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CONSTRUCTION SPECIFICATIONS						
Section 20 - General Specifications Paving Grading Drainage and Earthwork						
20. General						
20.1. It is the intent of these specifications to describe the minimum acceptable technical requirements for the materials and workmanship for construction of site improvements for this project. Such improvements may generally include, but not to be limited to, clearing, grading, paving, removal of existing pavement storm drainage, water lines and sanitary sewers.						
20.2. It is the intent that the Florida Department of Transportation (FDOT) "Standard Specifications for Road and Bridge Construction: (current edition) together with "Supplemental Specifications to the Standard Specifications for Road and Bridge Construction" (current edition), and the FDOT Roadway and Traffic Design Standards (current edition) be used where applicable for the various work, and that where such wording therein refers to the State of Florida and its Department of Transportation and personnel, such wording is intended to be replaced with the wording which would provide proper terminology; thereby making such "Standard Specifications for Road and Bridge Construction" together with the "FDOT Roadway and Traffic Design Standards" as the "Standard Specifications" for this project. If within a particular section, another section, article or paragraph is referred to, it shall be part of the Standard Specifications also. The Contractor shall abide by all local and State laws, regulations and building codes which have jurisdiction in the area.						
20.3. The Contractor shall furnish all labor, materials and equipment and perform all operations required to complete the construction of a paving and drainage system as shown on the plans, specified herein, or both. It is the intent to provide a complete and operating facility in accordance with these specifications and the construction drawings. The material and equipment shown or specified shall not be taken to exclude any other incidentals necessary to complete the work.						
20.4. All labor, materials, and methods of construction shall be in strict accordance with the plans and construction specifications and the minimum engineering and construction standards adopted by the unit of government which has jurisdiction and responsibility for the construction. Where conflicts or omissions exist, the jurisdictional government Engineering Department's standards shall govern. Substitutions and deviations from plans and specifications shall be permitted only when written approval has been issued by the Engineer.						
20.5. Guarantee - all materials and equipment to be furnished and/or installed by the Contractor under this contract, shall be guaranteed for a period of (1) one year from the date of final acceptance thereof, against defective materials, design and workmanship. Upon receipt of notice from the owner of failure of any part of the guaranteed equipment or materials, during the guarantee period, the affected part or materials shall be replaced promptly with new parts or materials by the contractor, at no expense to the owner. In the event the Contractor fails to make necessary replacement or repairs within (7) seven days after notification by the owner, the owner may accomplish the work at the expense of the contractor.						
21. Earthwork						
21.1. All areas within the project limits shall be cleared and grubbed prior to construction. This shall consist of the complete removal and disposal of all trees, brush, stumps, roots, grass, weeds, rubbish and all other obstructions resting on or protruding through the surface of the existing ground to a depth of 1'. All work shall be in accordance with section 110 of the Standard Specifications.						
21.2. None of the existing limerock material from demolished pavement is to be incorporated in the new limerock base, unless noted in plans. The existing limerock material from demolished pavement may be incorporated into the stabilized subgrade / subbase, or stabilized shoulder.						
21.3. Fill material shall be classified as A-1, A-3, or A-2-4 in accordance with AASHTO N-145 and shall be free from vegetation and organic material. Not more than 12% by weight of fill material shall pass the no. 200 sieve.						
21.4. All fill material in areas not to be paved shall be compacted to 95% of the maximum density as determined by AASHTO T-99.						
21.5. All material of construction shall be subject to inspection and testing to establish conformance with the specifications and suitably for the uses intended. The Contractor shall notify the Engineer at least 24 hours prior to the time he will be ready for an inspection or test. The Contractor shall follow City and County inspection procedures. The Contractor shall not proceed with any phase of work dependent on an inspection or test of an earlier phase of work, prior to that test or inspection passing. The Contractor shall be responsible for providing certified material test results to the Engineer of record prior to the release of final certification by the Engineer. Test results must include, but may not be limited to, densities for subgrade and limerock, utilities, excavation, asphalt gradation reports, concrete cylinders, etc.						
21.6. When encountered, muck shall be completely removed from the center line (10) ten feet beyond the edge of pavement each side. All such material shall be replaced by approved granular fill.						
21.7. When encountered within drainage swales, hardpan shall be removed to full depth for a width of (5) five feet at the invert and replaced with granular materials.						
21.8. All underground utilities and drainage installations shall be in place prior to subgrade compaction and pavement construction.						
21.9. Ground adjacent to roadway/pavement having runoff shall be graded (2) two inches lower than the edge of pavement to allow for the placement of sod.						
21.10. Site grading elevations shall be within 0.1' of the required elevation for non paved areas and all areas shall be graded to drain without ponding.						
21.11. The Contractor shall perform all excavation, fill, embankment and grading to achieve the proposed plan grades including typical road sections, side slopes and canal sections. All work shall be in accordance with section 120 of the Standard Specifications. If fill material is required in excess of that generated by the excavation, the Contractor shall supply this material as required from off-site.						
21.12. A 2" blanket of top soil shall be placed over all areas to be sodded or seeded and mulched within the project limits unless otherwise indicated on the plans.						
21.13. Sod shall be St. Augustine unless otherwise indicated on the plans, and shall be placed on the graded top soil and watered to insure satisfactory condition upon final acceptance of the project.						
22. Drainage						
22.1. Inlets - all inlets shall be the type designated on the plans, and shall be constructed in accordance with section 425 of the Standard Specifications. All inlets and pipe shall be protected during construction to prevent siltation in the drainage systems by way of temporary plugs and plywood or plastic covers over the inlets. The entire drainage system shall be cleaned of all debris prior to final acceptance.						
22.2. Pipe specifications: the material type is shown on the drawings by one of the following designations:						
• RCP = reinforced concrete pipe, ASTM designation C-76, section 941 of the Standard Specifications.						
• CMP = corrugated metal (aluminum) pipe, ASTM designation M-196.						
• CMP (smooth lined) = corrugated metal aluminum pipe, (smooth lined) ASTM designation M-196.						
designations						
• SCP = slotted concrete pipe, sections 941 and 942, of the Standard Specifications.						
• PVC = polyvinyl chloride pipe.						
• PCMP = perforated cmp, section 945, of the Standard Specifications						
• Corrugated High Density Polyethylene Pipe (HDPE) (12 Inches to 60 Inches), shall meet the requirements of FDOT Specification section 948-2.3.						
22.3. Pipe backfill - requirements for pipe backfill crossing roads or parking areas shall be as defined in the section 125-8, of the Standard Specifications. Pipeline backfill shall be placed in 6 inch lifts and compacted to 100% of the standard proctor (AASHTO T-99 specifications)						
22.4. Location of drainage structures shall govern, and pipe length may have to be adjusted to accomplish construction as shown on these plans.						
22.5. Distance and lengths shown on plans and profile drawings are referenced to the inner walls of structures.						
22.6. Filter fabric shall be Mirafi, Typar or equal conforming to section 985 of the Standard Specifications.						
23. Asphalt Paving						
23.1. Where new asphalt meets existing asphalt, the existing asphalt shall be saw cut to provide a straight even line. Prior to removing curb or gutter, the adjacent asphalt shall be saw cut to provide a straight even line.						
23.2. Internal asphalt paving constructed on existing sandy soils shall be constructed with a 12" subgrade, compacted to a minimum density of 100% maximum density as determined by AASHTO T-99. The compacted subgrade shall be constructed in the limits shown on the plans. All subgrade shall have an LBR of 40 unless otherwise noted.						
23.3. Asphaltic concrete surface course shall be constructed to the limits shown on the plans. The surface course shall consist of the thickness and type asphaltic concrete as specified in the plans. All asphaltic concrete shall be in accordance with sections 320, 327, 330, 334, 336, 337, 337, 338, 339 and 341 of the Standard Specifications.						
23.4. Limerock base shall be prepared, compacted and graded and shall be in accordance with section 200 of the Standard Specifications. All limerock shall be compacted to 98% per AASHTO T-180 and have not less than 70% of carbonates of calcium and magnesium unless otherwise designated. The Engineer shall inspect the completed base course and the Contractor shall correct any deficiencies and clean the base course prior to the placement of the prime coat. A tack coat will also be required if the Engineer finds that the primed base has become excessively dirty or the prime coat has cured to the extent of losing bonding effect prior to placement of the asphaltic concrete surface course. The prime and tack coats shall be in accordance with section 300 of the Standard Specifications.						
23.5. Limerock base material shall be placed in maximum 6" lifts. Bases greater than 6" shall be placed in two equal lifts. If, through field tests, the Contractor can demonstrate that the compaction equipment can achieve density for the full depth of a thicker lift, and if approved by the engineer, the base may be constructed in successive courses of not more than 8 inches (200 mm) compacted thickness.						
23.6. Asphalt edges that are not curved shall be saw cut to provide a straight even line to the dimensions shown on plans.						
24. Concrete Construction						
24.1. Concrete sidewalk shall be in accordance with section 522 of the Standard Specifications and in accordance with F.D.O.T. Roadway and Traffic Design Standards, index no. 310. Concrete sidewalk shall be 4" thick, unless otherwise not and constructed on compacted subgrade, with 1/2" expansion joints placed at a maximum of 75', unless otherwise noted on plans. Crack control joints shall be 5' on center. All concrete sidewalks that cross driveways shall be 6" thick, unless otherwise noted on plans.						
24.2. Sidewalk Curb ramps hall be in accordance with F.D.O.T. Roadway and Traffic Design Standards, index no. 304.						
24.3. Concrete curb shall be constructed to the limits shown on the plans. The concrete shall have a minimum compressive strength of 2500 PSI at 28 days and shall be in accordance with section 520 of the Standard Specifications. Concrete curbing shall be in accordance with F.D.O.T. Roadway and Traffic Design Standards, index no. 300.						
24.4.						
Section 30 - Water distribution and sanitary sewer force mains.						
30. Materials:						
Note: If materials list here on are in conflict with utility owner, material owner requirements shall govern.						
30.1. All water main pipe, including fittings, shall be color coded or marked using blue as a predominant color to differentiate drinking water from reclaimed or other water. Underground plastic pipe shall be solid-wall blue pipe, shall have a co-extruded blue external skin, or shall be white or black pipe with blue stripes incorporated into, or applied to, the pipe wall; and underground metal or concrete pipe shall have blue stripes applied to the pipe wall. Pipe striped during manufacturing of the pipe shall 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 shall 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 pipes with an internal diameter of 24 inches or greater, tape or paint shall be applied in continuous lines along each side of the pipe as well as along the top of the pipe.						
30.2. Ductile iron pipe for water distribution mains shall conform to ANSI/AWWA standard C151/A21.51 latest revision, "ductile iron pipe centrifugally cast in metal molds or sand-lined molds" with a minimum wall thickness of class 51 (pressure class 350) unless otherwise noted in the plans. Ductile iron pipe shall be cement lined and seal coated in accordance with ANSI/AWWA standard C104/A21.4 latest revision. The pipe shall be adapted for use with class 250 fittings for all sizes. Water main shall be colored blue in accordance with Florida State Statutes.						
30.3. Ductile iron pipe for sewage force mains shall conform to ANSI/AWWA standard C151/A21.51 latest revision, "ductile iron pipe centrifugally cast in metal molds or sand-lined molds" with a minimum wall thickness of class 51 (pressure class 350) unless otherwise noted in the plans. Ductile iron pipe shall be interior ceramic epoxy lined and exterior coated with the manufacturer's coating system (Protecto 401 ceramic epoxy with a minimum dry film thickness of 40 mils and an outside coating of either coal tar epoxy or asphalt). Cement mortared linings are not appropriate for this application.						
30.4. All pipe & fittings on the lift station sites shall be ductile iron conforming to the same specifications as above for sewage force mains except that flanged ductile iron pipe & fittings shall be used inside valve pits and wet wells. Flanged pipe and fittings shall conform to ANSI/AWWA C115/a21.15 latest revision and ANSI/AWWA C110/A21.10 latest revision. The following thickness classes shall be adhered to: 4" - 12" - class 52, 14" & larger - class 51.						
30.5. PVC pressure pipe for sizes 4" through 12" and shall conform to ANSI/AWWA standard C900 latest revision. PVC pressure pipe shall be made from class 12454-a or class 12454-b virgin material and conform with the outside diameter of cast iron pipe with a minimum wall thickness of dr series 18. Ultra violet degradation or sun bleached pipe will be cause for rejection. Water main shall be colored blue in accordance with Florida State Statutes. Force main shall be impregnated with green pigment. Reuse main shall be impregnated with purple pigment.						
30.6. Ductile iron fittings for water distribution mains shall conform to ANSI/AWWA standard C110/A21.10 latest revision. Fittings 4" and larger shall be cement lined and seal coated in accordance with ANSI/AWWA standard C104/A21.4 latest revision. Water Main fitting shall be colored blue in accordance with Florida state statutes.						
30.7. Cast iron and ductile iron fittings for sewage force mains shall conform to ANSI/AWWA standard C110/A21.10 latest revision. Fittings 4" and larger shall be coated in accordance with the requirements of ductile iron pipe for sewage force mains.						
30.8. Joints for bell and spigot ductile iron pipe and fittings shall conform to ANSI/AWWA standard C111/A21.11 latest revision. Mechanical joint or push-on joint to be rubber gasket compression-type. Special fittings and joints shall be considered for specific installation subject to the approval of the engineer.						
30.9. Joints for PVC pressure pipe shall be bell and spigot push-on rubber gasket type only. No solvent weld or threaded joints will be permitted.						
30.10. Water distribution system restraint: all fittings and specific pipe joints shall be restrained as outlined below:						
• Joint restraint						
• Push-on P.V.C. EBAA iron series 1600						
• Push-on DIP EBAA iron series 1700						
• tr-flex by U.S. Pipe or						
• flex ring by American						
• Fittings w/ DIP EBAA iron series 1100 megalug						
• Fittings w/ P.V.C. EBAA iron series 2000 megalug						
• Length of restrained pipe shall be as indicated on restrained joint pipe detail. (see water & sewer detail sheet)						
30.11. Sewage force main system restraint: all fittings and specific pipe joints shall be restrained as outlined below						
• Joint restraint						
• Push-on P.V.C. EBAA iron series 1600						
• Push-on DIP EBAA iron series 1700						
• tr-flex by U.S. Pipe or						
• flex ring by American						
• Fittings w/ DIP EBAA iron series 1100 megalug						
• Fittings w/ P.V.C. EBAA iron series 2000 megalug						
• Length of restrained pipe shall be as indicated on restrained joint pipe detail. (see water & sewer detail sheet)						
30.12. Water distribution valves shall be gate valves, iron body, fully resilient seat bronzed mounted non-rising stem, rated at 200 PSI and conforming to ANSI/AWWA C509 latest revision, and shall have mechanical joints.						
30.12.1. Gate valves 4" and larger shall be Mueller A-2360, American 250 line or Clow F-6100, conforming to ANSI/AWWA C500 latest revision or approved equal.						
30.12.2. Tapping valves shall be Mueller T-2360 or approved equal.						
30.12.3. Gate valves 3" or less shall be Nibco T-133 or T-136 with malleable hand wheels or approved equal.						
30.13. Tapping sleeves shall be Mueller H615, Clow F-2505 or approved equal.						
30.14. Valve boxes shall be U.S. foundry 7500 or approved equal painted blue with the designation "water".						
30.15. Retainer glands for DIP shall conform to ANSI/AWWA C111/A21.11 latest revision. All glands shall be manufactured from ductile iron as listed by underwriters laboratories for 250 psi minimum water pressure rating. Clow corporation model F-1058, standard fire protection equipment company or approved equal.						
30.16. Dresser couplings shall be regular black couplings with plain gaskets for galvanized steel pipe. They shall be dresser style 90. No substitutions allowed.						
30.17. Fire hydrants shall be Mueller centurion traffic tie A-423 with 5 1/4" internal valve opening or approved equal. Pumper nozzle to be 18" from finished grade. All hydrants to be installed with control valve. Retainer glands are preferred for restraining. Fire hydrant shall comply with ANSI/AWWA C502 latest revision. Fire hydrants shall be painted in accordance with NFPA #291 or per agency standards having jurisdiction. Blue raised reflective pavement marker (rpm) shall be used to identify fire hydrant location. The placement of the rpm to be at the centerline of the outside roadway lane.						
30.18. Sewage force main valves shall be plug valves which shall be of the non-lubricated, eccentric type with resilient faced plugs, port areas for valves 20 inches and smaller shall be at least 80% of full pipe area. Port area of valves 24 inches and larger shall be at least 70% of full pipe area. The body shall be of semi-steel (ASTM A-126 C1.b) and shall have bolted bonnet which gives access to the internals of the valve. Seats shall be welded overlay of high nickel content or a stainless steel plate locked in the body cavity. If a plate is used, it shall be replaceable through the bonnet access. Bearings shall be permanently lubricated of stainless steel, bronze or Teflon lined, fiber glass backed Duralon. Bearing areas shall be isolated from the flow with grit seals. Valves shall have packing bonnets where the shaft protrudes from the valve and the packing shall be self-adjusting chevron type which can be replaced without removing the bonnet. All nuts, bolts, springs and washers shall be stainless steel.						
30.19. Plug valves shall be designed for a working pressure of 150 PSI the valve and actuator shall be capable of satisfactory operation in either direction of flow against pressure drops up to and including 100 PSI (for plug valves over 12" in diameter). Valves shall be bubble tight in both directions at 100 psi differential. Plug valves over 12" in diameter shall have worm gear operators. The operating mechanism shall be for buried service with a 2 inch square operating nut.						
30.20. Plug valves are to be installed with the seat pointed towards the upstream flow, when specified.						
30.21. Swing check valves for water, sewage, sludge, and general service shall be of the outside lever and spring or weight type, in accordance with ANSI/AWWA C 508 latest revision swing-check valves for waterworks service, 2" through 24" NPS, unless otherwise indicated, with full-opening passages, designed for a water-working pressure of 150 PSI they shall have a flanged cover piece to provide access to the disc.						
30.22. High density polyethylene pipe (HDPE) for water distribution mains shall conform to AWWA C906 standard, latest revision. Pipes shall be color-coded blue, minimum 40 feet standard lengths.						
31. Service connection:						
31.1. Service saddles shall be fusion bonded plastic coated ductile iron (ASTM A536) with stainless steel straps, saddles shall be double strap type.						
31.2. Service lines shall be polyethylene (PE 3408), 200 p.s.i rated, DR9. Pipe joints shall be of the compression type totally confined grip seal and coupling nut.						
31.3. Corporation stops shall be manufactured of brass alloy in accordance with ASTM B-62 with threaded ends, as manufactured by Ford ballcorp, catalog # 1100 or approved equal.						
31.4. Curb stops shall be Ford v63-44w-x" latest revision or approved equal.						
31.5. Meter stops shall be 90 degree locking type and shall be of bronze construction in accordance FV63-777W" latest revision with ASTM B-62. Meter stops shall be closed bottom design and resilient "O" ring sealed against external leakage at the top. Stops shall be equipped with a meter coupling nut on the outlet sides, as manufactured by Ford or approved equal.						
32. Installation:						
32.1. Where restrained pipe joints are required due to fittings, appurtenances, etc., pipe material shall be DIP						
32.2. All PVC pipe shall be installed in accordance with the uni-bell plastic pipe association "guide for installation of PVC pressure pipe for municipal water distribution system," and ANSI/AWWA C605-xx latest revision standard.						
32.3. All DIP shall be installed in accordance with ANSI/ C600-xx latest revision.						
32.4. All water mains shall typically be laid with a minimum 36" cover for PVC and 30" cover for DIP.						
32.5. Detector tape shall be laid 18 inches above all water and sewer lines. A 14 gauge multi-strand wire shall be attached to all nonconductive water mains to facilitate location. An extra 4 feet of wire shall be provided at all valves, blow-offs, hydrants, etc. The wire shall be tested for continuity at the pressure test.						
32.6. Pipe deflection shall not exceed 50% of the maximum deflection recommended by the manufacturer.						
32.7. A continuous and uniform bedding shall be provided. Backfill material shall be placed in accordance with the plans and specifications.						
32.8. All valves shall be installed with adjustable cast iron valve boxes with the word "water" or "sewer", as applicable, cast in the cover. U.S. foundry or approved equal.						
33. Testing:						
33.1. Before any physical connections and acceptance for operation to the existing water mains are made, the complete water system shall be flushed, pressure tested and disinfected. Copies of passing bacteriological results and pressure test results must be submitted to, and approved by, the engineer, utility owner, and health department. Hydrostatic testing of new mains shall be performed at a minimum starting pressure of 150 PSI for two hours in accordance with ANSI/AWWA C600-05 (hydrostatic test). The pressure test shall not vary more than 5 PSI during the test. The allowable leakage during the pressure test shall be less than the number of gallons per hour as determined by the formula: L = (sd(p)/2)/148,000. In which L equals the allowable leakage in gallons per hour. S equals length of pipe (linear feet), d equals nominal diameter of pipe (inches) and p equals the average test pressure (pounds per square inch gauge). Maximum length of test pipe section should be 2000 feet. The water system shall be disinfected in accordance with the ANSI/AWWA C651-05 (water main bacteriological tests).						
33.2. The pressure test shall be witnessed by a representative of the utility owner and the engineer of record.						
33.3. For water distribution pipes, sampling points shall be provided by the contractor at the locations shown on the plans.						
33.4. For water distribution pipes, disinfection and bacteriological testing shall be in accordance with ANSI/AWWA C651-14 (water main bacteriological tests). Maximum distance between sampling points shall be as follows:						
• Transmission mains: every 1200 feet						
• Branch mains: every 1000 feet						
• Isolated mains < 1000 feet: 2 sample points						
• Isolated mains > 1000 feet: 3 sample points						
Section 40 - Gravity Sanitary Sewer Collection System						
40. General:						
40.1. Manhole, valve box, meter box and other structure rim elevations within the limits of construction are to be adjusted to conform to plan grades proposed in these plans. If no other individual cost item is included in the contract schedule for a particular structure adjustment.						
40.2. Distance and lengths shown on plans and profile drawings are referenced to the center of structures.						
41. Materials:						
Note: If materials list here on are in conflict with utility owner, material owner requirements shall govern.						
41.1. All PVC sewer pipe and fittings shall be non-pressure polyvinyl chloride (PVC) pipe conforming to ASTM D 3034, SDR 26, with push-on rubber gasket joints.						
41.2. Ductile iron pipe shall conform to ANSI/AWWA C151/A21.51-xx latest revision, "ductile iron pipe centrifugally cast in metal molds or sand-lined molds" with wall thickness class 51 for 8" and above, class 52 for 4" and 6", unless otherwise directed by the engineer. Ductile iron pipe shall be epoxy lined or coated with the manufacturer's coating system as approved by the engineer of record and the local municipality or utility owner. In either case, the engineer's review and approval is required for either alternative prior to construction. Cement mortared linings are not appropriate for this application.						
41.3. All ductile iron fittings shall conform to ANSI/AWWA standard C110/A21.10-xx latest revision. All fittings and accessories shall be epoxy lined and as manufactured or supplied by the pipe manufacturer or approved equal.						
41.4. Manholes shall be precast per ASTM C 478 and in accordance with the plans and specifications.						
41.5. Manholes are to be sealed with type II sulphate resistant cement or approved equal - no molding plaster.						
41.6. Joints for bell and spigot ductile iron pipe and fittings shall conform to ANSI/AWWA standard C111/A21.11-xx latest revision. Mechanical joint or push-on joint to be rubber gasket compression- type.						
41.7. PVC clean-outs to have screw type access plug. Long radius wye connections and fittings shall be used in order to access clean-out operations.						
41.8. Cleanouts shall be installed at all sewer services exceeding 75' in length (every 75') with a clean out at the property line, easement line, or 5' from a building. The contractor shall coordinate the location of the building cleanout (5' from the building) and elevation of the end of the sewer service with the building plumbing contractor. Cleanouts shall be the same size as the service lateral in which they are installed.						
42. Installation:						
42.1. PVC sewer pipe shall be laid in accordance with ASTM D 2321 and the Uni-Bell plastic pipe association's "recommended practice for the installation of PVC sewer pipe."						
42.2. DIP shall be installed in accordance with ANSI/AWWA C-600-xx latest revision.						
42.3. Pipe to manhole connection to be Fernco neoprene boot couplings with stainless steel accessories or approved equal.						
42.4. Manholes shall be set plumb to line and grade on firm subgrade providing uniform bearing under the base.						
42.5. All openings and joints shall be sealed watertight.						
42.6. Two coats of Koppers 300-m, first red, second one black, shall be applied to the inside of all manholes and shall be applied in accordance with the manufacturer's specifications (16 mils per coat). Coating as required by utility owner or engineer shall be applied to the outside of the manhole. The interior coats shall be applied after sewer						
lamppng of lines. After the application of each coat, the utility owner and engineer shall inspect the manholes. The inspection shall be scheduled a minimum of 48 hours prior to inspection.						
43. Testing: Testing of gravity sewer mains and laterals shall be in accordance with the utility owner's minimum design and construction standards latest revision.						
43.1. After construction of the sewer system, the engineer may require a visual infiltration and/or exfiltration test to be performed on the entire system or any part thereof.						
43.2. An air test may be substituted for the water exfiltration test, upon approval of the engineer.						
43.3. The allowable limits of sewer pipe leakage for gravity sewer mains shall not exceed 100 gallons per inch of inside pipe diameter per mile per day for any section tested. No visible leakage shall be allowed.						
43.4. The installed sewers may require video inspections.						
301 East Atlantic Blvd. Pompano Beach, FL 33060 PH: (954) 788-3400						
Florida Certificate of Authorization: 7928 Licensed Business Number: 6860						
REVISIONS						
NO.	DESCRIPTION					DATE

1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN FLORIDA (HEREAFTER REFERRED TO AS FLA GUIDELINES).
2. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, A VISUAL INSPECTION SHALL BE MADE OF ALL INSTALLED EROSION CONTROL MEASURES AND REPAIRS SHALL BE CONDUCTED TO ENSURE THEIR CONTINUING FUNCTION AS DESIGNED.
3. CATCH BASIN, INLETS, STORM SEWER MANHOLES STRUCTURES, ETC. SHALL BE PROTECTED DURING CONSTRUCTION OPERATIONS FROM SEDIMENT RUNOFF AND DEBRIS BY PLACING A FILTER FABRIC MATERIAL IN THE FRAME AND GRATE/MANHOLE COVER. PREVENTIVE METHODS MUST BE UTILIZED AROUND THESE STRUCTURES (DURING CONSTRUCTION OPERATIONS) BY GRADING TO DRAIN AWAY FROM STRUCTURES AND ANY OTHER METHODS APPROVED BY THE AGENCY HAVING JURISDICTION OR DESIGN ENGINEER OF RECORD.
4. THE CONTRACTOR SHALL INSTALL A SOIL TRACKING PREVENTION DEVICE AS PER THE FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL. THE CONTRACTOR SHALL TAKE MEASURES TO INSURE THE CLEANUP OF SEDIMENTS THAT HAVE BEEN TRACKED BY VEHICLES OR HAVE BEEN TRANSPORTED BY WIND OR STORM WATER ABOUT THE SITE OR ONTO NEARBY ROADWAYS. STABILIZED CONSTRUCTION ENTRANCES AND CONSTRUCTION ROADS, IF APPROPRIATE, SHALL BE IMPLEMENTED IN ORDER TO REDUCE OFFSITE TRACKING.
5. ALL AREAS OF DISTURBANCE THAT ARE NOT WITHIN BUILDING OR PAVEMENT LIMITS SHALL BE SODDED, REFER TO LANDSCAPE PLANS FOR SOD SPECIFICATION AND REQUIREMENTS.
6. REMOVE ALL EROSION CONTROL IMPROVEMENTS AFTER ALL DISTURBED AREAS ARE STABILIZED WITH THE FINAL GROUND COVER.

. ELEVATIONS SHOWN HEREIN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD)

CONTRACTOR SHALL PROTECT ALL EXISTING FIRE HYDRANTS DURING CONSTRUCTION ACTIVITIES.

UNDERGROUND FIRE MAIN WORK SHALL BE PERFORMED BY A CONTRACTOR HOLDING A CLASS I, II, OR V LICENSE PER F.S. 633.102.

WATER MAIN SEPARATION SHALL BE IN ACCORDANCE WITH DETAIL G-01.1 ON SHEET CU-501.

