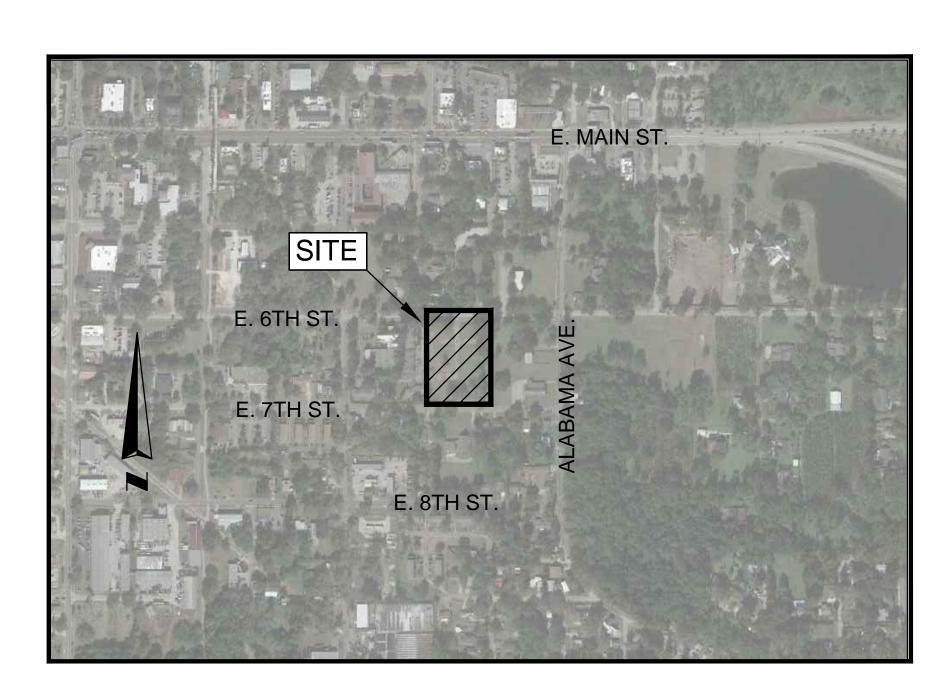
# Apopka Townhomes Construction Plans

Prepared For
Hannibal Square Community
Land Trust, Inc.

Woodland Circle and 350 E. 6th Street Apopka, Florida 32703

Parcel ID: 10-21-28-5096-00-001



LOCATION MAP

# Prepared By

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SHEET INDEX					
SHEET TITLE					
COVER					
GENERAL NOTES					
GENERAL NOTES					
EXISTING-SURVEY					
TREE SURVEY					
DEMO PLAN					
FIRE TRUCK ACCESS					
GARBAGE TRUCK ACCESS					
SITE PLAN					
GRADING & DRAINAGE PLAN					
UTILITY PLAN					
SITE DETAILS					
SITE DETAILS					
SITE DETAILS					
SITE DETAILS					
SITE DETAILS					
SITE DETAILS					
SITE DETAILS					
LANDSCAPE PLAN					
LANDSCAPE PLANTING DETAILS					
LANDSCAPE GENERAL NOTES					
IRRIGATION PLAN					
IRRIGATION DETAILS					
IRRIGATION DETAILS					
IRRIGATION DETAILS					
IRRIGATION DETAILS					



IRRIGATION SPECIFICATIONS

IR-06

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OPKA LOWINHOMES

e Development

9. 8. 7. 6. 2/15/23 Owner Revisions 5. 8/3/22 Owner Revisions 4. 10/5/21 Response to City Comments 3. 8/20/21 Response to City Comments 2. 5/14/21 Response to City Comments 1. 7/26/19 Response to SJRWMD Comments 1

Design: RAL/JJI
Drawn: JJR

OVER SHEE

Release:

FOR PERMIT

- ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF O.S.H.A. SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES OF HIS EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH OSHA REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST
- . ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE OWNER FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY SIGNS, BARRIERS, LABOR, EQUIPMENT, ETC., TO MAINTAIN SAFE AND ADEQUATE ACCESS FOR PEDESTRIAN AND VEHICULAR TRAFFIC ALONG ROADWAY AND SIDEWALKS INTO AND OUT OF THE SITE FOR THE DURATION OF CONSTRUCTION.
- . CONTRACTOR SHALL PROVIDE ACCESS FOR EMERGENCY VEHICLES ON TO AND AROUND THE ENTIRE PROJECT SITE DURING THE FULL
- . ALL SURVEY DATA USED AND CONDITIONS ASSUMED TO BE PRESENT IN PREPARATION OF THESE PLANS WAS PROVIDED BY EXACTA LAND SURVEYORS, LLC. HARRIS CIVIL ENGINEERS, LLC. AND OWNER DO NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THIS DATA. THE CONTRACTOR SHALL VERIFY AND LOCATE ALL VERTICAL AND HORIZONTAL CONTROL POINTS PRIOR TO CONSTRUCTION BY EMPLOYING A LICENSED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA. IF ANY DISCREPANCIES SHOULD BE FOUND, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF THE CONDITION IN WRITING PRIOR TO COMMENCING HIS CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUBCONTRACTORS. CONTRACTOR SHALL ACCEPT PREMISES AS FOUND. OWNER ASSUMES NO RESPONSIBILITY FOR THE CONDITION OF THE EXISTING SITE OR EXISTING STRUCTURES AT THE TIME OF BIDDING OR THEREAFTER
- 8. THE OWNER WILL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM MATERIAL TESTING AND SOIL TESTING IN ACCORDANCE WITH CITY OF APOPKA REQUIREMENTS AND THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL INVESTIGATION REPORT. THIS SHALL INCLUDE DENSITY TESTS IN ALL PAVEMENT AREAS AND BUILDING PADS AND IN ALL UTILITY TRENCHES LOCATED IN PAVEMENT AREAS CONCRETE TESTING AND ALL OTHER MATERIAL TESTING.
- . THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE PROJECT INCLUDING CITY OF APOPKA
- 11. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION.
- 12. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL CLEAR AND GRUB ENTIRE AREA WITHIN THE INDICATED LIMITS OF CONSTRUCTION OF ALL VEGETATION, CONCRETE SLABS AND FOUNDATIONS, PAVEMENT, FENCES, LIGHT POLES, ETC. AND PROPERLY DISPOSE OF OFF SITE. ANY EXISTING UTILITY SERVICES SHALL BE PROPERLY DISCONNECTED, PLUGGED, REMOVED OR ABANDONED.
- 13. ALL AREAS SHOWN TO BE FILLED SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND SHALL BE FILLED WITH CLEAN STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
- 14. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED. THE CONTRACTOR SHALL CONTRACT THE SURVEYOR OF RECORD FOR RE-NSTALLATION OF THE MONUMENT, AT THE CONTRACTOR'S EXPENSE.
- 15. ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE PROPERLY DISPOSED OF OFF-SITE BY CONTRACTOR.
- 16. ALL EXCESS SUITABLE AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTORS UNLESS DIRECTED OTHERWISE BY ENGINEER OR OWNER.
- 17. BURNING OF TREES, BRUSH AND OTHER MATERIAL IS NOT PERMITTED.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTING ANY ERRORS AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE CIVIL ENGINEER. THE MEANS OF CORRECTING ANY ERROR SHALL FIRST BE APPROVED BY THE ARCHITECT. DISCREPANCIES BETWEEN PORTIONS OF THE CONTRACT DOCUMENTS ARE NOT INTENDED. THE CONTRACTOR IS TO CLARIFY WITH THE ARCHITECT ANY SUCH DISCREPANCIES PRIOR TO COMMENCING WORK.
- 19. CONTRACTOR SHALL REFER AND CONFORM TO ALL RECOMMENDATIONS AND FINDINGS AS SET FORTH IN THE GEOTECHNICAL REPORT. THE ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF THE FINDINGS OR FOR THE FINAL RECOMMENDATIONS. CONTACT ARCHITECT FOR INSTRUCTIONS PRIOR TO THE CONTINUATION OF WORK SHOULD ANY UNUSUAL CONDITIONS BECOME APPARENT DURING CONSTRUCTION. EXISTING ELEVATIONS AND LOCATIONS TO BE JOINED SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IF THEY DIFFER FROM THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING SO THAT MODIFICATIONS CAN BE MADE TO THE CONSTRUCTION PLANS BEFORE PROCEEDING WITH THE WORK.
- 20. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR WILL COORDINATE HIS ACTIVITIES WITH ALL THE UTILITY COMPANIES SERVING THIS AREA. CONTRACTOR IS TO COORDINATE FULLY WITH UTILITY COMPANIES ON EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION. A LIST OF UTILITY COMPANIES THAT SHOULD BE CONTACTED AND MAY HAVE SERVICES NEAR THE SITE INCLUDE, BUT ARE NOT LIMITED TO, THE UTILITY PROVIDERS LISTED BELOW. CITY OF APOPKA - REUSE WATER, WASTEWATER DUKE ENERGY - ELECTRIC
- 21. THE PROJECT SPECIFICATIONS AND GENERAL CONDITIONS ARE TO BE FOLLOWED IN ADDITION TO THESE PLANS.
- 22. SUBSURFACE INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FOR USE IN ESTABLISHING DESIGN CRITERIA FOR THE PROJECT. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED AND IS NOT TO BE CONSTRUED AS PART OF THE PLANS GOVERNING CONSTRUCTION OF
- 23. PRIOR TO CONTRACT CLOSE-OUT, THE CONTRACTOR SHALL HAVE RECORD PLANS PREPARED BY A LICENSED LAND SURVEYOR. THE RECORD DRAWINGS WILL BE PREPARED ELECTRONICALLY AND BE IN AUTOCAD. RELEASE 2007 (OR ABOVE) FORMAT. THE DRAWINGS WILL BE COPIES OF THE ENGINEER'S PLANS WITH DESIGNED INFORMATION CROSSED OUT AND THE AS-BUILT INFORMATION PLACED NEXT TO IT. AS-BUILT INFORMATION WILL BE PLACED ON A SEPARATE LAYER NAMED AS—BUILT—WATER, AS—BUILT—SEWER, ETC. EACH AS—BUILT UTILITY SHALL BE PLACED ON A SEPARATE AS-BUILT LAYER AS INDICATED ABOVE. THE OWNER'S ENGINEER WILL SUPPLY THE REQUIRED DESIGN ELECTRONIC FILES TO THE CONTRACTOR SO THAT THE AS-BUILT PLANS CAN BE COMPILED AS REQUIRED. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH EIGHT (8) SETS OF RECORD PLANS SIGNED AND SEALED BY A LICENSED SURVEYOR. THE CONTRACTOR SHALL ALSO PROVIDE THE OWNER WITH RECORD PLANS IN ELECTRONIC DIGITAL FORMAT - AUTOCAD, RELEASE 2007 (OR ABOVE) FORMAT.

#### AS-BUILT SUBMITTAL

THE CONTRACTOR SHALL SUBMIT TWO SETS OF PLANS AND AN AUTOCAD FILE ON A CD OF THE AS-BUILT DRAWINGS PREPARED BY A REGISTERED SURVEYOR TO HCE FOR REVIEW. THE AS-BUILT DRAWINGS SHALL CONTAIN THE FOLLOWING INFORMATION:

THE AS-BUILT PLANS SHALL SHOW COORDINATES AND ELEVATIONS FOR TOP OF ALL THE PROPOSED WATER MAINS, LATERALS AND APPURTENANCES, I.E. TIE-IN POINT, BENDS, TEES, VALVES & BOXES, FIRE HYDRANTS, METERS, BACKFLOW UNITS, STUBS, ETC. NOTE ALL PIPE MATERIALS, SIZES AND ANY CONCRETE ENCASEMENT OR SLEEVES. AS-BUILT PLANS ARE TO INCLUDE THE NUMBER OF TEST POINTS AND LOCATIONS OF THE BACTERIOLOGICAL SAMPLE AS STIPULATED IN THE FDEP PERMIT.

#### SANITARY SEWER

WYES AND LATERALS WITH TOP OF PIPE ELEVATIONS PLUS PIPE SIZES, LENGTHS AND MATERIAL TYPES. AS-BUILT DATA SHALL ALSO INCLUDE THE LOCATIONS OF CHANGE IN MATERIALS AND CONCRETE ENCASEMENT. STORM DRAINAGE

THE AS-BUILT PLANS SHALL SHOW GPS COORDINATES AND ELEVATIONS FOR ALL MANHOLE RIMS AND PIPE INVERTS, CLEANOUTS AND INVERTS,

THE AS-BUILT PLANS SHALL SHOW COORDINATES AND ELEVATIONS FOR ALL MANHOLES, INLETS, CATCH BASINS, RIMS AND PIPE INVERTS, CLEANOUTS AND INVERTS, WYES AND LATERALS WITH TOP OF PIPE ELEVATIONS PLUS PIPE SIZES, LENGTHS AND MATERIAL TYPES. AS-BUILT COORDINATES AND TOP OF PIPE ELEVATIONS FOR BEACH UNDERDRAIN PIPES SHALL BE PROVIDED EVERY 25' ALONG THE PIPE.

WHEN EXISTING UTILITIES ARE CROSSED OR ENCOUNTERED THE TYPE OF CROSSING SHALL BE NOTED ALONG WITH THE LOCATION, TYPE, SIZE, MATERIAL AND ELEVATION. THE AS-BUILT DATA FOR ALL EXISTING UTILITIES ENCOUNTERED SHALL MEET THE WATER LINE, SANITARY SEWER AND STORM SEWER REQUIREMENTS NOTED ABOVE.

HCE WILL REVIEW THE AS-BUILT DRAWINGS FOR COMPLIANCE WITH THE PLANS AND GOVERNMENTAL PERMITS AND ISSUE COMMENTS TO THE

UPON HCE REVIEW(S) AND COMPLETION OF ANY COMMENTS AND CORRECTIVE WORK BY THE CONTRACTOR'S SURVEY, HCE WILL ADVISE THE CONTRACTOR ON THE NUMBER OF SIGNED AND SEALED AS-BUILD DRAWINGS THAT ARE NEEDED FOR CERTIFICATION TO THE VARIOUS GOVERNMENTAL AGENCIES. ONCE SUBMITTED, CERTIFICATION AND ACCEPTANCE COULD TAKE FROM 30 TO 45 DAYS FOR EACH PERMIT.

#### <u>DRAINAGE, PAVING AND GRADING NOTES</u>

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS, SFWMD REQUIREMENTS, AND THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- 2. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS AND INVERTS OF EXISTING UTILITIES AT PROPOSED CROSSINGS AND POINTS OF CONNECTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY IN WRITING OF ANY UTILITY CONFLICTS OR DISCREPANCIES.

- 3. ALL EARTHWORK OPERATIONS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, PLANS AND RECOMMENDATIONS OF THE
- 4. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE CIVIL ENGINEER AND CITY OF APOPKA, IF REQUIRED, ON ALL MATERIALS FOR REVIEW AND APPROVAL PRIOR TO PURCHASE OR CONSTRUCTION OF ANY UTILITY, PIPE OR STRUCTURE.
- 5. ALL DRAINAGE PIPING SHALL HAVE A MINIMUM OF 3.0 FEET OF COVER MEASURED FROM FINISH GRADES, UNLESS OTHERWISE NOTED. ALL PIPE LENGTHS ARE SCALED DIMENSIONS. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM TO F.D.O.T. STANDARD SPECIFICATIONS. ALL DRAINAGE STRUCTURES SHALL HAVE H-20 TRAFFIC BEARING GRATES.
- 6. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC., ARE CLEAN AND FUNCTIONING PROPERLY AT TIME OF ACCEPTANCE.
- 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT PERMITS FOR CONSTRUCTION HAVE BEEN OBTAINED AND COPIES OF ALL REQUIRED PERMITS ARE IN HAND PRIOR TO STARTING WORK. THE CONTRACTOR SHALL MAINTAIN UPDATED COPIES OF ALL PERMITS ON-SITE THROUGHOUT THE DURATION OF THE CONSTRUCTION PERIOD.
- 8. ALL DRAINAGE PIPES GREATER THAN 12" SHALL BE REINFORCED CONCRETE PIPE (RCP) OR AS SHOWN. ALL DRAINAGE PIPE JOINTS SHALL BE FILTER—FABRIC WRAPPED ACCORDING TO F.D.O.T. STANDARDS.
- 9. THE CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE GEOMETRIC DATA PROVIDED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS TO ENSURE ADEQUATE POSITIONING, BOTH HORIZONTAL AND VERTICAL, PRIOR TO THE INSTALLATION OF ANY IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY IN WRITING IF ANY APPARENT
- 10. ALL COUNTY R.O.W. AND OTHER SODDED AREAS WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE SODDED. SLOPES STEEPER THAN 5:1
  AND ALL OTHER AREAS INDICATED IN THE LANDSCAPE PLANS SHALL BE SODDED. THESE AREAS SHALL BE MAINTAINED BY THE CONTRACTOR
  UNTIL FINAL ACCEPTANCE BY THE OWNER AND LANDSCAPE ARCHITECT, INCLUDING MOWING, TEMPORARY IRRIGATION AND FERTILIZATION.
- 11. ALL PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN PREVIOUSLY EXISTED UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. THE COST FOR SUCH RESTORATION SHALL BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA
- 12. THE CONTRACTOR SHALL PROVIDE FLAG MAN AND ANY OTHER TRAFFIC MEASURES NECESSARY TO PROTECT AND FACILITATE TRAFFIC MOVEMENT ALONG ALL OFF-SITE ROADWAYS DURING CONSTRUCTION AS REQUIRED BY CITY OF APOPKA AND/OR FDOT STANDARD SPECIFICATIONS.
- 13. A 48-HOUR/TWO WORKING DAYS NOTICE WILL BE GIVEN TO THE CIVIL ENGINEER OF RECORD AND CITY OF APOPKA PRIOR TO TESTING.
- 14. ALL FILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY (AASHTO T-180), UNLESS OTHERWISE NOTED IN THE GEOTECHNICAL REPORT.
- 15. ROADWAY MARKINGS, SIGNAGE, AND STRIPING TO BE INSTALLED IN ACCORDANCE WITH FDOT INDEX #17346 AND CITY OF APOPKA STANDARDS. STRIPING SHALL BE COORDINATED WITH THE CITY OF APOPKA INSPECTORS.
- 16. WHEN TRENCH EXCAVATION EXCEEDS FIVE (5) FEET IN DEPTH: A - CONTRACTOR SHALL CONFORM TO OSHA STD. 29CFR. SECTION 1926.650 WHICH IS INCORPORATED IN FL. STATE 90-96. B - THE CONTRACTOR SHALL PROVIDE WRITTEN ASSURANCE OF COMPLIANCE WITH THIS LAW.
  - C TRENCH SAFETY SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR.

17. DRAINAGE STRUCTURE RIM ELEVATION REFERS TO TOP OF GRATE, OR EDGE OF PAVEMENT FOR CURB INLETS.

18. RIM ELEVATIONS SHOWN FOR PROPOSED STRUCTURES LOCATED IN EXISTING PAVEMENT AREAS ARE APPROXIMATE AND SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PLACE RIM ELEVATIONS TO BE WITHIN 0.01' OF THE EXISTING PAVEMENT GRADE.

