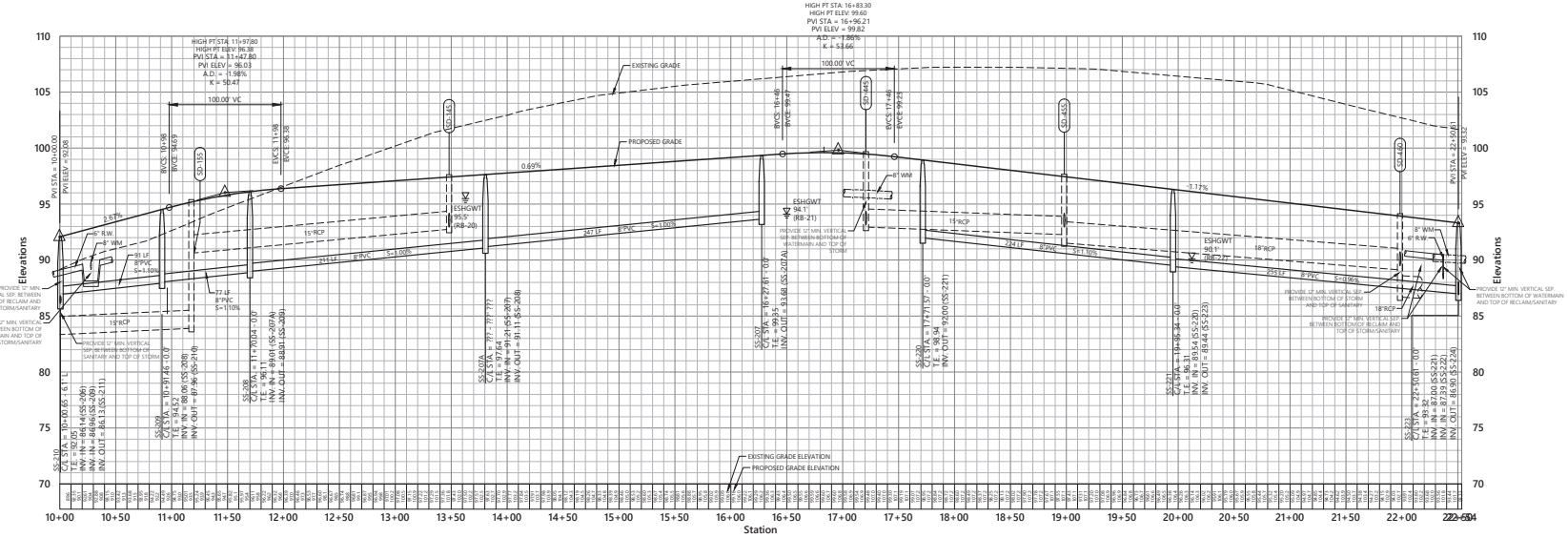
Vert. 0 2.5 5 10 Feet
Horiz. 0 25 50 100 Feet

Street 'E2'



The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
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5	Phase 2 Sub-Phasing Revisions	01/17/2024	

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Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title: Plan & Profile Street 'E2'

Drawing Number: C6.11

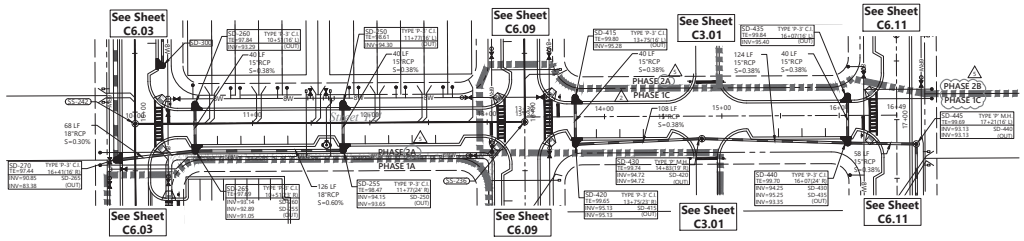
Sheet of

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER NO. 59469

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number: 63534.03

Saved Tuesday, November 21, 2023 3:21:03 PM JFISHER Plotted Wednesday, January 17, 2024 2:44:09 PM Jordan Fisher



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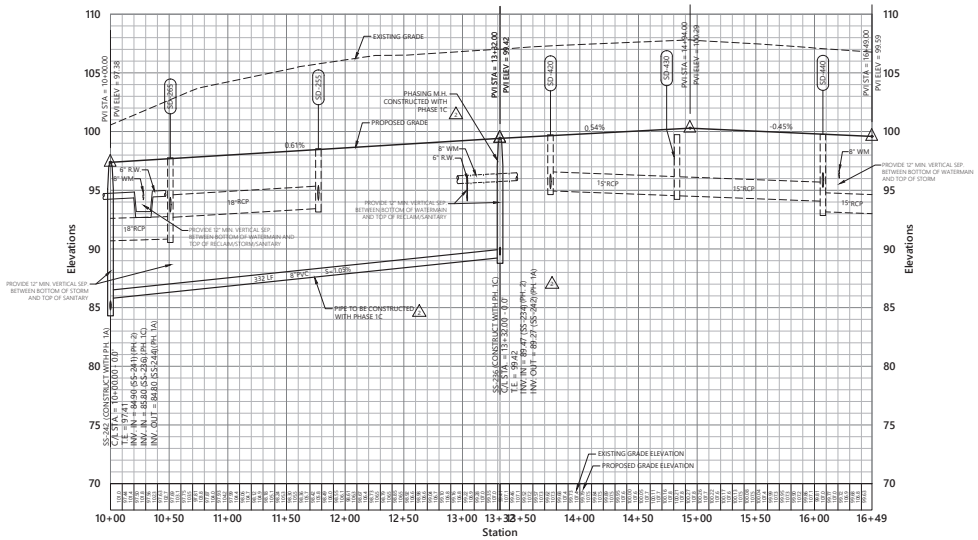
Street 'F2'



Vert. 0 2.5 5 10 Feet
Horiz. 0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
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Checked by JRH
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Date Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title
Plan & Profile
Street 'F2'

Drawing Number C6.12

Sheet of

Project Number 63534.03

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

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Number FL #3932

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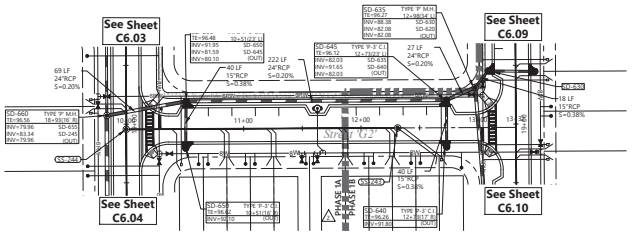

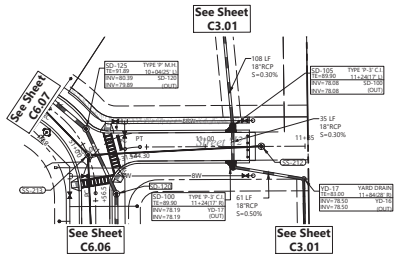

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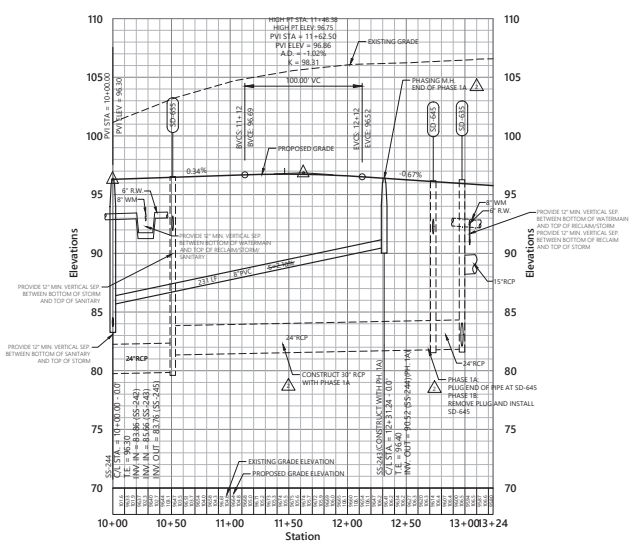
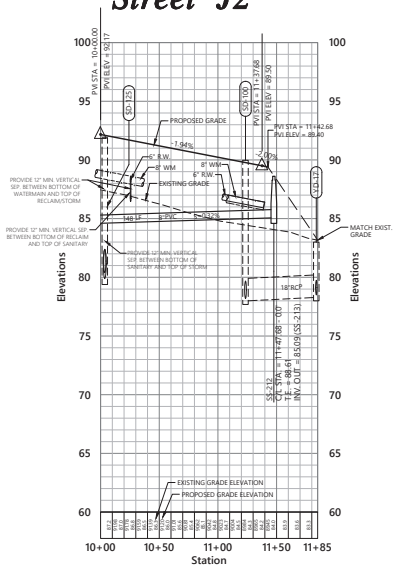
Street 'G2'



Street 'J2'



Vert. 0 2.5 5 10 Feet
Horiz. 0 25 50 100 Feet

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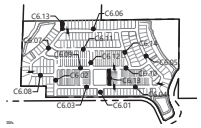

Key Map N.T.S.