1. ALL EXISTING TRAFFIC CONTROL SIGNAGE AND PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED TRAFFIC CONTROL SIGNAGE AND PAVEMENT MARKINGS WILL BE REMOVED OR RELOCATED BY THE CONTRACTOR.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS (CURRENT EDITION), AND THE CITY OF HOLLYWOOD'S ZONING AND LAND DEVELOPMENT REGULATIONS.
3. ALL MARKINGS SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS, SECTION 711, DESIGN STANDARDS, INDEX 17346, AND THE BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS AND SPECIFICATIONS (CURRENT EDITION).
4. ALL ON-SITE MARKINGS SHALL BE PAINT EXCEPT 24" SOLID WHITE STOP BAR AND DOUBLE YELLOW CENTERLINE MARKINGS AT DRIVEWAY ENTRANCES, WHICH SHALL BE THERMOPLASTIC OR AS INDICATED ON PLANS.
5. VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF SIGN POSTS.
6. ALL PAVEMENT MARKINGS AND SIGNING DAMAGED DURING CONSTRUCTION, SHALL BE RESTORED TO BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS (CURRENT EDITION).
7. THE CONTRACTOR SHALL PROVIDE A COPY OF THEIR BROWARD COUNTY CERTIFICATE OF COMPETENCY PRIOR TO SUBMITTING FINAL INSPECTION REQUEST TO BROWARD COUNTY TRAFFIC ENGINEERING DIVISION.
8. ALL SIGNS TO FOLLOW FDOT INDEX 17302 - CASE V (LOCATION IN BUSINESS OR RESIDENTIAL AREAS) AND INDEX 11860 - MIN. INSTALLATION REQUIREMENTS.
9. ALL FDC SIGNAGE SHALL BE INSTALLED PURSUANT TO CITY STANDARDS AND SHALL HAVE RED LETTERING, NOT LESS THAN 3 INCHES IN HEIGHT, ON WHITE BACKGROUND. EACH SIGN SHALL BE 18 INCHES WIDE BY 24 INCHES IN HEIGHT, AND SHALL BE CONSISTENT WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION).
10. ALL FIRE HYDRANTS REQUIRE BLUE REFLECTORS IN THE ROADWAY TO INDICATE FIRE HYDRANT LOCATIONS.
11. FIRE DEPARTMENT CONNECTION PER CITY REQUIREMENTS, REFER TO PLUMBING PLAN. INSTALL "FIRE DEPARTMENT CONNECTION, NO PARKING" SIGN TO BE FDOT AND CITY COMPLIANT AS REQUIRED.
12. STOP BARS SHALL BE A MINIMUM OF 4 FEET BEHIND THE CROSSWALK.
13. ALL REGULATORY AND WARNING SIGNS SHALL BE MADE WITH TYPE XI SHEETING MATERIAL.

	PROPOSED DRAINAGE MANHOLE (MH)
	PROPOSED CATCH BASIN (CB)
	PROPOSED CURB INLET (CI)
	PROPOSED EXFILTRATION TRENCH
	PROPOSED GRADE ELEVATION (NAVD)
	MATCH EXISTING GRADE (MEG)
	PROPOSED TOP OF CURB ELEVATION (NAVD) PROPOSED PAVEMENT ELEVATION (NAVD)
	EXISTING UTILITY EASEMENT
	PROPERTY LINE
	DEMOLITION LINE
	FLOW LINE
	PROPOSED ASPHALT PAVEMENT
	PROPOSED CONCRETE
	PROPOSED PAVERS (REFER TO HARDSCAPE PLANS BY OTHERS)
	PAVEMENT RESTORATION
	DETECTABLE WARNING HATCH
	PROPOSED SANITARY SEWER LATERAL W/ CLEAN OUT TO GRADE (C.O.T.G.)
	DOMESTIC WATER METER
	DOUBLE DETECTOR CHECK VALVE
	PROPOSED FIRE DEPARTMENT CONNECTION (SEE PLUMBING PLANS)
	PROPOSED FIRE HYDRANT ASSEMBLY
	PROPOSED GAS LINE
	EXISTING GAS LINE
	EXISTING WATER MAIN
	EXISTING SANITARY SEWER
	EXISTING STORM DRAIN
	EXISTING OVERHEAD LINE
	EXISTING FIRE HYDRANT
	EXISTING GATE VALVE
	EXISTING SANITARY SEWER MANHOLE
	EXISTING DRAINAGE STRUCTURES
	EXISTING LIGHT POLES
	EXISTING SPOT ELEVATION
	FLOW ARROW
	DECORATIVE FENCE (REFER TO ARCHITECTS PLANS)
	DECORATIVE FENCE (REFER TO ARCHITECTS PLANS)
	PROPOSED EASEMENT
	UTILITY CROSSING
	PROPOSED SAMPLE POINT



KEITH

301 East Atlantic Blvd. Pompano
Beach, FL 33060
PH: (954) 788-3400

Florida Certificate of Authorization: 7928
Licensed Business Number: 6860

REVISIONS		
NO.	DESCRIPTION	DATE

PRELIMINARY PLAN

NOT FOR CONSTRUCTION

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RESPONSIBILITY FOR THE USE OF THESE
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ALL AGENCIES HAVING JURISDICTION OVER
THE PROJECT WILL FALL SOLELY UPON THE
USER.

ISSUE DATE:	03/17/21
DESIGNED BY:	MC
DRAWN BY:	GR
CHECKED BY:	JT
BID-CONTRACT:	



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256
(FOR THE FIRM)

This item has been
digitally signed and
sealed by James A
Thiele, P.E. on
05/14/2021

Printed copies of this
document are not
considered signed
and sealed and the
signature must be
verified on any
electronic copies.

CLIENT



PROJECT

PINNACLE 441

SHEET TITLE

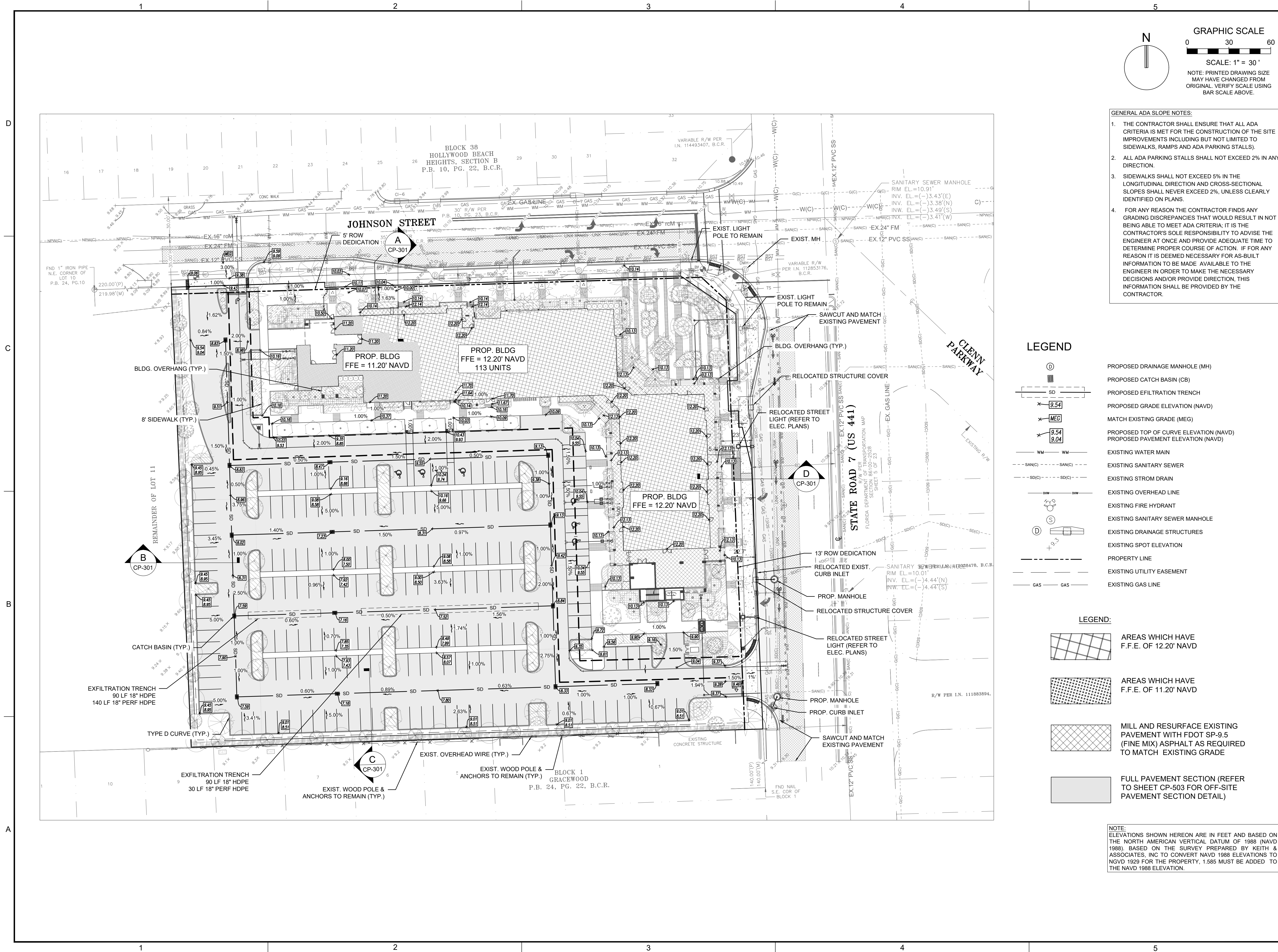
SPECIFIC NOTES AND LEGEND

SHEET NUMBER	GI-003
PROJECT NUMBER	11074.01

Plotted by: grojas On Wednesday, September 23, 2020 9:40:08 AM

Drawing name: N:\11\11074.01 - Pinnacle 441 Hollywood - Pinnacle Housing Group\Engineering\Cadd\11074.01-GI-XXX.dwg

STATUS: TAC



- GENERAL ADA SLOPE NOTES:
1. THE CONTRACTOR SHALL ENSURE THAT ALL ADA CRITERIA IS MET FOR THE CONSTRUCTION OF THE SITE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO SIDEWALKS, RAMPS AND ADA PARKING STALLS).
 2. ALL ADA PARKING STALLS SHALL NOT EXCEED 2% IN ANY DIRECTION.
 3. SIDEWALKS SHALL NOT EXCEED 5% IN THE LONGITUDINAL DIRECTION AND CROSS-SECTIONAL SLOPES SHALL NEVER EXCEED 2%, UNLESS CLEARLY IDENTIFIED ON PLANS.
 4. FOR ANY REASON THE CONTRACTOR FINDS ANY GRADING DISCREPANCIES THAT WOULD RESULT IN NOT BEING ABLE TO MEET ADA CRITERIA, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ADVISE THE ENGINEER AT ONCE AND PROVIDE ADEQUATE TIME TO DETERMINE PROPER COURSE OF ACTION. IF FOR ANY REASON IT IS DEEMED NECESSARY FOR AS-BUILT INFORMATION TO BE MADE AVAILABLE TO THE ENGINEER IN ORDER TO MAKE THE NECESSARY DECISIONS AND/OR PROVIDE DIRECTION, THIS INFORMATION SHALL BE PROVIDED BY THE CONTRACTOR.

LEGEND

- PROPOSED DRAINAGE MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED EFILTRATION TRENCH
- PROPOSED GRADE ELEVATION (NAVD)
- MATCH EXISTING GRADE (MEG)
- PROPOSED TOP OF CURVE ELEVATION (NAVD)
- PROPOSED PAVEMENT ELEVATION (NAVD)
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- EXISTING STORM DRAIN
- EXISTING OVERHEAD LINE
- EXISTING FIRE HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- EXISTING DRAINAGE STRUCTURES
- EXISTING SPOT ELEVATION
- PROPERTY LINE
- EXISTING UTILITY EASEMENT
- EXISTING GAS LINE

LEGEND:

- AREAS WHICH HAVE F.F.E. OF 12.20' NAVD
- AREAS WHICH HAVE F.F.E. OF 11.20' NAVD
- MILL AND RESURFACE EXISTING PAVEMENT WITH FDOT SP-9.5 (FINE MIX) ASPHALT AS REQUIRED TO MATCH EXISTING GRADE
- FULL PAVEMENT SECTION (REFER TO SHEET CP-503 FOR OFF-SITE PAVEMENT SECTION DETAIL)

NOTE:
ELEVATIONS SHOWN HEREON ARE IN FEET AND BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988). BASED ON THE SURVEY PREPARED BY KEITH & ASSOCIATES, INC TO CONVERT NAVD 1988 ELEVATIONS TO NGVD 1929 FOR THE PROPERTY, 1.585 MUST BE ADDED TO THE NAVD 1988 ELEVATION.

301 East Atlantic Blvd. Pompano Beach, FL 33060
PH: (954) 788-3400

Florida Certificate of Authorization: 7928
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REVISIONS		
NO.	DESCRIPTION	DATE

**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**

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ISSUE DATE: 03/17/21
DESIGNED BY: MC
DRAWN BY: GR
CHECKED BY: JT
BID-CONTRACT:

JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256
(FOR THE FIRM)

CLIENT

PROJECT

PINNACLE 441

SHEET TITLE

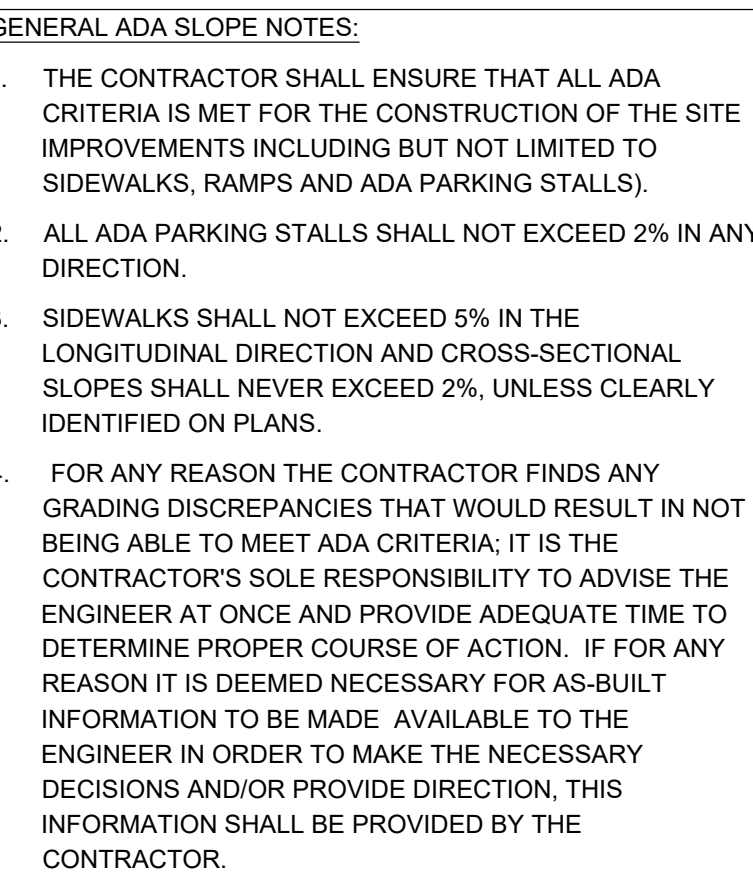
**PAVING, GRADING,
AND DRAINAGE PLAN**

SHEET NUMBER

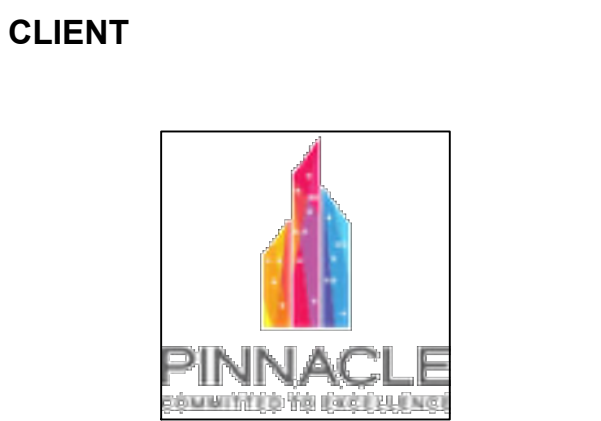
CP-101

PROJECT NUMBER

11074.01

[illegible]

ISSUE DATE:	03/17/21
DESIGNED BY:	MC
DRAWN BY:	GR
CHECKED BY:	JT
BID-CONTRACT:	



SHEET TITLE

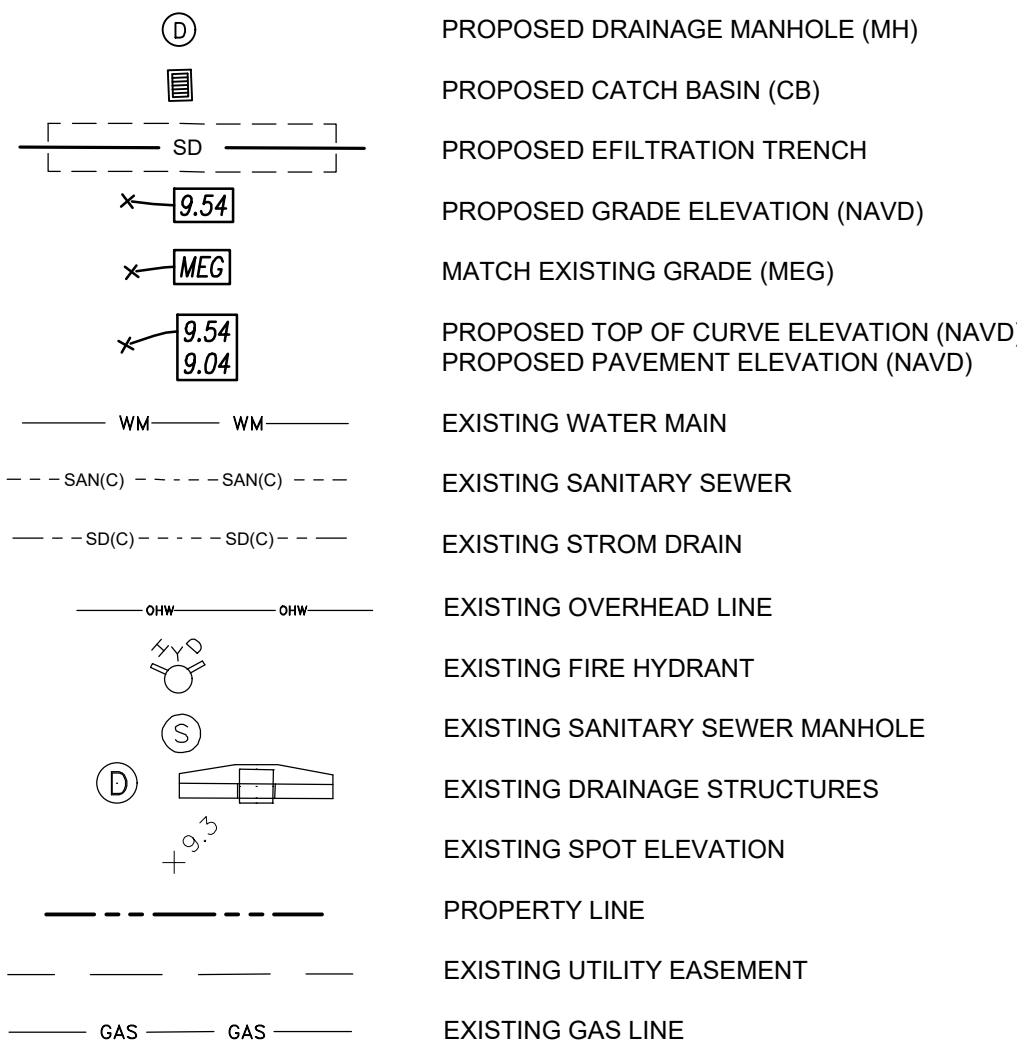
**PAVING GRADING
AND DRAINAGE PLAN
(OFFSITE)**

SHEET
NUMBER

CP-102

PROJECT
NUMBER

11074.01



	MILL AND RESURFACE EXISTING PAVEMENT WITH FDOT SP-9.5 (FINE MIX) ASPHALT AS REQUIRED TO MATCH EXISTING GRADE
	FULL PAVEMENT SECTION (REFER TO SHEET CP-503 FOR OFF-SITE PAVEMENT SECTION DETAIL)

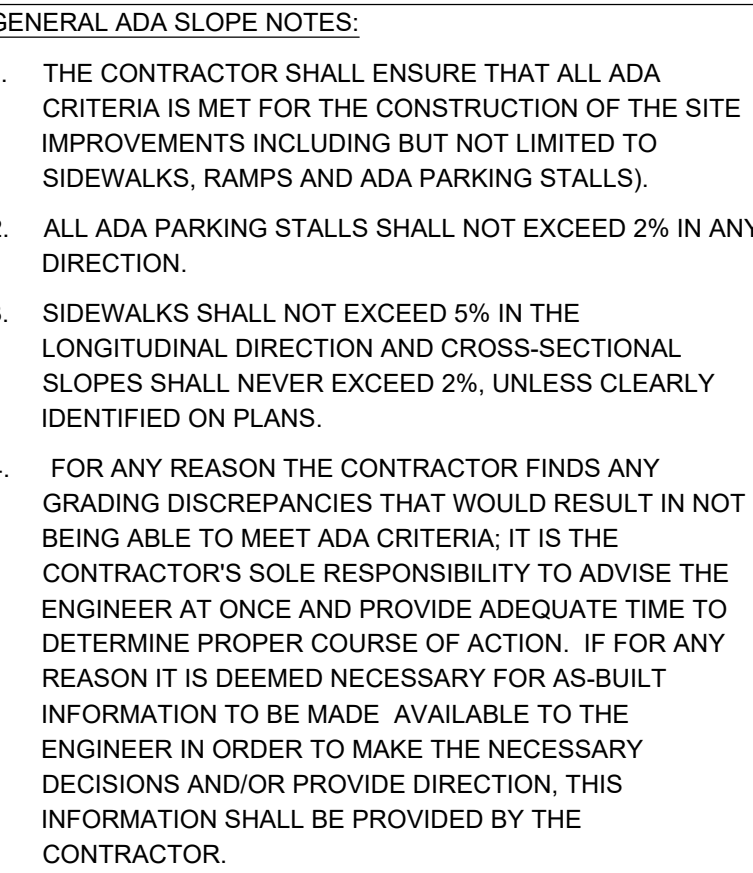
NOTE:
ELEVATIONS SHOWN HEREON ARE IN FEET AND BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988). BASED ON THE SURVEY PREPARED BY KEITH & ASSOCIATES, INC TO CONVERT NAVD 1988 ELEVATIONS TO NGVD 1929 FOR THE PROPERTY, 1.585 MUST BE ADDED TO THE NAVD 1988 ELEVATION.

MATCH LINE 'A-A' (SEE BELOW)

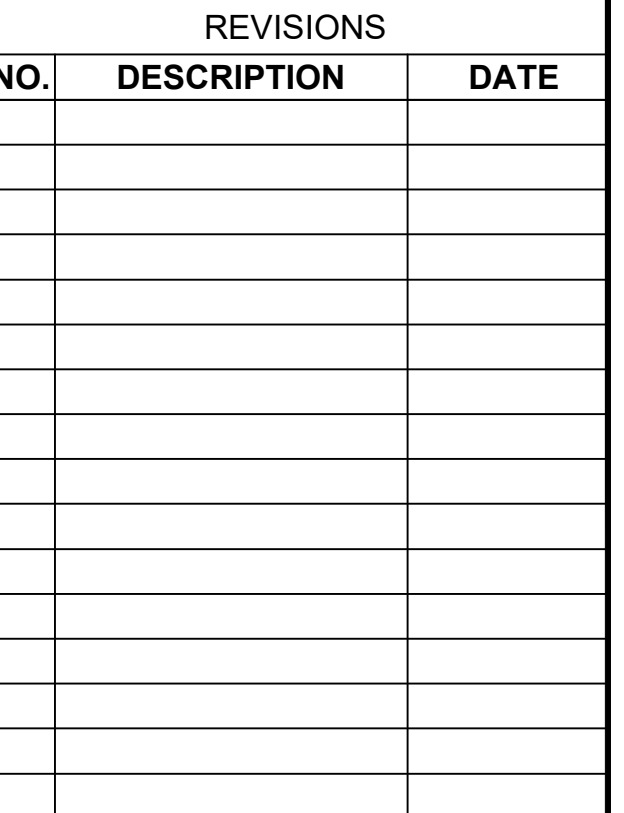
MATCH LINE 'A-A' (SEE ABOVE)

STATUS: TAC

Drawing name: N:\1111074.01 - Pinnacle 441 Hollywood - Pinnacle Housing Group\Engineering\Cadd\11074.01-CP-1XX.dwg



NOTE:
ELEVATIONS SHOWN HEREON ARE IN FEET AND BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988). BASED ON THE SURVEY PREPARED BY KEITH & ASSOCIATES, INC TO CONVERT NAVD 1988 ELEVATIONS TO NGVD 1929 FOR THE PROPERTY, 1.585 MUST BE ADDED TO THE NAVD 1988 ELEVATION.



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USER.

BID-CONTRACT:



PINNACLE
COMMUNITY DEVELOPMENT

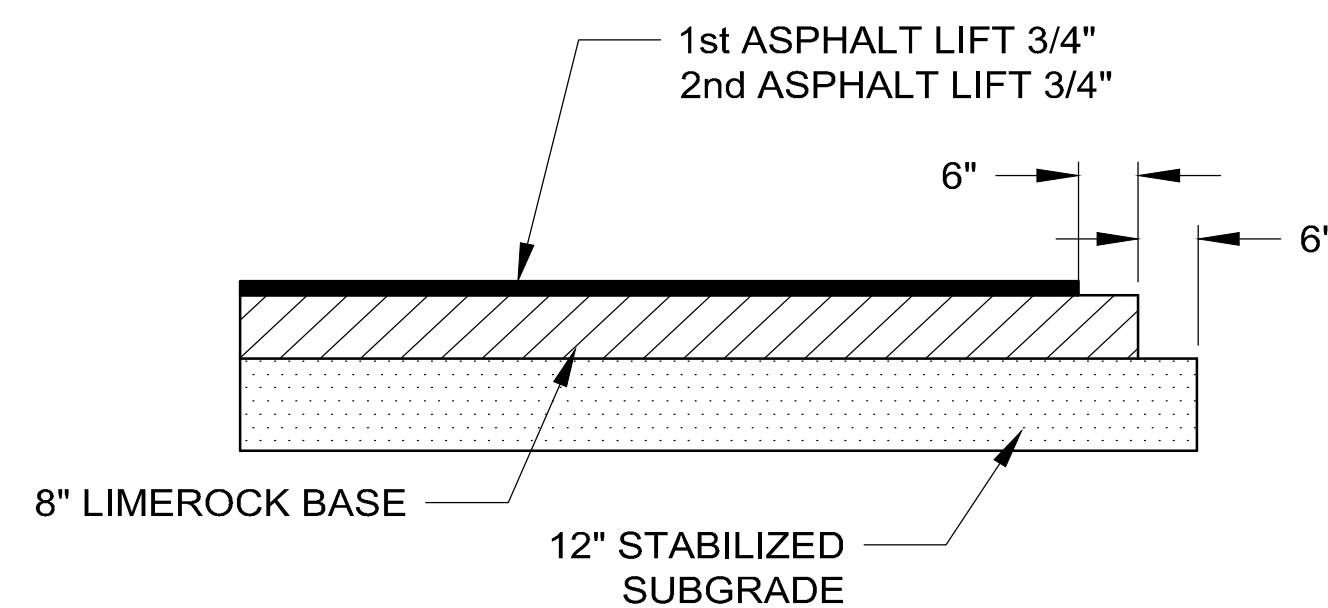
PINNACLE 441

PAVING, GRADING, AND DRAINAGE SECTIONS

PROJECT NUMBER	11074.01
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Drawing name: N:\11\1074.01 - Pinnacle 441 Hollyood - Pinnacle Housing Group\Engineering\Cadd\11074.01-CP-3XX.dwg

STATUS: TAC

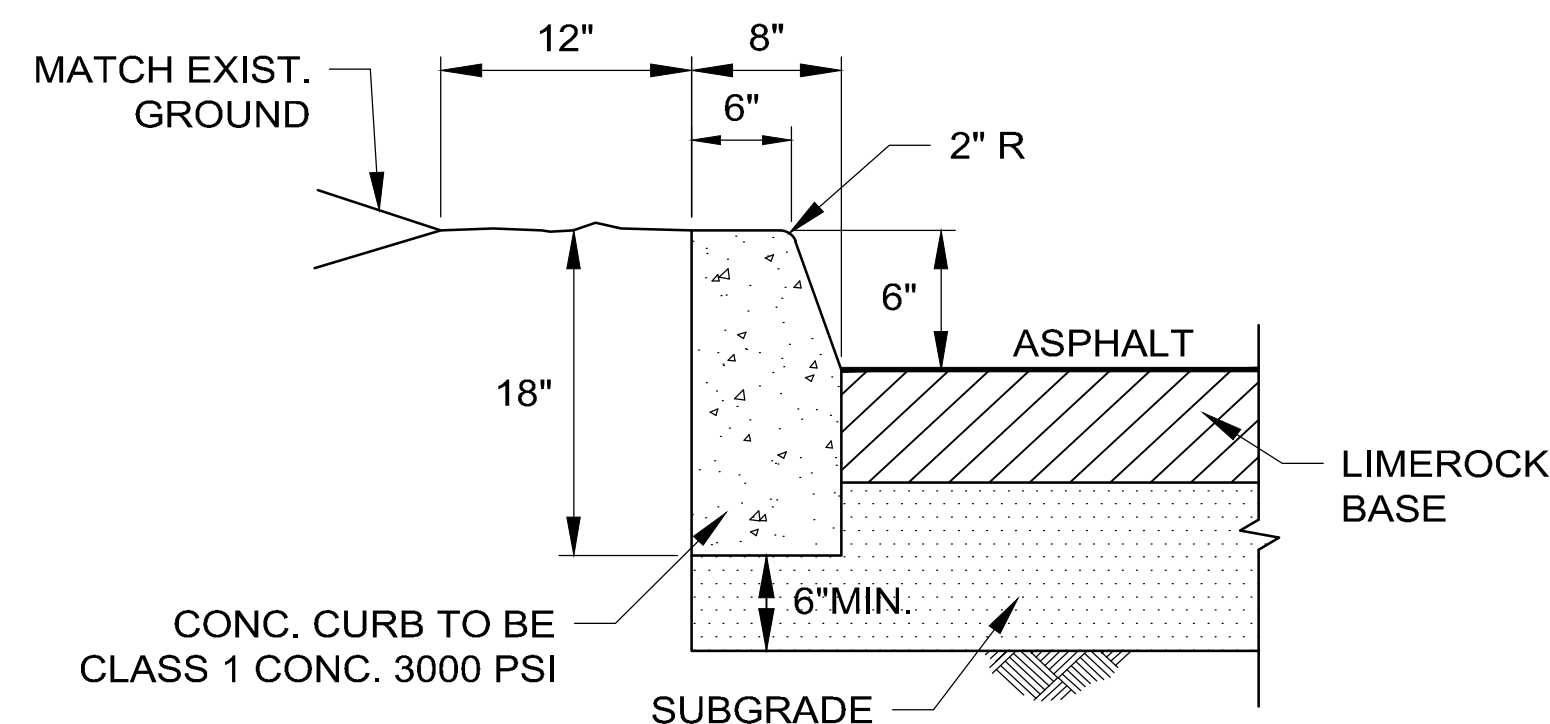


ASPHALTIC CONCRETE VEHICULAR:
FIRST LIFT - 3/4" FDOT - S-III OR APPROVED EQUAL
SECOND (FINAL) LIFT - 3/4" FDOT - S-III OR APPROVED EQUAL
ASPHALT SURFACE COURSE SHALL CONFORM TO THE REQUIREMENTS
OF FDOT STANDARDS SPECIFICATIONS SECTION 331.
SECOND LIFT OF ASPHALT SHALL NOT BE PLACED UNTIL FINAL
LANDSCAPE/HARDSCAPE HAS BEEN INSTALLED.