#### FIRE AND WATER MAIN NOTES

- 1. ALL UNDERGROUND MAINS SERVING FIRE HYDRANTS OR FIRE PROTECTION SYSTEMS ON PRIVATE PROPERTY MUST BE PERMITTED BY THE FIRE DEPT. PRIOR TO INSTALLATION. THIS INCLUDES THE ENTIRE INDUSTRIAL WATER SYSTEM. THE UNDERGROUND FIRE MAIN CONTRACTOR MUST OBTAIN A FIRE PERMIT FROM CITY OF APOPKA PRIOR TO INSTALLATION OF THE FIRE MAINS, HYDRANTS AND/OR FIRE PROTECTION SYSTEM
- 2. ALL UNDERGROUND FIRE MAINS WILL BE INSTALLED IN ACCORDANCE WITH NFPA 24, 2010 EDITION, "STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES". [F.A.C. 69A-60.005(2)]
- 3. DEFINITION OF UNDERGROUND POINT-OF-SERVICE IS DEFINED IN FLORIDA STATUTES, SECTION 633.021.
- 4. THE PRIVATE DEDICATED UNDERGROUND FIRE MAINS AND FIRE HYDRANTS MUST BE INSTALLED BY A LICENSED FIRE CONTRACTOR CLASS I, II, OR V. COMBINATION FIRE MAINS (SHARED DOMESTIC AND FIRE PROTECTION SERVICE) AND FIRE HYDRANTS UP TO THE DEDICATED FIRE PROTECTION SYSTEM "POINT OF SERVICE" CAN BE INSTALLED BY A LICENSED UNDERGROUND UTILITY/ EXCAVATION CONTRACTOR, GENERAL CONTRACTOR, OR PLUMBING CONTRACTOR. [FLORIDA STATUTES 633.021, 633.539, 489.105]
- 5. ALL UNDERGROUND FIRE LINES AND HYDRANTS TO BE INSTALLED BY A BY A LICENSED FIRE CONTRACTOR CLASS I, II, OR V, INSPECTED BY THE CITY OF APOPKA FIRE INSPECTOR, TESTED AND CLEARED FOR USE PRIOR TO ONSITE DELIVERY OF COMBUSTIBLE MATERIALS.
- 6. A 36 IN. CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS EXCEPT AS OTHERWISE REQUIRED OR APPROVED. [CLEARANCE NFPA 1: 18.5.7.1]
- 7. AUTOMATIC SPRINKLER SYSTEMS SHALL BE ELECTRONICALLY MONITORED. ALL CONTROL VALVES, INCLUDING CONTROL VALVES ON BACKFLOW PREVENTION DEVICES, THAT MIGHT INTERFERE WITH THE OPERATION OF THE SYSTEM AND/OR ALL WATERFLOW DETECTION DEVICES SHALL BE MONITORED IN ACCORDANCE WITH NFPA 72.
- 8. AFTER INSTALLATION, RODS, NUTS, BOLTS, WASHERS, CLAMPS, AND OTHER RESTRAINING DEVICES SHALL BE CLEANED AND THOROUGHLY COATED WITH A BITUMINOUS OR OTHER ACCEPTABLE CORROSION-RETARDING MATERIAL IN ACCORDANCE WITH NFPA 24:10.8.3.5, 2010
- 9. ALL NEW FIRE HYDRANTS SHALL BE CAPABLE OF FLOWING 2,000 GPM AT 20 PSI.

#### UTILITIES NOTES

- 1. ALL EXISTING MANHOLES AND VALVES AFFECTED BY THIS CONSTRUCTION SHALL BE RAISED TO THE PROPOSED FINISHED GRADE USING APPROVED METHODS. IF THE OVERALL BRICK ADJUSTMENT WILL BE LESS THAN 7" OR GREATER THAN 16" A NEW RISER SECTION SHALL BE REQUIRED TO BRING EXISTING MANHOLE LIDS TO GRADE.
- 2. ALL PROPOSED TREES MUST MAINTAIN A MINIMUM 5' SEPARATION FROM WATER, SEWER, AND REUSE UTILITIES.
- 3. SANITARY GRAVITY SEWER 3' TO 15' DEPTHS OF COVER SHALL BE PVC, IN ACCORDANCE TO CH. 3 SECTION 3310. WHERE SPECIFICALLY APPROVED BY THE DIVISION MANAGER, PIPES GREATER THAN 15' DEEP SHALL BE CERAMIC EPOXY LINED DUCTILE IRON PIPE (DIP). PVC SANITARY SEWER PIPE SHALL MEET ASTM D3034 AND DUCTILE IRON PIPE SHALL MEET ASTM D746.
- 4. FOUR INCH (4") WATER MAINS SHALL BE EITHER PRESSURE CLASS 350 DUCTILE IRON (D.I.) IN ACCORDANCE WITH ANSI/AWWA C150/A21.50-96 ANSI/AWWA C151/A21.51-86 OR, AS CONDITIONS WARRANT, C-900 DR14 CLASS 200 PVC PIPE.
- 5. CITY OF WINTER PARK WATER MAINS SHALL BE D.I. AWWA C150/C151 PRESSURE CLASS 350 FROM THE POINT OF CONNECTION TO THE METER.
- 6. WATER MAIN PIPE SHALL BE D.I. AWWA C150/C151 PRESSURE CLASS 350 OR PVC DR14, AWWA C-900 FOR 4" DIAMETER AND LARGER PIPES BEYOND THE POINT OF SERVICE NOTED ON THE PLAN SHEETS. WATER MAIN PIPE SHALL BE HDPE SDR11, AWWA C-901 FOR 1" TO 3" IN
- 7. TRAFFIC MUST BE MAINTAINED AT ALL TIMES ON DIPLOMAT CIRCLE, COORDINATE ALL WORK WITH THE PROPER AUTHORITIES.
- 8. COORDINATE ALL SANITARY SEWER SERVICE LOCATIONS WITH THE MEP PLANS.
- 9. DIRECTION DRILL IS NOT ALLOWED ON CITY FORCE MAIN UNLESS SPECIFIC WRITTEN APPROVAL BY THE CITY.

10. NOTE REMOVED

- 11. CONTRACTOR SHALL RELOCATE OR REMOVE AND REPLACE ANY EXISTING UTILITY IN CONFLICT WITH THE CROSSING.
- 12. THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUBCONTRACTORS. CONTRACTOR SHALL ACCEPT PREMISES AS FOUND. OWNER ASSUMES NO RESPONSIBILITY FOR THE CONDITION OF THE EXISTING SITE OR EXISTING STRUCTURES AT THE TIME OF BIDDING OR THEREAFTER.
- 13. ELECTRIC, COMMUNICATION, LIGHTING, CHILLED WATER, AND GAS DESIGNED BY OTHERS AND SHOWN FOR REFERENCE ONLY
- 14. VERTICAL SEPARATION BETWEEN WATER AND SANITARY SEWER SHALL MEET THE REQUIREMENTS OF F.A.C. RULE 62-555.314 AND UTILITIES CROSSING MATRIX AS SHOWN ON THE DETAIL SHEET.
- 15. POTABLE WATER AND SANITARY SEWERS MAINS SHALL MAINTAIN 18 INCHES OF VERTICAL SEPARATION. IF VERTICAL SEPARATION CANNOT BE ACHIEVED, PROVIDE DUCTILE IRON PIPE FOR SANITARY SEWER FOR 10 FEET ON EACH SIDE OF CROSSING. NEAREST JOINT SHALL NOT BE
- 16. STORM SEWER PIPES AND SANITARY SEWER MAINS SHALL MAINTAIN 12 INCHES OF VERTICAL SEPARATION. IF VERTICAL SEPARATION CANNOT BE ACHIEVED, PROVIDE DUCTILE IRON PIPE FOR SANITARY SEWER FOR 10 FEET ON EACH SIDE OF CROSSING. NEAREST JOINT SHALL NOT BE CLOSER THAN 10 FEET FROM THE CROSSING.

#### STANDARD SEWER AND WATER NOTES

- 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 VACUUM-TYPE 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 GRAVITY-TYPE 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." [FAC 62-555.314(1); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)]
- 2. 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 18 INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 18 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 PRESSURE-TYPE 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 18 INCHES ABOVE OR BELOW THE OTHER PIPELINE. [FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)]. 6 INCH MINIMUM CLEARANCE SHALL BE PROVIDED AT STORMWATER / SANITARY SEWER LINE CROSSINGS WHEN SANITARY SEWER LINE CROSSES ABOVE STORMWATER LINE. WHEN STORMWATER LINE CROSSES ABOVE SANITARY SEWER LINE A 12 INCH MINIMUM CLEARANCE SHALL BE PROVIDED.
- 3. AT THE UTILITY CROSSINGS DESCRIBED IN PART II.C.1.W 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. [FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)] SANITARY SEWER PIPE MATERIAL AND JOINT SPACING SHALL BE IN COMPLIANCE WITH CITY OF APOPKA UTILITIES DESIGN AND CONSTRUCTION STANDARDS MANUAL.
- 4. ALL WATER MAIN AND SANITARY SEWER MATERIALS AND APPURTENANCES SHALL CONFORM TO AND SHALL BE CONSTRUCTED, INSTALLED, TESTED AND CLEARED FOR SERVICE IN ACCORDANCE WITH ORANGE COUNTY SPECIFICATIONS, AND THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF
- 5. THE CONTRACTOR SHALL PERFORM HYDROSTATIC TESTING OF ALL NEWLY-INSTALLED WATER DISTRIBUTION SYSTEMS IN ACCORDANCE WITH THE CITY OF APOPKA STANDARDS AND IN ACCORDANCE WITH AWWA STANDARD C600 FOR DUCTILE IRON PIPE. TESTING SHALL BE IN ACCORDANCE WITH AWWA MANUAL M23 FOR PVC PIPE. TEST PRESSURES SHALL BE 150 PSI. FOR POTABLE WATER MAINS AND 200 PSI. FOR FIRE PROTECTION
- 6. THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION SYSTEM IN ACCORDANCE WITH THE FDEP WATER PERMIT, AND RECEIVE APPROVAL THEREOF FROM THE CITY OF APOPKA WATER UTILITY, ENGINEER OF RECORD, AND FDEP, PRIOR TO DISINFECTION OF THE WATER DISTRIBUTION SYSTEM SHALL BE PLACING IN SERVICE. PERFORMED IN ACCORDANCE WITH AWWA 651 "DISINFECTING WATER MAINS", CITY OF APOPKA UTILITY DESIGN AND CONSTRUCTION STANDARDS MANUAL.
- 7. CLOSED CIRCUIT TV (CCTV) INSPECTION OF ALL LINES SHALL BE CONDUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE CITY OF APOPKA UTILITY DESIGN AND CONSTRUCTION STANDARDS MANUAL (SECTION 44.3). AN AS-BUILT SURVEY OF ALL WASTEWATER COMPONENTS SHALL BE CONDUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE CITY OF APOPKA UTILITY DESIGN AND CONSTRUCTION STANDARDS MANUAL. PROVIDE GPS COORDINATES FOR ALL WASTEWATER STRUCTURES
- 8. PLASTIC WATER SERVICE PIPING AND FITTINGS 1 THROUGH 2 INCHES SHALL CONFORM TO THE REQUIREMENTS OF CITY OF APOPKA.
- 9. UNDERGROUND FIRE LINES FROM P.O.S. SHALL MEET NFPA 24 REQUIREMENTS.
- 10. PIPE FITTINGS AND MATERIALS TO COMPLY WITH CITY OF APOPKA UTILITY DESIGN AND CONSTRUCTION STANDARDS MANUAL. APPROVAL OF CITY OF APOPKA IS REQUIRED FOR SANITARY SEWER DEPTHS GREATER THAN 15 FEET. FOR DEPTHS OF COVER GREATER THAN 15' CERAMIC EPOXY LINED DUCTILE IRON PIPE SHALL BE USED. PVC PIPE SHALL MEET THE STANDARDS OF ASTM D-3034 AND SHALL HAVE JOINTS WITH INTEGRAL BELL ELASTOMERIC GASKET IN ACCORDANCE WITH ASTM F477. DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS OF ASTM D476 AND SHALL HAVE JOINTS AND GASKETS AS DESCRIBED BY AWWA C111 AND C151. ALL SEWER PIPING SHALL BEAR THE "NSF-DW SEAL."
- 11. ALL UNDERGROUND UTILITY PIPING SHALL HAVE A MINIMUM OF (3) FEET OF COVER UNLESS SHOWN OTHERWISE ON THE PLANS OR AS DIRECTED
- 12. PIPE DEFLECTIONS AT JOINTS SHALL NOT EXCEED 75% OF PIPE MANUFACTURERS RECOMMENDED MAXIMUM JOINT DEFLECTION.
- 13. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION ACTIVITY FOR DIG PERMITS, ELECTRICAL PERMITS OR OTHER PERMITS AS APPLICABLE. CONTRACTOR SHALL COORDINATE FULLY WITH UTILITY COMPANIES ON EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
- 14. THE LOCATIONS OF ALL EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE OWNER OR ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY, PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES WITH THE UTILITY COMPANY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING ANY UNDERGROUND UTILITY. EXISTING UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED AS DIRECTED ON THE PLANS OR BY THE OWNER.
- 15. THE CONTRACTOR SHALL LOCATE AND VERIFY ALL HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
- 16. ALL WATER AND SEWER LINES ARE TO BE CAPPED TEMPORARILY AT THEIR OPEN ENDS UNTIL CONNECTIONS ARE CONSTRUCTED.
- 17. A 48-HOUR/TWO WORKING DAYS NOTICE WILL BE GIVEN TO THE ENGINEER OF RECORD, CITY OF APOPKA INSPECTORS PRIOR TO TESTING ANY UTILITY SHOWN ON THESE PLANS. ADDITIONAL RE-INSPECTION(S) DUE TO FAILED TESTING WILL BE PAID FOR BY THE CONTRACTOR.
- 18. WHEN TRENCH EXCAVATION EXCEEDS FIVE (5) FEET IN DEPTH
- 19. CONTRACTOR SHALL CONFORM TO OSHA STD. 29CFR. SECTION 1926.650. 20. THE CONTRACTOR SHALL PROVIDE WRITTEN ASSURANCE OF COMPLIANCE WITH THIS LAW. 21. TRENCH SAFETY SYSTEM SHALL BE DESIGNED AND INSTALLED BY THE CONTRACTOR.
- 22. THIS PROJECT REQUIRES AN FDEP WATER DISTRIBUTION SYSTEM PERMIT. THE CONTRACTOR SHOULD REQUEST A COPY OF THIS PERMIT AND KEEP IT AT THE JOB SITE AT ALL TIMES DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOT PUT THE SYSTEM INTO SERVICE UNTIL THE CONTRACTOR HAS PROVIDED CERTIFIED "AS-BUILT" PLANS AND COPIES OF THE APPROVED BACTERIOLOGICAL TESTING HAS BEEN SUBMITTED TO THE ARCHITECT OF RECORD, AND THE ENGINEER HAS PROVIDED A COPY OF THE FDEP CLEARANCE LETTER TO THE CONTRACTOR, ALLOWING THE SYSTEM TO BE PLACED INTO OPERATION. FROM THE TIME AS-BUILT DRAWINGS ARE APPROVED BY THE ENGINEER, THE ESTIMATED TIME FOR PROCESSING AND RECEIPT OF THE FDEP CERTIFICATION IS 30 TO 45 DAYS.
- 23. ALL DEWATERING ACTIVITIES AND PERMITTING SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 24. ON-SITE WATER DISTRIBUTION SYSTEM AND RECLAIMED WATER SYSTEM SHALL BE PRIVATELY OWNED AND MAINTAINED.
- 25. THRUST BLOCKS SHALL NOT BE UTILIZED FOR RESTRAINING PIPE INSTALLED UNDER THIS CONTRACT.
- 26. CONTRACTOR TO SCHEDULE DEMOLITION AND REPLACEMENT OF EXISTING SERVICE ROAD AND PROPOSED UTILITY CONSTRUCTION SO THAT PARK ACCESS ALONG THE SERVICE ROAD IS MAINTAINED AT ALL TIMES.
- 27. CONTRACTOR TO COORDINATE EFFORTS AND TIMING SO THAT EXISTING POTABLE WATER LINE REMAIN IN SERVICE UNTIL SUCH TIME AS THE PROPOSED POTABLE WATER LINE HAS BEEN INSTALLED AND F.D.E.P. CLARENCE CERTIFICATION HAS BEEN RECEIVED.
- 28. CONTRACTOR TO COORDINATE EFFORTS AND TIMING SO THAT ALL EXISTING UTILITY LINES REMAIN IN SERVICE UNTIL SUCH TIME AS THE PROPOSED UTILITY LINES HAVE BEEN INSTALLED, AS-BUILT PROVIDED AND ACCEPTED BY ENGINEER.
- 29. NO TREES SHALL BE PLACED OVER SANITARY SEWERS.
- 30. SANITARY SEWER SYSTEM SHALL BE PRIVATELY OWNED AND MAINTAINED.
- 31. CITY OF APOPKA LOGO MANHOLE COVER IS NOT USED ON PRIVATE SEWERS.

**HARRIS** 

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Release:

#### **EROSION PROTECTION NOTES**

1. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN, CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTATION OF SOILS OFF THE SITE. THE CONTRACTOR SHALL ACCEPT AND WILL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL FACILITIES.