The Ridge PD Parcel 2

Apopka, Florida

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Designed by DMK
Checked by JRH
Issued for Construction Site Plan
Date Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title
Plan & Profile
Streets 'G2' and 'J2'

Drawing Number C6.13
Sheet of

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number 63534.03

Saved Monday, December 4, 2023 9:28:49 AM JFISHER Plotted Wednesday, January 17, 2024 2:45:59 PM Jordan Fisher

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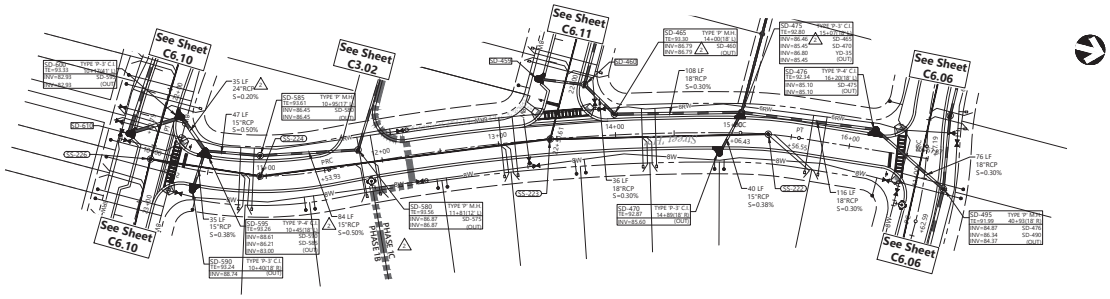

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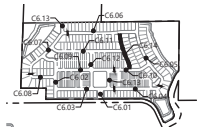

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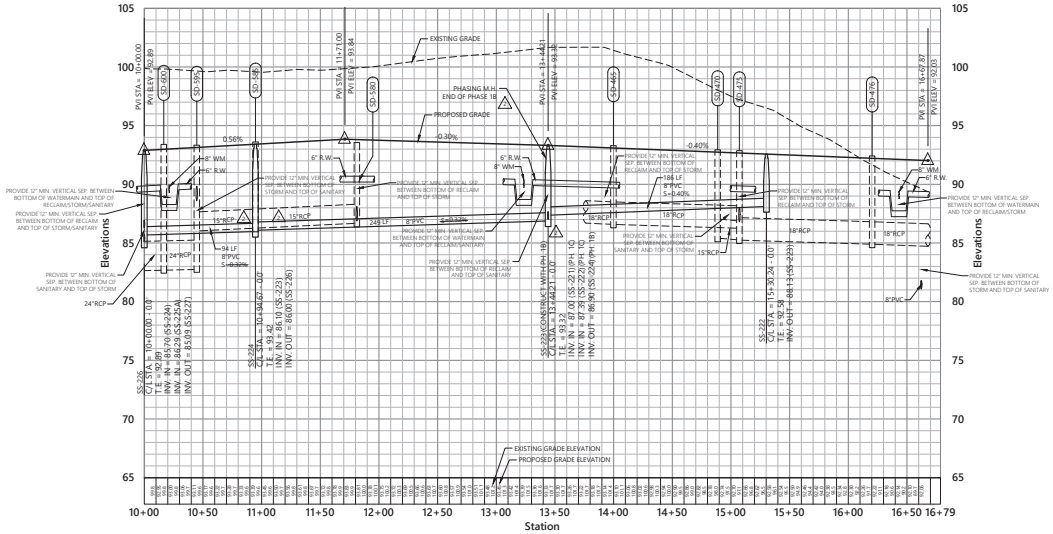
Street 'H2'



Vert. 0 2.5 5 10 Feet
Horiz. 0 25 50 100 Feet

The Ridge PD Parcel 2

Apopka, Florida

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Designed by DMK
Checked by JRH
Issued for Construction Site Plan
Date Feb. 25, 2022
Vertical Datum NAVD 1988

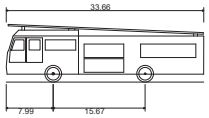
Drawing Title
Plan & Profile
Street 'H2'

Drawing Number C6.14
Sheet of

STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER NO. 59469
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number 63534.03

Saved Monday, December 4, 2023 9:28:49 AM JPSNER Plotted Wednesday, January 17, 2024 2:46:34 PM Jordan Fisher



Apopka-Engine/Pumper 4000

Overall Length	33.660ft
Overall Width	8.160ft
Overall Body Height	9.830ft
Min Body Ground Clearance	1.363ft
Track Width	8.160ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	28.190ft

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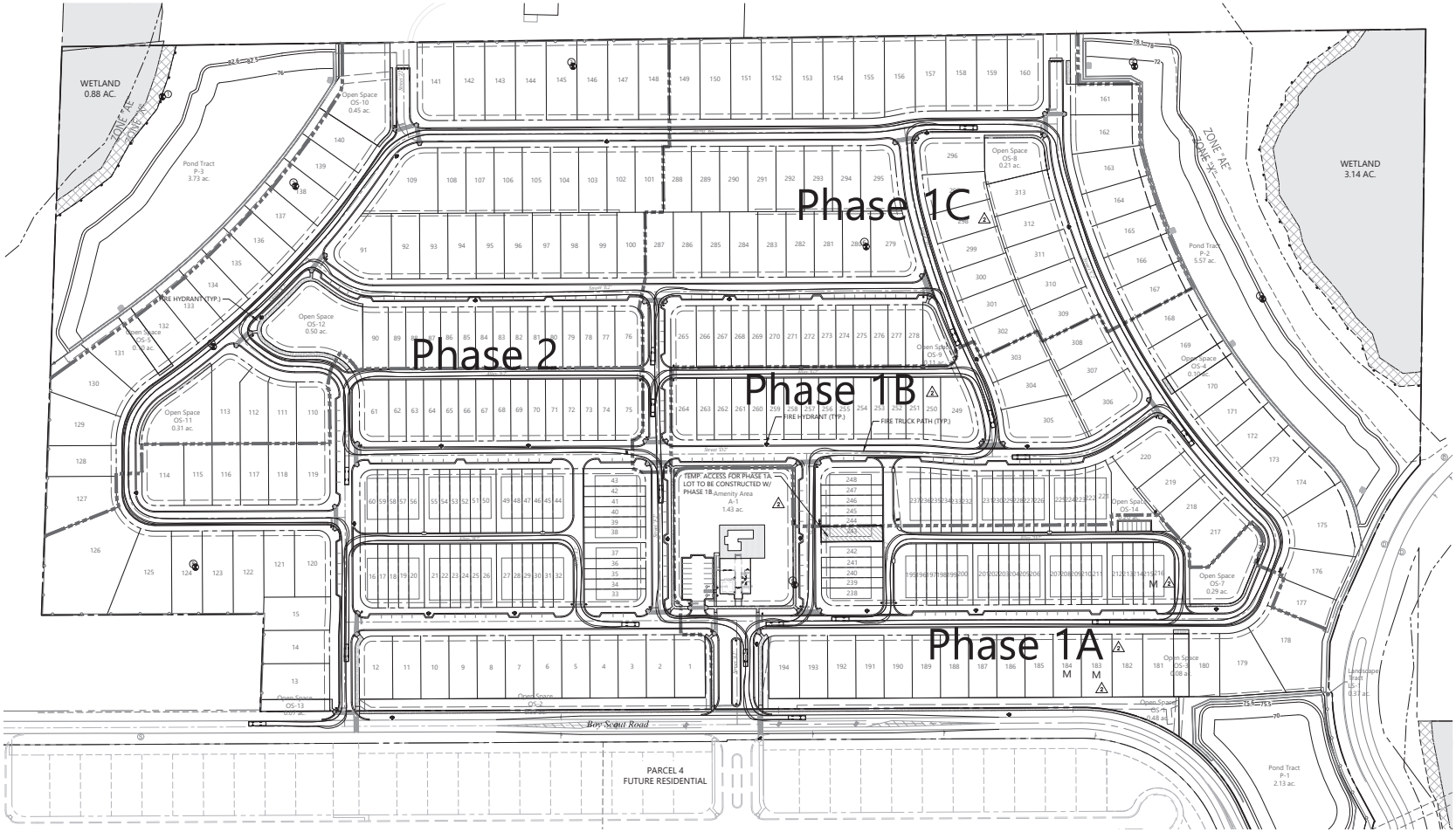