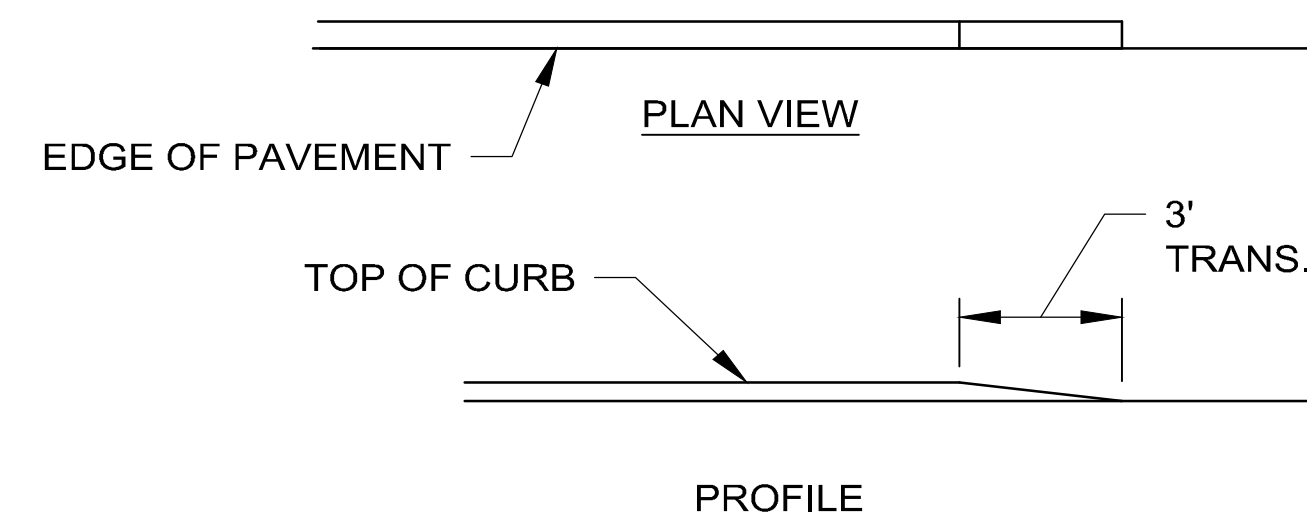
PRIME AND TACK COAT:
LIMEROCK BASE COURSE SHALL CONFORM TO THE REQUIREMENTS
OF FDOT STANDARDS SPECIFICATIONS SECTION 300.
APPLICATION RATES:
PRIME COAT - 0.10 GALLONS PER SQ. YD.
TACK COAT - 0.08 GALLONS PER SQ. YD.

BASE:
8" LIMEROCK BASE COMPACTED TO 98% OF MAXIMUM DENSITY
(AASHTO T-180), LIMEROCK BASE TO CONFORM WITH THE
REQUIREMENTS OF FDOT SPECIFICATIONS SECTIONS 200 AND 911.

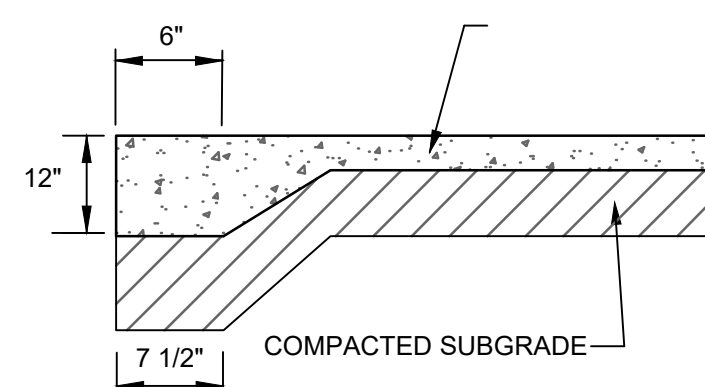
SUBGRADE:
12" STABILIZED SUBGRADE COMPACTED TO 98% OF MAXIMUM
DENSITY (AASHTO T-180); MINIMUM LBR = 40.



NOTE:
ALL TYPE "D" CURB SHALL BE IN ACCORDANCE WITH
THE STANDARD REQUIREMENTS OF FDOT INDEX 300.



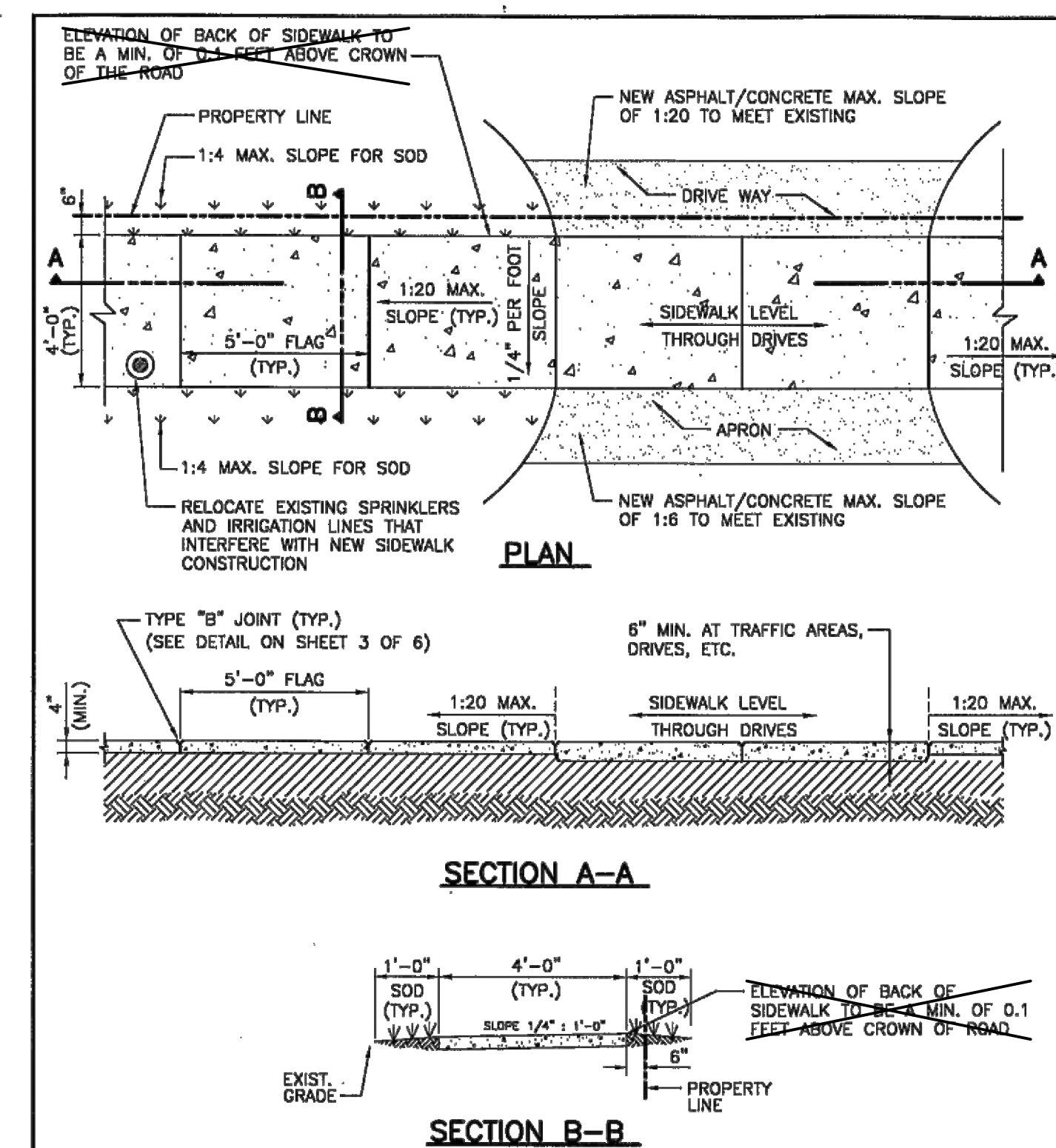
STRAIGHT END



CONCRETE PAVEMENT::
4" CONCRETE PAVEMENT SHALL BE A MINIMUM 2,500 PSI 28 DAY
COMPRESSIVE STRENGTH CONCRETE.

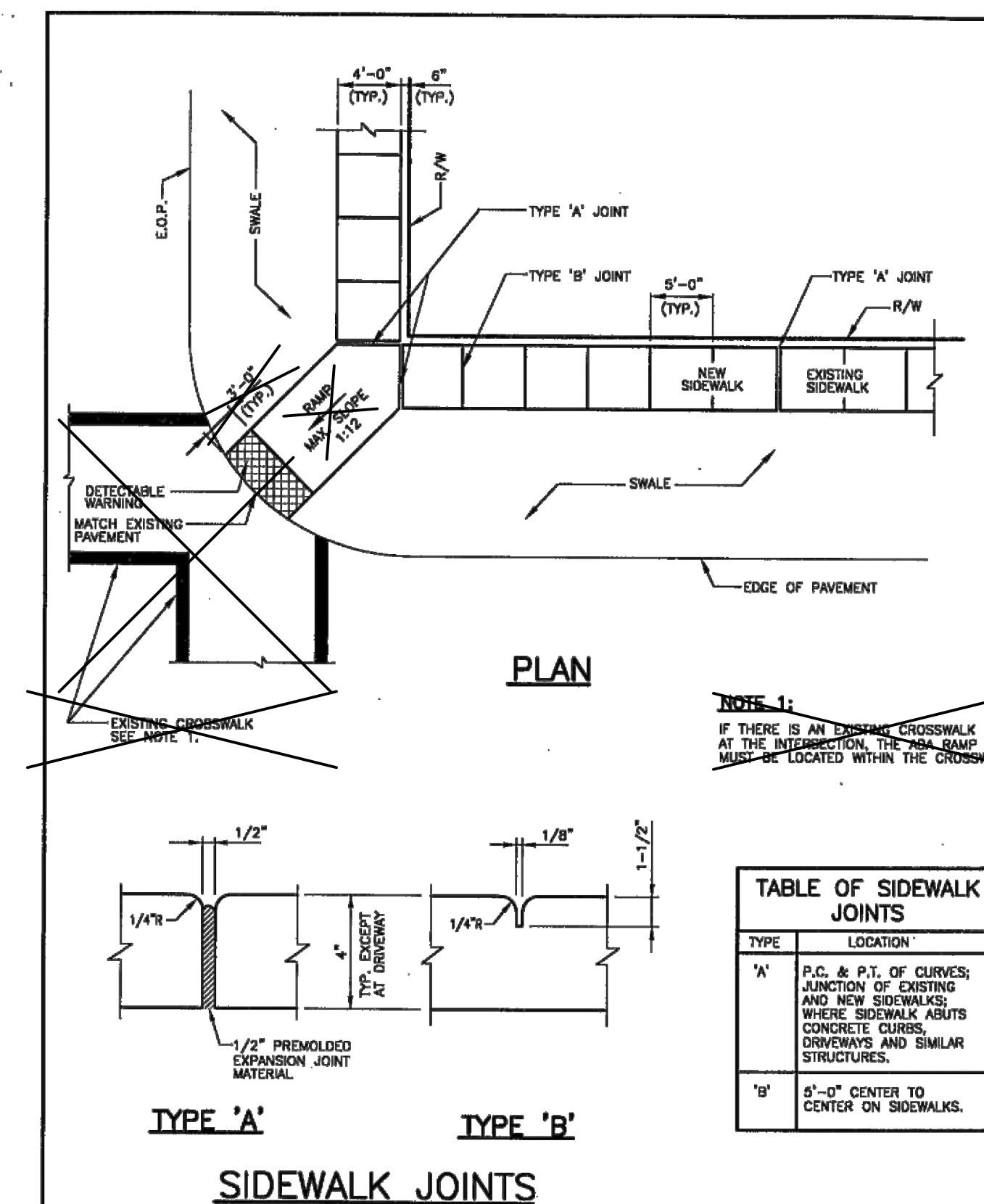
SUBGRADE:
SUBGRADE COMPACTED TO 98% OF MAXIMUM DENSITY (AASHTO T-180);
MINIMUM LBR = 40.

NOTE:
THICKENED EDGE SIDEWALK TO BE USED ONLY WITHIN RIGHT-OF-WAY
AND NOT WITHIN DRIVES.



NOTE:
ALL SIDEWALK CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE
CONTRACT SPECIFICATIONS.
LIGHT BROOM FINISH PERPENDICULAR TO THE DIRECTION OF THE SIDEWALK.

CITY OF HOLLYWOOD, FLORIDA DEPARTMENT OF ECONOMIC DEVELOPMENT AND DEVELOPMENT ADMINISTRATION ENGINEERING DIVISION STANDARD DETAIL SIDEWALK CONSTRUCTION DETAIL	DESIGNED BY	SCALE	APPENDED BY
	DRAWN BY	PROJECT No.	
	CHECKED BY	ACCT. No.	
	DATE	CAD/CORR No.	SHEET No.
	01/28/81	CITY ENGINEER	2



TYPE	LOCATION
'A'	P.C. & P.T. OF CURVES; JUNCTION OF EXISTING AND NEW SIDEWALKS; WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS AND SIMILAR STRUCTURES.
'B'	5'-0" CENTER TO CENTER ON SIDEWALKS.

CITY OF HOLLYWOOD, FLORIDA DEPARTMENT OF ECONOMIC DEVELOPMENT AND DEVELOPMENT ADMINISTRATION ENGINEERING DIVISION STANDARD DETAIL SIDEWALK CONSTRUCTION DETAIL	DESIGNED BY	SCALE	N.T.S.	APPROVED BY
	DRAWN BY	N.T.G.	PROJECT No.	CITY ENGINEER
	CHECKED BY		ACCT. No.	SHEET No.
	DATE	03/28/01	CADD/ONG No.	SETV9 SWACFT



KEITH

**301 East Atlantic Blvd. Pompano
Beach, FL 33060
PH: (954) 788-3400**

Florida Certificate of Authorization: 7928
Licensed Business Number: 6860

REVISIONS

[illegible]

**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**

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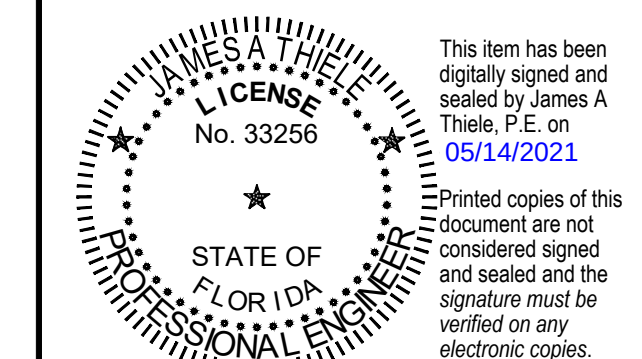
ISSUE DATE: 03/17/21

DESIGNED BY: MC

DRAWN BY: GR

CHECKED BY: JT

BID-CONTRACT:	
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JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256
(FOR THE FIRM)

CLIENT



PROJECT

PINNACLE 441

SHEET TITLE

PAVING, GRADING, AND DRAINAGE DETAILS

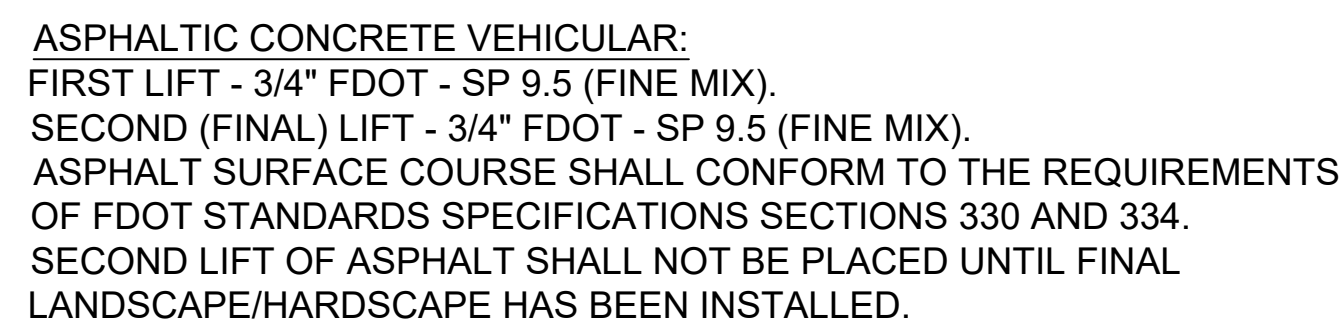
SHEET
NUMBER CP-501

PROJECT NUMBER	11074.01
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STANDARD SIDEWALK CURB RAMP DETAIL

SCALE: NOT TO SCALE



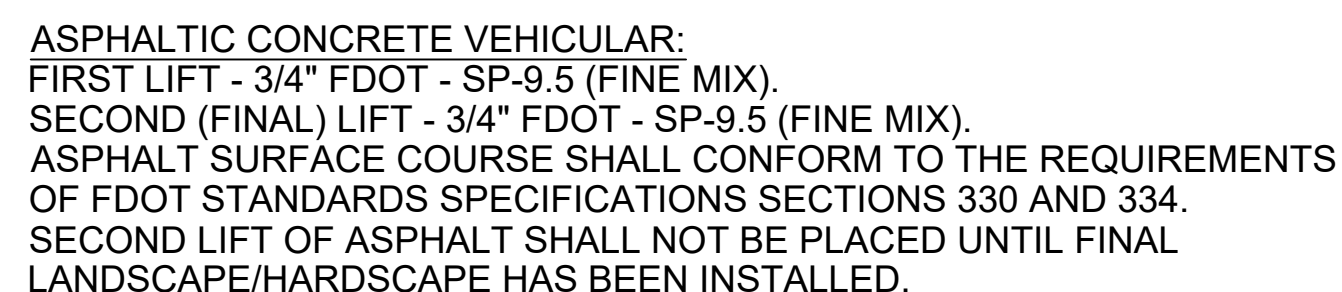
PRIME AND TACK COAT:
LIMEROCK BASE COURSE SHALL CONFORM TO THE REQUIREMENTS
OF FDOT STANDARDS SPECIFICATIONS SECTION 300.
APPLICATION RATES:
PRIME COAT - 0.10 GALLONS PER SQ. YD.
TACK COAT - 0.08 GALLONS PER SQ. YD.

BASE:
8" / 6" LIMEROCK BASE COMPACTED TO 98% OF MAXIMUM DENSITY (AASHTO T-180), LIMEROCK BASE TO CONFORM WITH THE REQUIREMENTS OF FDOT SPECIFICATIONS SECTIONS 200 AND 911.

SUBGRADE:
12" STABILIZED SUBGRADE COMPACTED TO 98% OF MAXIMUM
DENSITY (AASHTO T-180); MINIMUM LBR = 40.

OFF-SITE ASPHALT PAVEMENT DETAIL

SCALE: NOT TO SCALE



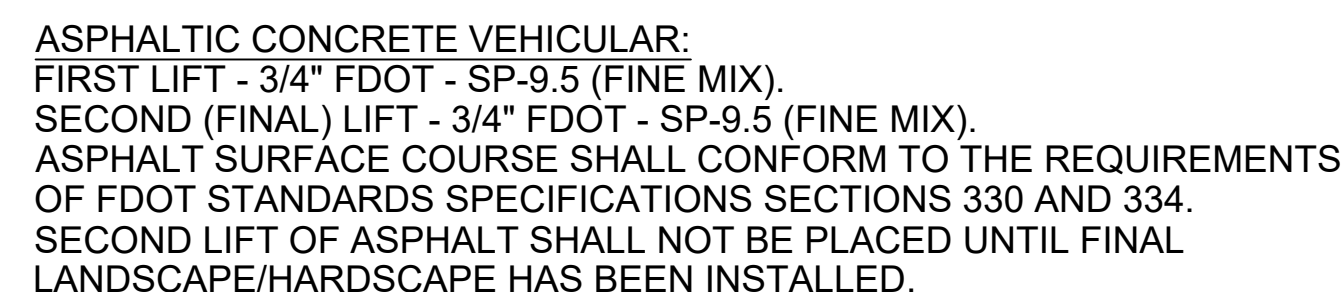
PRIME AND TACK COAT:
LIMEROCK BASE COURSE SHALL CONFORM TO THE REQUIREMENTS
OF FDOT STANDARDS SPECIFICATIONS SECTION 300.
APPLICATION RATES:
PRIME COAT - 0.10 GALLONS PER SQ. YD.
TACK COAT - 0.08 GALLONS PER SQ. YD.

BASE:
6" LIMEROCK BASE COMPACTED TO 98% OF MAXIMUM DENSITY (AASHTO T-180), LIMEROCK BASE TO CONFORM WITH THE REQUIREMENTS OF FDOT SPECIFICATIONS SECTIONS 200 AND 911.

SUBGRADE:
6" STABILIZED SUBGRADE COMPACTED TO 98% OF MAXIMUM
DENSITY (AASHTO T-180); MINIMUM LBR = 40.

ON-SITE ASPHALT PAVEMENT DETAIL

SCALE: NOT TO SCALE



PRIME AND TACK COAT:
LIMEROCK BASE COURSE SHALL CONFORM TO THE REQUIREMENTS
OF FDOT STANDARDS SPECIFICATIONS SECTION 300.
APPLICATION RATES:
PRIME COAT - 0.10 GALLONS PER SQ. YD.
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SUBGRADE:
12" STABILIZED SUBGRADE COMPACTED TO 98% OF MAXIMUM
DENSITY (AASHTO T-180); MINIMUM LBR = 40.

ON-SITE ASPHALT PAVEMENT DETAIL ADJACENT TO DRAINAGE STRUCTURES

SCALE: NOT TO SCALE



Florida Certificate of Authorization: 7928
Licensed Business Number: 6860

REVISIONS

[illegible]

PRELIMINARY PLAN
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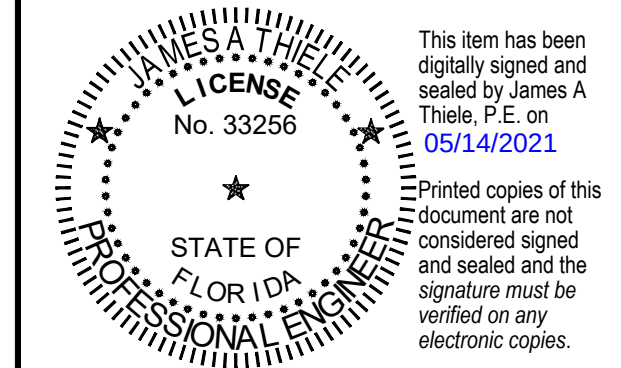
ISSUE DATE:	03/17/21
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DESIGNED BY: MC

DRAWN BY: GE

CHECKED BY: JT

BID-CONTRACT:



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256
(FOR THE FIRM)

CLIENT



PROJECT

PINNACLE 441

SHEET TITLE

PAVING, GRADING, AND DRAINAGE DETAILS

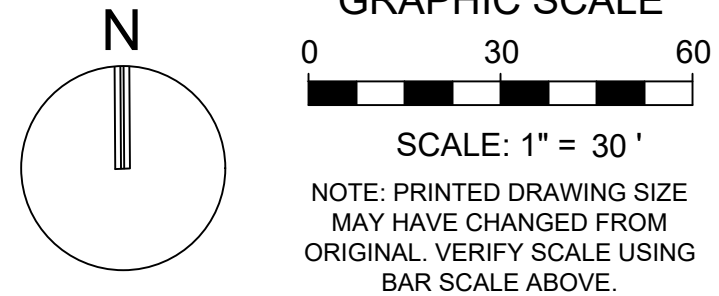
SHEET NUMBER CP-503

PROJECT NUMBER	11074.01
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Plotted by: arojas On Wednesday, September 23, 2020 9:40:08 AM

Drawing name: N:\1111074.01 - Pinnacle 441 Hollywood - Pinnacle Housing Group\Engineering\Cadd\111074.01-CP-5XX.dwg

STATISTICS: TAC



PROJECT NUMBER	11074.01
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STATUS: TAC

C

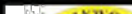
B

- A

VP SCALE: CUSTOM / 1.12:1



- | | | | |
|--|--------------------|---|------------------------------|
|  | ISSUED: 03/01/1994 | DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL | REVISED: 06/08/2014 |
| | DRAWN: EAM | JOINT RESTRAINT DESIGN
FOR PVC AND DIP
REDUCERS AND DEAD ENDS | DRAWING NO.
G-11.3 |
| | APPROVED: XXX | | |

	ISSUED: 03/11/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
	DRAWN: EAM	JOINT RESTRAINT DESIGN FOR PVC AND DIP REDUCERS AND DEAD ENDS	DRAWING NO. G-11.3
	APPROVED: XXX		

- | | | | |
|---|--------------------|--|----------------------------|
|  | ISSUED: 03/01/1994 | DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL | REVISED: 11/06/2017 |
| | DRAWN: EAM | FLEXIBLE PAVEMENT RESTORATION
NOTES | DRAWING NO.
G-12 |
| | APPROVED: XXX | | |

Plotted by: amoraes On Wednesday, September 23, 2020 9:40:08 AM

**PRELIMINARY PLAN
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DESIGNED BY: MC

CHECKED BY: JT



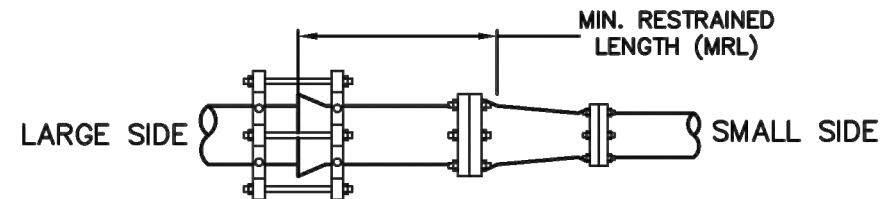
CLIENT



SHEET TITLE

SHEET NUMBER CU-503

STATIIS: TAC



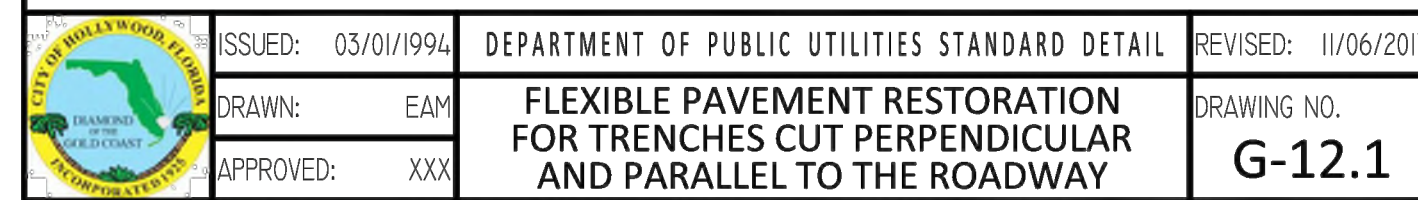
MIN. RESTRAINED LENGTH (MRL)