- 2. SILT SCREENS AND TURBIDITY BARRIERS MUST REMAIN IN PLACE AND IN GOOD CONDITION AT ALL LOCATIONS SHOWS ON THE PLANS AND AS REQUIRED UNTIL THE CONTRACT IS COMPLETED AND SOILS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.
- 3. THE EROSION CONTROL MEASURES SET FORTH IN THESE PLANS ARE INTENDED AS MINIMUM STANDARDS. ANY EROSION CONTROL REQUIRED BEYOND THAT SPECIFIED SHALL BE CONSIDERED AS INCLUDED WITHIN THIS CONTRACT.
- 4. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE PROJECT PLANS AND SPECIFICATIONS, CITY OF APOPKA AND SJRWMD.
- 5. LIMITS OF ALL EROSION PREVENTION MUST BE STAKED BY CONTRACTOR AND THE LOCATION INSPECTED AND APPROVED BY THE OWNER'S PERSONNEL PRIOR TO PLACEMENT OF EROSION CONTROL MEASURES AND ANY CLEARING OR CONSTRUCTION ACTIVITIES. REMOVAL OF THESE SAME EROSION CONTROLS AND PREVENTION MEASURES MAY BE DONE ONLY AFTER AUTHORIZATION BY THE OWNER'S PERSONNEL IS OBTAINED.
- 6. MATERIALS FROM WORK ON THIS PROJECT SHALL BE CONTAINED, AND NOT ALLOWED TO COLLECT ON ANY OFF-PERIMETER AREAS, WETLANDS. PROTECTED AREAS OR IN WATERWAYS. THESE INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES OR
- 7. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE THE EFFECTIVENESS OF THESE EFFORTS. ANY NECESSARY REMEDIES SHALL BE PERFORMED WITHOUT DELAY AND AT NO COST TO THE OWNER.
- 8. ALL MUD, DIRT OR OTHER MATERIALS TRACKED OR SPILLED ONTO EXISTING OR PRIVATE ROADS AND FACILITIES FROM THIS SITE, DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. DEVIATION FROM THIS WILL CAUSE OWNER NOTIFICATION, AND ALL WORK TO STOP UNTIL CORRECTED.
- 9. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED IMMEDIATELY AFTER FINAL GRADING. WHEN IT IS NOT POSSIBLE TO PERMANENTLY PROTECT A DISTURBED AREA IMMEDIATELY AFTER GRADING OPERATIONS, TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED. ALL TEMPORARY PROTECTION SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE IN PLACE AND ESTABLISHED. TEMPORARY EROSION CONTROL MAY CONSIST OF BUT NOT BE LIMITED TO MULCH, SAND BAGS, PIPING, SLOPE DRAINS, SETTLEMENT BASINS, ARTIFICIAL COVERINGS, BERMS, AND DUST CONTROL.
- 10. ALL RE-VEGETATION SHALL BE INSTALLED WITH LOCAL MATERIALS AS THE FINAL INSTALLATION AS OPPOSED TO TEMPORARY STABILIZATION, AND MAINTAINED UNTIL FINAL ACCEPTANCE. COORDINATE WITH PROPOSED LANDSCAPE PLAN.
- 11. THE CONTRACTOR SHALL PREPARE A SCHEDULE OF DE-WATERING FOR POOL AND UTILITY ITEMS. THIS WILL CONSIST OF ESTIMATES OF POINTS OF DISCHARGE, DISCHARGE FLOWS, DATES AND DURATIONS FOR ALL UTILITY ITEMS WHICH WILL REQUIRE DE-WATERING. THIS WILL INCLUDE THE POOLS AND ALL UTILITIES. THIS SCHEDULE SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL OF THE DE-WATERING OPERATIONS.
- 12. DURING CONSTRUCTION, THE CONTRACTOR WILL PROVIDE TEMPORARY MULCHING OR STABILIZATION FOR AREAS THAT HAVE BEEN CLEARED AND NOT REWORKED WITHIN SEVEN (7) CALENDAR DAYS DURING THE WET SEASON AND FOURTEEN (14) CALENDAR DAYS DURING THE DRY SEASON. IN ADDITION, ALL SIDE SLOPES SHALL BE MULCHED OR STABILIZED WITHIN SEVEN (7) DAYS DURING THE WET SEASON AND FOURTEEN (14) DAYS
- 13. ALL SURFACE WATER DISCHARGE FROM THE SITE, INCLUDING DE-WATERING DISCHARGE SHALL MEET WATER QUALITY STANDARDS (LESS THAN 29 NTU ABOVE BACKGROUND) PRIOR TO REACHING ANY WATER BODIES INCLUDING WETLANDS, LAKES AND STORM WATER PONDS. CONTRACTOR SHALL TAKE WATER SAMPLES PRIOR TO START OF CONSTRUCTION WHICH SHALL BE USED AS BASE LINE WATER QUALITY. ALL DE-WATERING PLANS AND TESTS MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S PERSONNEL PRIOR TO INSTALLATION AND OPERATION.
- 14. IN THE EVENT THAT THE EROSION PREVENTION AND CONTROL DEVICES SHOWN IN THESE PLANS PROVE NOT TO BE EFFECTIVE, ALTERNATE METHODS FOR MAINTAINING WATER QUALITY STANDARDS FOR DISCHARGE FROM THE CONSTRUCTION SITE WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE. ALL ALTERNATIVE EROSION PREVENTION AND CONTROL DEVICES MUST BE APPROVED BY THE OWNER'S DESIGNATED
- 15. IN CONJUNCTION WITH STAKING AND PLACEMENT OF EROSION CONTROL MEASURES THE CONTRACTOR SHALL STAKE THE LIMITS OF CLEARING AS INDICATED ON THE PLANS OR AS REQUIRED BY CONSTRUCTION. THE LIMITS OF CLEARING MUST BE INSPECTED AND APPROVED BY THE OWNER'S PERSONNEL PRIOR TO ANY CLEARING AND REMOVAL. THE CONTRACTOR WILL PAY FOR RE-VEGETATION OF ANY AND ALL AREAS THAT ARE CLEARED PRIOR TO THE OWNER'S APPROVAL OR AREAS THAT ARE CLEARED BEYOND THE LIMITS APPROVED BY THE OWNER.
- 16. ALL DRAINAGE STRUCTURES, INLETS, ETC. MUST HAVE EROSION CONTROL MEASURES IN PLACE AND MAINTAINED UNTIL COMPLETION OF THE PROJECT.
- 17. SILT FENCE LOCATIONS SHOWN ON THE PLANS ARE A REPRESENTATION, AS A MINIMUM TO WHERE SILT FENCING IS REQUIRED. THE EXACT LOCATION TO BE DETERMINED AS PART OF NOTE E ABOVE.
- 18. THE EXISTING PARK, BACK-OF-HOUSE AREAS, AND SERVICE ROAD WILL REMAIN OPEN DURING CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THE EXISTING PARK AREAS, GUEST AND DUST CONTROL.

#### (B) EROSION AND SEDIMENT CONTROL NOTES

- THESE PLANS INDICATE THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.) CHAPTER 6. CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND TURBIDITY CONTROL AS REQUIRED TO ENSURE CONFORMANCE TO STATE AND FEDERAL WATER QUALITY STANDARDS AND MAY NEED TO INSTALL ADDITIONAL CONTROLS TO CONFORM TO AGENCIES REQUIREMENTS. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS, AND FINES.
- IN ACCORDANCE WITH NPDES REQUIREMENTS, THE CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN PRIOR TO INITIATING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT SAID PLAN TO THE OWNER PRIOR TO THE PRE-CONSTRUCTION CONFERENCE AND SHALL KEEP A COPY ON-SITE FOR THE DURATION OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS AND SPECIFICATIONS AND THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS AND CRITERIA.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER CITY OF APOPKA STANDARDS AND
- IF DEWATERING CAPACITY REQUIRES A CONSUMPTIVE USE PERMIT (C.U.P.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
- THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT FROM WATER QUALITY VIOLATIONS. COSTS MAY INCLUDE LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS, AND FINES.
- PRIOR TO COMMENCEMENT OF CONSTRUCTION AND EXCAVATION ACTIVITIES. THE CONTRACTOR SHALL PERFORM GROUNDWATER TESTING IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY FEDERAL REGISTER, PAGE 42739, PART 1A.3, TO DETERMINE PETROLEUM CONTAMINATION LEVELS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING N.P.D.E.S. PERMIT, IF REQUIRED, IN ORDER TO DISCHARGE ANY GROUNDWATER ENCOUNTERED DURING CONSTRUCTION AND DE-WATERING OPERATIONS.
- 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS.
- IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL OF THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS AND SOLVENT RESISTANT GASKET MATERIAL SUCH AS FLUOROCARBON SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED. ANY CONTAMINATED SOIL THAT IS EXCAVATED SHALL BE PLACED ON AN IMPERMEABLE MAT AND COVERED WITH A WATERPROOF COVERING. THE PROPER AUTHORITIES WILL BE NOTIFIED AND THE CONTAMINATED SOIL HELD FOR PROPER DISPOSAL.

#### LOCATION OF PUBLIC WATER SYSYEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

			Joint Spacing @ Crossings
Other Pipe	Horizontal Separation	Crossings (1)	(Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	Water Main 3 ft. minimum	Water Main  12 inches is the minimum, except for storm sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 3 ft. minimum  Water Main
Vacuum Sanitary Sewer	Water Main  10 ft. preferred 3 ft. minimum	Water Main  12 inches preferred 6 inches minimum	Alternate 3 ft. minimum  Water Main
Gravity or Pressure Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	Water Main  10 ft. preferred 6 ft. minimum (3)	Water Main  12 inches is the minimum, except for gravity sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 6 ft. minimum  Water Main
On-Site Sewage Treatment & Disposal System	10 ft. minimum		

(1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.
(2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C. (3) 3 ft. for gravity samitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.

Disclaimer - This document is provided for your convenience only. Please refer to F.A.C. Rule 62-555.314 for additional construction requirements.

(4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

Water and reclaimed water mains shall maintain a 3' min cover below existing grade and shall be installed, as necessary, to avoid any potential conflicts with other proposed or existing pipe or structures.

HARRIS

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Release:

19020646

BOUNDARY SURVEY

ORANGE COUNTY

5 89°43'49" W 153.92' (D)

GRASS PAD

GRASS PAD

5 89°43**'**49**"** W **|**48.34**'** (D)

**♂** 

COMMENCE AT THE WE

CORNER OF LOT I

SURVEYOR'S NOTES:

LB 6674

@ B.C.

FENCE OWNERSHIP NOT DETERMINED.

N 89°43'49" E 266.11'(M) N 89°43'49" E 286.50' (D)

LESS OUT

BUILDING A

O.R.B. 7816

PG. 2362

89°43**'**49**'** W 87.7**|'** (D)

N 89°43**'**49**" |** 87.7**| '** (D`

5 89°43**'**49**'** W 87.7**!'** (D)

⊕ APPROX. T.O.B.

LESS OUT LOT 21 x

APPROX. T.O.B.

ORANGEWOOD

PHASE 8

DRY RETENTION POND

5 89°43**'**49**"** W 87.7**|'** (

14.4

BUILDING F

O.R.B. 7816

PG. 2884

(VACATED ALLEY)

S 89°43°49° W 7 1.75° (D)

ORANGEWOOD

VILLAS

— — <u>\*</u>

NO ID

**FLOW** 

LOT 19 LINE -

N 89°38**'**49**"** W 45.00**'** (D)

GRASS PAD

BOUNDARY LINE STRUCTURE CENTERLINE EASEMENT

IRON FENCE OVERHEAD LINES SURVEY TIE LINE WALL OR PARTY WALL WOOD FENCE VINYL FENCE

ASPHALT BRICK OF THE CONCRETE COVERED AREA WOOD

SYMBOLS: (UNLESS OTHERWISE NOTED) BENCH MARK CENTERLINE COMMON OWNERSHIP CONTROL POINT CONCRETE MONUMENT

> CALCULATED DEED FIELD MEASURED PLAT RECORD SURVEY ACCESSORY SETBACK LINE AIR CONDITIONING BLOCK CORNER BACKFLOW PREVENTOR BEARING REFERENCE BUILDING RESTRICTION LINE BAY/BOX WINDOW BUILDING BLOCK BENCHMARK BASEMENT

CURVE CONCRETE BLOCK CHAIN LINK FENCE CLEAN OUT CONCRETE VALLEY GUTTER CENTER LINE COVERED PORCH CONCRETE SLAB CABLE TV RISER CHORD BEARING CHIMNEY CONCRETE CORNER CONCRETE SIDEWALK DRAIN FIELD DRILL HOLE DRIVEWAY EDGE OF WATER

ELEVATION ELECTRIC METER ENCLOSURE ENTRANCE ELECTRIC UTILITY BOX FINISHED FLOOR EDGE OF PAVEMENT FOUND DRILL HOLE FND. CONCRETE MONUMENT FOUND IRON PIPE FOUND IRON PIPE & CAP FOUND IRON ROD FOUND IRON ROD & CAP FOUND NAIL FOUND NAIL AND DISC

FOUND PARKER-KALON NAIL FOUND PK NAIL & DISC FOUND RAILROAD SPIKE GAS METER IDENTIFICATION ILLEGIBLE INSTRUMENT INTERSECTION LICENSE # - BUSINESS

METAL FENCE MITERED END SECTION MANHOLE NON RADIAL NOT TO SCALE NORTH AMERICAN VERTICAL DATUM OF 1988 NATIONAL GEODETIC VERTICAL DATUM OF 1929 ON CONCRETE SLAB ON GROUND OFFICIAL RECORD BOOK OFFICIAL RECORD VOLUME OVERALL OFFSET

OUTSIDE OF SUBJECT PARCEL OVERHANG OVERHEAD LINES INSIDE OF SUBJECT PARCEL PLAT BOOK POINT OF CURVATURE POINT OF COMPOUND CURVATURE PERMANENT CONTROL POINT POINT OF INTERSECTION POINT OF BEGINNING POINT OF COMMENCEMENT PINCHED PIPE POINT OF REVERSE CURVATURE PERMANENT REFERENCE MONUMENT

POINT OF TANGENCY POOL EQUIPMENT PROFESSIONAL LAND SURVEYOR PLANTER PROFESSIONAL SURVEYOR AND MAPPER RADIUS or RADIAL RADIUS POINT RIGHT OF WAY RESIDENCE RANGE SET BACK LINE SURVEY CLOSURE LINE

SURVEY TIE LINE SEAWALL SET GLUE DISC SIDEWALK SCREEN SECTION SEPTIC TANK SEWER SET IRON ROD & CAP SET NAIL & DISC SQUARE FEET

STORY SEWER VALVE TOP OF BANK TEMPORARY BENCHMARK TELEPHONE FACILITIES TOWNSHIP TRANSFORMER TYPICAL UTILITY RISER

UNDERGROUND UTILITY RISER VINYL FENCE WOODEN FENCE WITNESS CORNER WATER FILTER WM WV WATER VALVE

WATER METER/VALVE BOX ACCESS EASEMEN ANCHOR EASEMENT CANAL MAINTENANCE ESMT COUNTY UTILITY ESMT. DRAINAGE EASEMENT EASEMENT INGRESS/EGRESS ESM IRRIGATION EASEMENT

I.E./E.E. IRR.E. LANDSCAPE ESMT. LAKE OR LANDSCAPE

L.A.E. L.B.E. L.M.E. P.U.E. R.O.E. S.W.E. S.W.M.E STORM WATER

CHAIN-LINK or WIRE FENCE

EDGE OF WATER

CENTRAL ANGLE or DELTA ● FND OR SET MONUMENT UTILITY OR LIGHT POLE ELEVATION

À.Ś.B.L. A/C B.F.P. B.R. B.R.L. B/W BLDG. BLK. BM BSMT. C.V.G. C/L C/P

C/S CATV CH CHIM. CONC. COR. CS/W D.F. D.H. D/W E.O.W. ELEV. EM ENCL. ENT. EUB F.O.P. F/DH

FCM FIPC FIR FIRC FN&D FND. FPKN FPKN&D FRRSPK GAR. GM

INST. INT. LS# LICENSE # - SURVEYOR M.B. MAP BOOK M.E.S. MITERED END SECTION

M.F. MES МН N.R. N.T.S. NGVD29

0.C.S. 0.R.B 0.R.V. O/A 0/9 OFF

OHL P.B. P.C.C. P.C.P. P.O.B. P.O.C. P.R.C.

P.R.M. PG. PLS PLT PSM R/W RES.

RGE. 9.B.L. 9.C.L. 9.T.L. S.W. S/GD S/W

SCR. SEC. SEP. SEW. SIRC SN&D SQ.FT.

STY. T.O.B. TBM TEL. TWP. U.R.

UG V.F. W.F. W/C W/F

AN.E. C.M.E. C.U.E. D.E. D.U.E. ESMT.

A.E.

U.E.

DRAINAGE AND UTILITY ESMT LIMITED ACCESS ESMT. LANDSCAPE BUFFER ESMT MAINTENANCE EASEMENT MAINTENANCE EASEMENT PUBLIC UTILITY EASEMENT

ROOF OVERHANG ESMT. SIDEWALK EASEMENT MANAGEMENT EASEMENT T.U.E. TECHNOLOGICAL UTILITY ESMT.

UTILITY EASEMENT

N 89°43'49" E 133.50' (D)

VILLAS

PHASE I

LESS OUT

LESS OUT

ORANGEWOOD

VILLAS

PHASE 2

N73°44'20' E 121.98' (D)

LESS OUT

ORANGEWOOD

VILLAS

PHASE 5

LOT 7

OPERTY ADDRESS SURVEY NUMBER 1902.0646-01 WOODLANE CIRCLE AND 350 E 6TH STREET, APOPKA, FLORIDA 32703

CLIENT ORDER NUMBER: **DATE:** 07/15/19 BUYER: HANNIBAL SQUARE COMMUITY LAND TRUST, INC.

SELLER: CERTIFIED TO HANNIBAL SQUARE COMMUITY LAND TRUST, INC.; NEW HOME

NONE VISIBLE

BY PERFORMING A SEARCH WITH THE LOCAL GOVERNING MUNICIPALITY OR WWW.FEMA.GOV, THE PROPERTY APPEARS TO BE LOCATED IN ZONE X. THIS PROPERTY WAS FOUND IN THE CITY OF APOPKA, COMMUNITY NUMBER 120180, DATED

THE BEARING REFERENCE OF NORTH 89 DEGREES 43 MINUTES 49 SECONDS EAST IS BASED ON THE SOUTHERLY RIGHT-OF-WAY LINE OF CIRCLE AND 350 E 6TH STREET, LOCATED WITHIN H.B. LINDLEY'S ADDITION TO APOPKA ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK B, PAGE 22 OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.

The Legal Description used to perform this survey was supplied by others. This survey does not determine or imply ownership.
This survey only shows improvements found above ground. Underground feetings, trillities and approachment strongly leaded on this survey man.

footings, utilities and encroachments are not located on this survey map. If there is a septic tank, or drain field shown on this survey, the location is approximate as the location was either shown to Exacta Land Surveyors, LLC. by approximate as the location was either shown to Exacta Land Surveyors, LLL. by a third party or it was estimated by metal detection, probing rods, and visual above ground inspection only. No excavation was performed in order to determine the exact and accurate location.

This survey is exclusively for the use of the parties to whom it is certified. Additions or deletions to this survey map and report by other than the signing party or parties is prohibited without written consent of the signing party or parties.

party or parties is prohibited without written consent of the signing party or parties.

Dimensions are in feet and decimals thereof.

Due to varying construction standards, house dimensions are approximate.

Any FEMA flood zone data contained on this survey is for informational purposes only. Research to obtain such data was performed at www.fema.gov.

All corners marked as set are at a minimum a ½"diameter, 18" iron rebar with a

cap stamped LB# 8291. cap stamped LB# 8291.

If you are reading this survey in an electronic format, the information contained on this document is only valid if this document is electronically signed as specified in Chapter 5J-17.062 (3) of the Florida Administrative Code and Florida Statute 472.025. The Electronic Signature File related to this document is prominently displayed on the invoice for this survey which is sent under separate cours. Many allysticated and encoded for a following signature (file to see New Line).

cover. Manually signed and sealed logs of all survey signature files are kept in the office of the performing surveyor. If this document is in paper format, it is not alld without the signature and original raised seal of a Florida Licensed: Unless otherwise noted, an examination of the abstract of title was NOT performed by the signing surveyor to determine which instruments, if any, are affecting this property.

12. The symbols reflected in the legend and on this survey may have been enlarged.

The symbols reflected in the legend and on this survey may have been enlarged or reduced for clarity. The symbols have been plotted at the center of the field location, and may not represent the actual shape or size of the feature.
 Points of Interest (POI's) are selected above-ground improvements which may be in conflict with boundary, building setback or easement lines, as defined by the parameters of this survey. There may be additional POI's which are not shown, not called-out as POI's, or which are otherwise unknown to the surveyor. These POI's may not represent all items of interest to the viewer.
 Utilities shown on the subject property may or may not indicate the existence of recorded or unpercorded if this wasements.

 Others show for the subject property may not indicate the existence of recorded or unrecorded utility easements.
 The information contained on this survey has been performed exclusively, and is the sole responsibility, of Exacta Land Surveyors, LLC.. Additional logo or references to third party firms are for informational purposes only.
 Pursuant to F.S. 558.0035, an individual employee or agent may not be held individually liable for negligence.
 House measurements should not be used for new construction or planning. 17. House measurements should not be used for new construction or planning. Measurements should be verified prior to such activity.