0 30 60 120 Feet

The Ridge PD
Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
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Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988

Drawing Title: Fire Access Plan

Drawing Number: C7.00

Sheet of

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Project Number: 63534.03

Saved Tuesday, November 21, 2023 3:33:12 PM JFISHER Plotted Wednesday, January 17, 2024 2:47:43 PM Jordan Fisher

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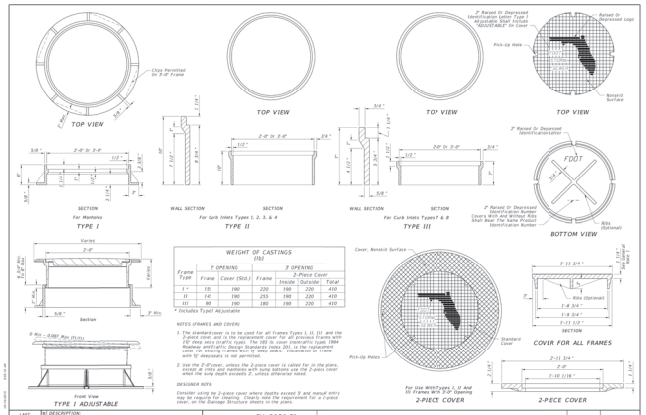

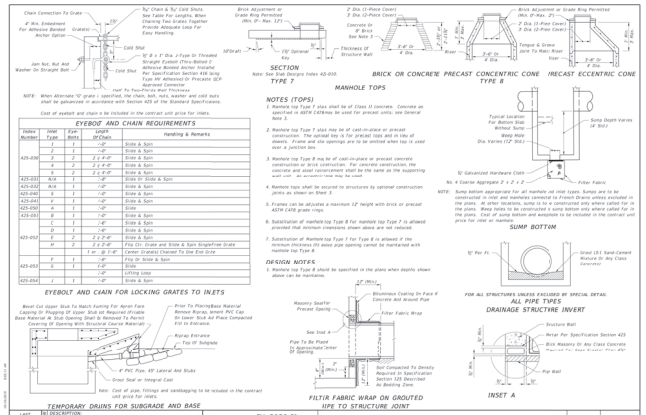

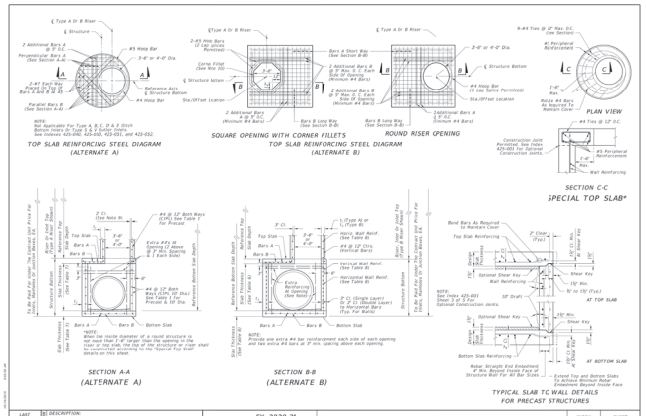

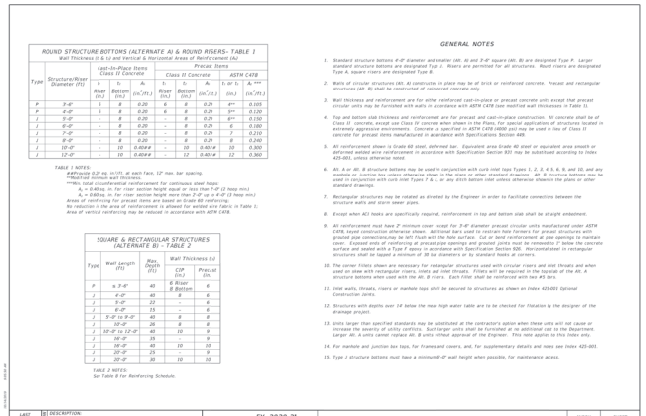

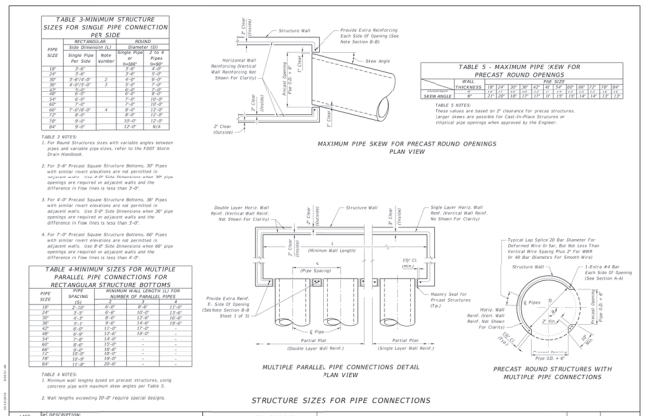

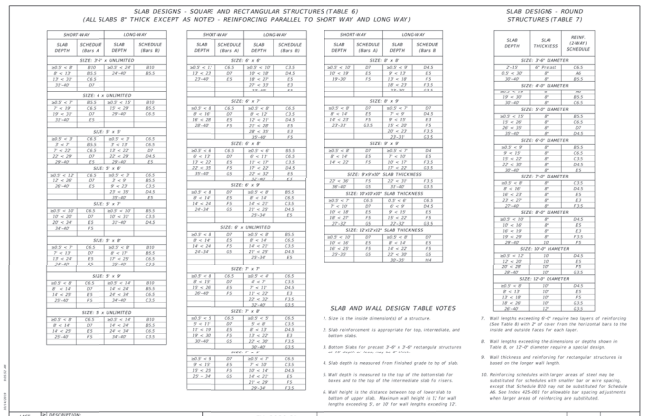

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The Ridge PD
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Apopka, Florida

No.	Revision	Date	Approv.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SIRWMD	10/19/2023	
4	SIRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: **Construction Site Plan**
Date: Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title: **Standard F.D.O.T. Details**

CERTIFIED PROFESSIONAL ENGINEER LICENSE NO. 59469 STATE OF FLORIDA
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: **C9.00**
Sheet of
Project Number: 63534.03

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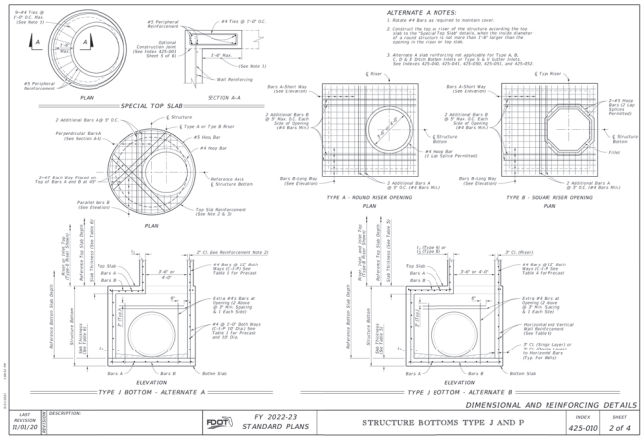