CAP OR PLUG

*ALL DIP JOINT-RESTRAINT CALCULATIONS ASSUME THE PIPE WILL BE WRAPPED IN POLYETHYLENE ENCASEMENT

TEES AND TAPPING SLEEVES								
RUN DIA. (INCHES)	BRANCH DIA. (INCHES)	MINIMUM RESTRAINED LENGTH ALONG RUN (FT.)	MINIMUM RESTRAINED LENGTH ALONG BRANCH (FT.)		RUN DIA. (INCHES)	BRANCH DIA. (INCHES)	MINIMUM RESTRAINED LENGTH ALONG RUN (FT.)	MINIMUM RESTRAINED LENGTH ALONG BRANCH (FT.)
			PVC	*DIP			PVC	*DIP
24"	24"	-	-	-	12"	12"	-	-
	16"	-	-	-		8"	-	-
	12"	-	-	-		6"	-	-
	8"	-	-	-		4"	-	-
	6"	-	-	-		8"	-	-
	4"	-	-	-		6"	-	1'
16"	16"	-	-	-	6"	4"	-	1'
	12"	-	-	-		6"	-	-
	8"	-	-	-		4"	-	-
	6"	-	-	-		4"	-	1'
	4"	-	-	-		-	-	-
	4"	-	-	-		-	-	-

	ISSUED: 03/01/1992	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
	DRAWN: EAM	JOINT RESTRAINT DESIGN FOR PVC AND DIP HORIZONTAL BENDS AND TEES	DRAWING NO. G-11.1
	APPROVED: XXX		



	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
	DRAWN: EAM APPROVED: YYY	SANITARY SEWER MAIN CONSTRUCTION NOTES	DRAWING NO. S-01

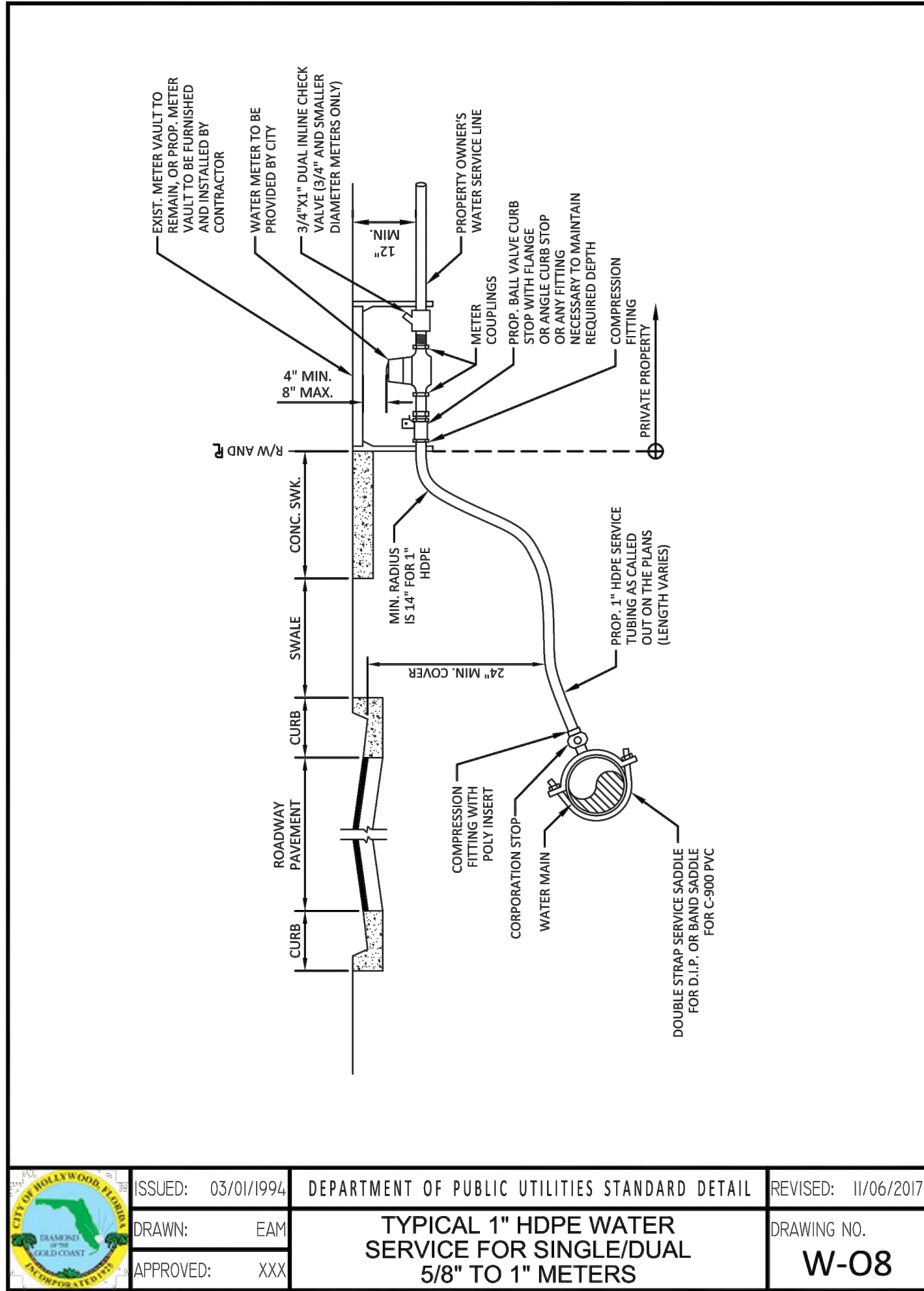


Drawing name: N:\11\1074.01 - Pinnacle 441 Hollywood - Pinnacle Housing Group\Engineering\Cadd\11074.01-CU-SX.dwg

WATER SYSTEM NOTES (CONTINUED):

13. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.
14. ALL PVC PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C900 LATEST REVISION AND CLASS DR 18. ALL DIP WATER MAINS SHALL BE DUCTILE IRON PIPE UNDER CLASS 350, WITH WALL THICKNESS COMPLYING WITH CLASS 52. ALL DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C151/A21.51-02 AND BE CEMENT UNED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03.
15. FITTINGS SHALL BE DUCTILE IRON, MEETING ANSI/AWWA C153/A21.53-00 SPECIFICATIONS, WITH 350 PSI MINIMUM WORKING PRESSURE. FITTINGS MUST BE CEMENT UNED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03. ALL DUCTILE IRON PIPE AND FITTINGS MUST BE MANUFACTURED IN THE UNITED STATES OF AMERICA.
16. ALL DUCTILE IRON PIPE TO BE MECHANICAL JOINTS, WRAPPED IN POLY. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY DESIGN.
17. PAVEMENT RESTORATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY.
18. ALL TRENCHING, PIPE LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTING MUST COMPLY WITH THE CITY OF HOLLYWOOD SPECIFICATIONS.
19. THE MINIMUM DEPTH OF COVER OVER WATER MAINS IS 30" (DIP) OR 36" (PVC).
20. MINIMUM HORIZONTAL SEPARATION BETWEEN STORM STRUCTURES AND WATER MAINS SHALL BE 3'.
21. MAXIMUM DEFLECTION PER EACH JOINT SHALL BE 50% OF MANUFACTURES RECOMMENDATION (MAXIMUM) WHERE DEFLECTION IS REQUIRED.
22. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING CONFLICTS WITH WATER MAINS PLACED AT MINIMUM COVER. IN CASE OF CONFLICT, WATER MAIN SHALL BE LOWERED TO PASS UNDER CONFLICTS WITH 18" MINIMUM VERTICAL SEPARATION. NO ADDITIONAL PAYMENT SHALL BE DUE TO CONTRACTOR FOR LOWERING THE MAIN OR THE ADDITIONAL FITTINGS USED THEREON.
23. PIPE JOINT RESTRAINT SHALL BE PROVIDED BY THE USE OF DUCTILE IRON FOLLOWER GLANDS MANUFACTURED TO ASTM A 536-80. TWIST-OF-NUTS SHALL BE USED TO ENSURE PROPER ACTUATING OF THE RESTRAINING DEVICES. THE MECHANICAL JOINT RESTRAINING DEVICES SHALL HAVE A WORKING PRESSURE OF 250 PSI MINIMUM, WITH A MINIMUM SAFETY FACTOR OF 2:1, AND SHALL BE EBAA (IRON INC., MEGALUG OR APPROVED EQUAL. JOINT RESTRAINTS SHALL BE PROVIDED AT A MINIMUM OF THREE JOINTS (60 FEET) FROM ANY FITTING.
24. WHENEVER IT IS NECESSARY, IN THE INTEREST OF SAFETY, TO BRACE THE SIDES OF A TRENCH, THE CONTRACTOR SHALL FURNISH, PUT IN PLACE AND MAINTAIN SUCH SHEETING OR BRACING AS MAY BE NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION TO ENSURE PERSONNEL SAFETY, AND TO PREVENT MOVEMENT WHICH CAN IN ANY WAY DAMAGE THE WORK OR ENDANGER ADJACENT STRUCTURES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SEQUENCE, METHODS AND MEANS OF CONSTRUCTION, AND FOR THE IMPLEMENTATION OF ALL OSHA AND OTHER SAFETY REQUIREMENTS.

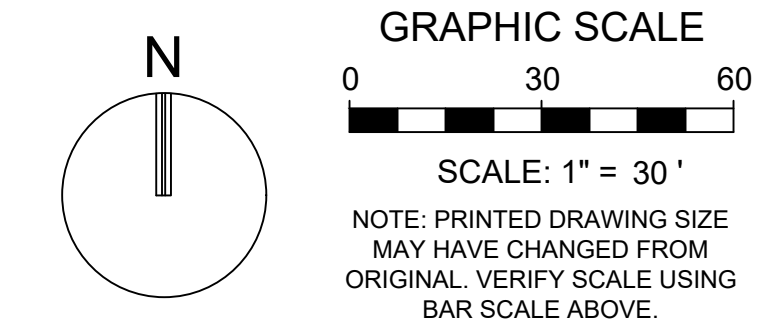
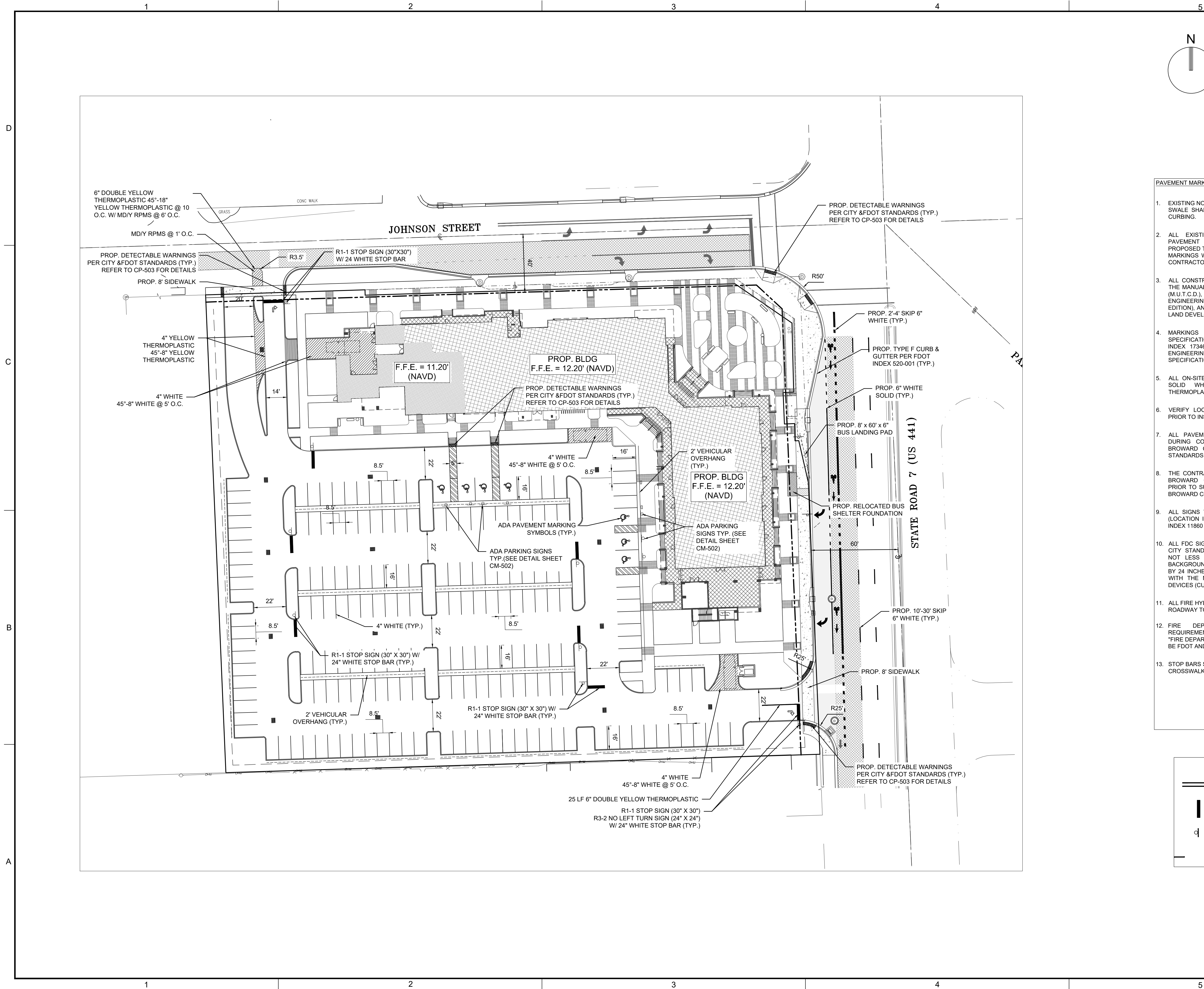
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
	DRAWN: EAM	WATER SYSTEM NOTES	DRAWING NO.
	APPROVED: XXX		W-02



1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED NOT LESS THAN 18" ON CENTER.
2. P.E. TUBING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C901, "POLYETHYLENE (PE) PRESSURE PIPE AND TUBING, 1/2 IN. (13mm) THROUGH 3 IN. (76 mm) FOR WATER SERVICE".
3. MINIMUM SERVICE PIPE DIAMETER SHALL BE 1" FOR SINGLE OR DUAL ¾" OR SINGLE 1" DIAMETER METERS.
4. MINIMUM SERVICE PIPE DIAMETER SHALL BE 2" FOR SINGLE OR DUAL 1-½" OR SINGLE 2" DIAMETER METERS.
5. FOR METER DIAMETERS LARGER THAN 2", THE MINIMUM SERVICE PIPE DIAMETER SHALL BE THE SAME AS THE METER DIAMETER.
6. APPROVED COPPER TUBING MAY BE USED AT THE CITY'S DISCRETION.
7. FOR NEW METER INSTALLATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS, CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE WATER METERS WILL BE PROVIDED AND INSTALLED BY THE CITY OF HOLLYWOOD (NEW ACCOUNTS).
8. FOR METER RELOCATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS, CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE EXISTING WATER METER TO BE RELOCATED AND INSTALLED BY CONTRACTOR.
9. FOR EXISTING METERS ABUTTING THE RIGHT-OF-WAY THAT ARE BEING DISCONNECTED FROM EXISTING MAINS AND RECONNECTED TO NEW MAINS, THE CONTRACTOR SHALL:
 - a. CUT AND PLUG THE EXISTING SERVICE LINE AT THE MAIN AND AT THE METER, AND REMOVE THE EXISTING BALL VALVE CURB STOP.
 - b. FURNISH AND INSTALL SERVICE SADDLE, CORPORATION STOP OR SERVICE VALVE AND VALVE BOX, PIPING AND FITTINGS UP TO AND INCLUDING THE BALL VALVE CURB STOP.
12. THE ELEVATION AT THE TOP OF THE METER BOX SHALL MATCH THE ELEVATION OF THE BACK OF SIDEWALK, WHENEVER PRACTICAL.
13. AS PART OF THE SERVICE INSTALLATION, THE CONTRACTOR SHALL RESTORE THE RIGHT-OF-WAY TO MATCH EXISTING CONDITIONS, INCLUDING ROADWAY PAVEMENT, PAVEMENT MARKINGS AND RPMs, CONCRETE CURBS, SIDEWALKS, RAMPS (INCLUDING DETECTABLE WARNING SURFACE), SODDING, AND ALL OTHER IMPROVEMENTS REMOVED OR DAMAGED DURING THE SERVICE INSTALLATION.
14. FOR UNPAVED AREAS, THE MINIMUM GROUND COVER ACCEPTED BY THE CITY IS SODDING.

	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
	DRAWN: EAM	TYPICAL 1" HDPE WATER SERVICE FOR SINGLE/DUAL 5/8" TO 1" METERS	DRAWING NO. W-O8
	APPROVED: XXX		

Drawing name: N:\11\1074.01 - Pinnacle 441 Hollywood - Pinnacle Housing Group\Engineering\Cadd\11074.01-CU-5XX.dwg



- PAVEMENT MARKING AND SIGNAGE NOTES:**
- EXISTING NO PARKING SIGNS WITHIN THE RIGHT OF WAY SWALE SHALL BE REMOVED IN AREAS OF PROPOSED CURBING.
 - ALL EXISTING TRAFFIC CONTROL SIGNAGE AND PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED TRAFFIC CONTROL SIGNAGE AND PAVEMENT MARKINGS WILL BE REMOVED OR RELOCATED BY THE CONTRACTOR.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS (CURRENT EDITION), AND THE CITY OF HOLLYWOOD'S ZONING AND LAND DEVELOPMENT REGULATIONS.
 - MARKINGS SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS, SECTION 711, DESIGN STANDARDS, INDEX 17346, AND THE BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS AND SPECIFICATIONS (CURRENT EDITION).
 - ALL ON-SITE MARKINGS SHALL BE PAINT EXCEPT 24" SOLID WHITE STOP BAR WHICH SHALL BE THERMOPLASTIC OR AS INDICATED ON PLANS.
 - VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF SIGN POSTS.
 - ALL PAVEMENT MARKINGS AND SIGNING DAMAGED DURING CONSTRUCTION, SHALL BE RESTORED TO BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS (CURRENT ADDITION).
 - THE CONTRACTOR SHALL PROVIDE A COPY OF THEIR BROWARD COUNTY CERTIFICATE OF COMPETENCY PRIOR TO SUBMITTING FINAL INSPECTION REQUEST TO BROWARD COUNTY TRAFFIC ENGINEERING DIVISION.
 - ALL SIGNS TO FOLLOW FDOT INDEX 17302 - CASE V (LOCATION IN BUSINESS OR RESIDENTIAL AREAS) AND INDEX 11860 - MIN. INSTALLATION REQUIREMENTS.
 - ALL FDC SIGNAGE SHALL BE INSTALLED PURSUANT TO CITY STANDARDS AND SHALL HAVE RED LETTERING, NOT LESS THAN 3 INCHES IN HEIGHT, ON WHITE BACKGROUND. EACH SIGN SHALL BE 18 INCHES WIDE BY 24 INCHES IN HEIGHT, AND SHALL BE CONSISTENT WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION).
 - ALL FIRE HYDRANTS REQUIRE BLUE REFLECTORS IN THE ROADWAY TO INDICATE FIRE HYDRANT LOCATIONS.
 - FIRE DEPARTMENT CONNECTION PER CITY REQUIREMENTS, REFER TO PLUMBING PLAN, INSTALL "FIRE DEPARTMENT CONNECTION, NO PARKING" SIGN TO BE FDOT AND CITY COMPLIANT AS REQUIRED.
 - STOP BARS SHALL BE A MINIMUM OF 4 FEET BEHIND THE CROSSWALK.

KEITH

301 East Atlantic Blvd. Pompano Beach, FL 33060
PH: (954) 788-3400

Florida Certificate of Authorization: 7928
Licensed Business Number: 6860

REVISIONS		
NO.	DESCRIPTION	DATE

**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**

THESE PLANS ARE NOT FULLY PERMITTED AND ARE SUBJECT TO REVISIONS MADE DURING THE PERMITTING PROCESS.

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

ISSUE DATE: 03/17/21
DESIGNED BY: MC
DRAWN BY: GR
CHECKED BY: JT
BID-CONTRACT:

James A. Thiele, P.E. License No. 33256
State of Florida Professional Engineer
This item has been digitally signed and sealed by James A. Thiele, P.E. on 05/14/2021
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256
(FOR THE FIRM)



PROJECT

PINNACLE 441

SHEET TITLE

PAVEMENT MARKING AND SIGNAGE PLAN

SHEET NUMBER CM-101
PROJECT NUMBER 11074.01

Florida Certificate of Authorization: 7928
Licensed Business Number: 6860

Drawing name: N:\11\11074.01 - Pinnacle 441 Hollywood - Pinnacle Housing Group\Engineering\Cadd\11074.01-CM-5XX.dwg

BID-CONTRACT:



PROJECT NUMBER	11074.01
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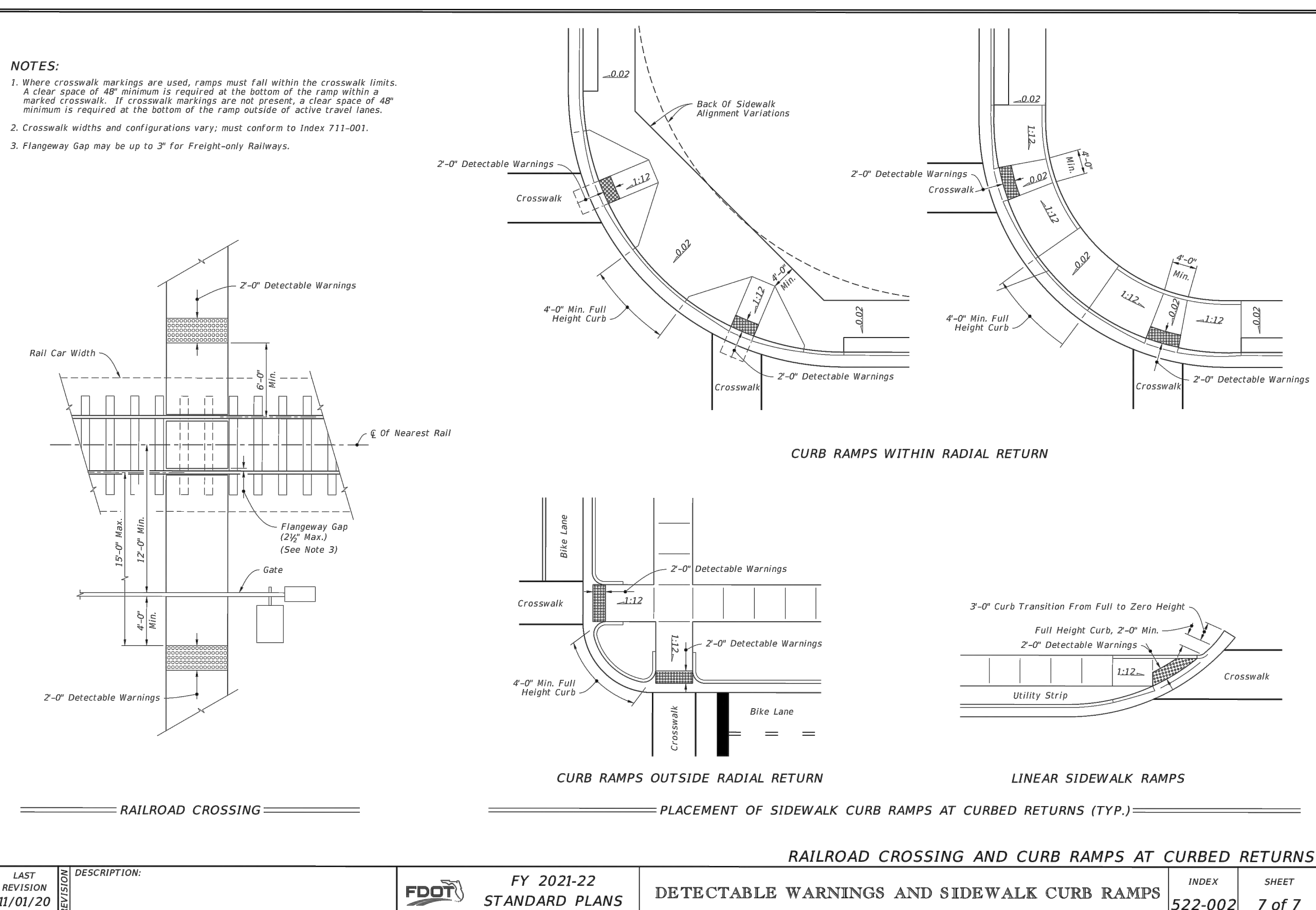
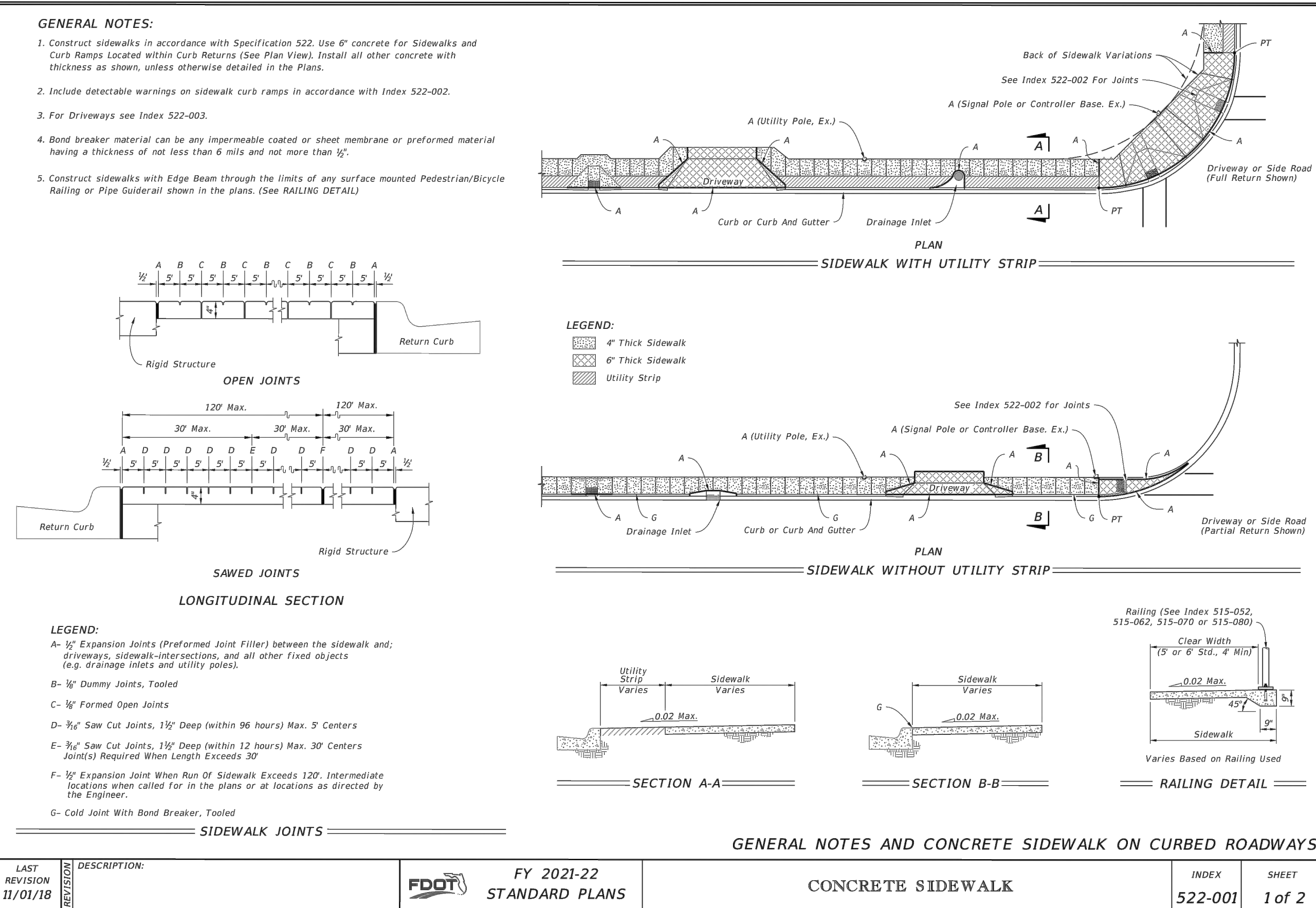
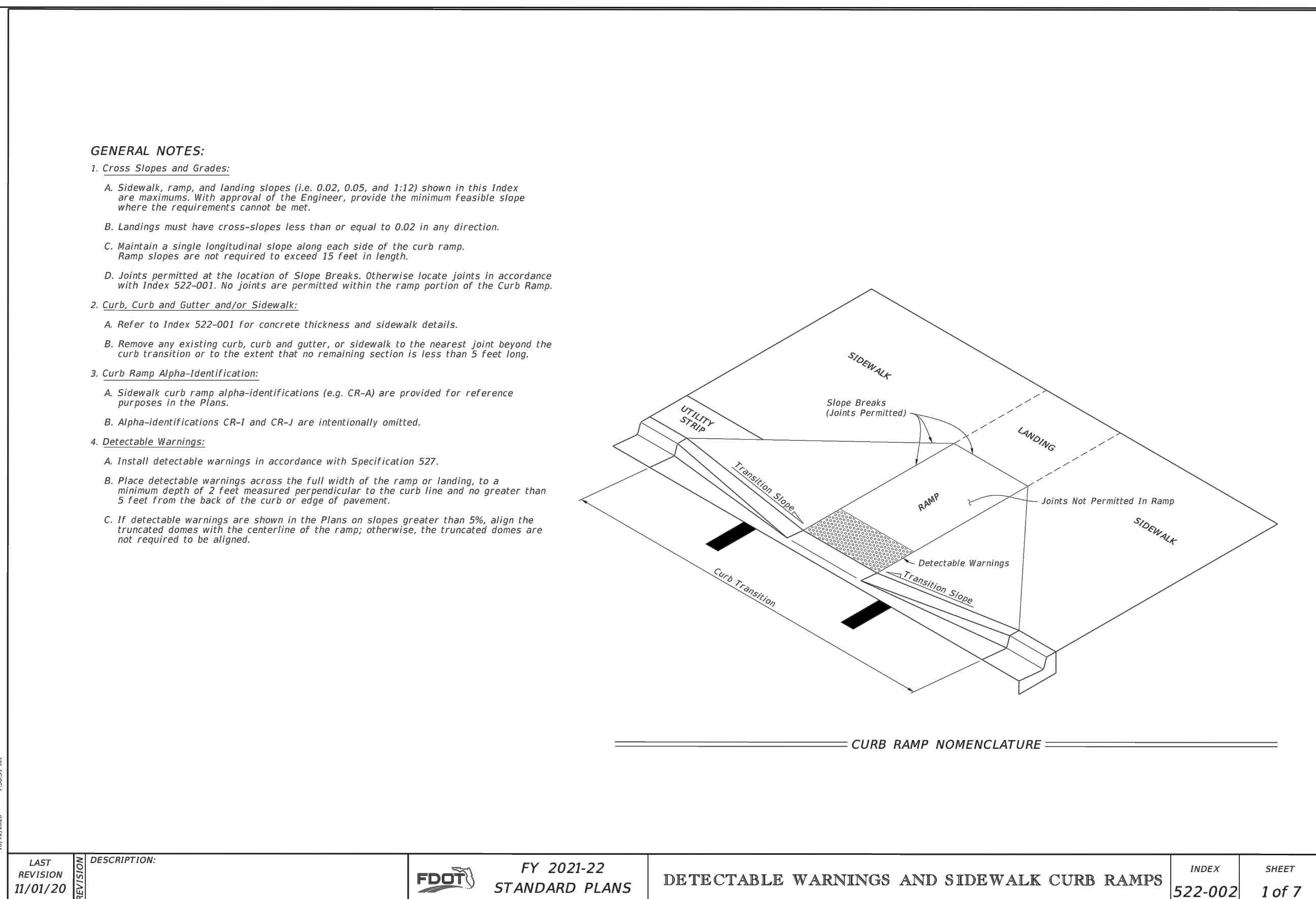
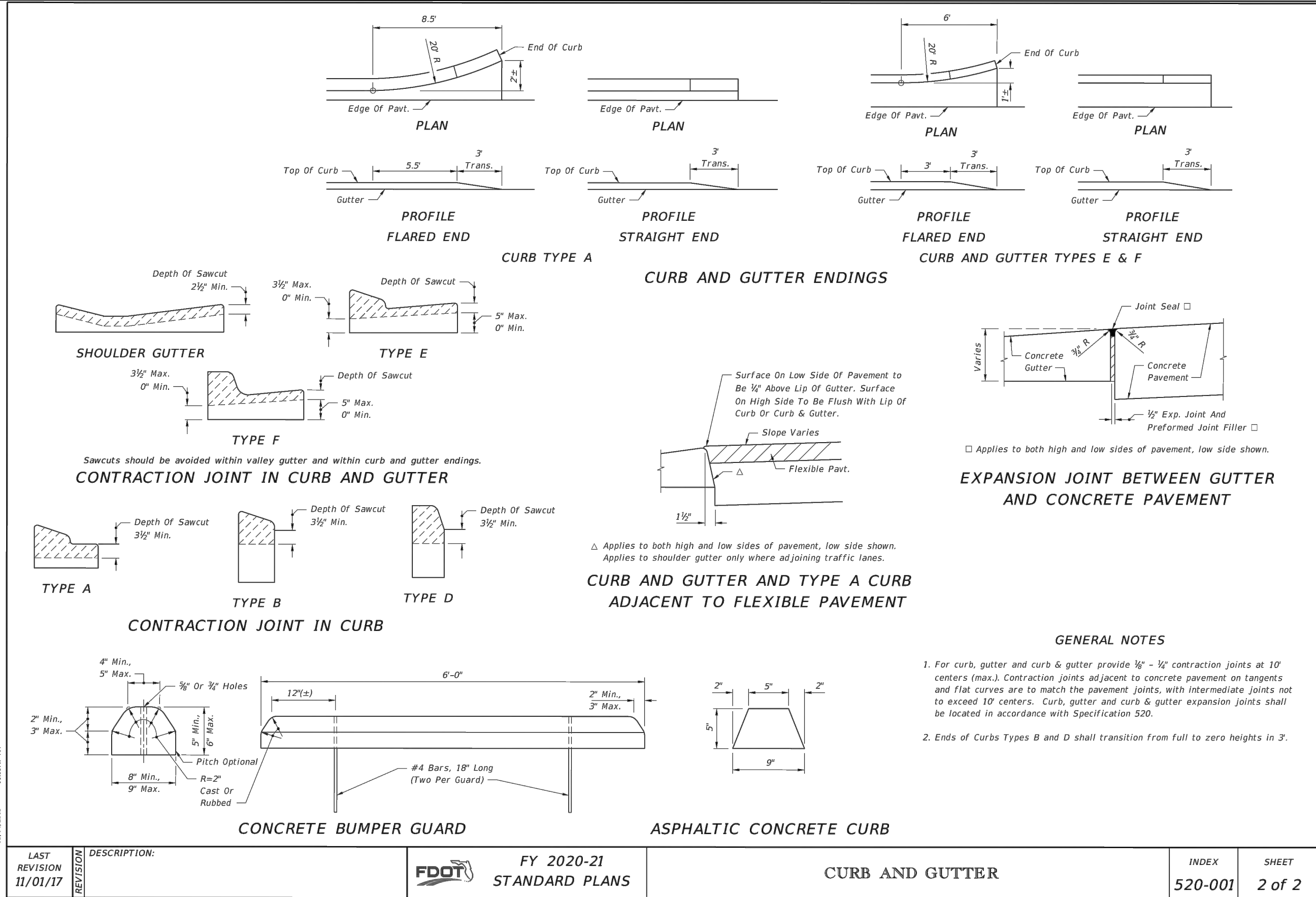
LAST REVISION 11/01/17	DESCRIPTION:  FY 2020-21 STANDARD PLANS BICYCLE MARKINGS	INDEX 711-002	SHEET 2 of 2
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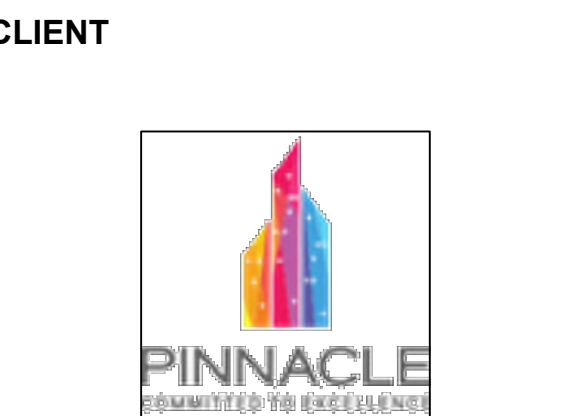
301 East Atlantic Blvd. Pompano Beach, FL 33060
PH: (954) 788-3400