**J** ·> — S

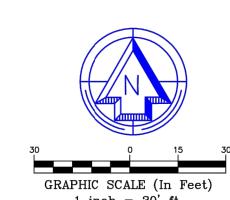
I hereby certify that the Boundary Survey of the hereon described property has been made under my direction, and to the best of my knowledge and belief, it is a true and accurate representation of a survey that meets the standards of Practice set forth by the Florida, Board of Professional Surveyors & Mapperson Chapter 5J-17 of the Florida Administrative Surveyors

FCM 4"X4"

RONALD W. WALLING

License No. 6473

State of Florida Professional Surveyor and Mapper



THE ELEVATIONS SHOWN HEREON WERE OBTAINED USING GPS IN

© DENOTES EXISTING ELEVATION IN NAVD 1988 DATUM

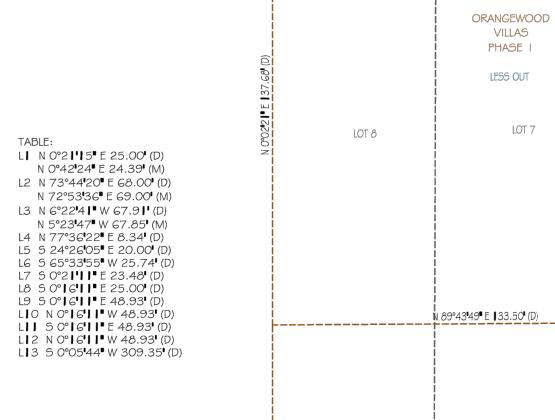
~-----

-----

N 89°38'45" W 127.36' (D)

LOT 13

LOT 14



N 89°39'04" W 16.00' (D)

LOT 17

9°39'04**"** E 7.32**"**(D)

LOT 16 LESS OUT ORANGEWOOD VILLAS PHASE 3

LESS OUT ORANGEWOO

S \$9°39**'**04**"** E 246.05**"** (D)

LOT 15

N 89°43**'**39**"** E 32 **I** .26**'** (M) 5 89°38'45" E 32 1.86' (D)

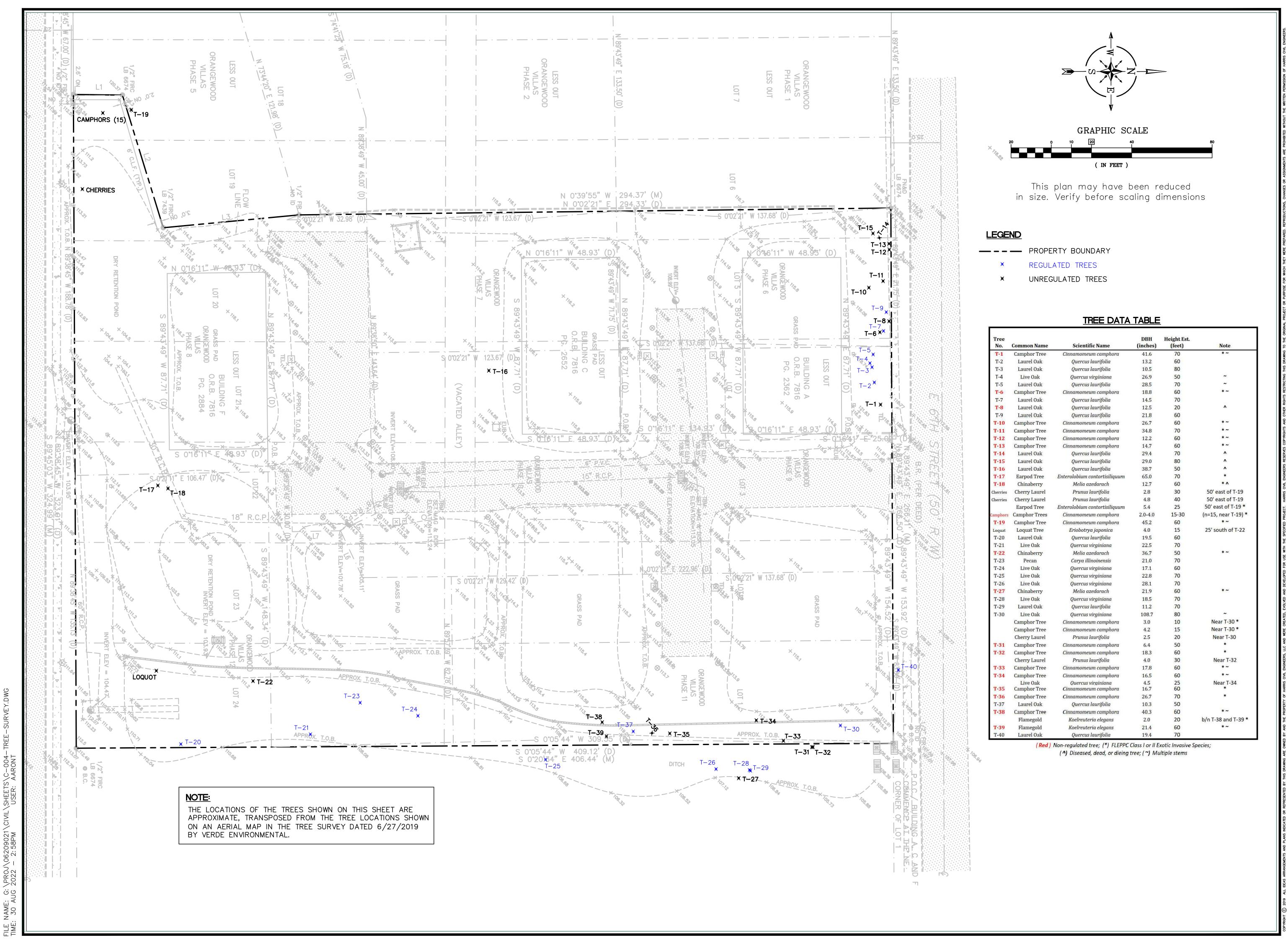
N 89°38'45" W 27.50' (D)

<sup>2,5</sup>6°⊗×′**%**,′ε,′.

VILLAS

PHASE 6

1 inch = 30' ft.



Harris Civil Engineers, LLC

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Orlando, Florida 32803

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Fax: (407) 629-7888

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Development

Revisions

9.

7.

6.

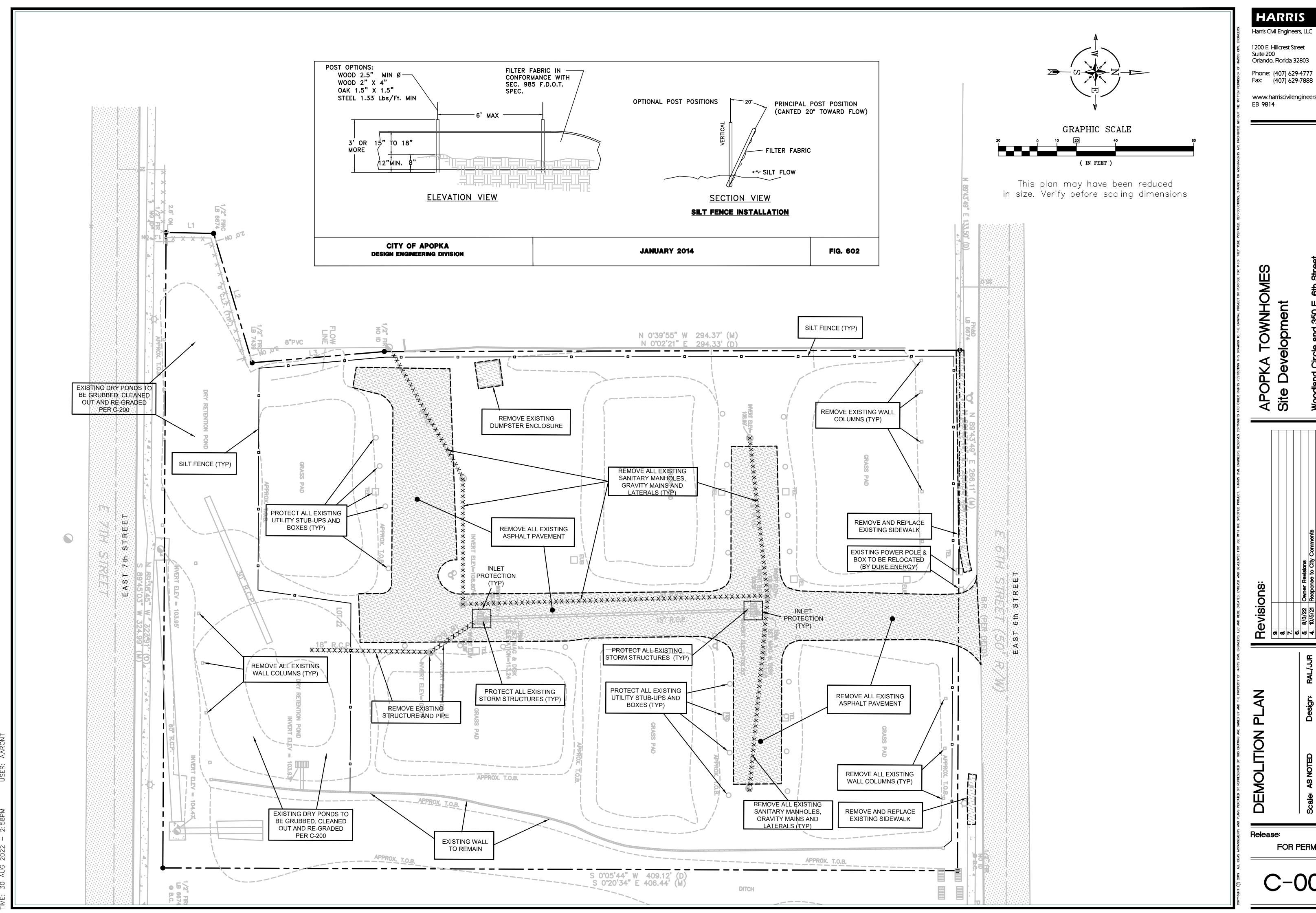
5. 8/3/22 Owner Revisions
4. 10/5/21 Response to City Comments
3. 8/20/21 Response to City Comments
2. 5/14/21 Response to City Comments
1. 7/26/19 Response to SJRWMD Comments
1. 7/26/19 Response to SJRWMD Comments

TED Design: RAL/JUR -19 Drawn: JUR 3209.021 Checked: RAL

cale: AS NOTED ate: 09-06-19 roject No: 6209.021

Release:

C-004

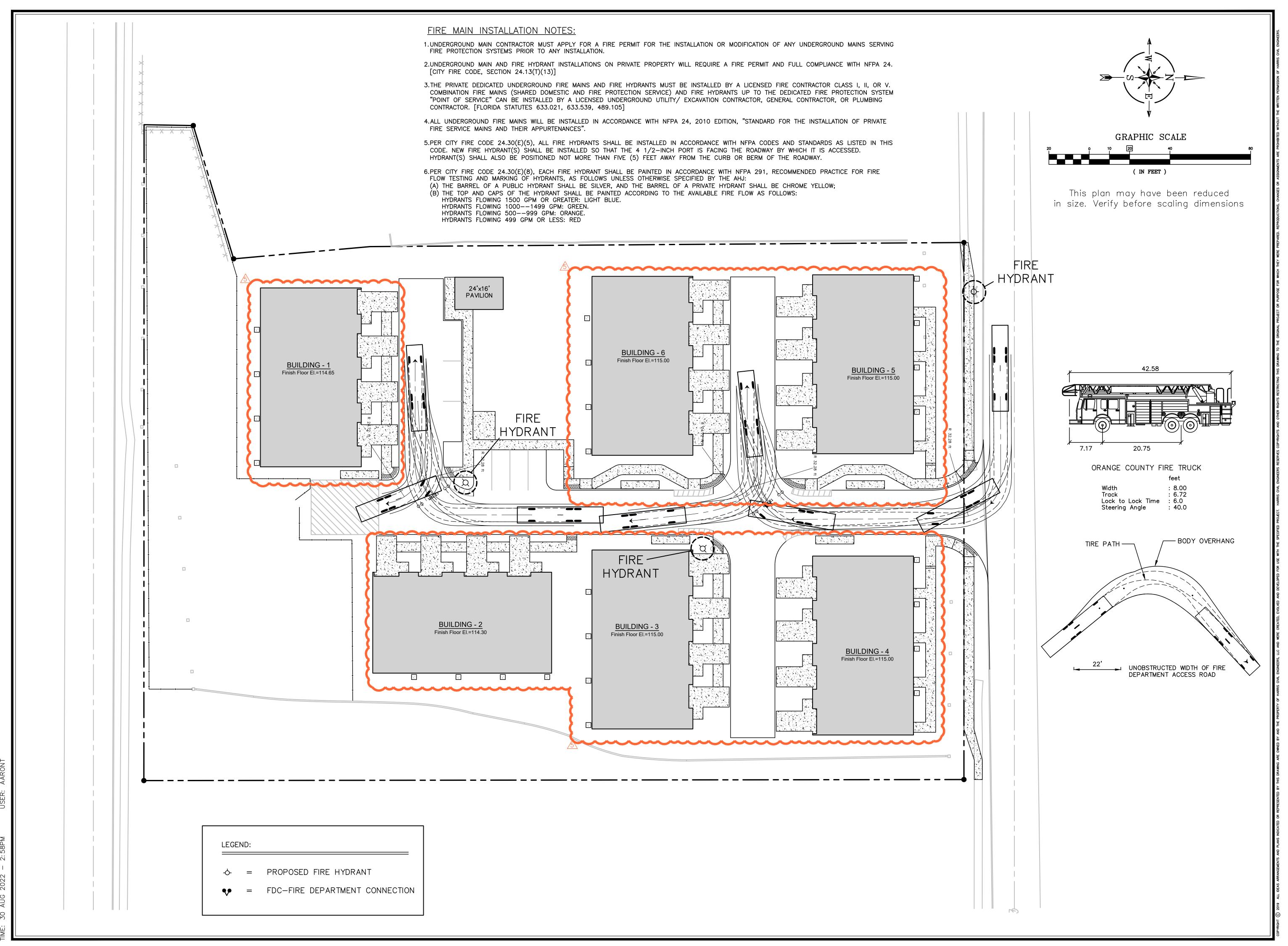


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OPKA TOWNHOMES

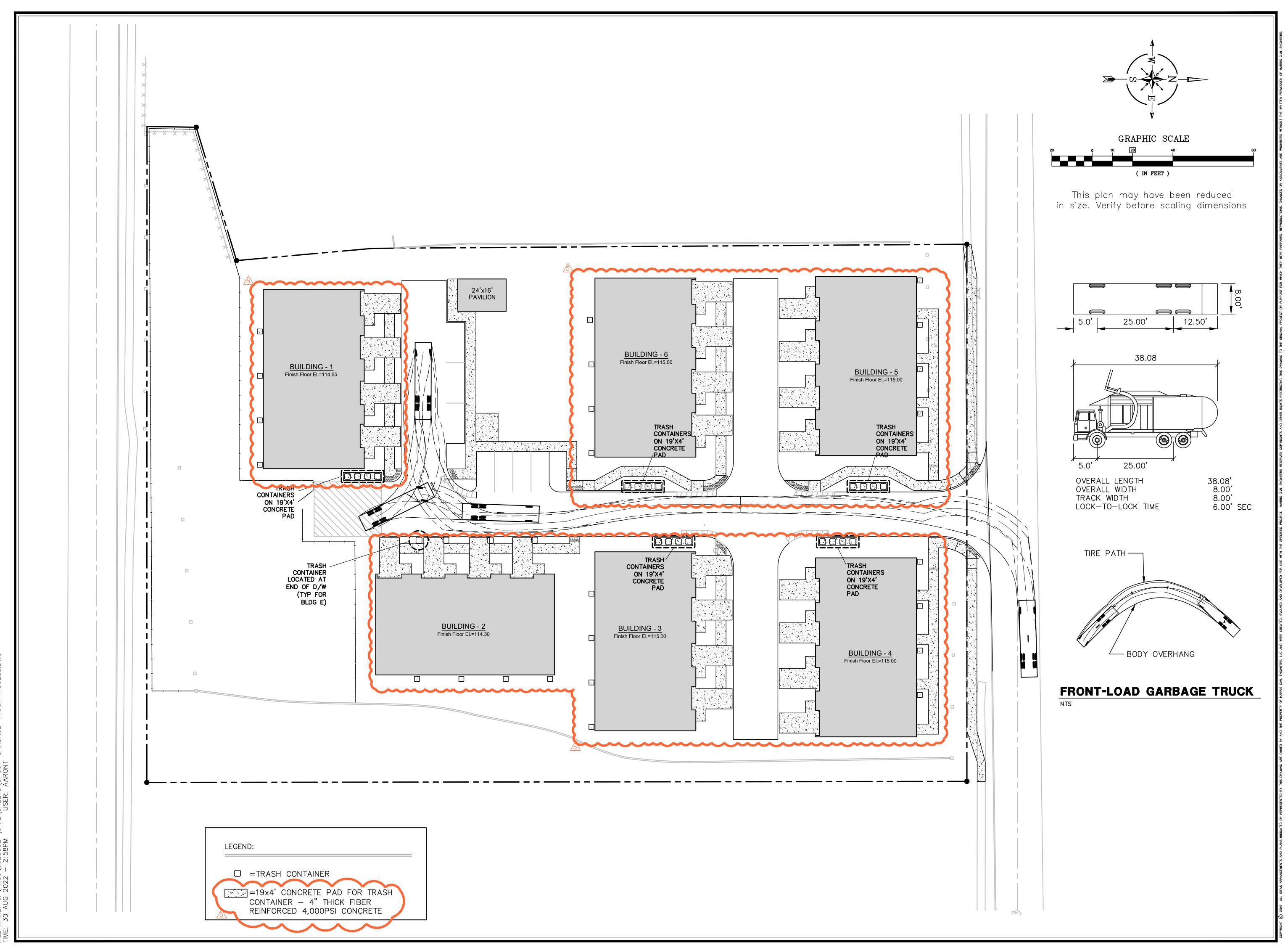
e Development

Design: RAL/JUR Drawn: JUR

AS-NOTES Design:

**⋖** 

Release: FOR PERMIT



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OPKA LOWNHOMES

Development

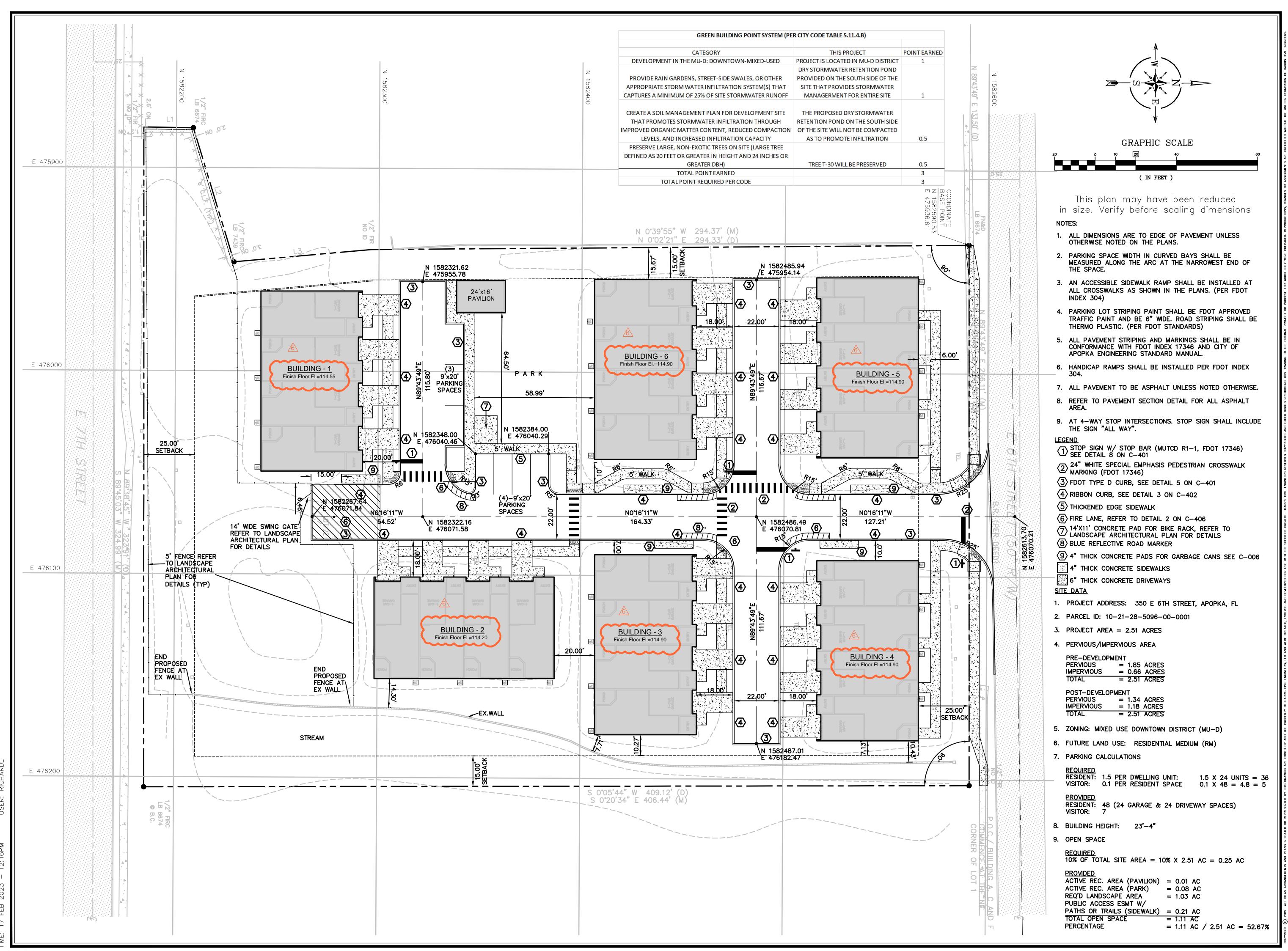
9.
 8.
 7.
 6.
 5. 8/3/22 Owner Revisions
 4. 10/5/21 Response to City Comments
 3. 8/20/21 Response to City Comments
 2. 5/14/21 Response to City Comments
 1. 7/26/19 Response to SJRWMD Comments
 No. Date Description

Design: RAL/J

Scale: AS-NOTES
Date: 09-06-19

Release:

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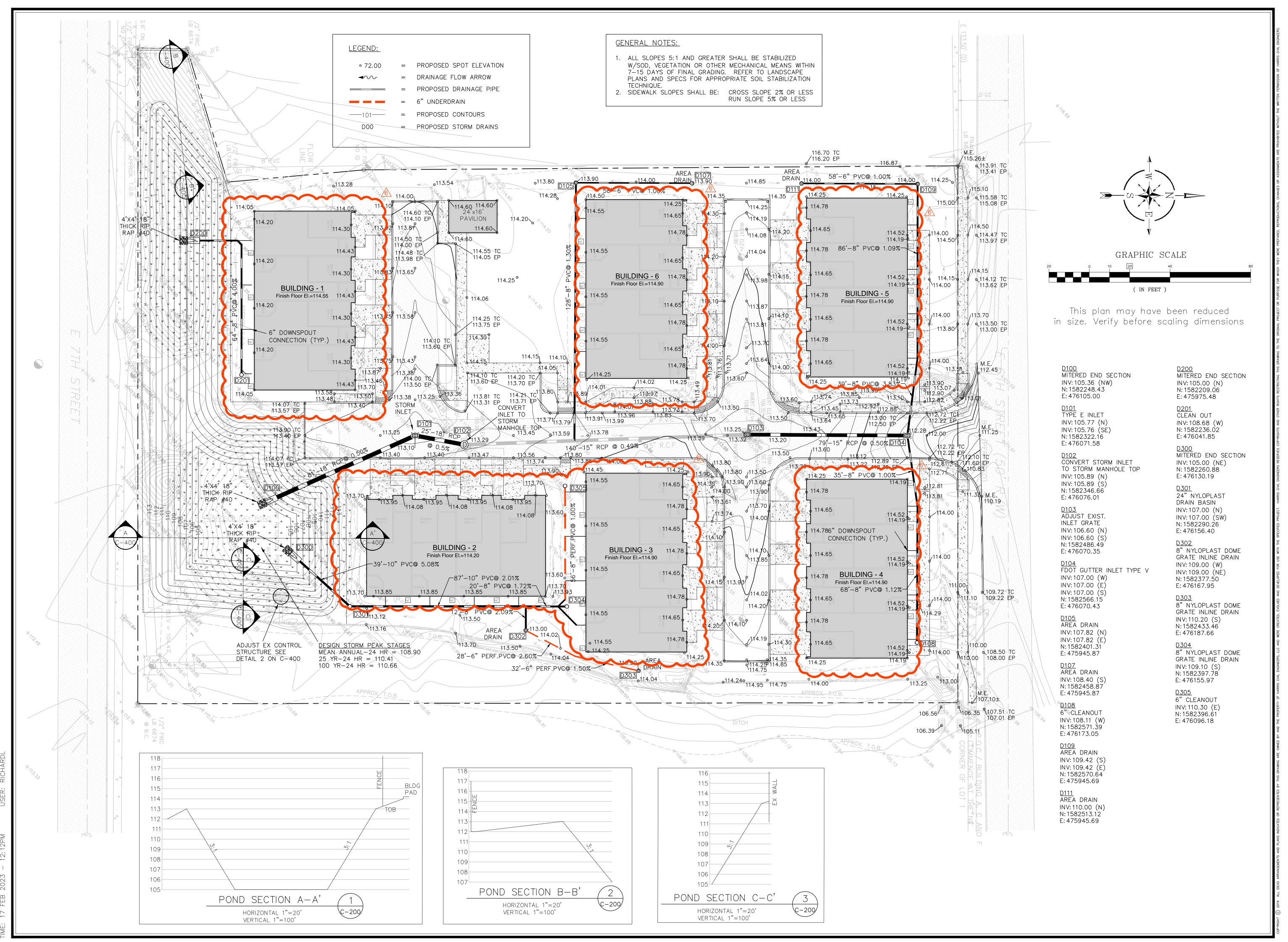
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Q Q C Q Q G G G G G

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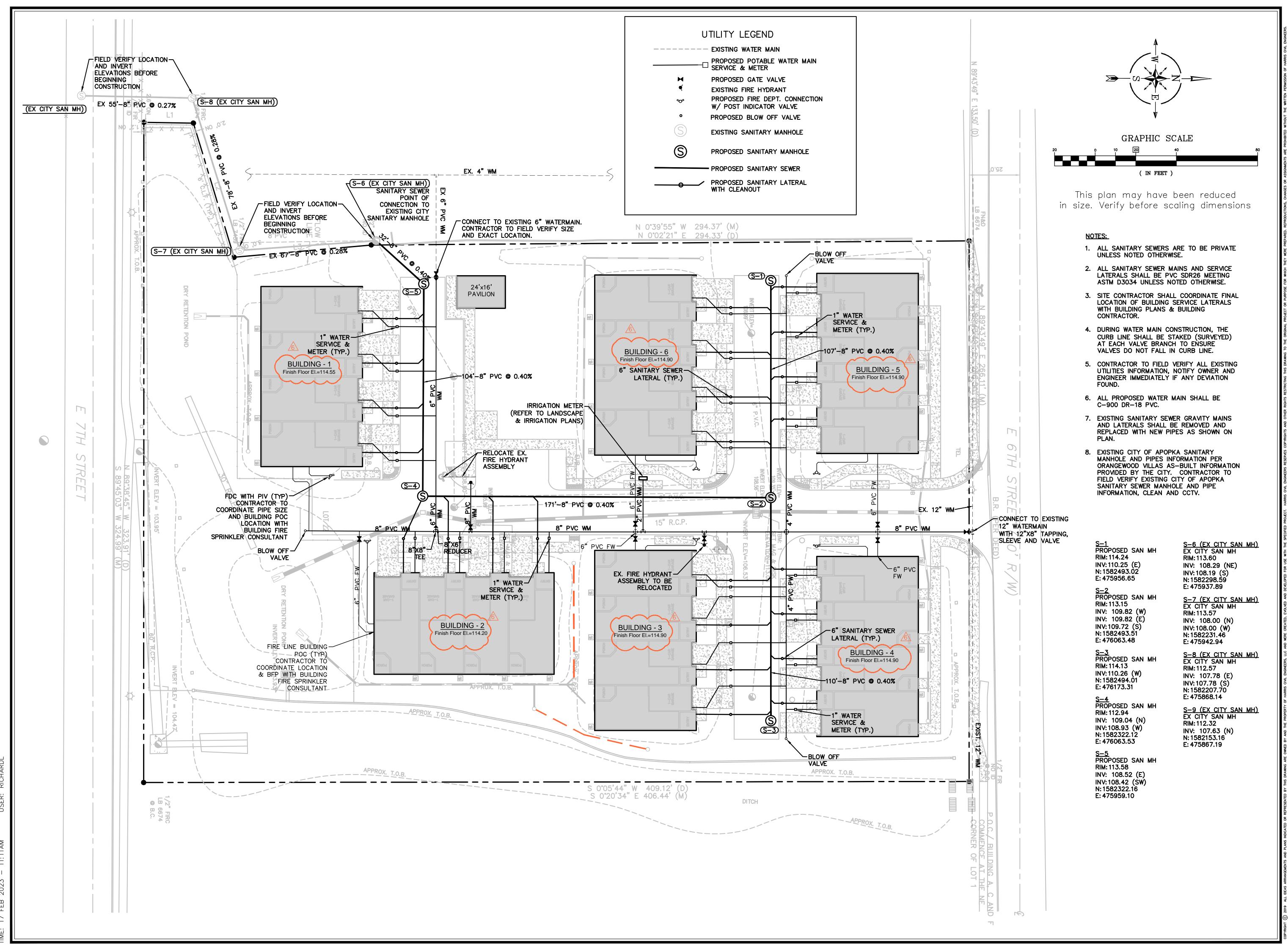
OWNHOME

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GRADING and DRAINAGE PLA

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PKA TOWNHOMES Development

9. 8. 7/26/19 Response to City Comments 2. 5/14/21 Response to City Comments 3. 8/20/21 Response to City Comments 4. 7/26/19 Response to SJRWMD Comments 7. 7/26/19 Response to SJRWMD Comments 7. 7/26/19 Response to SJRWMD Comments 1. 7/26/19 Response t

Design: RAL/JJR Drawn: JJR Checked: RAL

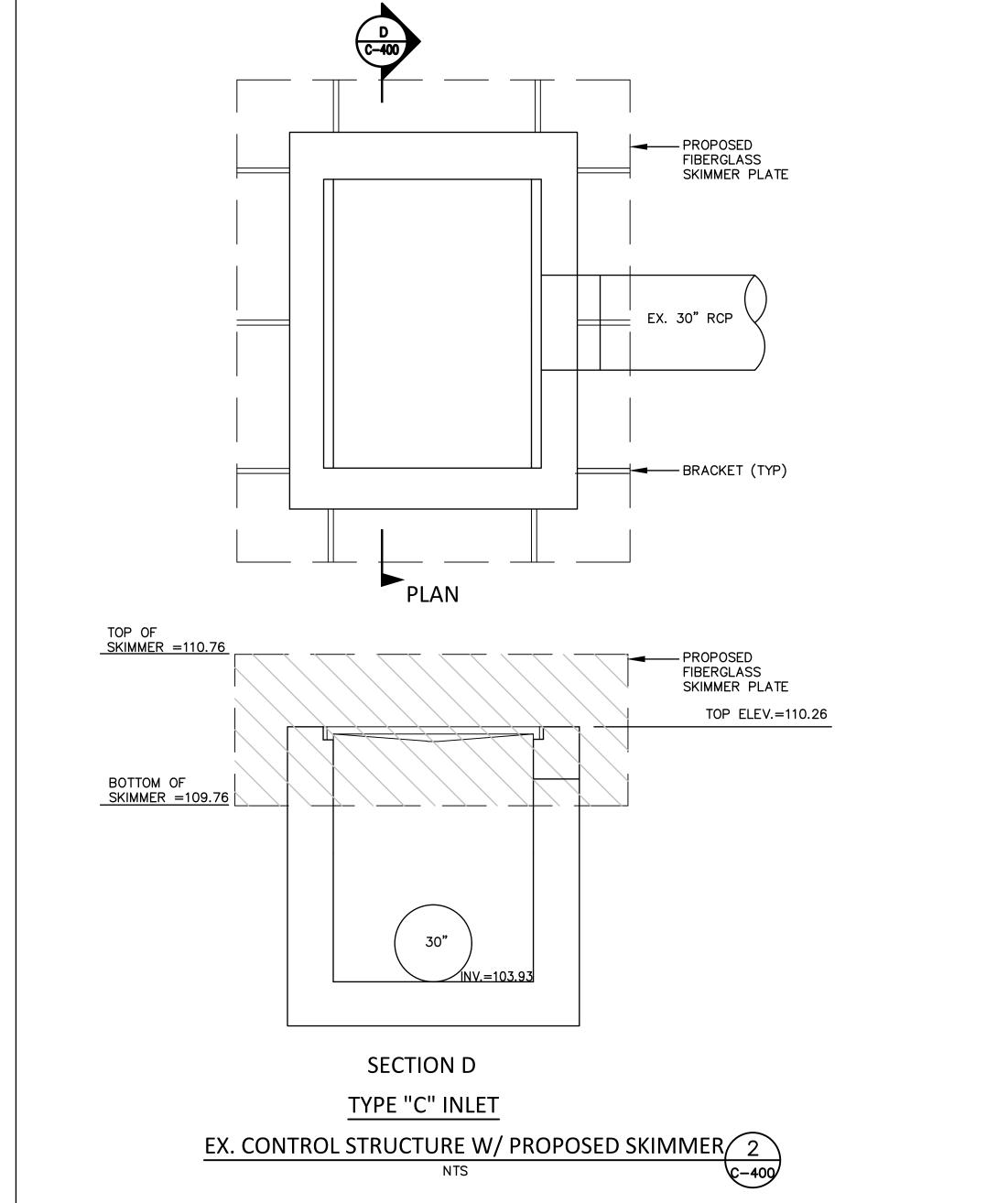
OTES Designation of the Checker Checke

Date: 09-06-19
Project No.: 6209.02

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Release: FOR PERMIT

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1200 E. Hillcrest Street Suite 200

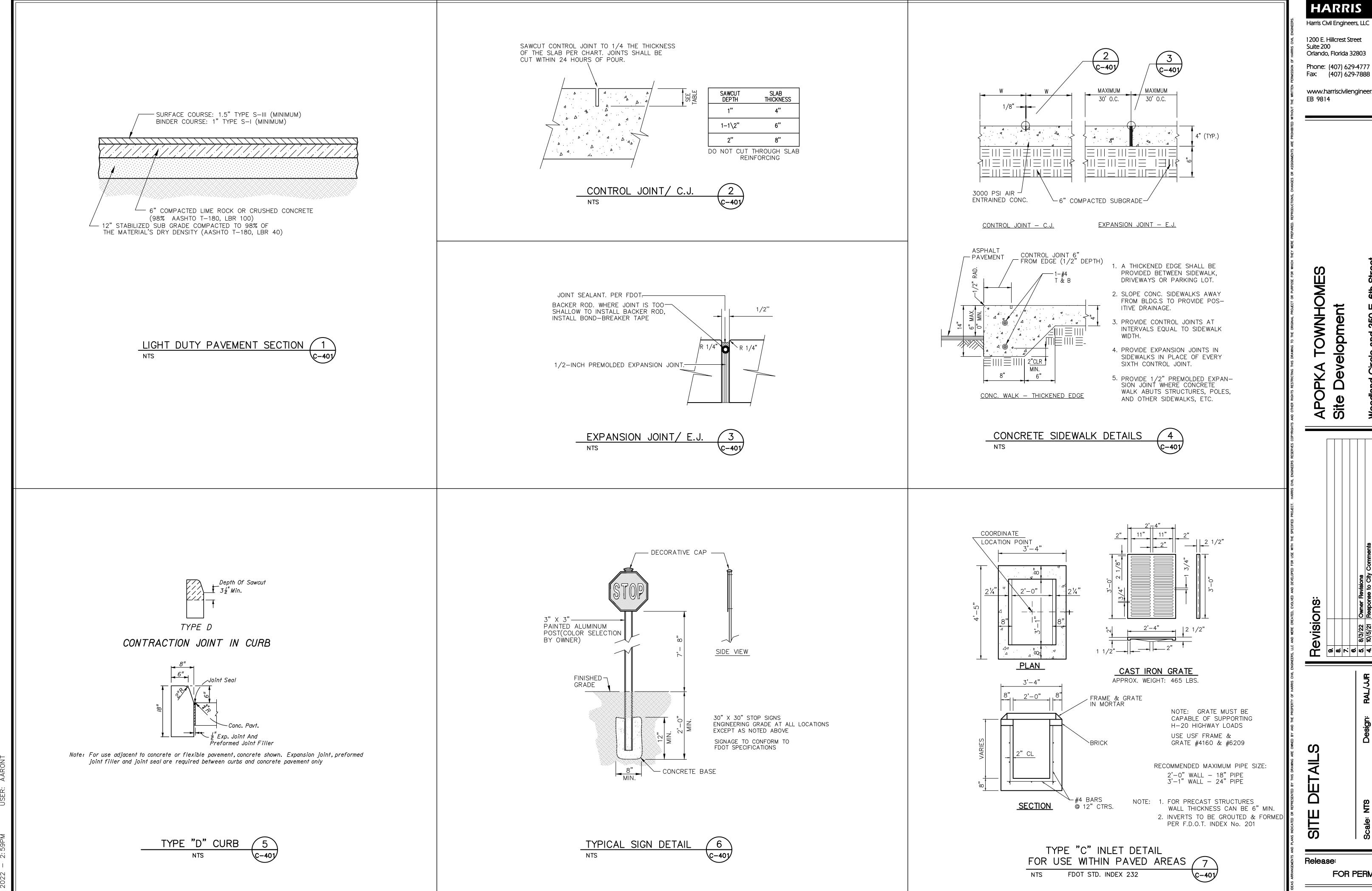
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Fax: (407) 629-7888