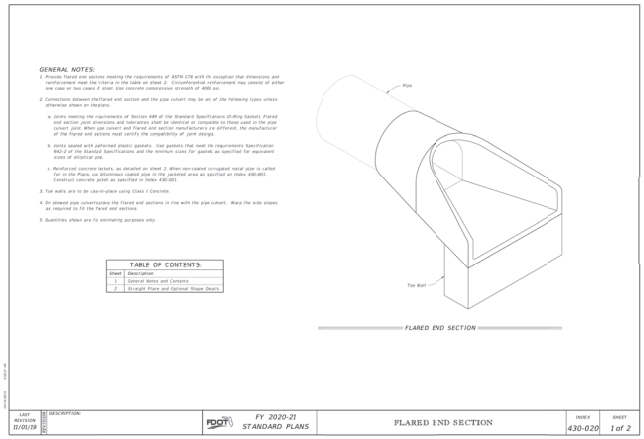

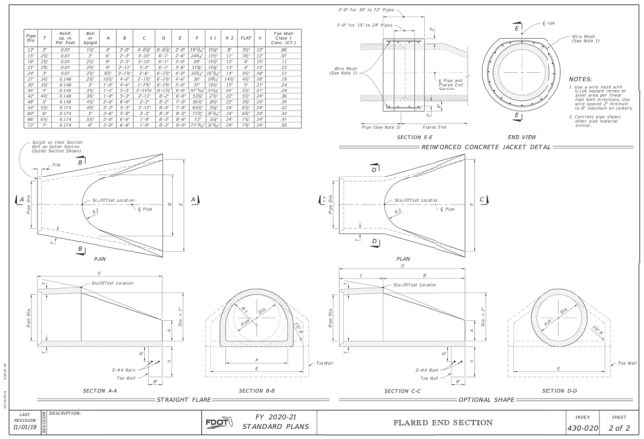

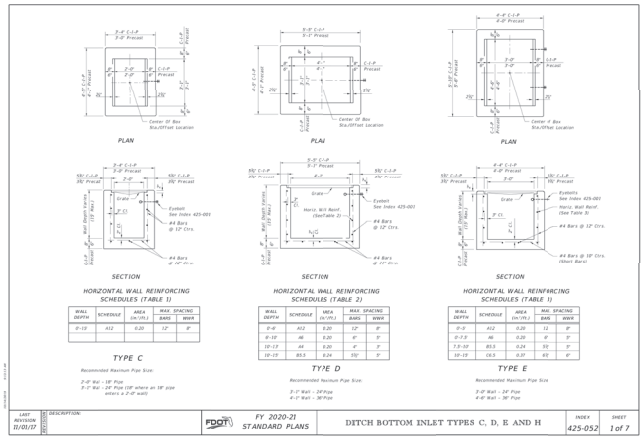

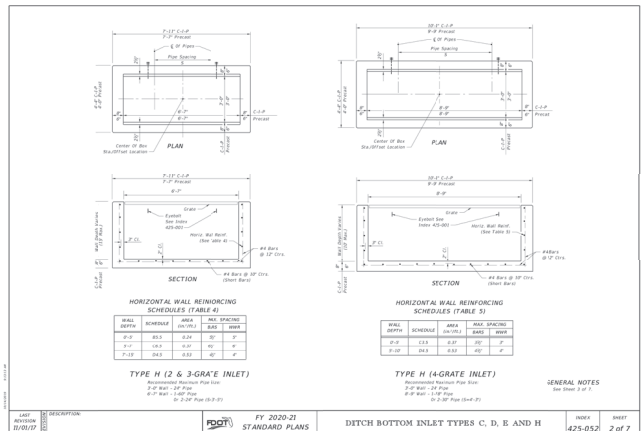

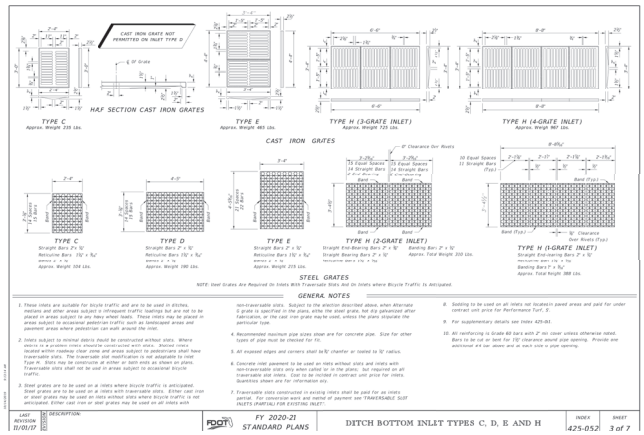

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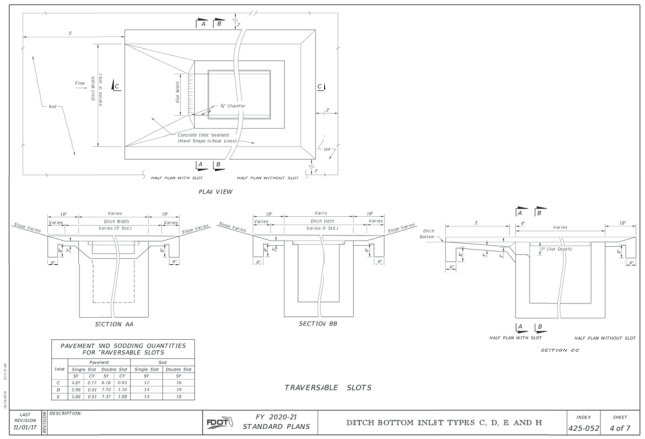

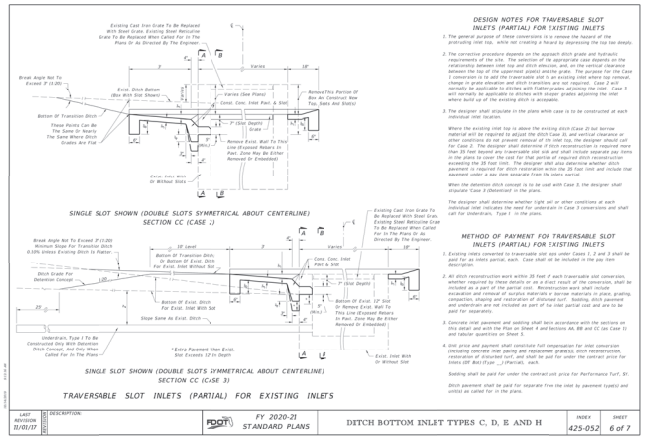

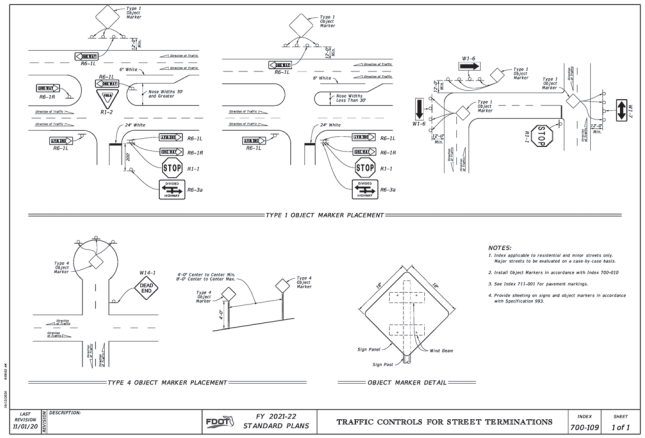

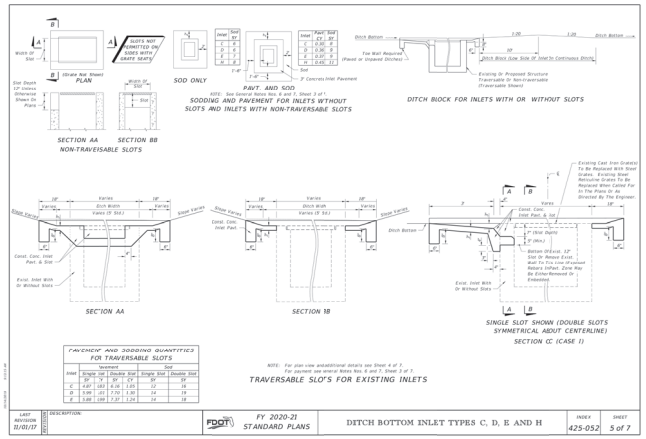

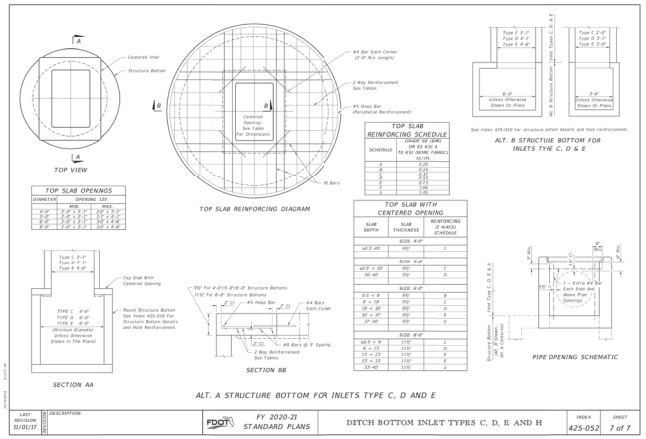

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STATE OF FLORIDA PROFESSIONAL ENGINEER LICENSE NO. 59469
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P.E. # 59469
DATE: Jan. 17, 2024