Florida Certificate of Authorization: 7928
Licensed Business Number: 6860

REVISIONS		
NO.	DESCRIPTION	DATE

**PRELIMINARY PLAN
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ISSUE DATE: 03/17/21
DESIGNED BY: MC
DRAWN BY: JR
CHECKED BY: JT
BID-CONTRACT:



PROJECT

PINNACLE 441

SHEET TITLE

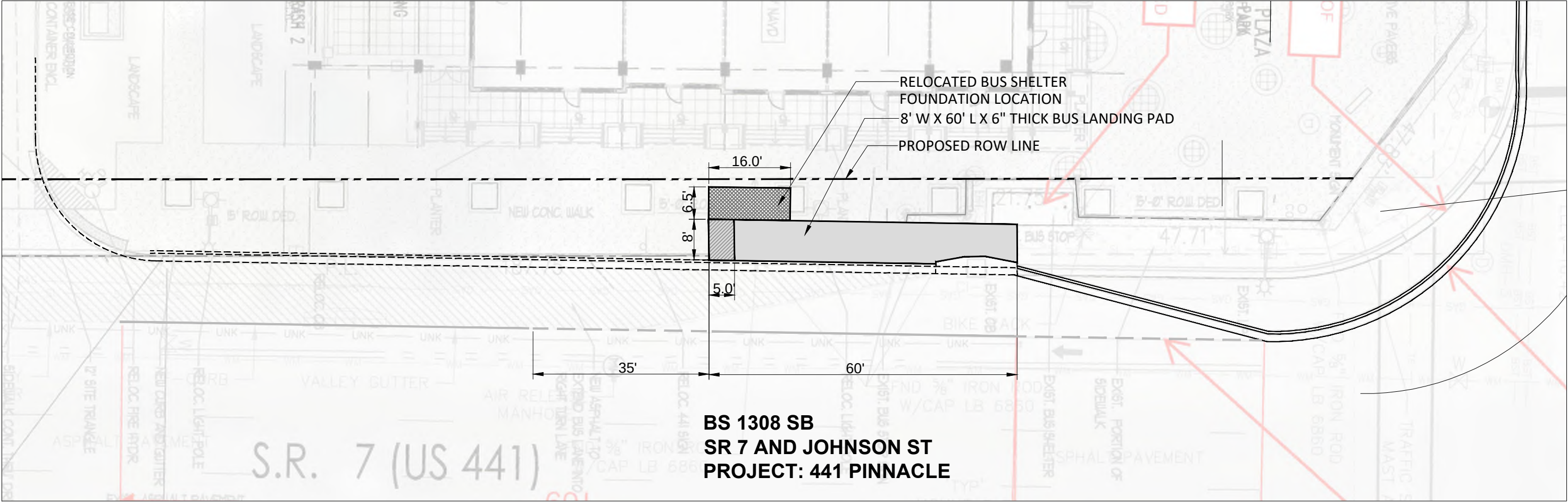
PAVEMENT MARKING
AND SIGNAGE
DETAILS

SHEET NUMBER CM-501
PROJECT NUMBER 11074.01

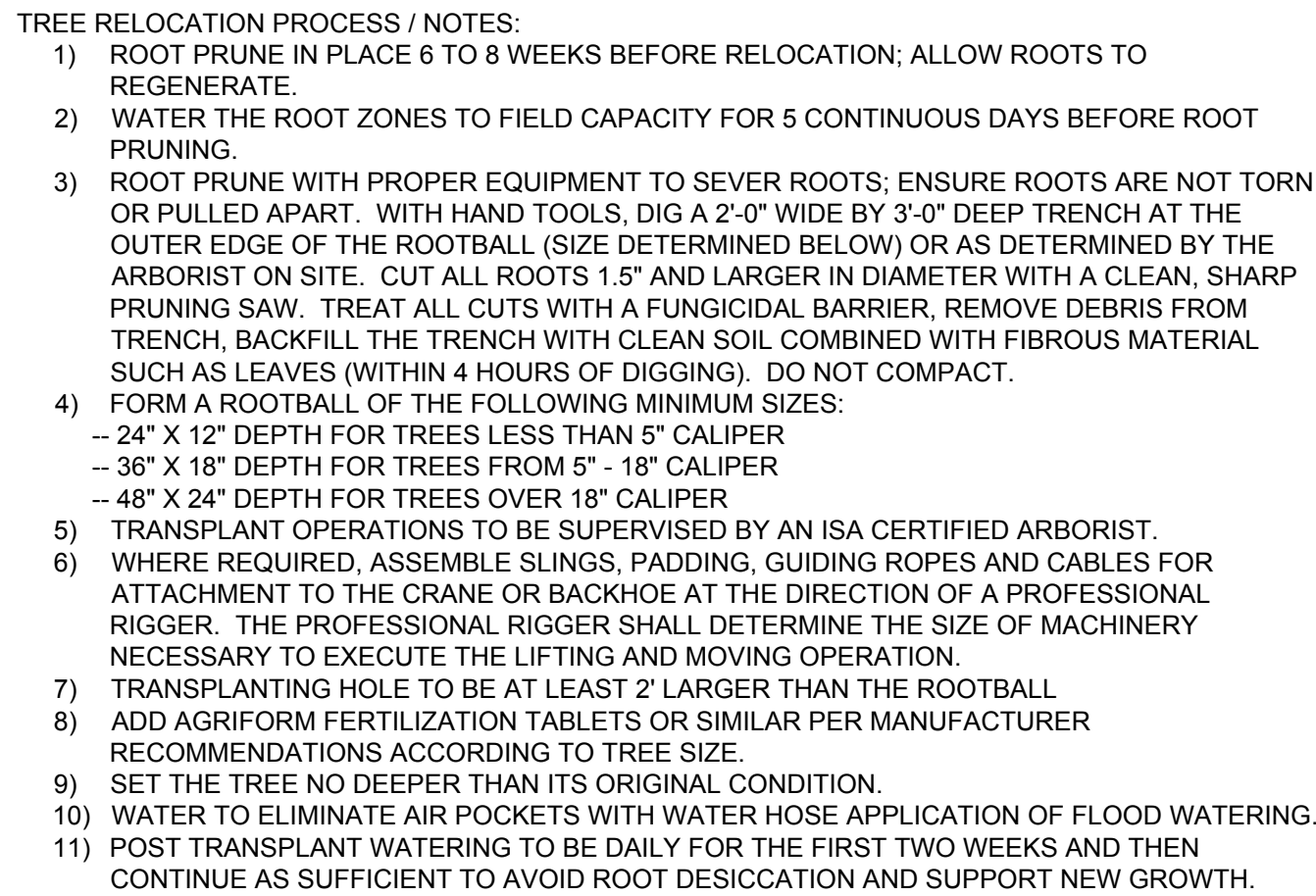
Plotted by: gjoas On Wednesday, September 23, 2020 9:40:00 AM

Drawing name: M:\1111074.01 - Pinnacle Housing Group\Engineering\Cadd\11074.01-CM-501.dwg

STATUS: TAC



REVISIONS				REVISIONS				Broward County Transit TRANSPORTATION DEPARTMENT Service & Capital Planning 1 North University Drive, Ste 3400A, Plantation, FL 33324	441 PINNACLE BS 1308 SB AND BS 648 EB SR 7 AND JOHNSON ST.		SHEET NO.
DATE	NO.	REMARKS	BY	DATE	NO.	REMARKS	BY				
				4-29-21			NRH				



03 TREE RELOCATION NOTES

SECTION NOT TO SCALE

EXISTING TREE

VARIABLES

DISTANCE VARIES, AS DESIGNATED IN FIELD

PROPOSED SIDEWALK OR ROADWAY

EXISTING GRADE

ROOT PRUNE 8" MAX. DEPTH

8" MAX.

- 1) ROOT PRUNE ALL TREES ADJACENT TO NEW CONSTRUCTION.
- 2) ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF A CERTIFIED ARBORIST PER APPROVED STANDARDS.
- 3) ROOT PRUNE IN PLACE 6 TO 8 WEEKS PRIOR TO CONSTRUCTION; ALLOW ROOTS TO REGENERATE.
- 4) WATER THE ROOT ZONES TO FIELD CAPACITY FOR 5 CONTINUOUS DAYS BEFORE ROOT PRUNING.
- 5) ROOT PRUNE WITH PROPER EQUIPMENT TO SEVER ROOTS; ENSURE ROOTS ARE NOT TORN OR PULLED APART. CUT ALL ROOTS 1.5" AND LARGER IN DIAMETER WITH A CLEAN, SHARP PRUNING SAW. TREAT ALL CUTS WITH A FUNGICIDAL BARRIER, REMOVE DEBRIS FROM TRENCH, BACKFILL THE TRENCH WITH CLEAN SANDY SOIL (WITHIN 4 HOURS OF DIGGING). DO NOT COMPACT.
- 6) ROOTS TO BE PRUNED TO A MAXIMUM OF 8" BELOW EXISTING GRADE.



TREE #								
PROJECT # : 11074.01		PROJECT NAME: PINNACLE 441						
TREE #	COMMON NAME	SCIENTIFIC NAME	DBH	HT.	CNPY.	TREE %	TREE	COMMENTS
			IN.	FT.	FT.	CONDITION	DISPOSITION	
1	ARBORVITAE	"Thuja occidentalis"	12	20	12	N/A	REMOVE	OVERGROWN SHRUB
2	GUMBO LIMBO	"Bursera simaruba"	7	14	16	65	REMOVE	POOR FORM
3	PAPAYA	Carica papaya	4	10	3	N/A	REMOVE	HERBACEOUS FRUIT
4	PAPAYA	Carica papaya	4	10	3	N/A	REMOVE	HERBACEOUS FRUIT
5	GUMBO LIMBO	"Bursera simaruba"	4	16	8	60	REMOVE	POOR FORM
6	STRANGLER FIG	"Ficus aurea"	8	12	15	60	REMOVE	GROWING IN FENCE
7	GUMBO LIMBO	"Bursera simaruba"	7	25	15	80	REMOVE	CO-D. POOR FORM
8	BANANA	"Musa spp."	clump	10	10	N/A	REMOVE	HERBACEOUS FRUIT
9	ARECA PALM	"Chrysalidocarpus lutescens"	clump	12	8	N/A	REMOVE	CLUMPING PALM
10	ARECA PALM	"Chrysalidocarpus lutescens"	clump	12	8	N/A	REMOVE	CLUMPING PALM
11	SEAGRASS	"Coccoloba uvifera"	13	25	25	50	REMOVE	B-DMG. D. POOR PRUNING
12	NORFOLK ISLAND PINE	"Araucaria heterophylla"	6.6,8,12	50	20	N/A	REMOVE	MULTI-STEM R. SPROUTS, POTENTIAL HAZARD
13	NORFOLK ISLAND PINE	"Araucaria heterophylla"	6.6,8,12	50	20	N/A	REMOVE	MULTI-STEM R. SPROUTS, POTENTIAL HAZARD
14	MULLBERRY	Morus spp.	9	16	20	N/A	REMOVE	B-DMG. IN FENCE
15	MULLBERRY	Morus spp.	8	25	10	N/A	REMOVE	B-DMG. POOR FORM
16	UMBRELLA TREE	"Schefflera actinophylla"	11	25	12	N/A	REMOVE	INVASIVE/ EXOTIC
17	STRANGLER FIG	"Ficus aurea"	28	25	30	60	REMOVE	AROUND 14" MELALEUCA, B-DMG. SUCKERS
18	MULLBERRY	Morus spp.	3	8	8	N/A	REMOVE	SPARSE DMG
19	RUBBER TREE	Ficus elastica	15, 26	25	35	40	REMOVE	ROOT DMG, T-DMG, B-DMG, DECAY
20	UMBRELLA TREE	"Schefflera actinophylla"	9	25	12	N/A	REMOVE	INVASIVE/ EXOTIC
21	UMBRELLA TREE	"Schefflera actinophylla"	10	28	12	N/A	REMOVE	INVASIVE/ EXOTIC
22	CABBAGE PALM	"Sabal palmetto"	10	5	0	N/A	REMOVE	DEAD
23	GUMBO LIMBO	"Bursera simaruba"	12	30	30	60	REMOVE	T-DMG, B-DMG, SHADED
24	CARROTWOOD	"Cupaniopsis anacardioides"	12	20	20	N/A	REMOVE	INVASIVE/ EXOTIC
25	BLACK OLIVE	"Bucida buceras"	11	24	30	50	REMOVE	NO LEADER. HORIZONTAL, UTILITY CONFLICT
26	BLACK OLIVE	"Bucida buceras"	10	22	25	40	REMOVE	SM ROOT AREA, T-DMG, B-DMG, SPARSE, DEBARK, UTILITY CONFLICT
27	BLACK OLIVE	"Bucida buceras"	14	25	25	30	REMOVE	B-DMG. OPEN WOUNDS, POOR CANOPY, POOR STRUCTURE
28	MAHOAGNY	"Swietenia mahagoni"	12	25	25	60	REMOVE	WOUNDS, CANOPY LIFTED
29	RUSTY FIG	Ficus rubiginosa	12	20	20	20	REMOVE	MAJOR DAMAGE, BROKEN LEADER, B-DMG
30	MAHOAGNY	"Swietenia mahagoni"	28	30	40	20	REMOVE	CO-O. OPEN WOUNDS, DECAY, INCUSION, CRACKS, HAZARD
31	BLACK OLIVE	"Bucida buceras"	12	30	20	40	REMOVE	SPARSE O/LOROTIC
32	FLORIDA PRUNET	Forestiera selegreata	3, 2, 2	18	12	50	REMOVE	OVERGROWN SHRUB, IN FENCE, PRUNING DMG
33	PYGMY DATE PALM	"Phoenix roebelenii"	3	6	4	N/A	REMOVE	SMALL PALM, POOR HEALTH
34	PONGAM	"Pongamia pinnata"	14	20	25	10	REMOVE	POOR CONDITION, DISEASED, SCALY GROWTH ON TRUNK
35	PONGAM	"Pongamia pinnata"	7	12	10	10	REMOVE	STUMP, SIDE BRANCH, DISEASED, SCALY GROWTH ON TRUNK
36	BLACK OLIVE	"Bucida buceras"	15	30	25	65	REMOVE	EXP.ROOTS, SUCKERS, B-DMG
37	BLACK OLIVE	"Bucida buceras"	17	30	30	65	REMOVE	EXP.ROOTS, SUCKERS, B-DMG
38	UMBRELLA TREE	"Schefflera actinophylla"	10	20	12	N/A	REMOVE	INVASIVE/ EXOTIC
39	LIVE OAK	"Quercus virginiana"	16	40	35	65	REMOVE	SURFACE ROOTS, UTILITY CONFLICT, ELECTROCUTION HAZARD
40	TROPICAL ALMOND	"Terminalia catappa"	7	14	7	N/A	REMAIN	INVASIVE/ EXOTIC - OFFSITE TREE
41	CARROTWOOD	"Cupaniopsis anacardioides"	5	10	6	N/A	REMAIN	INVASIVE/ EXOTIC - OFFSITE TREE

Tree Mitigation Table	
247	Total DBH (inches) to be removed
Replacement Trees	
207	Total Caliper inches proposed

TREE DISPOSITION NOTES

EXISTING TREES TO REMAIN SHALL BE TRIMMED PER ANSI-A300 STANDARDS, REMOVING WEAKEST RUBBING BRANCHES AND DEAD BRANCHES, BUT RETAINING 80% OF FOLIAGE. LARGE TREES SHALL HAVE LOWER BRANCHES CLEARED UP TO 8'.
SYMBOLS MAY BE SHOWN OFFSET FROM ACTUAL TREE LOCATION FOR CLARITY.
CONTACT LANDSCAPE ARCHITECT / ISA CERTIFIED ARBORIST FOR CLARIFICATION ON ANY DISCREPANCIES.
ALL TRIMMING AND ANY NECESSARY ROOT PRUNING SHALL BE PERFORMED OR SUPERVISED BY A CERTIFIED ARBORIST.
ALL TREE WORK REQUIRE PERMITTING BY A REGISTERED COUNTY TREE TRIMMER.
SUBMITTERS SHALL BE RESPONSIBLE FOR ALL REQUIRED TREES AND PAIS.
REMOVAL OF TREES OR PALMS WILL REQUIRE A WRITTEN "TREE REMOVAL PERMIT" FROM THE LOCAL GOVERNING AGENCY PRIOR TO REMOVAL. CONFIRM WITH LOCAL GOVERNING AGENCY THAT TREES CLASSIFIED AS NUISANCE/EXOTIC INVASIVE MAY BE EXEMPT.
ALL TREES AND PLANT MATERIAL TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION. REFER TO TREE PROTECTION DETAIL. THE CONTRACTOR SHALL TAKE EXTRA CAUTION TO PREVENT ANY DAMAGE TO THE TRUNK, ROOT ZONES AND GRADE.

[illegible]

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RESPONSIBILITY FOR THE USE OF THESE
PLANS PRIOR TO OBTAINING PERMITS FROM
ALL AGENCIES HAVING JURISDICTION OVER
THE PROJECT WILL FALL SOLELY UPON THE
USER.