**TOWNHOMES** 

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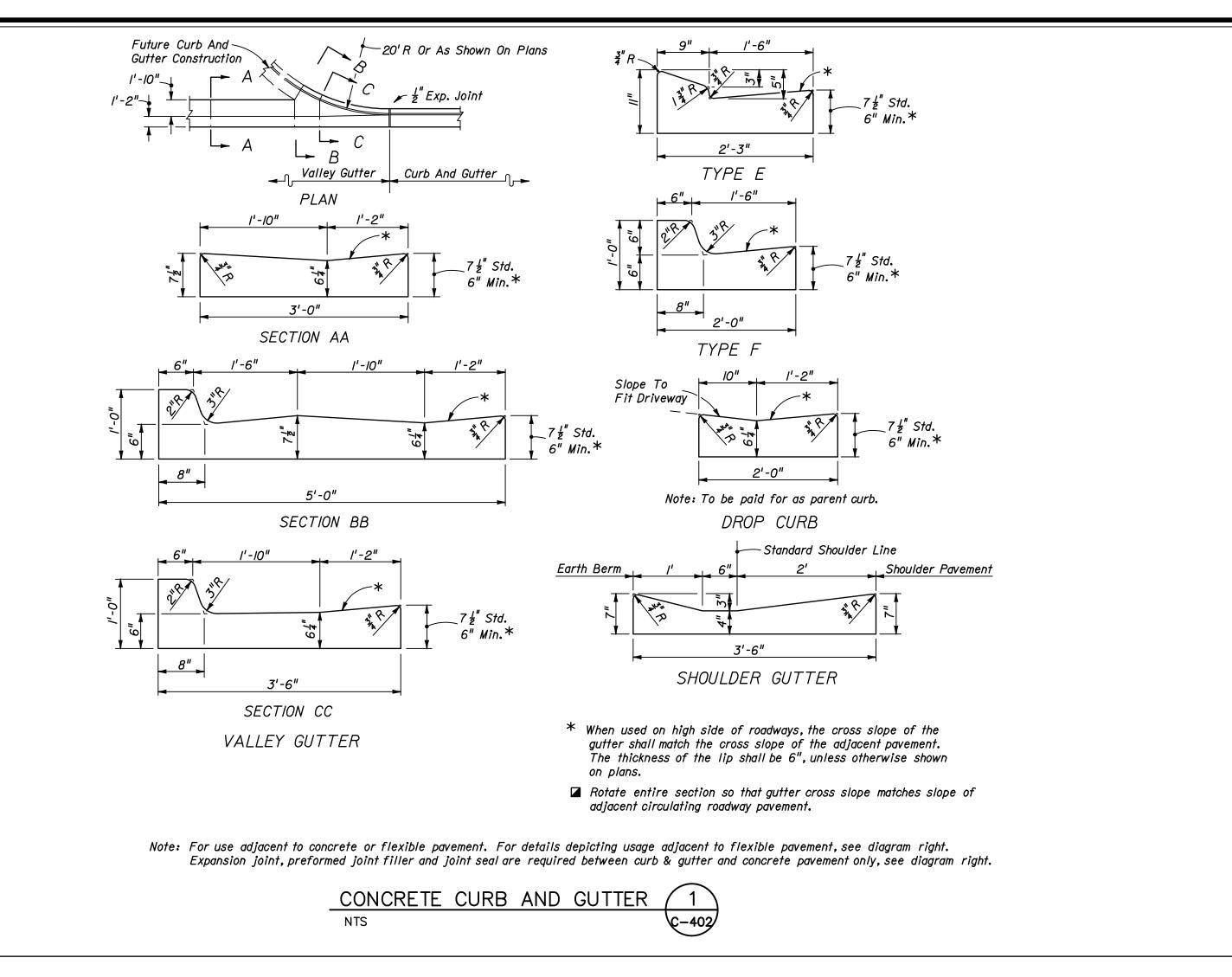
1200 E. Hillcrest Street Orlando, Florida 32803

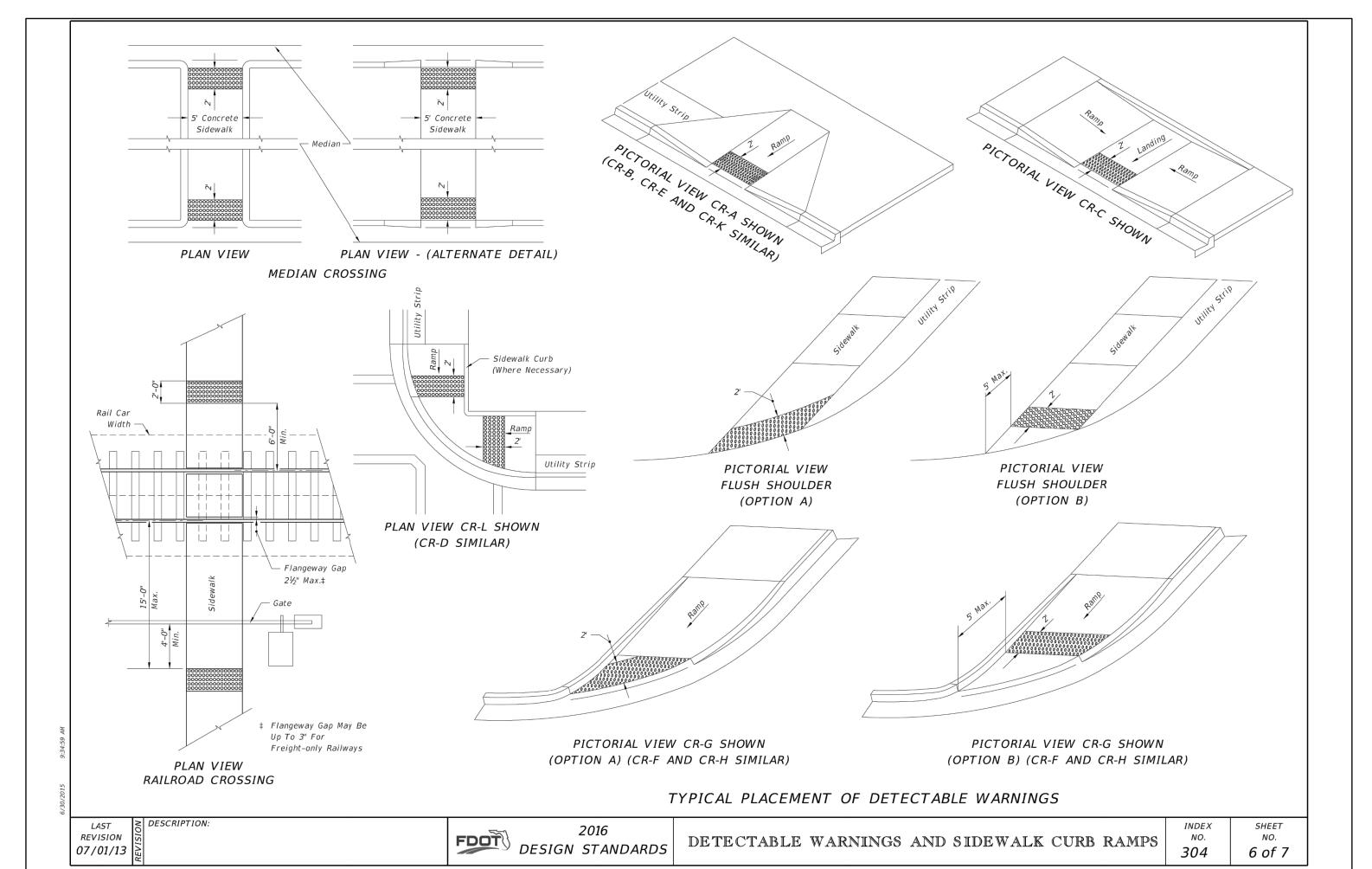
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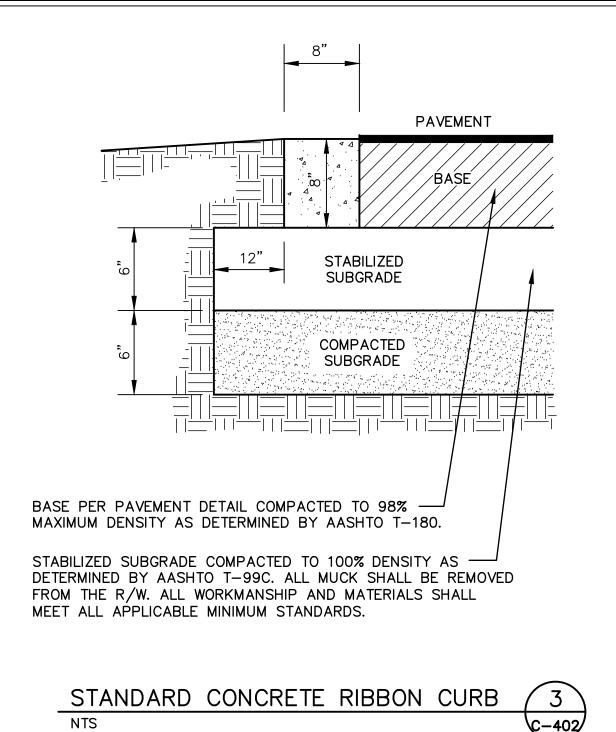


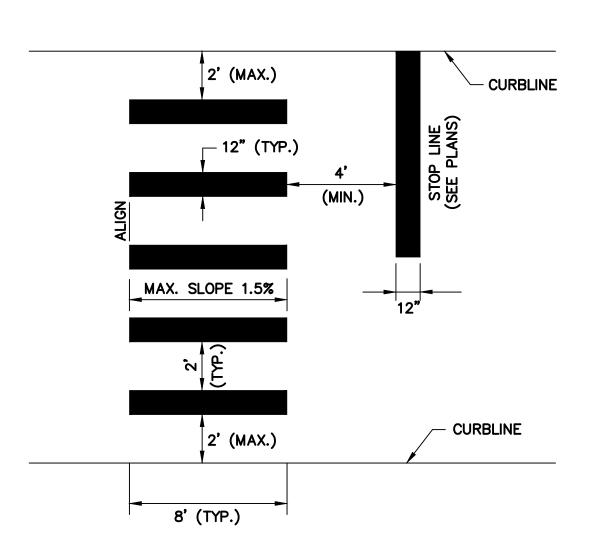


DETECTABLE WARNINGS DETAILS

NTS

C-402





1. TWELVE INCH (12") LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6

**Notes:** 

INCH LINES) WILL BE ACCEPTED.

2. LONGITUDINAL CROSSWALK LINES TO BE PARALLEL TO CURBLINE.

3. ALL LONGITUDINAL CROSSWALK LINES TO BE THE SAME LENGTH AND PROPERLY ALIGNED.

4. CROSS WALK SIDESLOPE SHALL NOT EXCEED 1.5%.

CROSSWALK

N.T.S.

CROSSWALK

(c-402)

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APOPKA TOWNHOMES Site Development

## Pevisions

| Sample | Page | Page

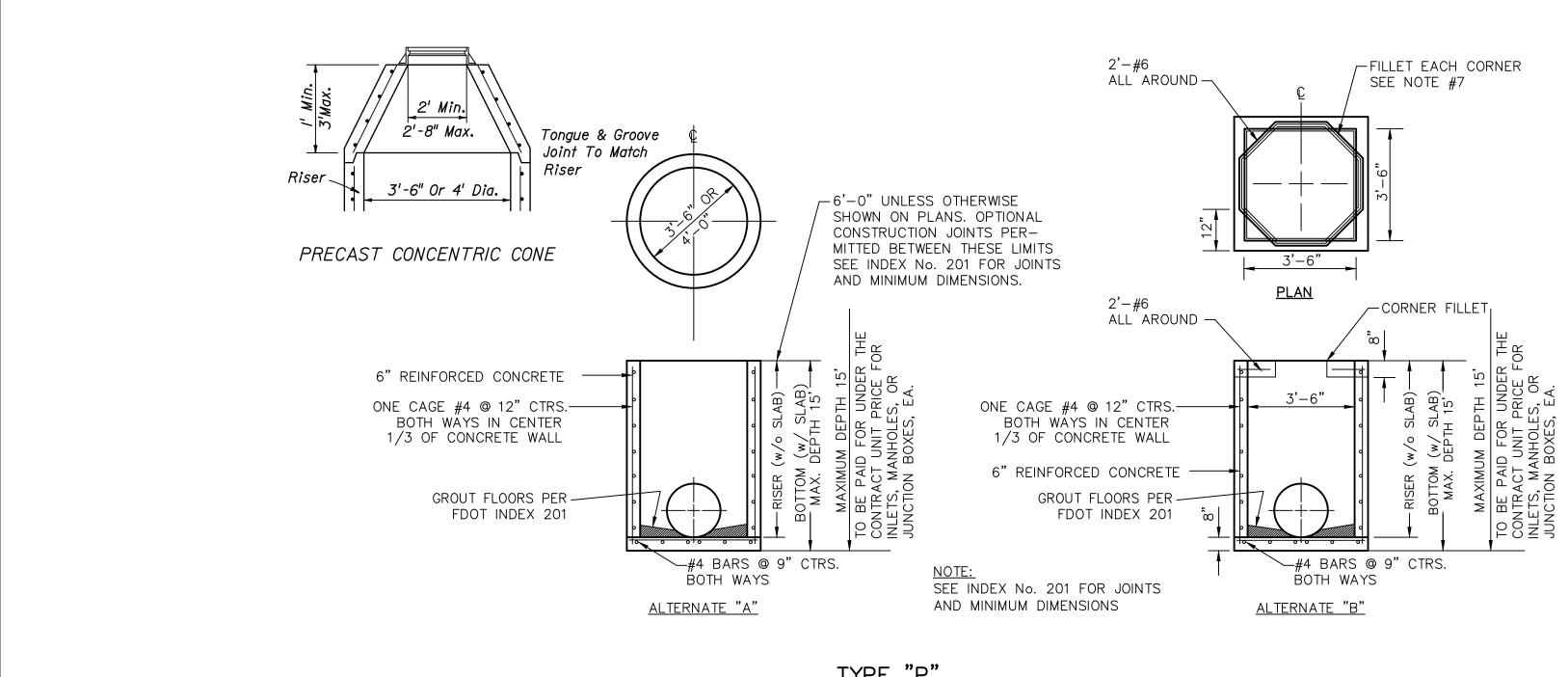
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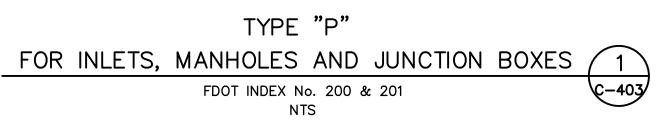
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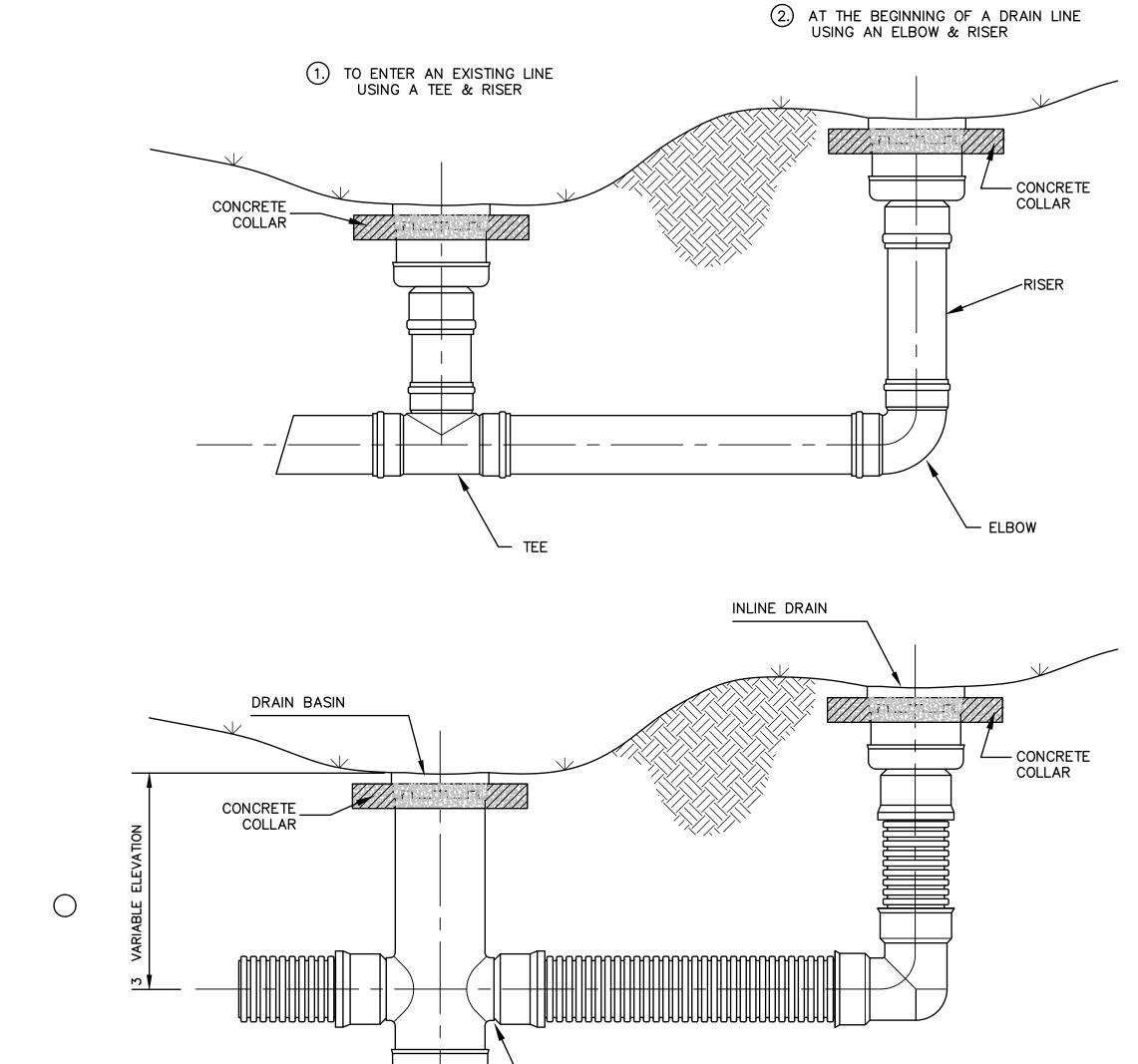
Scale: M Date: 09

Release:

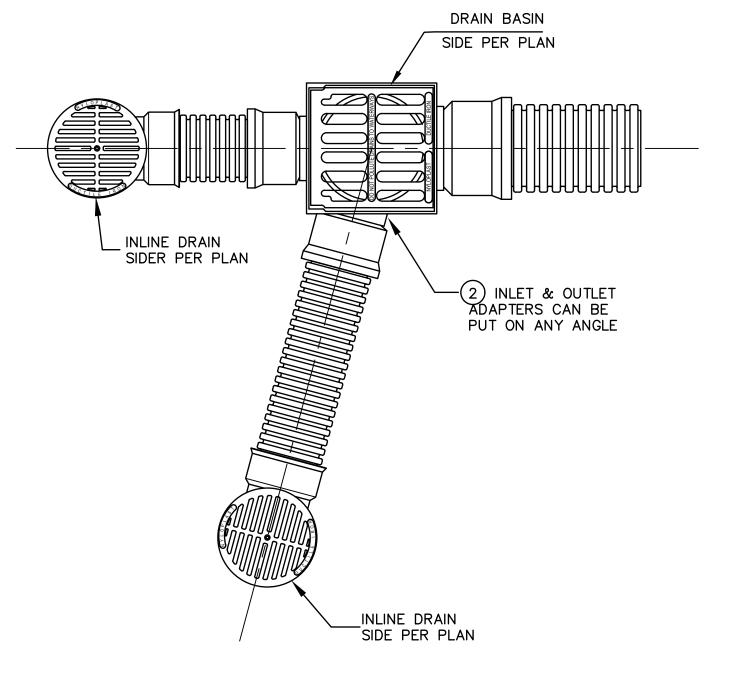
FOR PERMIT







WATERTIGHT ADAPTERS AVAILABLE FOR MOST COMMON PLASTIC PIPING SYSTEMS



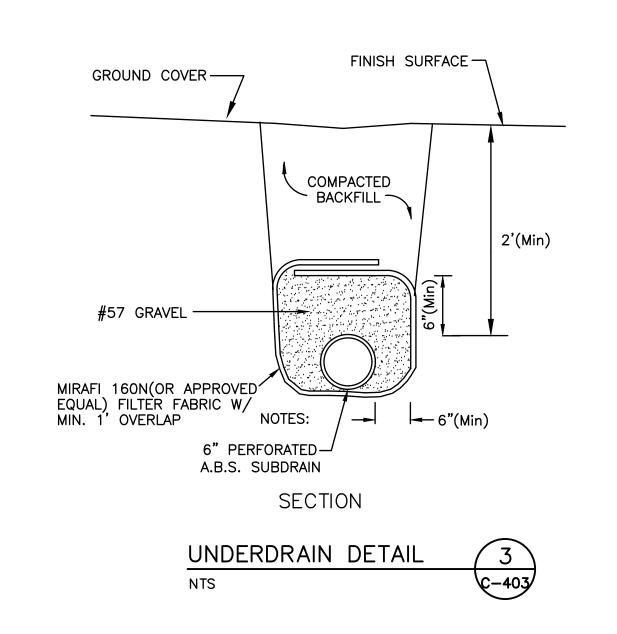
- 1 STRUCTURES & ADAPTERS AVAILABLE IN SIZES 8" 30" SEE PLANS FOR SIZES
- 2 ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°, TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS.
- 3 DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS.