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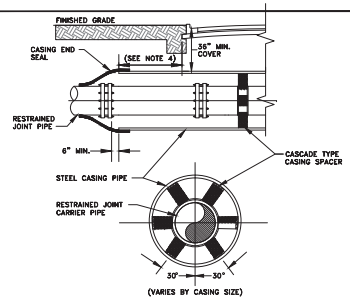


(VARIES BY CASING SIZE)

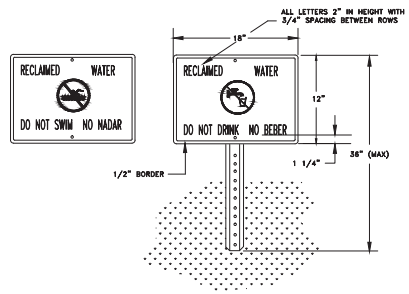
CARRIER PIPE NOMINAL DIAMETER	4	6	8	10	12	16	20	24	30	36	42
MINIMUM CASING OUTSIDE DIAMETER (INCHES)	16	16	18	20	24	30	36	42	48	54	60
MINIMUM CASING WALL THICKNESS (INCHES)	.250"	.250"	.250"	.250"	.250"	.312"	.375"	.500"	.500"	.500"	.500"

NOTES:

1. WHEN CONSTRUCTION IS WITHIN FDOT OR RAILROAD JURISDICTION, ADDITIONAL REQUIREMENTS SHALL BE MET.
2. DISTANCE BETWEEN SPACERS TO BE PER MANUFACTURER'S SPECIFICATIONS.
3. NO FLOWABLE FILL BETWEEN THE ANNULAR SPACE OF THE CASING OR CARRIER PIPE.
4. WHERE PRACTICAL, CASING SHALL EXTEND 10 FEET BEYOND EDGE OF PAVEMENT AND SHALL NOT BE LESS THAN 6 FEET BEYOND EDGE OF PAVEMENT IN ANY CASE. THE CITY MAY REQUIRE LONGER CASING FOR DEEPER BORES.

BORING AND JACKING DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 108

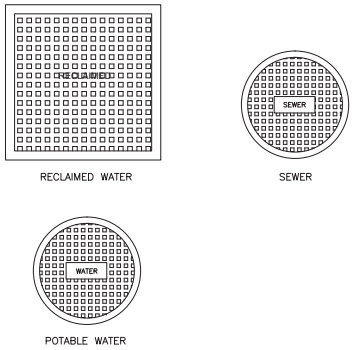


NOTES:

1. HEIGHT OF SIGN WILL DEPEND ON LOCATION AND SURROUNDING LANDSCAPE PLANT TYPES. IN ALL CASES, THE SIGN SHALL BE VISIBLE TO THE PUBLIC.
2. BACKGROUND SHALL BE WHITE. LETTERS AND FIGURES SHALL BE BLACK. PROHIBITIVE SYMBOL SHALL BE RED.
3. ENGINEERING GRADE REFLECTIVE MATERIALS SHALL BE USED.
4. POST SHALL BE U CHANNEL 12 FT. 2 LB. HOT ROLLED HIGH TENSILE RAIL OR BILLET STEEL, HOT DIP GALVANIZED PER ASTM A-123.
5. MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
6. SIGNS SHALL BE PLACED BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY APPROVED ENGINEERING PLANS AND/OR AS APPROVED BY PUBLIC SERVICES DEPARTMENT.

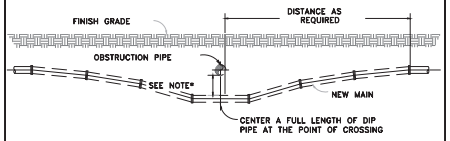
RECLAIMED WATER ADVISORY SIGN

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 115



TYPICAL VALVE BOX COVER DETAILS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 116



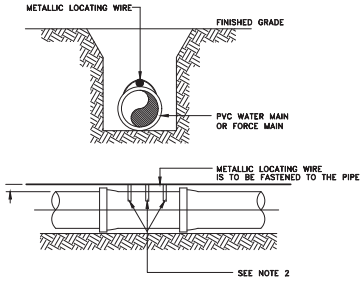
NOTES:

1. 18" MINIMUM CLEARANCE FOR WATER, SEWER AND RECLAIMED WATER MAIN CROSSINGS
2. 12" MINIMUM CLEARANCE REQUIRED FOR OTHER TYPE UTILITY CROSSINGS.
3. SEE ENCASEMENT DETAIL IF MINIMUM CLEARANCE CANNOT BE OBTAINED.

* CONSTRUCT UNIFORM PIPE DEFLECTION NOT TO EXCEED 75% OF MANUFACTURER RECOMMENDED MAXIMUM DEFLECTION PER PIPE JOINT

UTILITY CROSSING PIPE DEFLECTION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 117

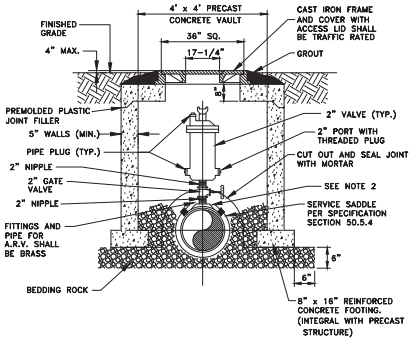


NOTES:

1. PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (10 AWG-SOLID CCS REINFORCED TRACER WIRE-INSULATED 30 MIL HDPE - 30 VOLT MFG. BY COPPERHEAD INDUSTRIES, LLC OR EQUAL) CAPABLE OF DETECTION BY A CABLE LOCATOR.
2. SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND ATTACHED WITH DUCT TAPE OR NYLON STRAPS AT 3 LOCATIONS PER JOINT. LOCATING WIRE SHALL TERMINATE AT THE TEST STATION BOX AS SHOWN IN FIG. 109.
3. BE CAPABLE OF EXTENDING 12" ABOVE TOP OF TEST STATION BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.
4. SPLICES SHOULD BE MADE USING STANDARDS AND PRODUCTS DESIGNED FOR DIRECT BURIAL CONDUCTORS.
5. WIRE INSULATION SHALL BE COLOR CODED FOR THE TYPE OF PIPE BEING INSTALLED.

PVC PIPE LOCATING WIRE DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 118



NOTES:

1. ABOVE DETAIL IS BASED ON 2 INCH COMBINATION AIR/VACUUM RELEASE VALVE. CHANGE PIPE AND FITTINGS ACCORDINGLY FOR OTHER VALVE SIZES AND TYPES. VALVE SIZES TO BE DETERMINED BY THE ENGINEER AND APPROVED BY THE CITY PRIOR TO INSTALLATION.
2. THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 4.0 FEET.
3. ALL STRUCTURES TO BE TRAFFIC BEARING RATED.

AIR OR COMBINATION AIR/VACUUM RELEASE VALVE DETAIL - UNDERGROUND

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 119

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Designed by: DMK
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Date: Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title: Standard Utility Details

LICENSED PROFESSIONAL ENGINEER NO.59469 STATE OF FLORIDA
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C9.03
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Project Number: 63534.03

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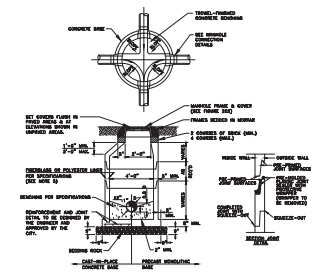


FORCE MAIN MANHOLE LINER*

THICKNESS (INCHES)				MATERIAL	MANUFACTURER
DIAMETER (INCHES)	HEIGHT (FEET) 3-6	7-12	13-17		
48	2 MM	3 MM	4 MM	POLYETHYLENE OR EQUAL	GSE STUDLINER OR EQUAL
60	2 MM	3 MM	4 MM	POLYETHYLENE OR EQUAL	GSE STUDLINER OR EQUAL
72	3 MM	4 MM	5 MM	POLYETHYLENE OR EQUAL	GSE STUDLINER OR EQUAL

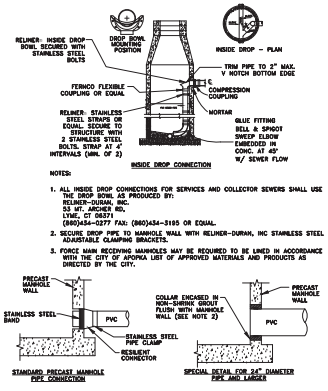
* TO BE COMPLETED BY THE ENGINEER

NOTES:

1. MANHOLE SHOWN IS FOR SEWER SIZE 8" THRU 24". SEE SECTION 20.4 OF THE MANUAL FOR MANHOLE DIAMETER FOR SEWERS LARGER THAN 24".
2. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. SEE MANHOLE CONNECTION DETAILS.
3. THE THICKNESS OF THE LINER SHALL BE 3/8" MINIMUM.
4. EACH BENCH WALL SHALL BE A MINIMUM OF 18 INCHES LONG FROM THE WALL OF THE MANHOLE TOWARD THE CENTER.
5. SANITARY SEWER MANHOLES MAY BE REQUIRED TO BE LINED IN ACCORDANCE WITH THE CITY OF APOPKA LIST OF APPROVED MATERIALS AND PRODUCTS AS DIRECTED BY THE CITY.