ISSUE DATE:	05/17/21
DESIGNED BY:	JR, MF
DRAWN BY:	JR, MF
CHECKED BY:	MF
BID-CONTRACT:	

MICHAEL J. PHILLIPS, R.L.A.
FLORIDA REG. NO. LA0001540
(FOR THE FIRM)

CLIENT

**PINNACLE
HOUSING
GROUP**

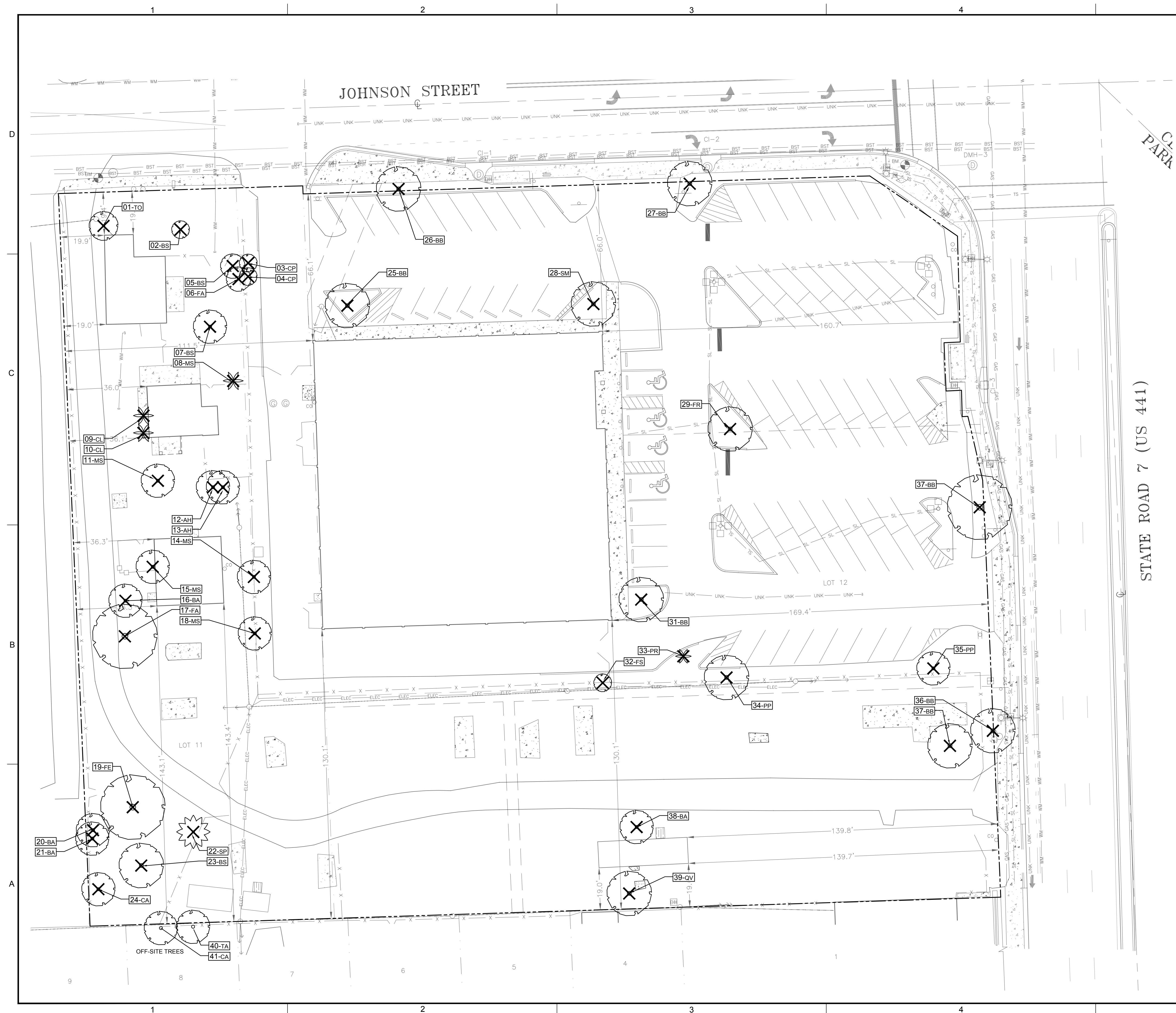
PROJECT

**PINNACLE 441
HOLLYWOOD**

SHEET TITLE

TREE DISPOSITION LIST AND DETAILS

SHEET NUMBER	LD-001
PROJECT NUMBER	11074.01



**301 East Atlantic Blvd. Pompano
Beach, FL 33060
PH: (954) 788-3400**

Florida Certificate of Authorization: 7928
Licensed Business Number: 6860

[illegible]

PRELIMINARY PLAN
NOT FOR CONSTRUCTION

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USER.**

ISSUE DATE:	05/17/21
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DESIGNED BY: JR, MP

DRAWN BY: JR, MP

CHECKED BY: MP

BID-CONTRACT:

MICHAEL J. PHILLIPS, R.L.A.
FLORIDA REG. NO. LA0001540
(FOR THE FIRM)

CLIENT

**PINNACLE
HOUSING
GROUP**

PROJECT

**PINNACLE 441
HOLLYWOOD**

SHEET TITLE

TREE DISPOSITION PLAN

SHEET
NUMBER

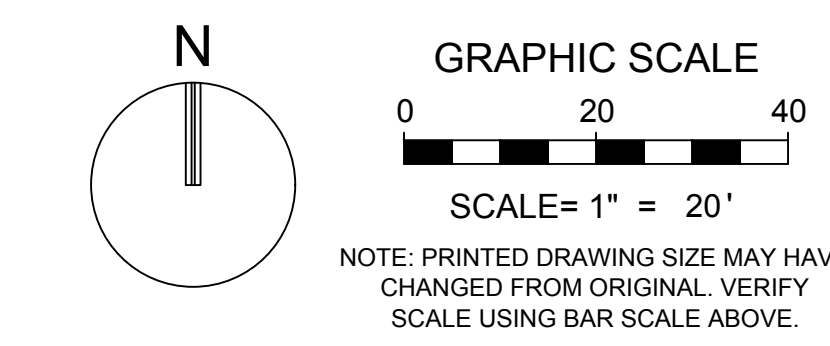
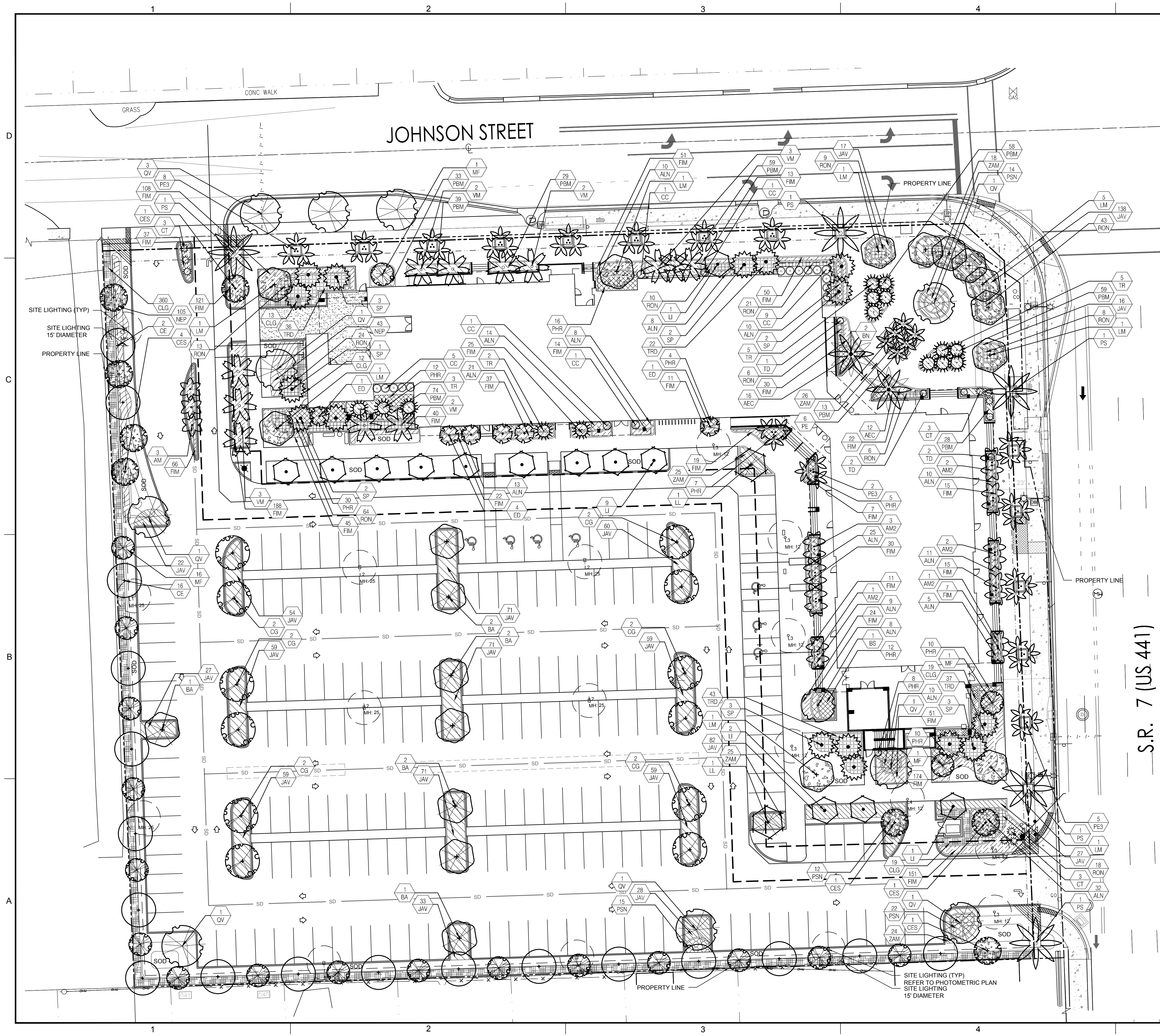
LD-101

PROJECT NUMBER	11074.01
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STATUS: TAC

Drawing name: N:\1111074.01 - Pinnacle 441 Hollywood - Pinnacle Housing Group\Landscape Architecture\CAD\11074.01-LD-1XX.dwg

	1	2	3	4	5
A. SCOPE	1. The location of plants, as shown on the plans, is approximate. The final locations may be adjusted slightly to accommodate unforeseen field conditions, to comply with safety setback criteria, to avoid creating unsafe sight conditions, or as otherwise directed or approved by the Landscape Architect / owner in writing. All other location adjustments to the layout are to be approved in advance in writing by the Landscape Architect and owner.	2. Contractor understands that an important element of the design of this project is meeting landscape ordinances with a design flare that includes symmetry, alignment, focal points and / or smooth curvilinear forms where applied and contractor shall follow and instruct the working crews accordingly. In the event of any doubt as to how to execute the plans, Contractor shall immediately consult with Architect and/or Owner.	3. Landscape Contractor shall fine grade, prepare site as outlined in the following notes and per plans; furnish and install all plants, shrubs, trees and / or palms meeting minimum requirements and brace them per details provided. Furnish and install soil, gravel, boulders, sod and mulch as specified in plans and notes below.	4. Landscape contractor shall furnish and install all trees, palms, shrubs, groundcover, sod, planting soil, fertilizer, herbicide, pre-emergence herbicide, seed, and mulch.	5. These disturbed areas shall have proper irrigation established or re-established if they were disrupted or non-functional.
B. BIDDING	1. Contractor to have liability insurance including Owner and Landscaper as insured's in excess of \$10,000 as well as Worker's Compensation.	2. Contractors and Subs must ensure they are doing take offs from Bldg Dept., Revised sets and / or Bid Set documents. Verify with this Office that you are bidding from latest available plans.	3. Read ALL notes and typical planting details sheets prior to submitting RFIs and prior to bidding.	4. When submitting an RFI reference sheet number, detail number and/or note category and number.	5. Landscape Contractor shall verify all estimated quantities of material shown on the drawings prior to submitting their bid. Plant list pricing (if shown) is for permitting / mitigation comparison purposes only, any prices shown are to be disregarded by Landscape Contractor.
	6. All plant material shall meet or exceed height and spread requirement. Heights are local code requirement and / or design intent related and always governs over container size. Container size given for reference only and must be sized up to meet height requirements of plant list. Plant material available with excessive height beyond specifications must be consulted with Landscape Architect for design intent.	7. All landscape material was confirmed to be available at time of design. Landscape contractor understands that some material may not be available locally, however is available in Tri-County Region. Plant material supply is the responsibility of the Landscape Contractor that is awarded the contract and he/she shall take steps to ensure availability at the time of installation. Bring to the attention of Landscape Architect if specific material is no longer available at the time of bidding and / or prior to actual construction. Substitutions must be approved prior to construction.	8. Pre-inspections of site required prior to bidding.	9. The plant list is intended only as an aid to bidding. Any discrepancies found between the quantities on the plan and the quantities on the plant list shall be brought to the attention of the Landscape Architect for clarification.	10. All labor and material for soil amendments and fertilizer that is required to ensure the successful establishment and survival of the proposed vegetation, as well as all the cost for the removal of unsuitable or excess backfill material from plant beds, in addition to fine grading and mulching all plant beds and individual trees shall be included in the contractor's bid to perform the work represented in this plan set.
	11. Bid shall be itemized for possible value engineering.	12. All trees and Rocks (if specified) shall be estimated by scaling plans. Include price per square foot for sod. Rocks (include price per ton). Small rocks and gravel beds shall have landscape fabric material and minimum 4" depth. Boulders to be bid by unit.	13. All S.F. if noted is approximate and shall not be considered all inclusive; it is the contractor's responsibility to do his or her take off, submit price per S.F. and in the end, sod all areas that are not covered either by plants, mulch which may be damaged during construction.	14. Final payment to the Contractor shall be for actual plants installed on the project.	15. Contractor shall be responsible for obtaining and paying for costs of all permits described in bid whether permit costs are reimbursable by owner or included in bid. Research permit status and research all permits and additional documentation and certifications required such as separate tree removal permit for example, and additional permits prior to bidding.
	16. General / Landscape Contractor shall leave a 5% unforeseen conditions allowance such as for additional root barriers determined to be needed on site and as job progresses.	17. Refer to Section T, Watering, for supplemental watering requirement.	18. Landscape contractor is responsible for verifying all plant quantities prior to bidding and within 7 calendar days of receipt of these plans shall notify the landscape architect in writing of any and all discrepancies. In case of discrepancies, planting plans shall take precedence over plant list. No substitutions are to be made without prior consent of the Landscape Architect.	19. Plants grown in containers prior to installation shall be removed from their containers before they are planted in the ground and have circling roots removed. All screening shrubs shall be planted for proper operation of equipment being screened and/or per the requirements of the utility as necessary. All hedge material required for screening purposes shall be planted with branches touching. Adjust spacing as necessary and/or provide additional plants to provide an adequate screen as required by code. Leave access to utility or clearance as required.	20. All landscaping shall be installed according to sound nursery practices. Contractor shall comply with federal, state and local laws and regulations pertaining to the inspection for plant disease and insect infestation.
	21. All ideas, designs and plans indicated or represented by this drawing are owned by and are the exclusive property of Keith and Associates and may not be duplicated without authorization or used for other projects than the intended.	22. The Landscape Contractor shall exercise caution to protect any existing sod, electrical and irrigation. Any damage to the sod, electrical or irrigation shall be replaced or repaired to the original state by the Landscape Contractor at no additional cost to the owner.	23. Tree, palm, accent shrubs and bed lines are to be located in the field and approved by the Landscape Architect / owner prior to planting. Landscape Contractor acknowledges that material planted without approval of landscape may be subject to relocation by Landscape Architect to maintain design intent if not followed properly.	24. All plant material shall be priced as per Landscape Architect's specifications.	25. In areas where asphalt is removed in order to receive landscape material, the lime rock sub-base material must also be removed and replaced with approved planting soil mix.
	26. Landscape contractor is responsible for sending photographs to the landscape architect to pre-approve all trees, palms, and shrubs prior to delivery to project site.	27. Landscape contractor shall coordinate his or her work with that of the irrigation, landscape lighting, and landscape contractor if different.	28. The landscape contractor shall treat plant areas with pre-emergence herbicide after weeds and grass have been removed. Landscape contractor shall wait 7 days after pre-emergence treatment prior to planting.	29. The landscape contractor shall treat plant areas with pre-emergence herbicide after weeds and grass have been removed. Landscape contractor shall wait 7 days after pre-emergence treatment prior to planting.	30. The landscape contractor shall treat plant areas with pre-emergence herbicide after weeds and grass have been removed. Landscape contractor shall wait 7 days after pre-emergence treatment prior to planting.
D. PERMITS & REGULATIONS	1. Contractor(s) must obtain separate landscape, irrigation and tree relocation/removal permits from the governing authority prior to the issuance of the first building permit for the project.	2. Landscape contractor to call the local Landscape Inspector to schedule a pre-construction meeting prior to installation if required.	3. All mandatory requirements by local Landscape Departments and their inspectors shall govern and landscape contractor commits by accepting contract to comply promptly for builder/owner to obtain C.O.		
E. TREE REMOVAL	1. Removal of any trees or palms will require a written "tree removal permit" from the local governing agency prior to removal. Non-native trees classified as "prohibited" trees may be exempt from the permit if listed as Category 1 by Florida Exotic Pest Plant Council. Confirm with Local Municipality.	2. Landscape Contractor is responsible to remove ALL invasive nuisance trees such as Brazilian Pepper, Melaleuca, Australian Pine and all invasive trees as categorized by the governing agencies, whether listed on plans or not.	3. The Landscape Contractor is responsible for coordinating tree and palm removals and transplants shown on the tree/palm Disposition Plan. The Landscape Contractor is to remove and discard from site existing unwanted trees, palms, shrubs, ground covers, sod and weeds within landscape areas.		
F. EXISTING TREES	1. Existing trees designated to remain shall be protected during all construction phases. Any trees or shrubs designated to remain that are scarred or destroyed will be replaced at the contractor's expense, per the appraised value.	2. Existing plant material not shown on the plan and in conflict with new planting shall be evaluated at the time of new planting installation by the Landscape Architect. Trees and plant material indicated to be relocated with no new location provided in plans shall be moved to a location on site designated as a nursery holding area with the root ball protected from direct sunlight, maintained and irrigated until new location is determined.	3. Prune trees to remove damaged branches and improve natural shape and thin out structure. Do not remove more than 15% of branches. Do not prune back terminal leader.	4. Prune existing shrubs to remove damaged branches and improve natural shape.	5. Existing trees to remain shall be trimmed per ANSI-A300 standards. Supervision of the trimming shall be performed by an ISA Certified Arborist to ensure quality work.
	6. All existing trees shall be "fired and thinned" to provide an 8' minimum clearance for sidewalks and pedestrian walkways and a 14' minimum clearance for roadways, driveways and all vehicular use areas.	7. Selective canopy and root pruning of existing trees can be conducted (only as necessary and in no event more than 35%) to accommodate for new approved construction. Pruning shall be conducted / supervised by an ISA Arborist.	8. If plans call for relocation of trees, palms or plants. High level of care should be exercised to assure that they are not damaged in the process and that they are promptly replanted upon being dug up.	9. All underground utilities and drain or irrigation lines shall be routed outside the tree protection zone, if lines must	10. traverse the protection area, they shall be tunneled or bored under the tree.
	11. Erosion control devices such as silt fencing, debris basins, and water diversion structures shall be installed to prevent siltation and/or erosion within the tree protection zone.	12. The contractor shall be responsible for determining the location of and avoid and protect utility lines, buried cables, and other utilities. The owner or Landscape Architect shall not be responsible for damage to utility or irrigation lines.	13. Water the root zones to field capacity for 5 continuous days before root pruning. At a minimum soak the soil to a 4'-0" depth within a 6' radius.	14. Root prune a minimum of six weeks before relocation. Prune away all dead or damaged limbs or fronds. For trees, prune out 1/3 of the existing canopy by selectively trimming small internal branches. For palms, gather fronds above the bud and tie them loosely with jute twine to avoid damage.	15. Tree Relocation process must be performed or supervised by ISA Certified Arborist.
	16. Water the root zones to field capacity for 5 continuous days before root pruning. At a minimum soak the soil to a 4'-0" depth within a 6' radius.	17. Root prune a minimum of six weeks before relocation. Prune away all dead or damaged limbs or fronds. For trees, prune out 1/3 of the existing canopy by selectively trimming small internal branches. For palms, gather fronds above the bud and tie them loosely with jute twine to avoid damage.	18. Brace root pruned trees awaiting relocation.	19. Root prune 1/3 of the root system, irrigate daily for 2 weeks then root prune another 1/3, irrigate daily and prune last 1/3 on actual relocation date, no less than two weeks (six weeks total minimum root pruning by stages). ISA Arborist shall staff to observe for intense root ball loss, canopy pruning may be deemed necessary by Arborist on staff to balance for intense root ball loss, canopy shall be trimmed only as necessary to increase survival.	20. Root prune with proper clean equipment to sever roots. Ensure roots are not torn or pulled apart.
	21. With hand tools, dig a 2'-0" wide by 2'-0" deep trench at a minimum distance as determined by the consulting arborist to expose roots. Cut all roots 1.5" and larger in diameter with a clean, sharp pruning saw. Treat all cuts with a fungicidal barrier. Backfill the trench, within 4 hours of digging, with a 1:1 mixture of site soil and sawdust or other fine organic material. Do not compact.	22. Form a rootball size in compliance with Florida grades and Florida standards number 1 or better.	23. Maintain the soil moisture at field capacity throughout the six weeks.	24. Allow the plant to regenerate roots over a period of six weeks.	25. At the end of six weeks, prepare the planting pit at the new location. Overdig the hole diameter a minimum of 2' beyond the root ball, with the recipient hole to be at least 1/3 larger than the area that was trenched for transplanting.
	26. With the consulting arborist present, undercut the entire root ball of the plants to be transplanted at a depth specified by the arborist. The undercutting method may be a choker cable drawn through the root ball with heavy equipment.	27. At the direction of a professional rigger, assemble slings, padding, guiding ropes and cables for attachment to the crane or backhoe. The professional rigger shall determine the size of machinery necessary to execute the lifting and moving operation.	28. Install trees within 24 hours of removal from their original location to locations provided by Landscape Architect or Developer and approved by the municipal / Landscape Inspector.	29. Experienced Tree Spade operator shall move tree or experienced tree mover shall choose best means and methods to strap and rig tree for transporting safely without damage to new location.	30. Maintain trees in a healthy and vigorous condition during installation and throughout the plant establishment period. Replace trees that do not meet this requirement with the same species, size, and quality or per mitigation requirements specific to the governing authority with jurisdiction.
	31. Fertilize the plant as directed by the consulting arborist.	32. When the plant is placed in the new location, backfill the planting pit with topsoil and water thoroughly to eliminate air pockets and compact the soil. Set the tree no deeper than its original condition.	33. Cover the root ball area with 3" depth of organic mulch.	34. Provide fungicide and fertility applications at the direction of the consulting arborist.	35. Post transplant watering to provide moisture and reduce any excessive stress due to root desiccation. Watering to be adjusted according to conditions and at the supervision and direction of the ISA certified arborist.
	36. The diameter of the root-pruning or transplanting circle shall be at a distance away from the trunk equal to 12 times each inch of trunk diameter at breast height.	37. For all palms except Sabal palmetto, the lower fronds shall be pruned leaving 9-11 fronds that can be tied without an extensive amount of weight that may damage the heart of the palm. The Sabal palmetto shall have all fronds cut without damaging the bud.	38. Transplanting must occur within 24 hours after being dug for relocation. Trees/palms should be kept in shade and the canopy kept moist.	39. Digging and preparation of the new hole for the transplant shall be done prior to removing the tree from the existing location.	40. The landscape Contractor is to verify that all new holes have appropriate percolation.
	41. Padding the plant material shall be necessary so that the trunk or "boots" are not damaged.	42. A 6" saucer shall be created around the edge of the plant pit to help hold water, see planting detail for additional information.	43. Over the guarantee period the Landscape contractor shall be responsible for resetting any trees or palms that are not vertical when caused by winds less than 74 mph.	44. After transplanting trees and palms, the landscape contractor shall be responsible for obtaining water and watering to maintain soil moisture during the guarantee period at a minimum of: First six weeks - one time per week - three times per week, Third and Fourth months - two times per week, Last eight months - one time per week.	45. For trees over 4" in caliper at the time of planting, the schedule should be: First six weeks, daily, one and a half months to six months - three times per week, last six months - one time per week.
H. SITE PREPARATION & GRADING	1. Landscape contractor shall loosen and till compacted soils that are overly compacted in all planting areas of the project to provide for proper soil aeration for plant establishment.	2. Planted areas shall be cleared of underground rocks, construction debris and other materials detrimental to the health of the plants. Lime rock base material shall be removed within planting pits and adjacent to pavement. The planting areas should be cleaned to a depth equal to the root ball of the trees/palms proposed for the area. Planting area soils shall be tested for pH before planting. Soils showing high (alkaline) pH (over 7.5) shall be amended or replaced with native soil having a pH range of 6.5 - 7.5, as approved by Landscape Architect.	3. All planting areas and planting pits shall be tested for sufficient percolation prior to final planting and irrigation installation to ensure proper drainage. Plant beds in parking lots and in areas compacted by heavy equipment shall be de-compacted so that drainage is not impeded.	4. Landscape Contractor shall treat plant areas with pre-emergence herbicide after weeds and grass have been removed. Landscape Contractor shall wait (7) seven days after pre-emergence treatment prior to planting.	5. Site preparation shall include the eradication and removal of any weeds, clean-up of any dead material, debris, and rubbish.
	6. General site and berm grading to +/- 1 inch (1") shall be provided by the general contractor. All finished site grading shall be provided by the Landscape Contractor. All planting beds shall be free of all rocks 1/2" or larger, sticks, and objectionable material including weeds and weed seeds. All lime rock shall be removed/cleaned down to the native soils.	7. The Landscape contractor shall ensure the planting areas are at a finish grade prior to installing plant materials.	8. All trees and plant material to remain shall be protected during construction. Contractor shall install protective barriers such as "Tensar" orange safety fencing or similar, to be installed before the beginning of the project. Barriers shall be located to include the drip line of the trees, palms and plant material. The contractor shall take extra caution to prevent any damage to the trunk, root zones and grade.	9. Final grade within planting areas to be 4" below adjacent paved areas or top of curb. Sod areas to be 2" below.	10. All planting beds shall be shaped and sloped to provide proper drainage away from building and structures and to swales, if applicable.
I. IRRIGATION	1. Any Irrigation Notes and specifications included in Irrigation Sheets govern over the following Irrigation Notes.	2. The Landscape Contractor shall coordinate with the irrigation contractor if not the same and leave provisions for all individual trees in turf areas and all planting beds.	3. Irrigation / Landscape contractor to guarantee 100% coverage and 50% overlap (head to head coverage) to all landscaped areas and furnish and install a rain sensor.	4. Irrigation Contractor to adapt design to onsite conditions adjusting heads and changing nozzles as required to avoid overspray onto buildings or paved areas.	5. The contractor shall ensure that the irrigation system is operational and free of leaks prior to any planting being finalized. Plant material that is installed prior to the irrigation system being operational shall be watered by the contractor at his or her expense. Water for plant establishment should be included in the cost of the plant.
	6. All guidelines as outlined by the South Florida Water Management District (SFWMD) or water management district with jurisdiction shall be strictly adhered to.	7. Irrigation water whether pumped from a lake or a well shall be treated for algae, rust, etc. to provide clean treated irrigation water that will not clog or stain property or components.	8. Any existing irrigation system shall be retrofitted to comply with the specifications as outlined above.		
J. HARDSCAPE & OTHER MATERIALS	1. Face of trees and palms to be located a minimum of 2' setback from all fences, walkways, walls, and paved surfaces, unless otherwise indicated on the plans. Refer to details.	2. Trees shall be placed a minimum of 5 ft. from underground utilities, unless otherwise approved in writing by Landscape Architect and Owner.	3. All canopy trees to be planted min. of 15' from light source/poles. Unless otherwise approved by the governing authority / Landscape Architect and Owner.	4. Landscape contractor shall contact the county, governing authority and/or utility companies to locate all	
K. UTILITIES / CLEARANCES	1. The contractor shall be responsible for determining the location of and avoid and protect utility lines, buried cables, and other utilities. The owner or Landscape Architect shall not be responsible for damage to utility or irrigation lines.	2. Trees shall be placed a minimum of 5 ft. from underground utilities, unless otherwise approved in writing by Landscape Architect and Owner.	3. All canopy trees to be planted min. of 15' from light source/poles. Unless otherwise approved by the governing authority / Landscape Architect and Owner.	4. Landscape contractor shall contact the county, governing authority and/or utility companies to locate all	
L. ROOT BARRIERS	1. Root barriers will be installed to protect building foundations, curbing, walkways, paved areas, roadway base material and utilities from existing large trees or proposed new trees that are within 5' of existing or new approved construction or as may be deemed necessary as job progresses.	2. Mechanical Root barriers will be used for large existing Canopy Trees and chemical type barriers will be used for new trees.	3. Mechanical Root barriers will be "DeepRoot" and Chemical Root barriers will be "Biobarrier". Substitutions must be of approved equal or better quality.	4. Root barriers will be installed per manufacturer specifications.	5. Root barrier depths will be determined by the manufacturer recommended depth chart and as required by on-site conditions in a case by case basis as deemed necessary by Landscape Architect Architect / ISA Arborist and Landscape Inspector.
M. LANDSCAPE BACKFILL & SOIL AMENDMENT	1. All building construction material and foreign material shall be removed from the planting areas and replaced with 70/30 mix (70% sand / 30% organic compost) or amend existing soils per section H.2.	2. Planting soil mix shall be delivered to the site in a clean loose and friable condition and is required around the root ball of all trees and shrubs, the top 6" of all shrubs and ground cover beds and top 2" of all grassed areas. This soil shall be tilled into the existing soil after the existing soil has been cleaned of all undesirable foreign materials. Recycled compost is encouraged as a soil amendment alternative. Planting soil to be weed free.	3. Planting backfill for palms shall be clean coarse native sand unless specified elsewhere.	4. Do not allow air pockets to form when backfilling. All trees shall be watered-in utilizing water probe or a tree bar.	
N. PLANT SIZE & QUALITY	1. All plant material must meet or exceed the minimum size requirements as specified on the plant list. Height specification governs over container size if both specifications given cannot be met. Any other requirements for specific shape or effect as noted on the plan shall also be required for acceptance.	2. Material specified as Balled and Burlapped (B&B) can be accepted in container if not available as B&B at the discretion of Landscape Architect; if so, root bound and/or circling roots shall be removed and root ball must be proportionate to Tree / Palm.	3. U.O.N. All trees designated as single trunk shall have a single, relatively straight, dominant leader, proper structural branching and even branch distribution. Trunks on palms shall be uniform in thickness for the entire length of the palm and shall not taper off to disproportionate thinness towards the crown. Trees with bark inclusion, tipped branches, and co-dominant trunks will not be accepted. Trees with girdling, circling and/or plunging roots will be rejected.	4. Use nursery grown plant materials that complies with all required inspection, grading standards, and plant regulations in accordance with the latest edition of Florida Department of Agriculture, "Grade & Standards for Nursery Plants".	5. All trees and palms shall be free of open wounds and unsightly visible scars.
	6. All substitutions must be approved by the governing authority if it is required Canopy and by Landscape Architect / Owner if supplementary accent material.	7. Contractor shall comply with Federal, State, and Local laws and regulations pertaining to the inspection for plant disease and insect infestation.	8. Trees, palms, shrubs, ground covers:	9. Plant species and sizes shall conform to those indicated on the drawings. All nursery stock shall be in accordance with grades and standards for nursery plants parts 1 and 2, latest edition published by the Florida Department of Agriculture and Consumer Services, unless specified otherwise. All plants shall be Florida grade number 1 or better as determined by the Florida Division of Plant Industry and lightly knit plant, so trained or favored in its development that first appearance is unsightly and it is outstandingly superior in form, number of branches, compactness and symmetry. All plants shall be freshly dug, sound, healthy, vigorous, well branched and free of disease and insect eggs and larvae and shall have adequate root systems. Trees and palms shall be uniform in size and shape. All materials shall be subject to approval by the Landscape architect.	10. Plants shall be pruned prior to delivery only upon the approval of the Landscape Architect.
	11. All container grown plants shall be healthy, vigorous, well-rooted plants and established in the container in which they are sold. The plant shall have top of good quality and be in a healthy growing condition. An established container grown plant shall be transplanted into a container and grown in that container sufficiently long enough for the new fibrous roots to have developed so that the root mass will retain its shape and hold together when removed from the container.	12. Field grown trees and palms previously root pruned shall obtain a root ball with sufficient roots for continued growth without substantial shock.	13. Root suckers on any tree are not acceptable and must be properly pruned.	14. Contractor shall coordinate with Landscape Architect and Owner to obtain prior approval for the selection of the specific specimens of all palms and any trees of more than six feet in height. Contractor to supply photograph of trees prior to purchase and installation.	
O. PLANTING NOTES	1. At the discretion of the Landscape Architect, plants are subject to review for approval for size, variety, condition and appropriateness to the design intent.	2. All synthetic burlap, synthetic string or cords, or wire baskets shall be removed before any trees are planted. All synthetic tape (i.e. tagging tape, nursery tape) shall be removed from trunks, branches, etc. before inspection. The top 1/3 of any natural burlap shall be removed or tucked into the planting hole before the trees are back filled.	3. All "groundcover" requires 75% coverage and 100% within 3 months of installation. Bring to the attention of Landscape Architect if not achieving if this is not achievable with the installed groundcover.	4. Set tree no deeper than it was in its original growing condition with the top of the root ball even with, or slightly higher (+/- 1") than the finished grade.	5. All trees/palms shall be planted so the top of the root ball, root fair are slightly above final grade. Shrub material shall be planted such that the top of the plant ball is flush with the surrounding grade.
	6. All trees and palms shall be banded / staked per accepted standards by the Florida Nursery, Growers & Landscape Association (FNLGA). Nailing into trees and palms for any reason is prohibited and the material will be rejected. Please refer to the planting details.	7. All trees, new or relocated, to be staked and guyed as detailed.	8. Layout shrubs to create a continuous smooth front line and fill in behind with triangular spacing.	9. Excavate pit or trench to 1'-1 1/2' times the diameter of the balls or containers or 1' wider than the spread of roots and 3" deeper than required for positioning at proper height. Compact a layer of topsoil in bottom before placing plants. Backfill around plants with planting mixture, compacted to eliminate voids and air pockets. Form grade slightly dish and bermed at edges of excavation. Apply 3" of mulch.	10. Groundcover and shrubs to be spaced in a uniform and consistent pattern per planting details.
	11. All mechanical equipment, irrigation pumps, FPL transformers, pool pumps, etc. shall be screened on a minimum of three sides by landscape shrubs.	12. Contractor shall not mark or scar trunks in any fashion.	13. When requested by Landscape Architect, demonstration of healthy root system if not previously approved, can include tree removal and re-installation for inspection at no additional cost to the owner.	14. Remove rejected Plant material from the Site immediately and replace with acceptable plants.	
P. FERTILIZATION	1. All Fertilization shall comply with state fertilization laws. Fertilization shall be Agriform "20-10-5 Plus minors" or similar approved slow-release tablets applied per manufacturer suggested application rate chart:				
	Agriform® 21-gm Tablets (SKU# 90026"; 500 tablets/case)	NEW Tree / Shrub Container Size	1 Gal 2 Gal 3 Gal 5 Gal 7 Gal 15 Gal 24" Box	Installation: 1 1 to 2 2 to 3 2 to 3 3 to 5 7 to 10 15 to 24	
	• Place plant in the hole and backfill to halfway point.	• Do not place tablets in the bottom of the planting hole.	• Place Agriform Tablets in the hole about 10 to 2 inches away from root tips.	• Finish filling the hole around the plant to grade level.	SCOTT'S: 1-800-492-8255 or visit www.scottsspro.com
Q. SOD	1. All areas disturbed during construction shall be sodded with St. Augustine 'Seville' unless otherwise noted.				