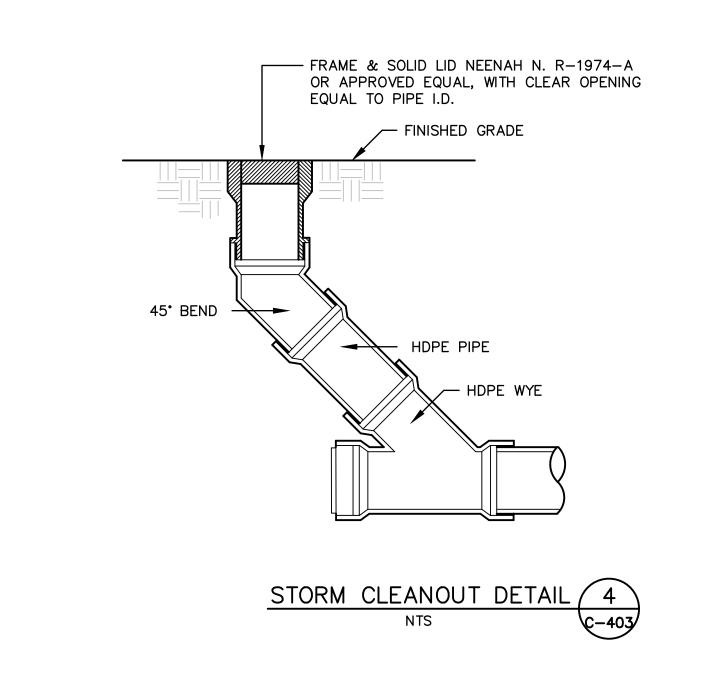


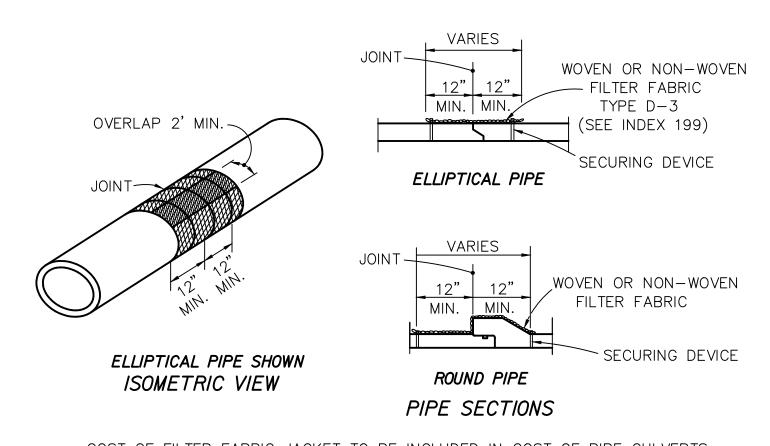
## TYPICAL INSTALLATIONS

TYPICAL INSTALLATION OF NYLOPLAST DRAIN BASIN AND INLINE DRAIN









COST OF FILTER FABRIC JACKET TO BE INCLUDED IN COST OF PIPE CULVERTS.

ALL STORMWATER PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC THIS INCLUDES HDPE AND PVC CULVERTS

JOINT WRAP DETAILS

N.T.S. FDOT INDEX No. 280 C-403

HARRIS

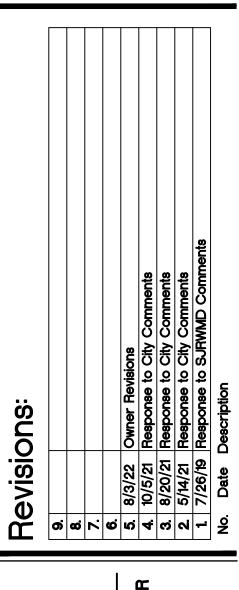
Harris Civil Engineers, LLC

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Phone: (407) 629-4777 Fax: (407) 629-7888

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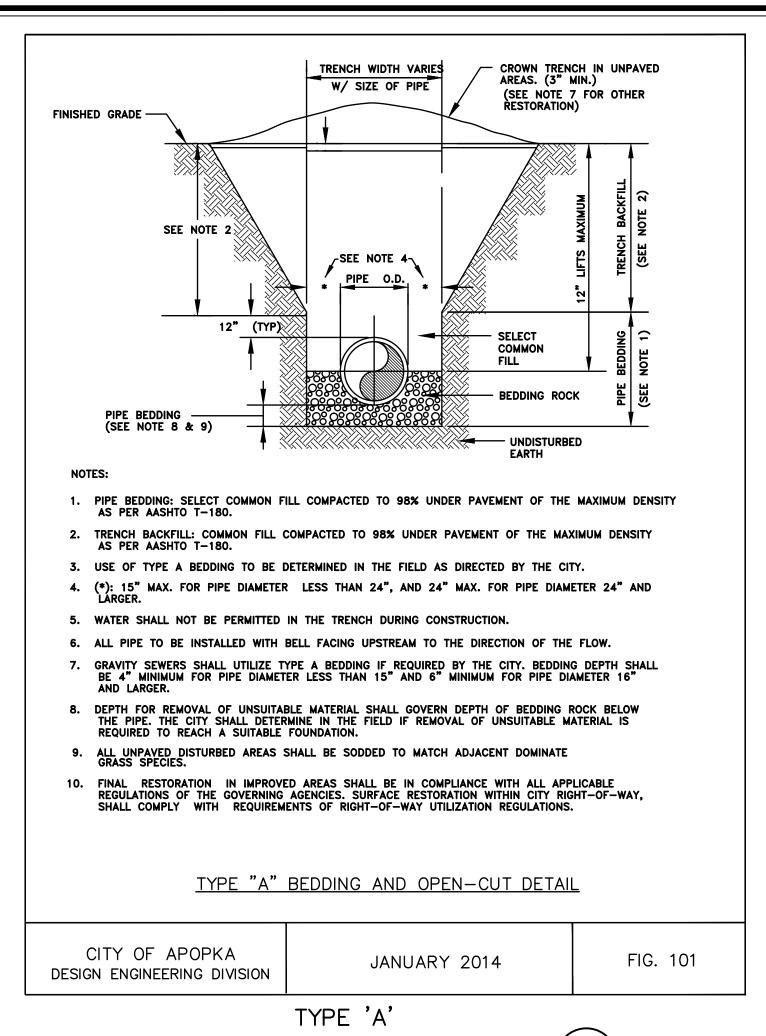


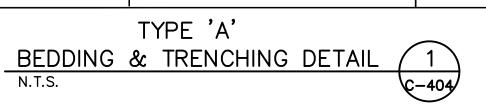
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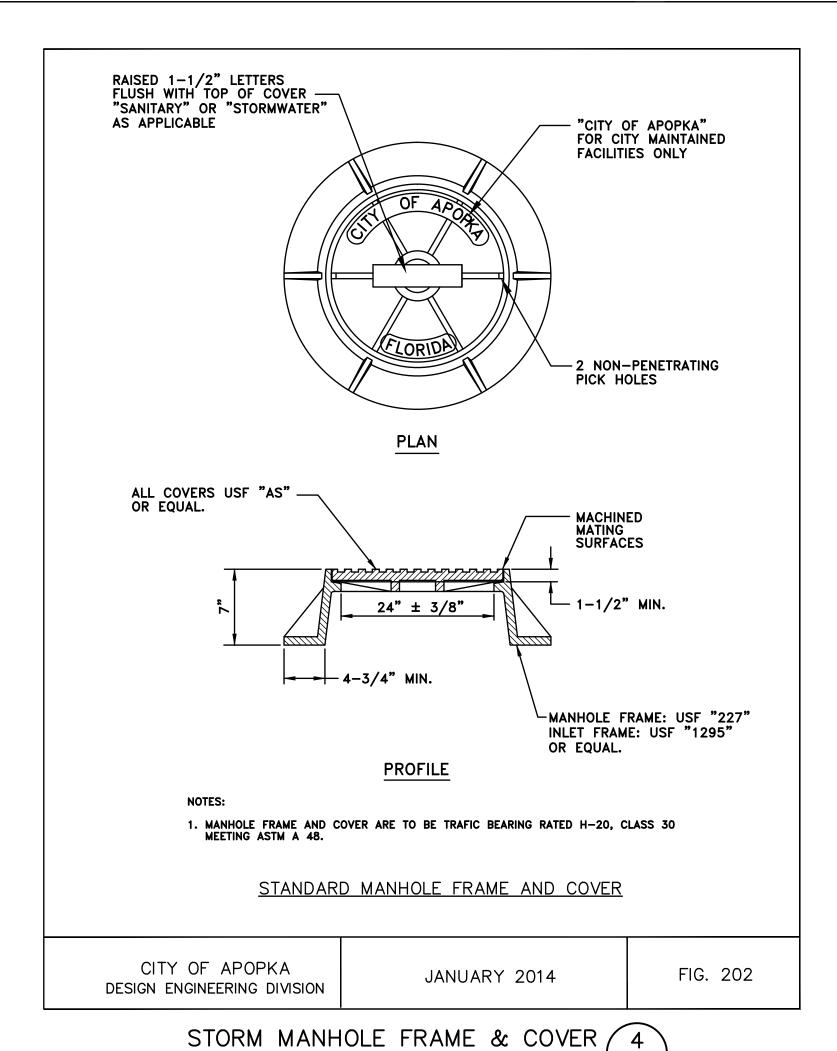
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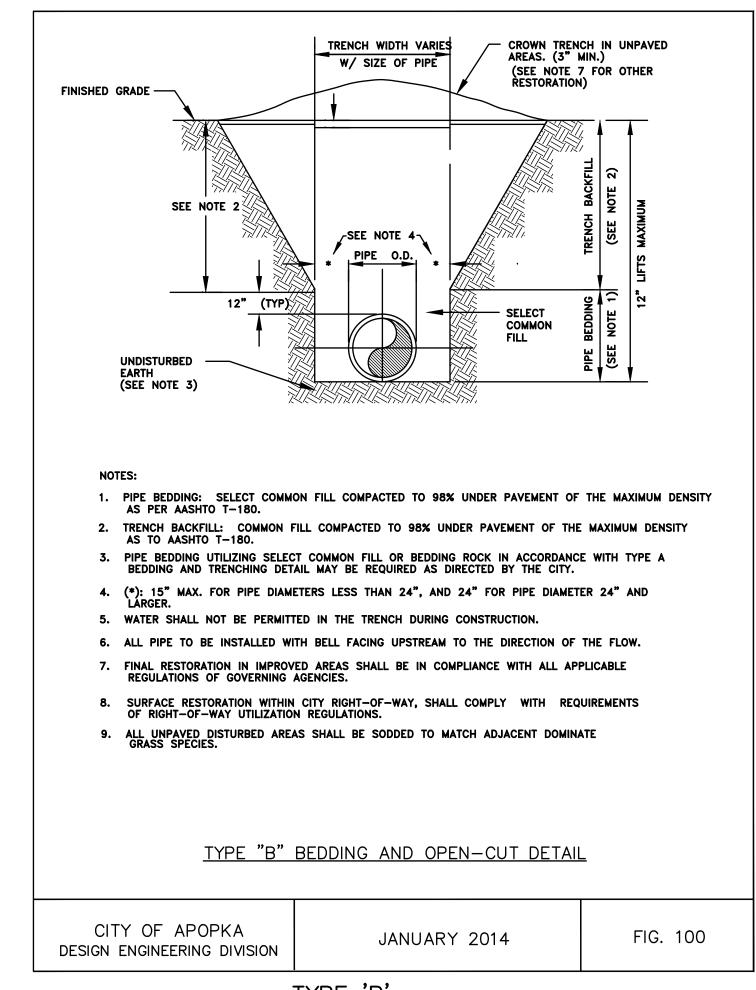
Release:

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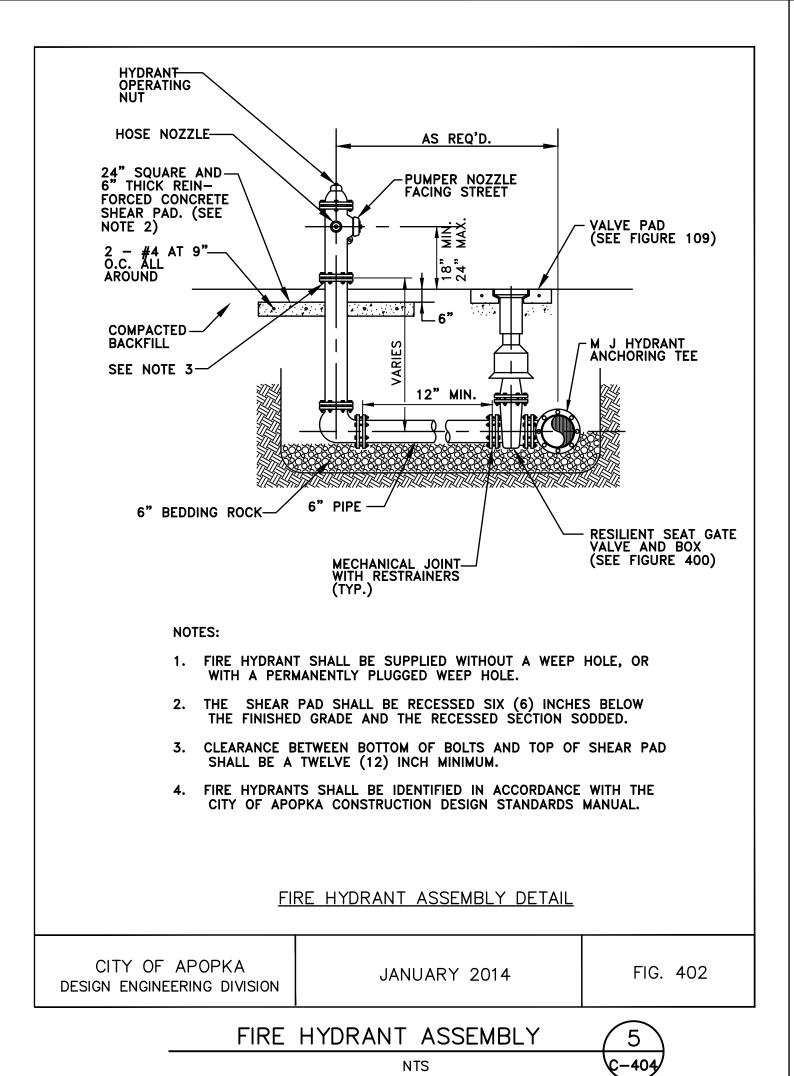


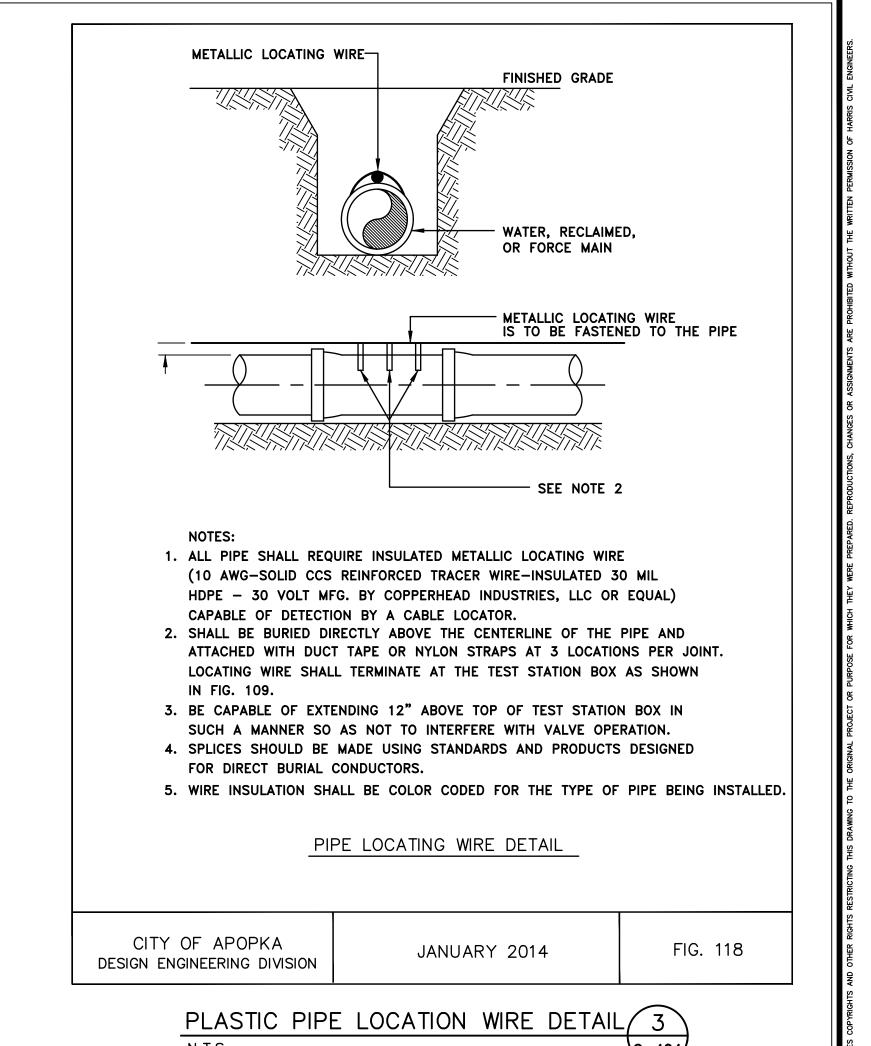












### UTILITIES CROSSING MATRIX

	POTABLE WATER	FIRE WATER	NATURAL GAS	SANITARY SEWER	COMMUN- CATIONS	ELECTRIC	STORM DRAINAGE	FORCE MAIN
POTABLE WATER		PW ON TOP FIRE DROPS	PW ON TOP GAS DROPS	PW ON TOP SEE DETAIL	PW ON TOP COMM DROPS	PW ON TOP ELEC. DROPS	STORM ON TOP PW DROPS	PW ON TOP FM DROPS
FIRE WATER			FIRE ON TOP GAS DROPS	SAN. ON TOP FIRE DROPS	FIRE ON TOP COMM DROPS	FIRE ON TOP ELEC. DROPS	STORM ON TOP FIRE DROPS	FIRE ON TOP
NATURAL GAS				SAN. ON TOP GAS DROPS	COMM ON TOP GAS DROPS	ELEC. ON TOP GAS DROPS	STORM ON TOP GAS DROPS	FM ON TOP GAS DROPS
SANITARY SEWER					SAN. ON TOP COMM DROPS	SAN. ON TOP ELEC. DROPS	SEE NOTE 3 BELOW	SAN ON TOP FM DROPS
COMMUN- CATIONS						COMM ON TOP ELEC. DROPS	STORM ON TOP COMM. DROPS	FM ON TOP
ELECTRIC							STORM ON TOP ELEC. DROPS	FM ON TOP ELEC. DROPS
STORM DRAINAGE								STORM ON TO
FORCE MAIN								