TYPICAL MANHOLE

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 200



NOTES:

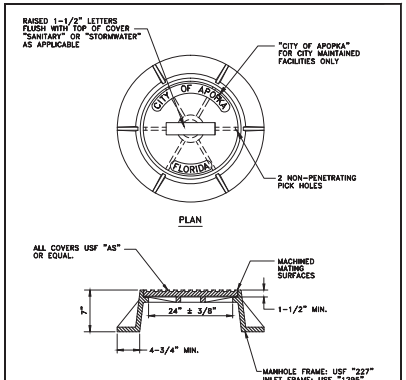
1. ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS PRODUCED BY: RELINER-DURAN, INC. 53 MT. ARCHER RD. LYME, CT 06371 (860)434-0277 FAX: (860)434-3195 OR EQUAL.
2. SECURE DROP PIPE TO MANHOLE WALL WITH RELINER-DURAN, INC STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS.
3. FORCE MAIN RECEIVING MANHOLES MAY BE REQUIRED TO BE LINED IN ACCORDANCE WITH THE CITY OF APOPKA LIST OF APPROVED MATERIALS AND PRODUCTS AS DIRECTED BY THE CITY.

NOTES:

1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
2. THE CITY MAY APPROVE ALTERNATE WATERTIGHT CONNECTION DETAILS FOR CONNECTION OF 24" DIAMETER PIPES AND LARGER.
3. AN INSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT WHICH HAVE AN INVERT 24" OR MORE ABOVE THE OUTFLOW PIPE INVERT.
4. CONCRETE TO BE MINIMUM OF 3000 PSI.

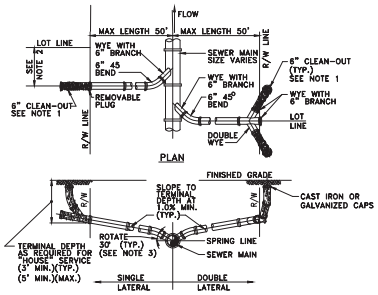
MANHOLE CONNECTION DETAILS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 201



STANDARD MANHOLE FRAME AND COVER

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 202

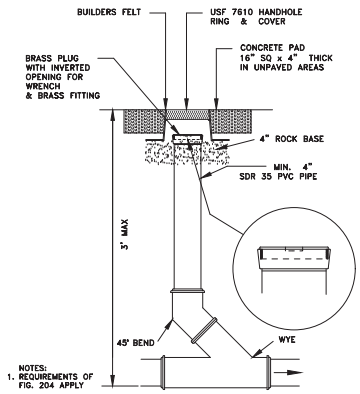


NOTES:

1. CLEAN-OUT (SHOWN SHADED) SHALL BE INSTALLED BY THE BUILDER IN ACCORDANCE WITH STANDARD PLUMBING CODE.
2. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE.
3. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
4. RESIDENTIAL SERVICES SHALL BE 4 INCHES & NON-RESIDENTIAL SERVICES SHALL BE 6 INCHES IN DIAMETER AS A MINIMUM.
5. GALVANIZED, OR CAST IRON CLEAN-OUT CAP SHALL BE USED ON THE STUBOUT FOR EACH SERVICE.
6. LATERAL SHALL BE MARKED WITH AN "S" STAMPED OR CUT IN THE CURB.

SERVICE LATERAL DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 204

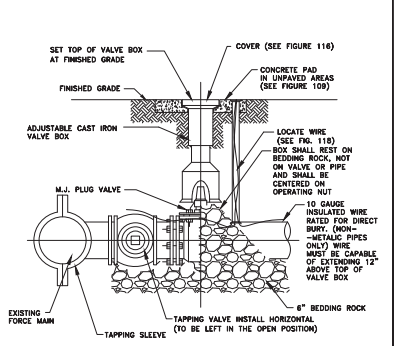


NOTES:
1. REQUIREMENTS OF FIG. 204 APPLY

SANITARY SEWER SERVICE TRAFFIC RATED CLEAN-OUT DETAIL

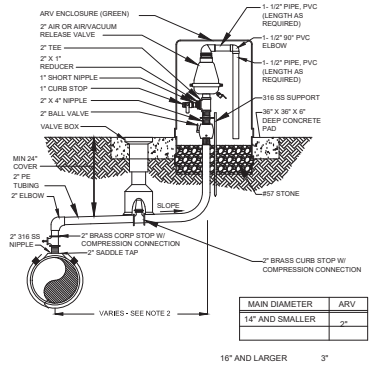
NTS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 205



FORCE MAIN WET TAP TIE-IN DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 206



MAIN DIAMETER	ARV
14" AND SMALLER	2"
16" AND LARGER	3"

NOTES:
1. FOR WASTEWATER USE ONLY.
2. OFFSET DISTANCE TO BE FIELD DETERMINED AND AS CLOSE TO THE R/W LINE AS POSSIBLE
3. ADJUST HORIZONTAL LOCATION OF SIDEWALK, AS REQUIRED TO AVOID ARV ENCLSOURE.
4. LOCATE ARV ENCLOSURE WITHIN 6" OF R/W LINE.

OFFSET AIR OR COMBINATION AIR/VACUUM RELEASE VALVE DETAIL – WASTEWATER ONLY

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 114

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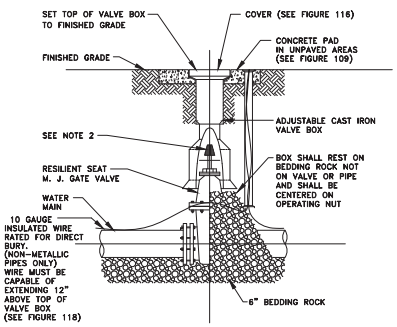
DATE: Jan. 17, 2024

Drawing Number C9.04
Sheet of
Project Number 63534.03

Saved Tuesday, August 30, 2022 10:38:15 AM CGERLACH Plotted Wednesday, January 17, 2024 2:50:01 PM Jordan Fisher

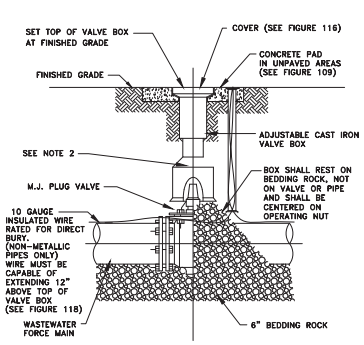


NOTES:

1. PVC EXTENSIONS MAY BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO WITHIN A 3 FEET BELOW FINISHED GRADE.

GATE VALVE AND BOX DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 400

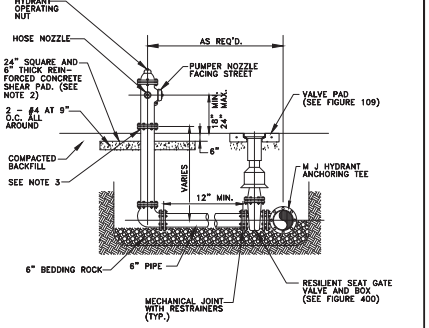


NOTES:

1. PVC EXTENSIONS MAY BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO WITHIN 3 FEET BELOW FINISHED GRADE.

PLUG VALVE AND BOX DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 400 A

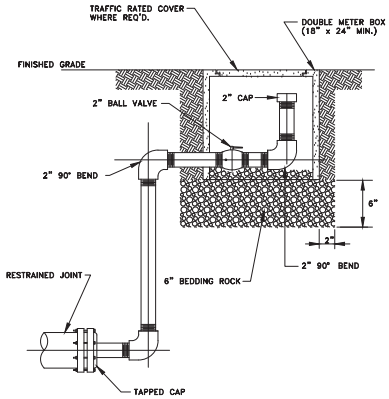


NOTES:

1. FIRE HYDRANT SHALL BE SUPPLIED WITHOUT A WEEP HOLE, OR WITH A PERMANENTLY PLUGGED WEEP HOLE.
2. THE SHEAR PAD SHALL BE RECESSED SIX (6) INCHES BELOW THE FINISHED GRADE AND THE RECESSED SECTION SODDED.
3. CLEARANCE BETWEEN BOTTOM OF BOLTS AND TOP OF SHEAR PAD SHALL BE A TWELVE (12) INCH MINIMUM.
4. FIRE HYDRANTS SHALL BE IDENTIFIED IN ACCORDANCE WITH THE CITY OF APOPKA UTILITIES DESIGN CONSTRUCTION STANDARDS MANUAL.