- NOTES:**
- SOD TO BE ST. AUGUSTINE 'FLORATAM', EXCEPT IN RETENTION AREAS. CONTRACTOR TO DETERMINE QUANTITY.
 - ALL PLANTS TO BE FLORIDA NO. 1 OR BETTER PER FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS.
 - ALL SOD AND LANDSCAPE TO RECEIVE 100% COVERAGE WITH 100% OVERLAP FROM AN AUTOMATIC IRRIGATION SYSTEM USING AN APPROVED WATER SOURCE.
 - BUBBLERS TO BE PROVIDED FOR NEW AND RELOCATED TREES AND PALMS.
 - CONTRACTOR IS RESPONSIBLE FOR ALL CONDITIONS AND LANDSCAPE SPECIFICATION ATTACHED TO THIS PLAN AND PLANT LIST. PLAN AND SPECIFICATIONS SHALL BE CONSIDERED CONTRACT DOCUMENTS.
 - PRE-CONSTRUCTION MEETING IS REQUIRED BEFORE ANY PLANT MATERIAL IS INSTALLED ON SITE.
 - ALL ROAD ROCK, CONCRETE, ASPHALT AND OTHER NON-NATURAL MATERIAL BE REMOVED AND BE REPLACED WITH PLANTING SOIL PRIOR TO LANDSCAPE INSTALLATION.
 - NO TRENCHING ALLOWED WITHIN ROOT ZONES OF EXISTING TREES.

301 East Atlantic Blvd. Pompano Beach, FL 33060
PH: (954) 788-3400

Florida Certificate of Authorization: 7928
Licensed Business Number: 6860

REVISIONS		
NO.	DESCRIPTION	DATE

**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**

THESE PLANS ARE NOT FULLY PERMITTED AND ARE SUBJECT TO REVISIONS MADE DURING THE PERMITTING PROCESS.

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

ISSUE DATE:	05/17/21
DESIGNED BY:	JR, MP
DRAWN BY:	JR, MP
CHECKED BY:	MP
BID-CONTRACT:	

MICHAEL J. PHILLIPS, R.L.A.
FLORIDA REG. NO. LA0001540
(FOR THE FIRM)

CLIENT	PINNACLE HOUSING GROUP
PROJECT	PINNACLE 441 HOLLYWOOD
SHEET TITLE	LANDSCAPE PLAN
SHEET NUMBER	LP-101
PROJECT NUMBER	11074.01

Plotted by: jrmald On Wednesday, September 23, 2020 9:40:08 AM

Drawing name: N:\1111074.01 - Pinnacle 441 Hollywood - Pinnacle Housing Group\Landscaping\Architecture\CAD\11074.01-LP-1XX.dwg

STATUS: TAC

TREES	BOTANICAL / COMMON NAME	SIZE	NATIVE	REMARKS	QTY
BA	BULNESIA ARBOREA VERAWOOD	12' HT X 6' SPRD, FULL CANOPY	*		8
BS	BURSERA SIMARUBA GUMBO LIMBO	15' HT X 7' SPR, 3" DBH, FULL CANOPY	N**		1
CG	CAESALPINIA GRANADILLO BRIDAL VEIL TREE	12' HT X 6' SPRD, 2" DBH, FULL CANOPY	**		12
CE	CONOCARPUS ERECTUS GREEN BUTTONWOOD	12' HT X 6' SPRD, 2" DBH, FULL CANOPY	N**		18
CES	CONOCARPUS ERECTUS 'SERICEUS' SILVER BUTTONWOOD	10' HT X 5' SPRD., FULL CANOPY	N**	MULTI-TRUNK	8
ED	ELAEOCARPUS DECIPIENS TM JAPANESE BLUEBERRY TREE	12' HT. X 5' SPRD., 2" CAL.	**		6
LI	LAGERSTROEMIA INDICA 'RASPBERRY' RASPBERRY CRAPE MYRTLE	12' HT. 6' SPR, FULL CANOPY	**		13
LM	LAGERSTROEMIA X 'NATCHEZ' WHITE CRAPE MYRTLE	15' HT X 6' SPR, 3" DBH, FULL CANOPY	**		12
LL	LYSILOMA LATISILIQUUM WILD TAMARIND	12' HT X 6' SPRD, 2" DBH, FULL CANOPY	N**		2
MF	MYRCIANTHES FRAGRANS SIMPSON'S STOPPER	12' HT X 6' SPRD, 2" DBH, FULL CANOPY	N**		19
QV	QUERCUS VIRGINIANA SOUTHERN LIVE OAK	15' HT X 7' SPR, 3" DBH, FULL CANOPY	N**		10
PALMS	BOTANICAL / COMMON NAME	SIZE	NATIVE	REMARKS	QTY
AM	ADONIDIA MERRILLII MANILA PALM	6' HT. X 3' SPRD., FULL CANOPY, STANDARD			9
AM2	ADONIDIA MERRILLII MANILA PALM	8' OA, DOUBLE			3
BN	BISMARCKIA NOBILIS BISMARCK PALM	16' HT OA			2
PS	PHOENIX SYLVESTRIS WILD DATE PALM	12' GW, HEAVY MATCHED	**	DIAMOND CUT	5
PE3	PTYCHOSPERMA ELEGANS SOLITARE PALM	10' CT, TRIPLE	**		15
PE	PTYCHOSPERMA ELEGANS SOLITARE PALM	10' CT	**	SINGLE	6
SP	SABAL PALMETTO CABBAGE PALMETTO	14', 20', 26' CT STAGGERED	N**		16
TR	THRINAX RADIATA FLORIDA THATCH PALM	8' OA	N**	FULL CANOPY	15
VM	VEITCHIA MONTGOMERYANA MONTGOMERY PALM	14' CT., 22' OA.	**	HEAVY	12

SHRUBS	BOTANICAL / COMMON NAME	SIZE	NATIVE	SPACING	QTY
CC	CHAMAEDOREA CATARACTARUM CAT PALM	3' HT X 3' SPRD.			18
CT	CRINUM ASIATICUM CRINUM LILY	3' HT X 3' SPRD.	**		9
TD	TABERNAEMONTANA DIVARICATA 'FLORE PLENO' FLORE PLENO PINWHEEL JASMINE	24" HT X 24" SPR			5
SHRUB AREAS	BOTANICAL / COMMON NAME	SIZE	NATIVE	SPACING	QTY
AEC	AECHMEA BLANCHETIANA ORANGE BROMELIAD	24" HT X 24" SPRD.		24" o.c.	28
ALN	ALLAMANDA CATHARTICA GOLDEN TRUMPET	24" HT X 24" SPRD.	**	24" o.c.	194
CLG	CLUSIA GUTTIFERA SMALL LEAF CLUSIA	36" HT. X 30" SPRD.	**	30" o.c.	423
FIM	FICUS MICROCARPA 'GREEN ISLAND' GREEN ISLAND FICUS	12" HT. X 12" SPRD.	**	16" o.c.	1,344
JAV	JASMINUM VOLUBILE WAX JASMINE	10" HT. X 16" SPRD.	**	24" o.c.	953
NEP	NEPHROLEPIS EXALTATA BOSTON FERN	12" HT X 14" SPRD., CERTIFIED NATIVE ONLY	N**	24" o.c.	148
PBM	PHILODENDRON X 'BURLE MARX' BURLE MARX PHILODENDRON	18" HT. X 18" SPRD.		20" o.c.	392
PHR	PHILODENDRON X 'ROJO CONGO' ROJO CONGO PHILODENDRON	24" HT. X 24" SPRD.		30" o.c.	114
PSN	PSYCHOTRIA NERVOSA WILD COFFEE	24" HT. X 24" SPRD.	N**	24" o.c.	63
RON	RONDELETIA LEUCOPHYLLA PANAMA ROSE	24" HT X 24" SPRD, 24" OC	**	24" o.c.	222
TRD	TRIPSACUM DACTYLOIDES FAKAHATCHEE GRASS	24" HT. X 16" SPRD.	N**	30" o.c.	138
ZAM	ZAMIA PUMILA COONTIE	12" HT. X 12" SPRD.	N**	24" o.c.	118
N	DENOTES NATIVE SPECIES				
**	DENOTES HIGH DROUGHT TOLERANT SHRUBS				
*	DENOTES MODERATE DROUGHT TOLERANT SPECIES				

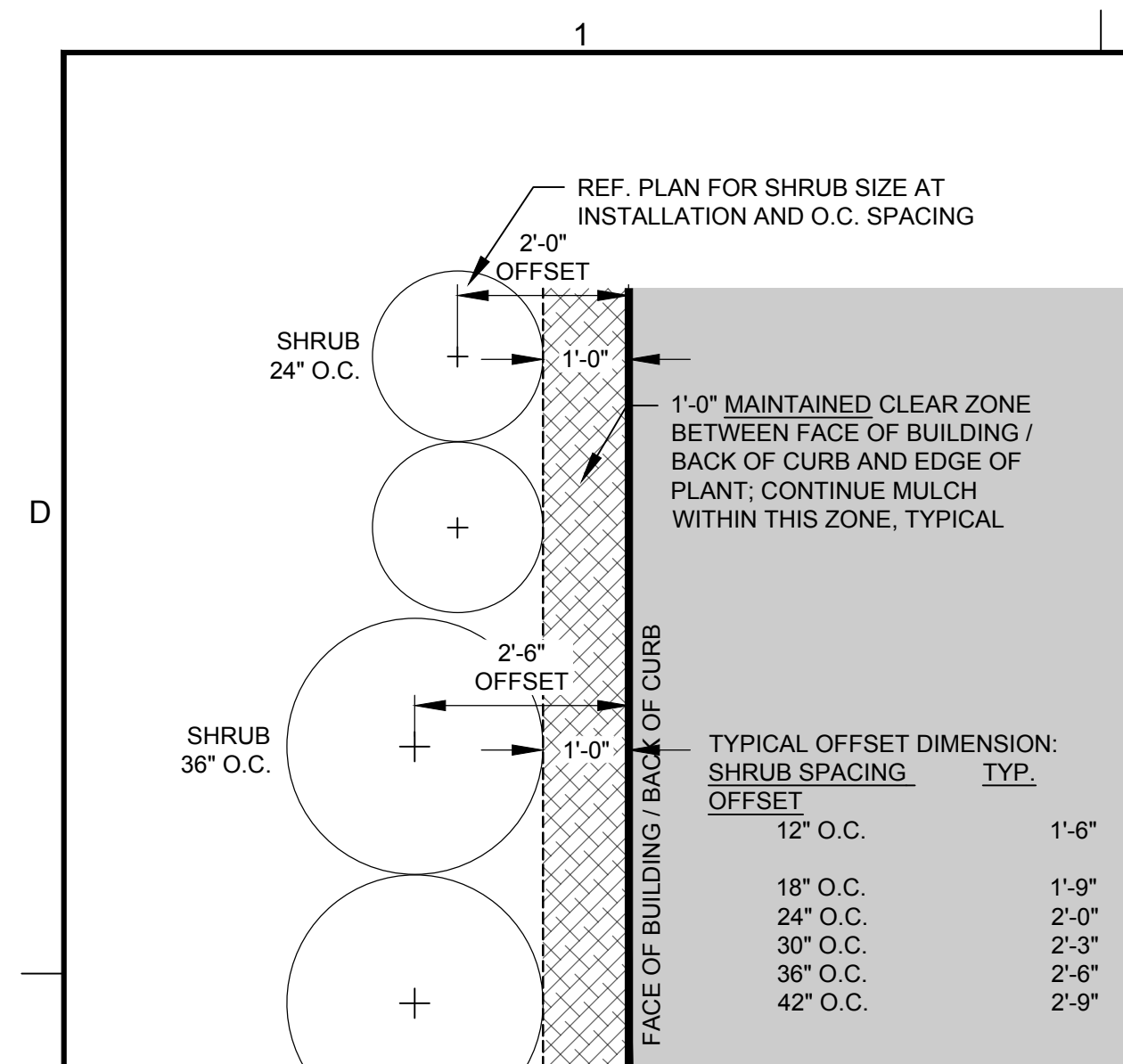
PINNACLE 441 LANDSCAPE REQUIREMENTS			
PROJECT INFORMATION:			
ZONING DESIGNATION	C-JS-SR7		
SITE AREA	132,642 SF		3.05 AC
LANDSCAPE OPEN SPACE:		REQUIRED	PROVIDED
15% of site area is required to be open space			
132,642 SF	x 15% =	19,896 SF	21,992 SF
PARKING LOT LANDSCAPE AREA:		REQUIRED	PROVIDED
190SF of landscape area per landscape island			
12	x 190 sf =	2,280 SF	2,966 SF
TOTAL LANDSCAPE OPEN SPACE REQUIRED		REQUIRED	PROVIDED
Required Landscape Open Space +			
Required Parking Lot Landscape		22,176 SF	23,303 SF
MINIMUM LOT TREE REQUIREMENT		REQUIRED	PROVIDED
22 Trees per acre of net lot area			
3.05 AC	x 22 Trees =	67 TREES	109 TREES*
NATIVE TREE REQUIREMENT		REQUIRED	PROVIDED
60% of required trees to be native		21 TREES	38 TREES
50% to be low maintenance & drought tolerant		34 TREES	53 TREES
SHRUB REQUIREMENT		REQUIRED	PROVIDED
10 Shrubs required per required tree		670 SHRUBS	3,969 SHRUBS
30% of required shrubs to be native		201 SHRUBS	467 SHRUBS
50% to be low maintenance & drought tolerant		335 SHRUBS	3,600 SHRUBS
BUFFER TREES (between dissimilar uses)		REQUIRED	PROVIDED
West Boundary - 1 tree per 30'			
330 LF	/ 30 trees =	11 TREES	13 TREES
South Boundary - 1 tree per 30'			
410 LF	/ 30 trees =	14 TREES	14 TREES
STREET TREES		REQUIRED	PROVIDED
1 tree required per 30 LF			
330 LF	SR 7 (441)	11 TREES	12 TREES
410 LF	Johnson Street	14 TREES	16 TREES
* Due to the existing building and utility infrastructure (including existing light poles); Trees have been proposed to the greatest extent that space allows given these limitations.			
**includes palms at 2:1			

[illegible]

Plotted by: jrnaldi On Wednesday, September 23, 2020 9:40:08 AM

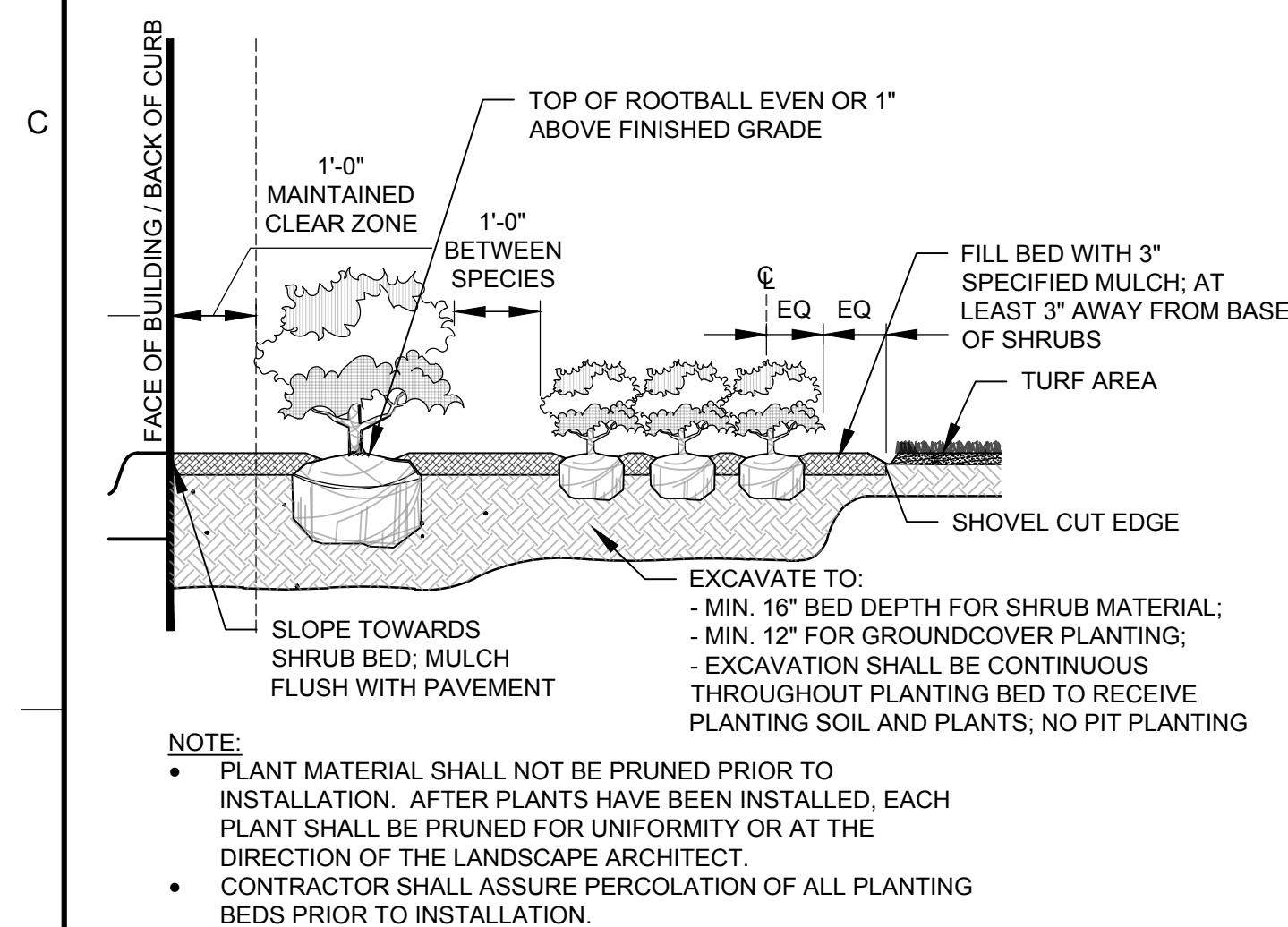
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STATIS-TAC