UTILITY CORRIDOR DETAILS 6
N.T.S. 6



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## Payisions

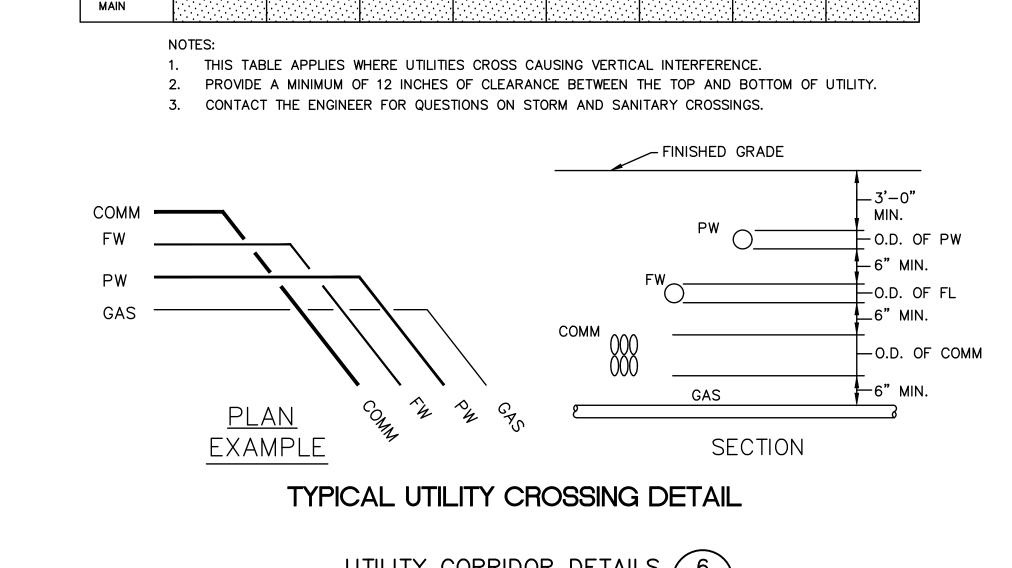
S.	8/3/22	Owner Revisions
A.	10/5/21	Response to City Comments
3.	8/20/21	Response to City Comments
2.	5/14/21	Response to City Comments
3.	1/26/19	Response to SJRWMD Comments
4.	7/26/19	Response to SJRWMD Comments
5.	1/26/19	Response to SJRWMD Comments
6.	1/26/19	Response to SJRWMD Comments
7/26/19	Response to SJRWMD Comments	
8.	1/26/19	Response to SJRWMD Comments
9.	1/26/19	Response to SJRWMD Comments
1/26/19	Response to SJR	

Design: RAL/J.
-19 Drawn: JJR

Scale: NT

Release:

FOR PERMIT



RAISED 1-1/2" LETTERS
FLUSH WITH TOP OF COVER — "SANITARY" OR "STORMWATER"

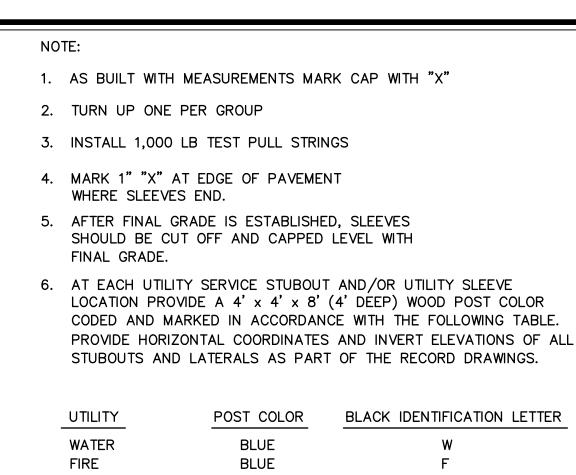
ALL COVERS USF "AS" — OR EQUAL.

CITY OF APOPKA

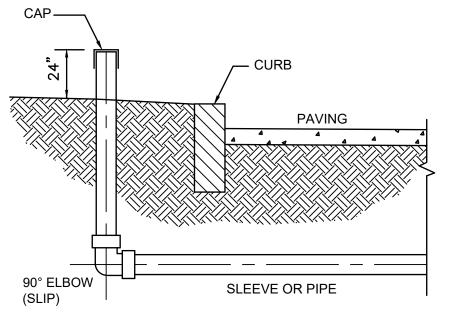
DESIGN ENGINEERING DIVISION

N.T.S.

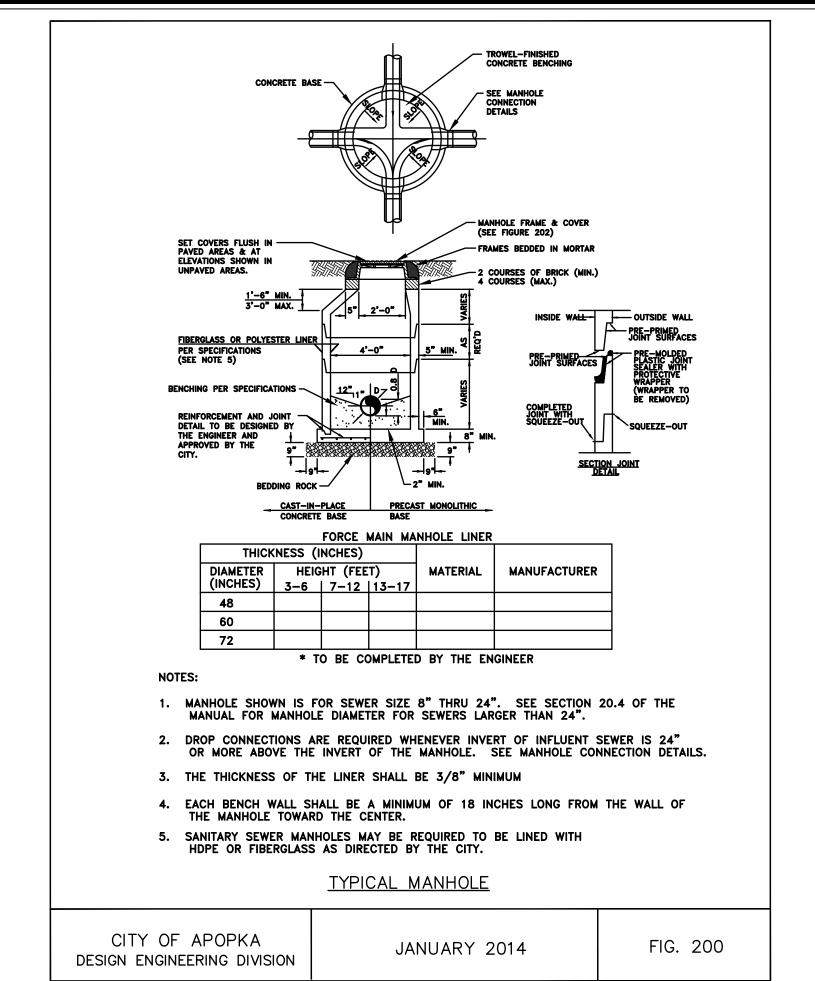
AS APPLICABLE



UTILITY	POST COLOR	BLACK IDENTIFICATION LETTER
WATER	BLUE	W
FIRE	BLUE	F
SANITARY SEWER	GREEN	S
COMMUNICATIONS	ORANGE	С
NATURAL GAS	YELLOW	G
PRIMARY ELECTRIC	RED	E
LIGHTING	RED	L
IRRIGATION	PURPLE	1









DOUBLE CHECK OR
REDUCED PRESSURE DEVICE
(NOT REQUIRED WHERE RECLAIMED
WATER IS UTILIZED UNLESS

FINISHED

FIG. 502

GRADE \

CHEMICAL INJECTION IS USED).

12" TO 36"

APPLIES ONLY IF IRRIGATION METER HAS SEPARATE TAP TO MAIN.

ABOVE GRADE

SCHEDULE 40 GALVANIZED— PIPE AND FITTINGS OR SCHEDULE 80 PVC PIPE AND FITTINGS

SHUT OFF VALVE -

┌ 4" TO 6"

- SERVICE LINE

- CORP. STOP

- WATER MAIN

- CURB STOP

SITIVE DIELECTRIC CONNECTION SHALL BE MADE BETWEEN ALL GALVANIZED AND COMPONENTS.

R SHALL BE INSTALLED JUST INSIDE THE ROW LINE OR PROPERTY LINE ON NO CASE SHALL IT BE INSTALLED IN THE SIDEWALK OR OTHER PAVED

CHECK VALVES MAY BE USED AS LONG AS THEIR ARE NO CHEMICALS ELL ON SITE.

À PVB DEVICE SHALL BE 12-INCHES MINIMUM ABOVE HIGHEST OUTLET OR SPRAYHEAD ALL BACKFLOW PREVENTION DEVICES ARE TO BE AWWA APPROVED.

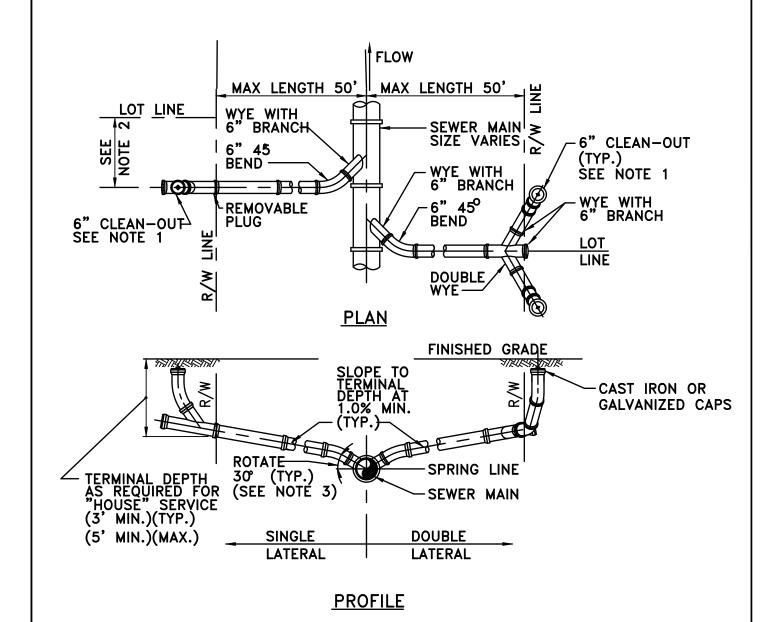
IRRIGATION METER AND DOUBLE CHECK VALVE OR

REDUCED PRESSURE BACKFLOW PREVENTER

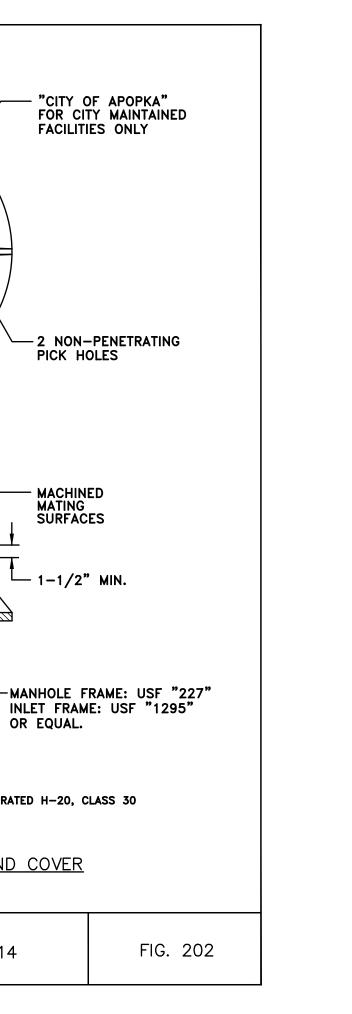
DOUBLE STRAP SADDLE

METER BOX AND LID TO BE FLUSH WITH FINISHED GRADE.

CURB -



CITY OF APOPKA JANUARY 2014 DESIGN ENGINEERING DIVISION



C-405

FACILITIES ONLY

PICK HOLES

SURFACES

OR EQUAL.

PLAN

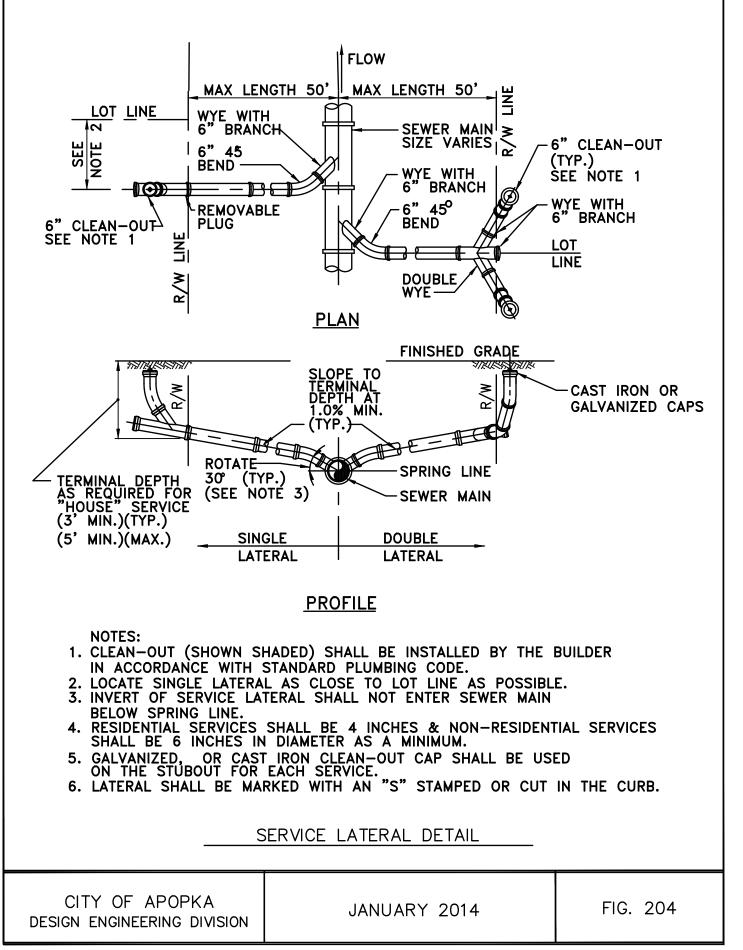
PROFILE

STANDARD SANITARY MANHOLE FRAME & COVER

1. MANHOLE FRAME AND COVER ARE TO BE TRAFIC BEARING RATED H-20, CLASS 30 MEETING ASTM A 48.

STANDARD MANHOLE FRAME AND COVER

JANUARY 2014



SANITARY SERVICE LATERAL DETAILS

N.T.S.

C-405





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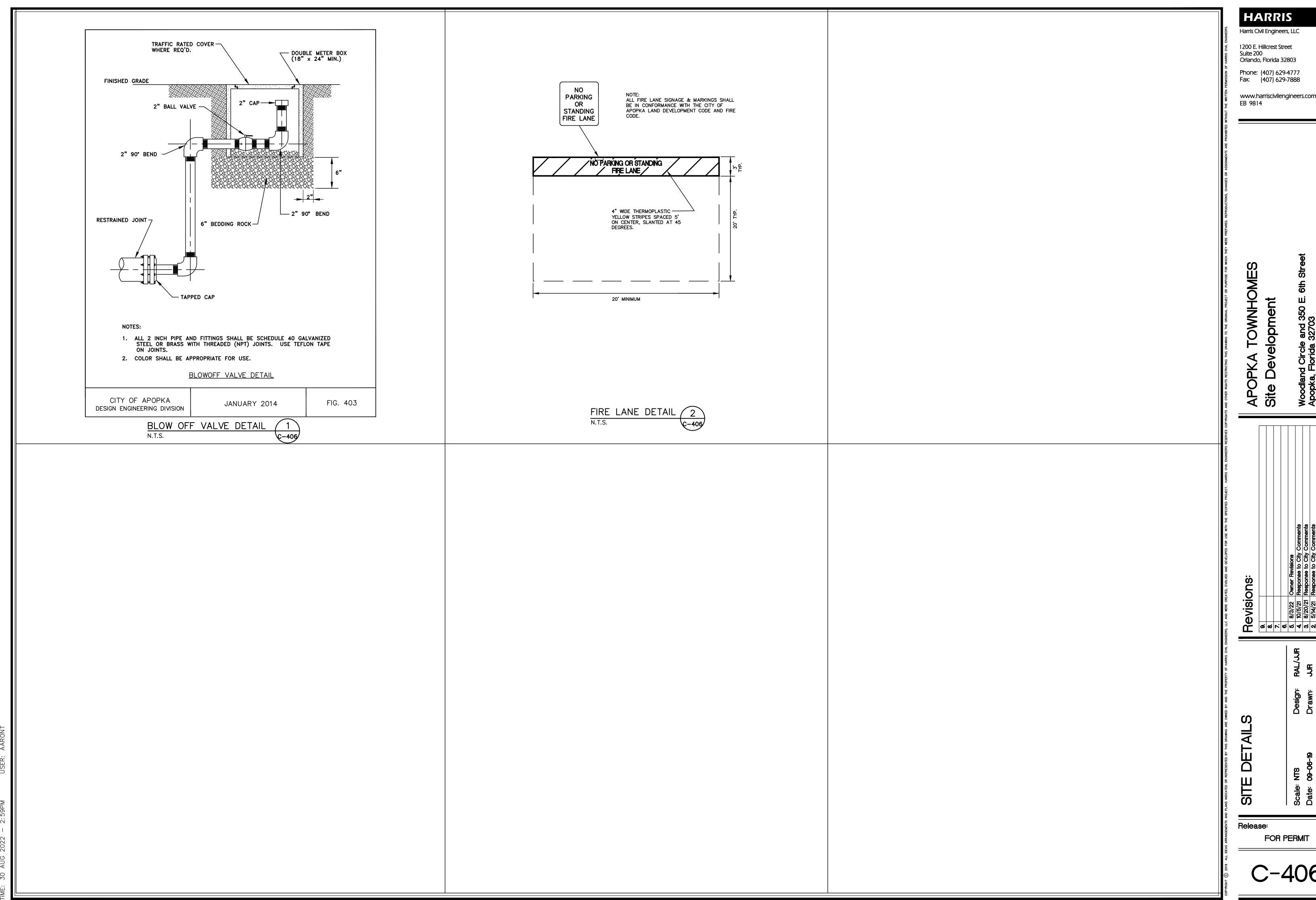
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Q Q C Q G G G G G G

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