FIRE HYDRANT ASSEMBLY DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 402

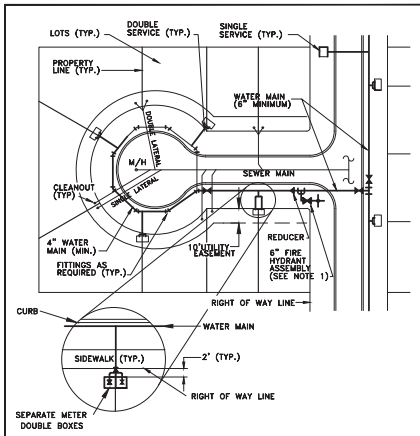


NOTES:

1. ALL 2 INCH PIPE AND FITTINGS SHALL BE SCHEDULE 40 GALVANIZED STEEL OR BRASS WITH THREADED (NPT) JOINTS. USE TEFLON TAPE ON JOINTS.
2. COLOR SHALL BE APPROPRIATE FOR USE.

BLOWOFF VALVE DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 403

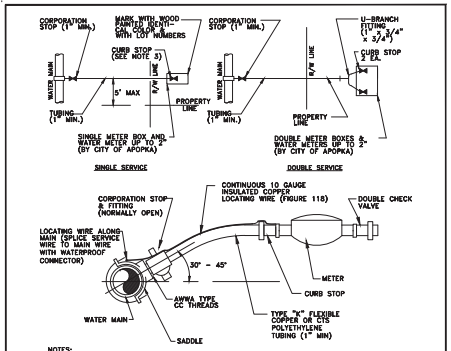


NOTES:

1. ANCHORING TYPE 90° BEND SHALL ONLY BE USED WHERE RIGHT-OF-WAY CONSTRUCTION WILL NOT ALLOW INSTALLATION OF A STRAIGHT ASSEMBLY.
2. POTABLE WATER AND RECLAIMED WATER MAINS SHALL BE LOOPED THROUGHOUT CUL-DE SAC.

TYPICAL SERVICE LOCATION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 404



NOTES:

1. ALL FITTINGS SHALL BE BRASS WITH COMPRESSION/PACK JOINT TYPE CONNECTIONS.
2. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
3. EACH SERVICE SHALL TERMINATE AT A CURB STOP(S) WHICH SHALL BE BURIED APPROXIMATELY 3" BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2" x 2" x 18" STAKE WITH THE TOP PAINTED BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER, AND MARKED WITH THE NUMBER OF THE LOT(S) TO BE SERVED.
4. RECLAIMED WATER SERVICES SHALL USE PURPLE COLORED CTS POLYETHYLENE TUBING.
5. POTABLE WATER SERVICES SHALL USE BLUE COLORED CTS POLYETHYLENE TUBING.
6. ALL SERVICE UNDER EXISTING OR PROPOSED PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" PVC SLEEVE.

WATER SERVICE CONNECTION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 405

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Number FL #3932

The Ridge PD
Parcel 2

Apopka, Florida

No.	Revision	Date	Approv.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by: DMK
Checked by: JRH
Issued for: Construction Site Plan
Date: Feb. 25, 2022
Vertical Datum NAVD 1988
Drawing Title: **Standard Utility Details**

CONS. PROVINCE LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER
John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number: C9.05
Sheet of
Project Number: 63534.03

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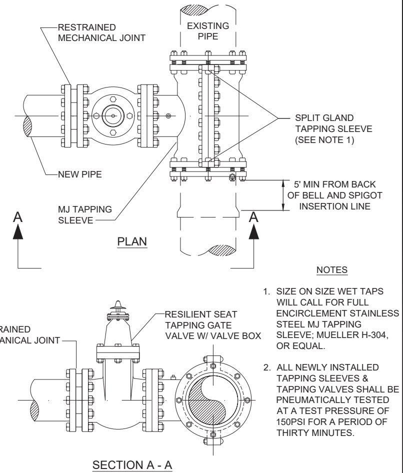
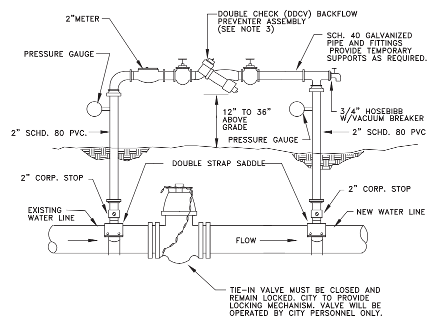


NOTES

1. SIZE ON SIZE WET TAPS WILL CALL FOR FULL ENCIRCLEMENT STAINLESS STEEL MJ TAPPING SLEEVE; MUELLER H-304, OR EQUAL.
2. ALL NEWLY INSTALLED TAPPING SLEEVES & TAPPING VALVES SHALL BE PNEUMATICALLY TESTED AT A TEST PRESSURE OF 150PSI FOR A PERIOD OF THIRTY MINUTES.

WATER AND RECLAIMED WATER MAINS WET TAP TIE-IN DETAIL

CITY OF APOPKA
DESIGN ENGINEERING DIVISION | JANUARY 2014 | FIG. 406



NOTE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, ASSEMBLY, AND THE INSTALLATION OF THE DEVICE.
2. SEE FIGURE 504C FOR PROCEDURES.
3. DDCV IS MINIMUM PROTECTION REQUIRED. A RPZ DEVICE MAY BE REQUIRED DEPENDING ON PROJECT. PROVIDE COPY OF LATEST CERTIFICATION TEST RESULTS.

TEMPORARY JUMPER CONNECTION

CITY OF APOPKA
DESIGN ENGINEERING DIVISION | JANUARY 2014 | FIG. 504 A

TEMPORARY JUMPER CONNECTION NOTES:

1. A temporary jumper connection is required at all connections between existing active water mains and proposed new water main improvements.
2. Figures 504 A and 504 B to be used for filling any new water main of any size from existing active water mains and for flushing of new mains up to 8 inches in diameter (2.5 FPS minimum velocity) and for pulling bacteriological samples from any new water main of any size. The jumper connection shall be maintained until after filling, flushing testing and disinfection of the new main has been successfully completed and cleared for use from the Florida Department of Environmental Protection (FDEP) and other pertinent agencies have been received. The jumper connection shall also be used to maintain a minimum pressure of 20 psi in the new mains after disinfection and until the FDEP clearence letter is obtained. Thrust blocking and/or restraints shall be provided temporarily, as required. Pipe and fittings used for connecting the new pipe to the existing pipe shall be disinfected prior to installation in accordance with AWWA C651, 2005 edition. The tapping sleeve and the exterior of the main to be tapped shall be disinfected by spraying or swabbing per section II of AWWA C651-05.
3. Flushing of 10 inches in diameter and larger water mains may be done through the tie-in valve under very controlled conditions. The following procedures shall be followed:
   A. The tie-in valves shall be operated and pressure tested in the presence of the City engineer to verify water tightness prior to tie-in. Valves which are not water tight shall be replaced with a new valve installed immediately adjacent to the leaking valve.
   B. The temporary jumper connection shall be constructed as detailed. The jumper connection shall be used to fill the new water main and for providing water for bac-teriological sampling of the new main as required by the FDEP permit.
   * Flushing shall not be attempted during peak demand hours of the existing water mains.
   * All downstream valves in the system must be open prior to opening the tie-in valve.
   * Provide for and monitor the pressure in the tie-in point. The pressure in the existing main must not drop below 35 psi.
   * The tie-in valve shall be opened a few turns only, ensuring a pressure drop across the valve is greater than 10 psi.
   C. The tie-in valve shall be locked closed by the City personel until flushing begins.
   D. The tie-in valve shall be opened only for flushing of the new main. The procedure shall be directed by the City and observed by the engineer.
   E. After flushing, the tie-in valve shall be closed and locked in the closed position by the City personel.
4. The contractor shall provide documentation demonstrating that the double check backflow prevention device has been tested and is in good working order at the time of installation.
5. Except as required to flush lines of greater than 8 inches in diameter, the tie-in valve shall remain closed and shall be locked in the closed position by the City. The tie-in valve shall remain locked closed until the new system has been cleared for use by FDEP and all other pertinent agencies.
6. Upon receipt of clearance for use from FDEP and all other pertinent agencies, the contractor shall remove the temporary jumper connection. The corporation stops are to be closed and plugged with 2 inch brass plugs.
7. All installation and maintenance of the temporary jumper connection and associated backflow prevention device, fittings, valve, etc. shall be the responsibility of the contractor.

PROCEDURES FOR TEMPORARY JUMPER CONNECTION

CITY OF APOPKA
DESIGN ENGINEERING DIVISION | JANUARY 2014 | FIG. 504 C

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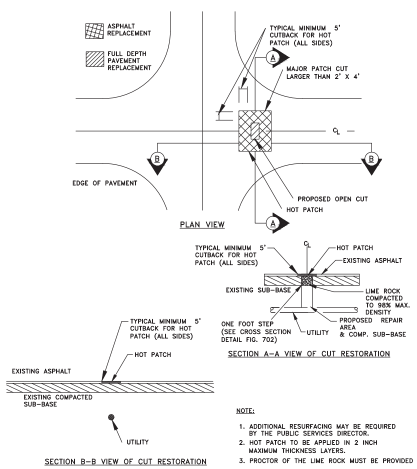


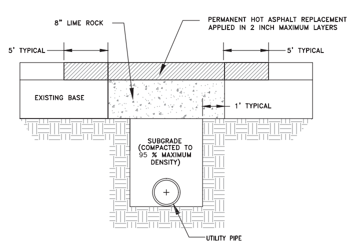
NOTE:

1. ADDITIONAL RESURFACING MAY BE REQUIRED BY THE PUBLIC SERVICES DIRECTOR.
2. HOT PATCH TO BE APPLIED IN 2 INCH MAXIMUM THICKNESS LAYERS.
3. PROCTOR OF THE LIME ROCK MUST BE PROVIDED
4. DENSITIES TO BE PROVIDED BY GEOTECHNICAL ENGINEER.

OPEN-CUT DETAIL - MAJOR PATCH

CITY OF APOPKA
DESIGN ENGINEERING DIVISION | JANUARY 2015 | FIG. 701

NOTE:
SUB-GRADE TO BE COMPACTED TO 95% MAX. DENSITY AS DETERMINED BY AASTHO T-180 CUT TO BE REPLACED WITH 8" LIME ROCK AND COMPACTED TO 98% MAX. DENSITY TO TOP OF EXISTING BASE. CUT AREA TO BE PLATED OR PROTECTED ON THE DAY OF POUR. EXISTING SURFACE TO BE SAW CUT TO AN AREA OF FIVE FEET (5') BEYOND BASE CUT.



GENERAL NOTES:

1. BASE REPLACEMENT SHALL BE 8" LIME ROCK COMPACTED TO 98% MAX. DENSITY.
2. ASPHALTIC CONCRETE SURFACE MATERIAL SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL AT THE TIME OF REMOVAL.
3. MINIMUM ASPHALTIC CONCRETE SURFACE OVERLAY THICKNESS SHALL BE ONE (1) INCH.
4. ALL JOINT CUTS SHALL BE MECHANICALLY SAW CUT.

PAVEMENT RESTORATION:

1. LONGITUDINAL CUTS MAY REQUIRE OVERLAY/RESURFACING OF THE COMPLETE WIDTH OF THE TRAVELED WAY.
2. CUTS AT INTERSECTIONS OF STREETS GENERALLY MAY REQUIRE A COMPLETE OVERLAY/RESURFACING TO THE END OF ALL RETURN RADII. AND ALSO TO A POINT TEN FEET (10') BEYOND THE CUT WHICHEVER IS GREATER.
3. ACTUAL REQUIREMENTS WILL BE AS STATED ON THE APPROVED PERMIT.

LIME ROCK
HOT PATCH

OPEN-CUT CROSS SECTION DETAIL

CITY OF APOPKA
DESIGN ENGINEERING DIVISION | JANUARY 2015 | FIG. 702

PROPOSED UTILITY	HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS									
	POTABLE WATER		RECLAIMED WATER*		SANITARY SEWER FORCE MAIN		SANITARY SEWER GRAVITY MAIN		STORM SEWER	
	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	HORZ.	VERT.	HORIZ.	VERT.
POTABLE WATER	-	-	3'	12"	6'	12"	6'	6"ABOVE / 12"BELOW	3'	6"
RECLAIMED* WATER	3'	12"	-	-	3'	12"	3'	12"	-	-
SANITARY SEWER FORCE MAIN	6'	12"	3'	12"	-	-	-	-	-	-
SANITARY SEWER GRAVITY MAIN	6'	6"ABOVE / 12"BELOW	3'	12"	-	-	-	-	-	-

GENERAL NOTES:

1. THE TABLE REPRESENTS THE MINIMUM SEPARATION REQUIREMENTS AS DESCRIBED IN F.D.E.P. RULES OF THE FLORIDA ADMINISTRATION CODE (F.A.C.). THESE SEPARATION REQIREMENTS SHALL APPLY BETWEEN NEWLY PROPOSED UTILITY LINES AND EXISTING OR PROPOSED UTILITY LINES.

*2. FOR THE PURPOSE OF THIS TABLE, RECLAIMED WATER SHALL MEAN UNRESTRICTED PUBLIC ACCESS REUSE WATER AS DEFINED BY F.A.C. 17-610. OTHER TYPES OF RECLAIMED WATER ARE CONSIDERED RAW SEWAGE AND SEPARATIONS LISTED FOR SANITARY SEWER SHALL APPLY.

3. ALL SEPARATION DISTANCES ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE UNLESS OTHERWISE SPECIFIED. CRITERION PRODUCING GREATER CLEARANCE SHALL BE USED.

   C/C - DENOTES CENTER OF PIPE TO CENTER OF PIPE.

   O/O - DENOTES OUTSIDE OF PIPE TO OUTSIDE OF PIPE.

4. ACCEPTABLE VARIANCES:
   A. WHERE HORIZONTAL SEPARATION IS NOT ATTAINABLE, PVC-C-900 SDR-14 OR CONCRETE ENCASEMENT MUST BE USED FOR THE SANITARY SEWER LINE FOR AT LEAST ONE OF THE PIPES. PVC-C-900 SDR 14 OR CONCRETE ENCASEMENT MUST BE USED UNTIL MINIMUM CLEARANCE IS REGAINED.
   B. WHERE 18 INCH VERTICAL SEPARATION IS NOT ATTAINABLE AT CROSSINGS, USE ONE FULL LENGTH OF PVC-C-900 SDR-14 FOR SANITARY SEWERS OR ENCASED PIPE CENTERED AT THE POINT OF CROSSING SPECIAL SUPPORT MAY BE REQUIRED.

5. NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY OR STORM WATER MANHOLE OR STRUCTURE.

6. CONCRETE ENCASEMENT SHALL NOT BE USED UNLESS APPROVED BY PUBLIC SERVICES DIRECTOR OR HIS DESIGNEE.

HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS

CITY OF APOPKA
DESIGN ENGINEERING DIVISION | JANUARY 2014 | FIG. 104

The Ridge PD Parcel 2

Apopka, Florida

No.	Revision	Date	Appvd.
1	City of Apopka Comments	05/17/2022	
2	Client Revision	11/11/2022	
3	Submit to SJRWMD	10/19/2023	
4	SJRWMD Comments	11/22/2023	
5	Phase 2 Sub-Phasing Revisions	01/17/2024	

Designed by DMK | Checked by JRH

Issued for: Construction Site Plan | Date: Feb. 25, 2022

Vertical Datum NAVD 1988

Drawing Title

Standard Utility Details

JOHN B. PROWELL LICENSE NO. 59469 STATE OF FLORIDA PROFESSIONAL ENGINEER

John B. Prowell, P.E.
P.E. # 59469
DATE: Jan. 17, 2024

Drawing Number
C9.06

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Project Number
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