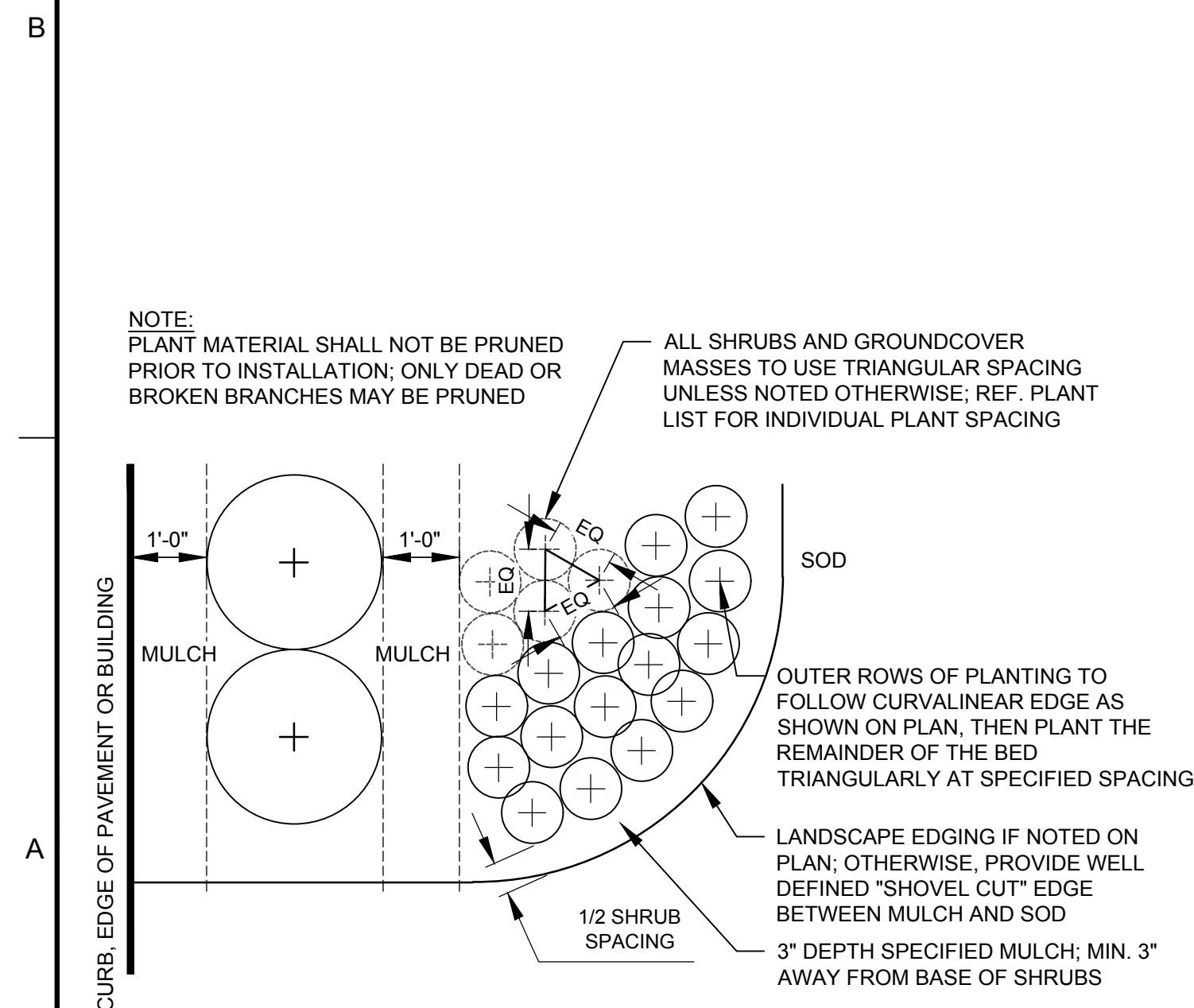


10 TYPICAL SHRUB OFFSET
AT BUILDING / CURB

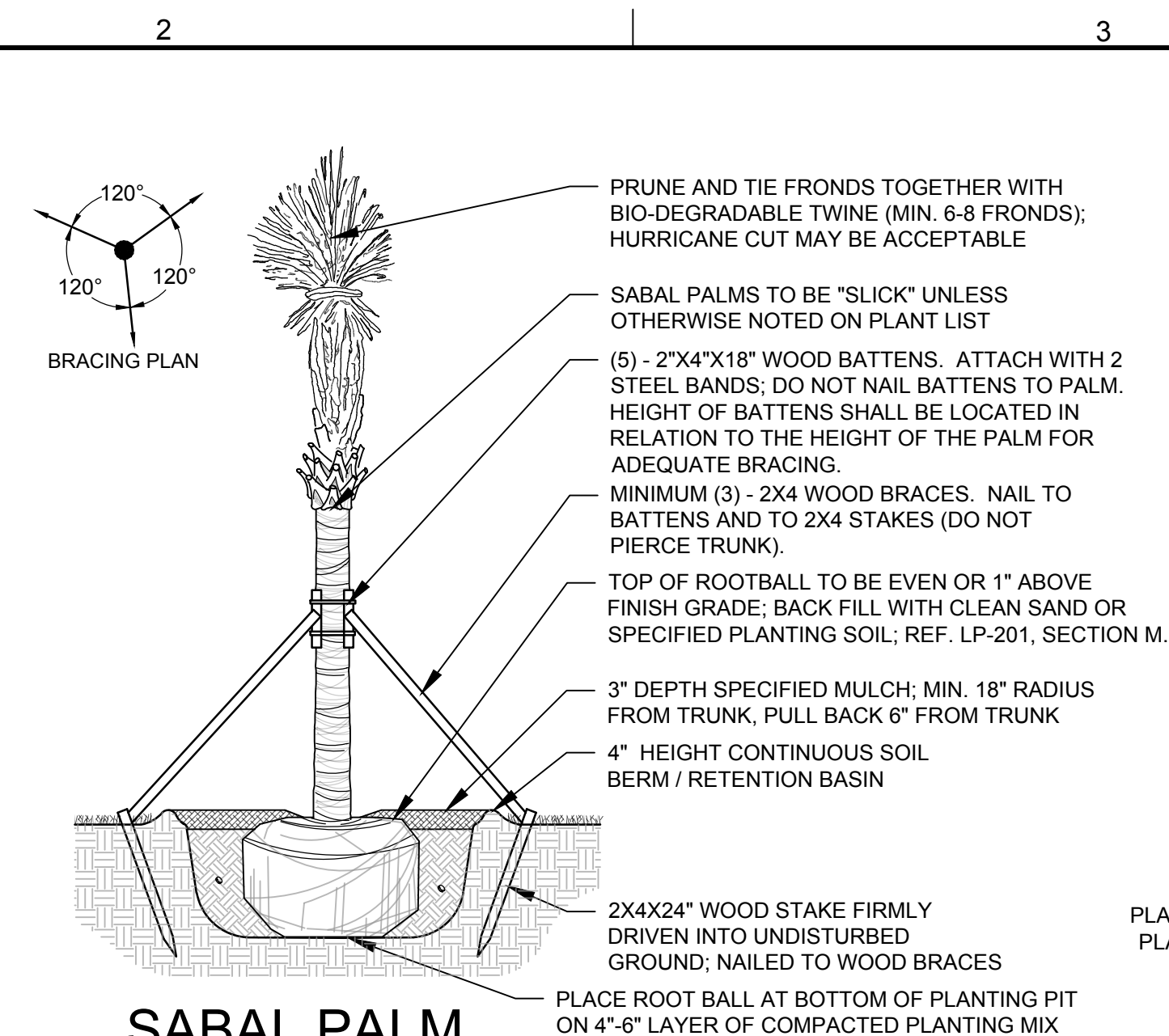
PLAN NOT TO SCALE



SHRUB AND GROUNDCOVER PLANTING



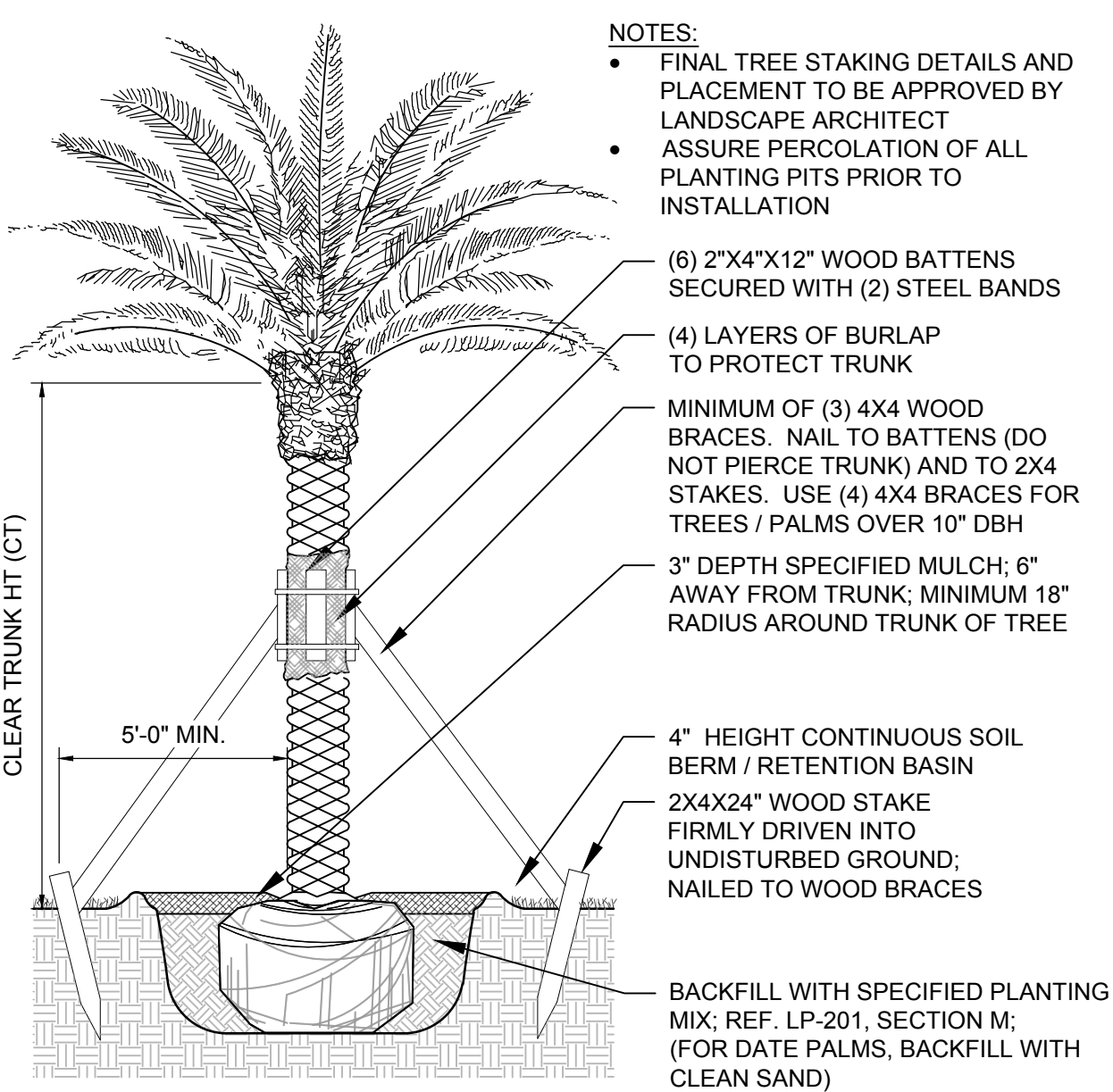
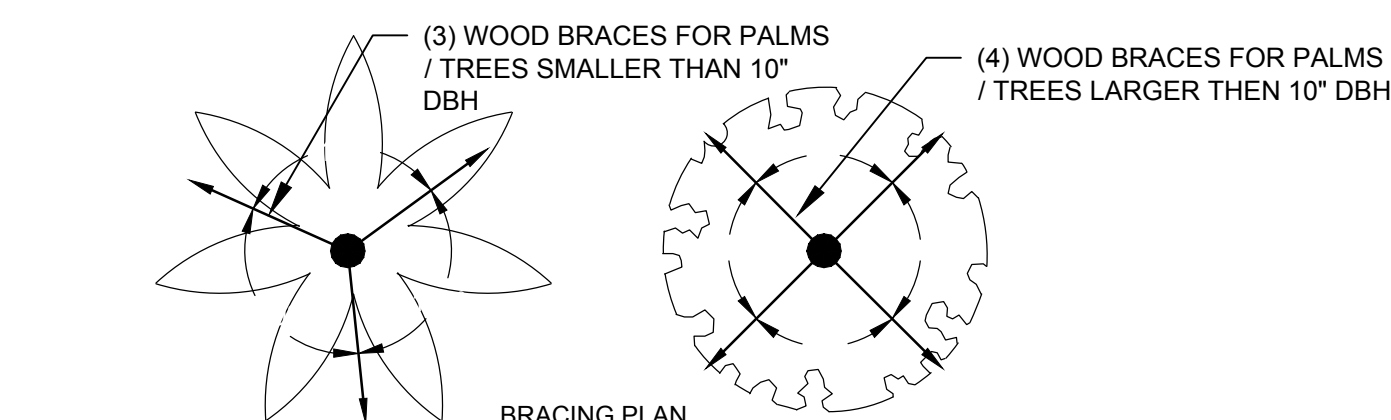
SHRUB AND GROUND COVER PLANTING



**SABAL PALM
PLANTING DETAIL**

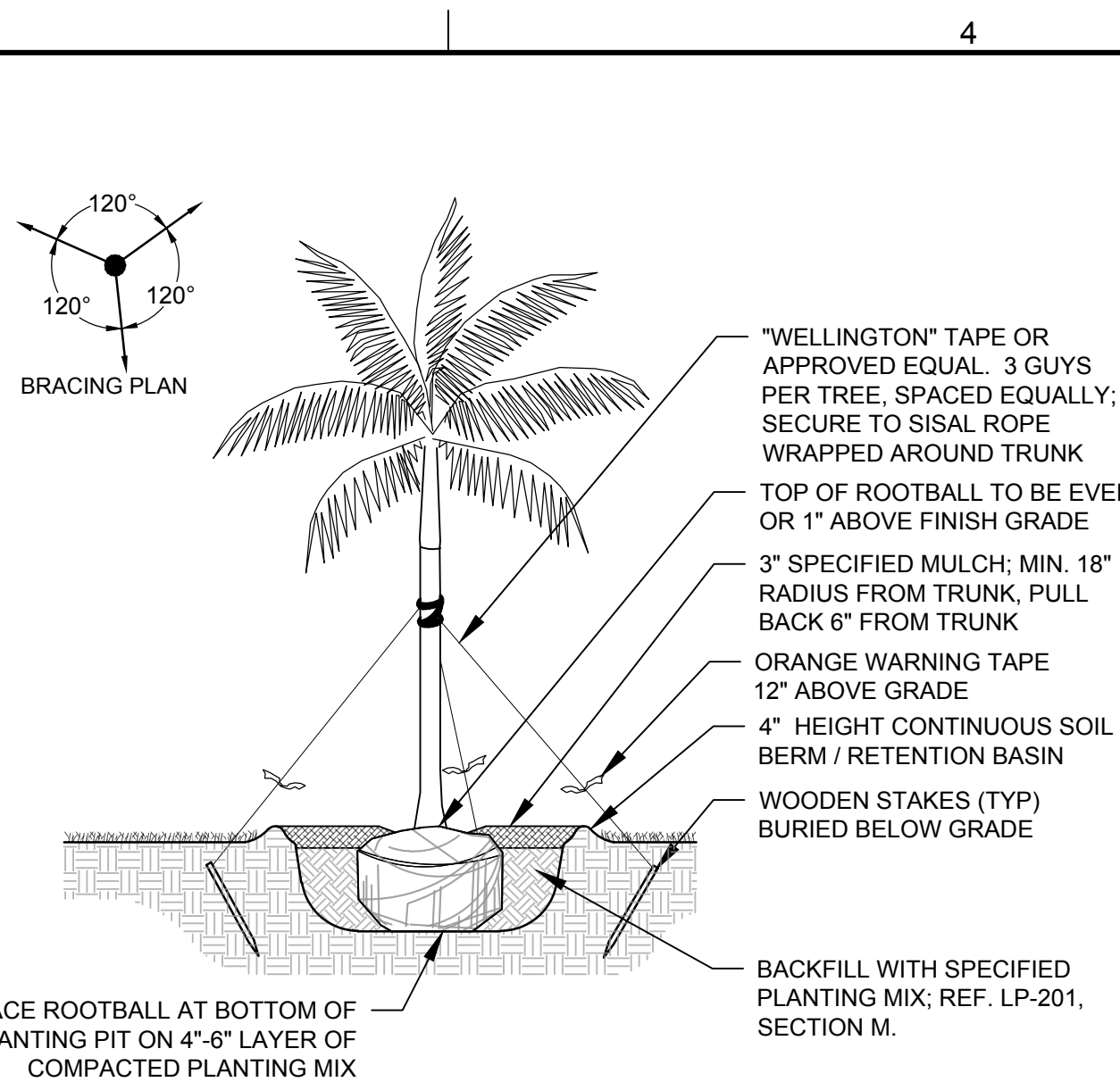
09 SECTION NOT TO SCALE

PLACE ROOT BALL AT BOTTOM OF HOLE
ON 4"-6" LAYER OF COMPACTED SOIL

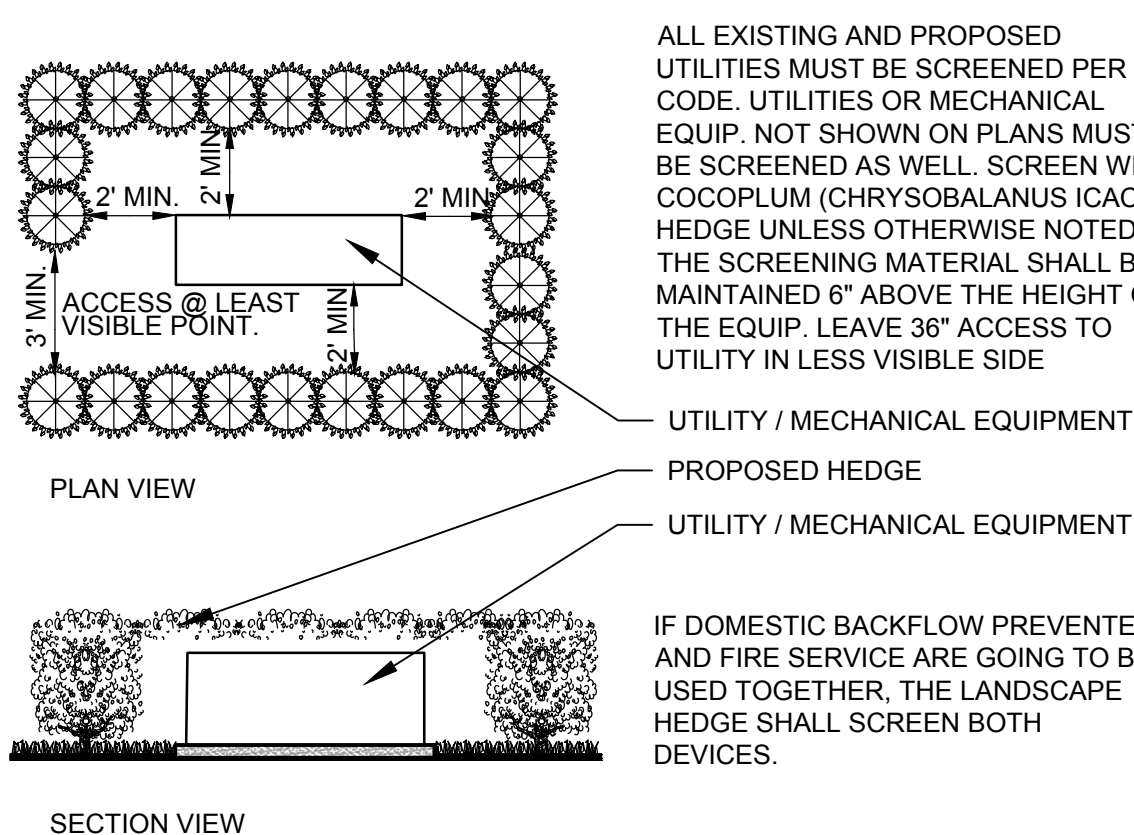


02 LARGE TREE
PALM PLANTING DETAIL

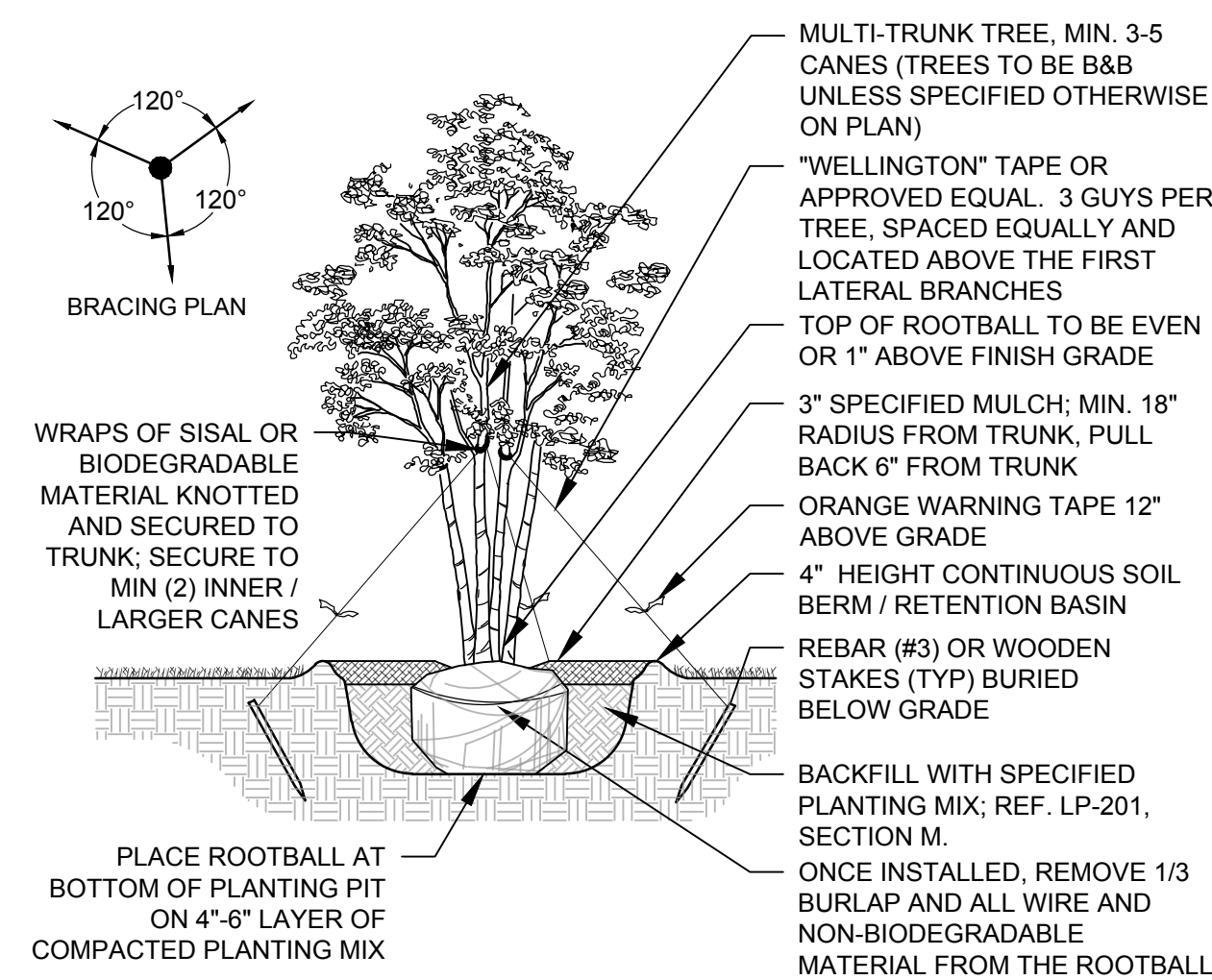
SECTION NOT TO SCALE



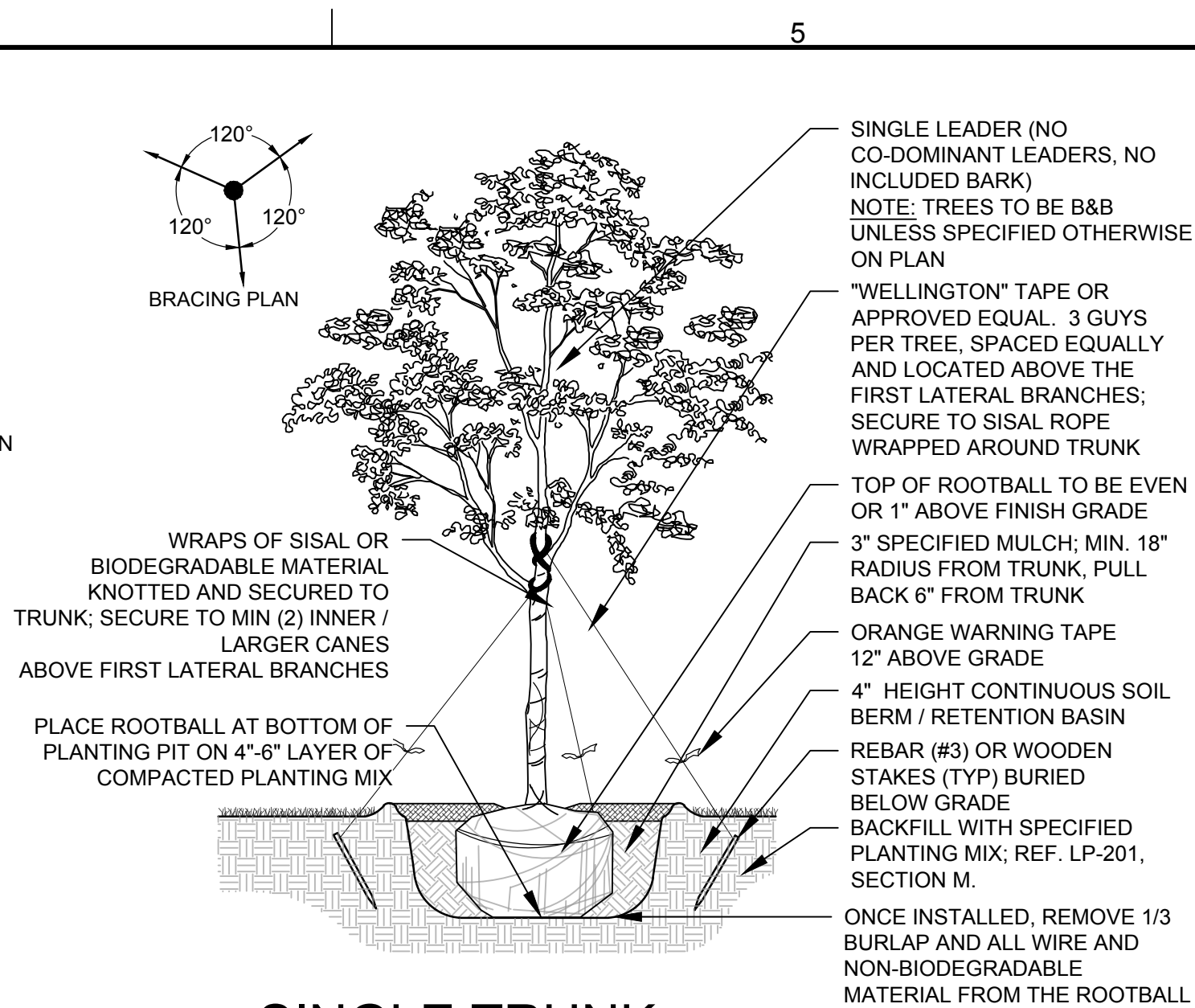
08 SMALL / MEDIUM TREE
PALM PLANTING DETAIL



05 TYPICAL SCREEN FOR UTILITIES / MECH. EQUIP.



MULTI-TRUNK TREE PLANTING DETAIL



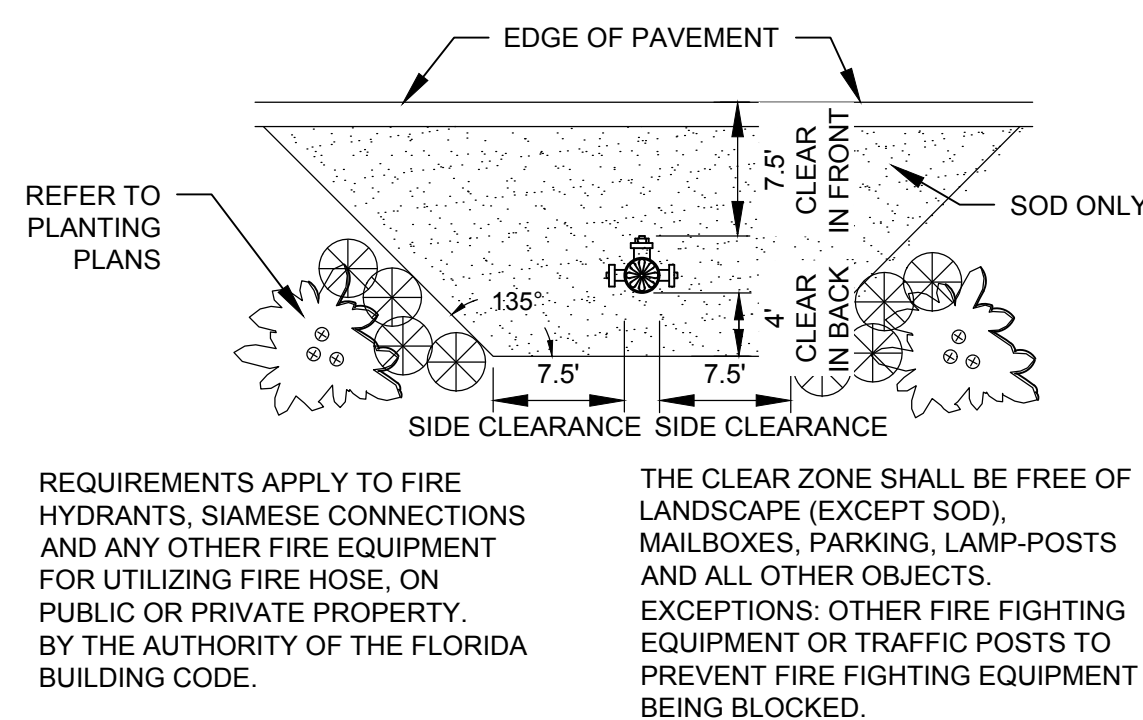
MATERIAL P

SINGLE TRUNK TREE PLANTING DETAIL

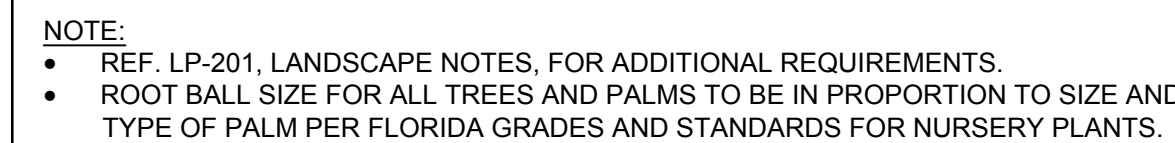
07

SECTION

NOT TO SCALE



04 FIRE HYDRANT CLEAR ZONE

[illegible]

STATUS: TAC



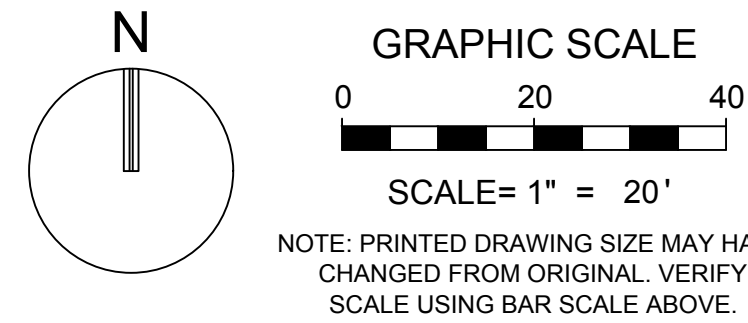
- # 01 GATE VALVE AND ANCHOR

SECTION NOT TO SCALE

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STATUS: TAC

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Min
PARKING AND DRIVE	Illuminance	Fc	2.05	3.9	1.0	3.90
PROPERTY LINE	Illuminance	Fc	0.33	0.5	0.0	N.A.



 **KEITH**
301 East Atlantic Blvd. Pompano
Beach, FL 33060
PH: (954) 788-3400

Florida Certificate of Authorization: 7928
Licensed Business Number: 6860

[illegible]

**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**
THESE PLANS ARE NOT FULLY PERMITTED
AND ARE SUBJECT TO REVISIONS MADE
DURING THE PERMITTING PROCESS.
RESPONSIBILITY FOR THE USE OF THESE
PLANS PRIOR TO OBTAINING PERMITS FROM
ALL AGENCIES HAVING JURISDICTION OVER
THE PROJECT WILL FALL SOLELY UPON THE
USER.

ISSUE DATE:	05/17/21
DESIGNED BY:	JR, MP
DRAWN BY:	JR, MP
CHECKED BY:	MP
BID-CONTRACT:	

MICHAEL J. PHILLIPS, R.L.A.
FLORIDA REG. NO. LA0001540
(FOR THE FIRM)

CLIENT

**PINNACLE
HOUSING
GROUP**

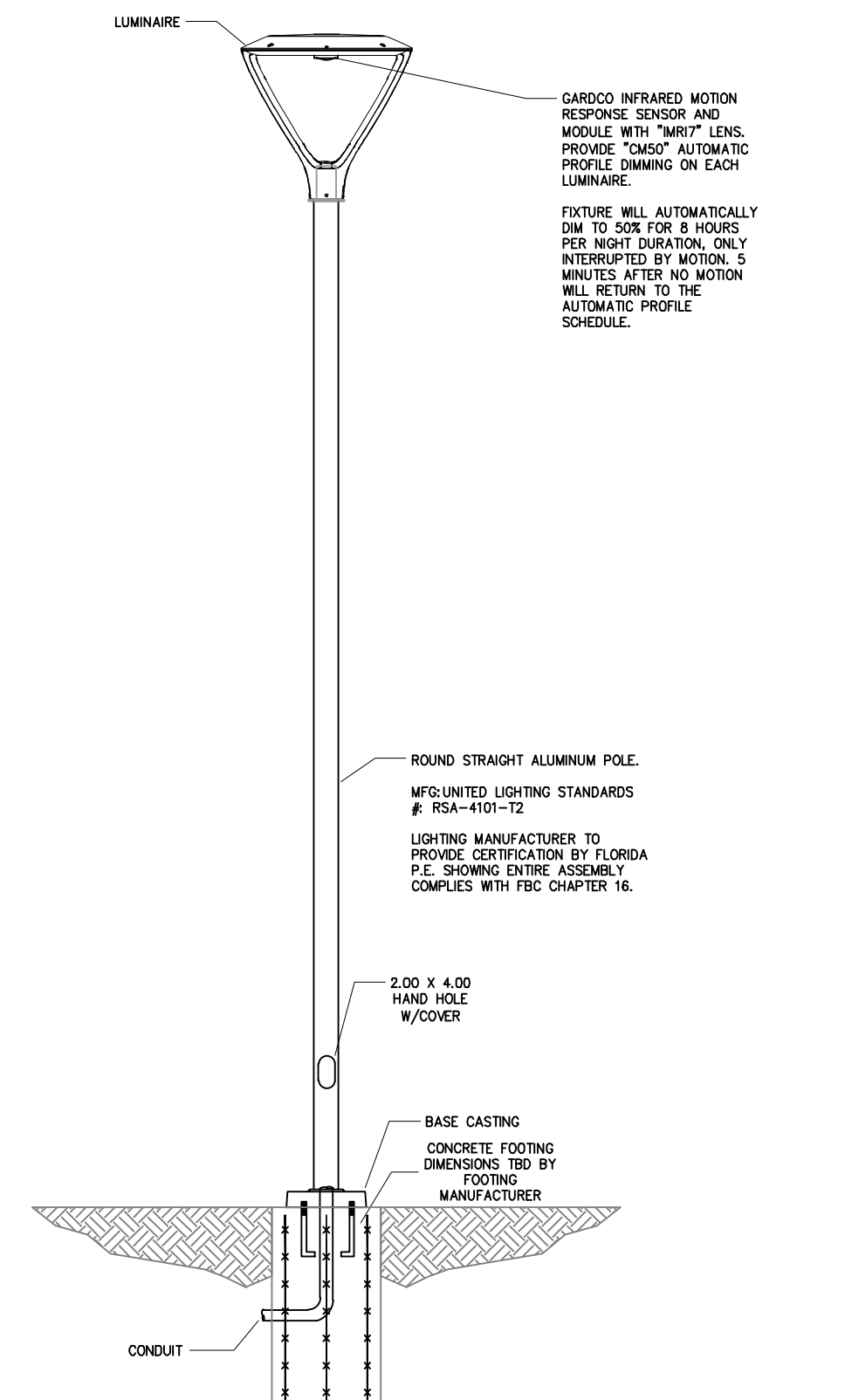
PROJECT

**PINNACLE 441
HOLLYWOOD**

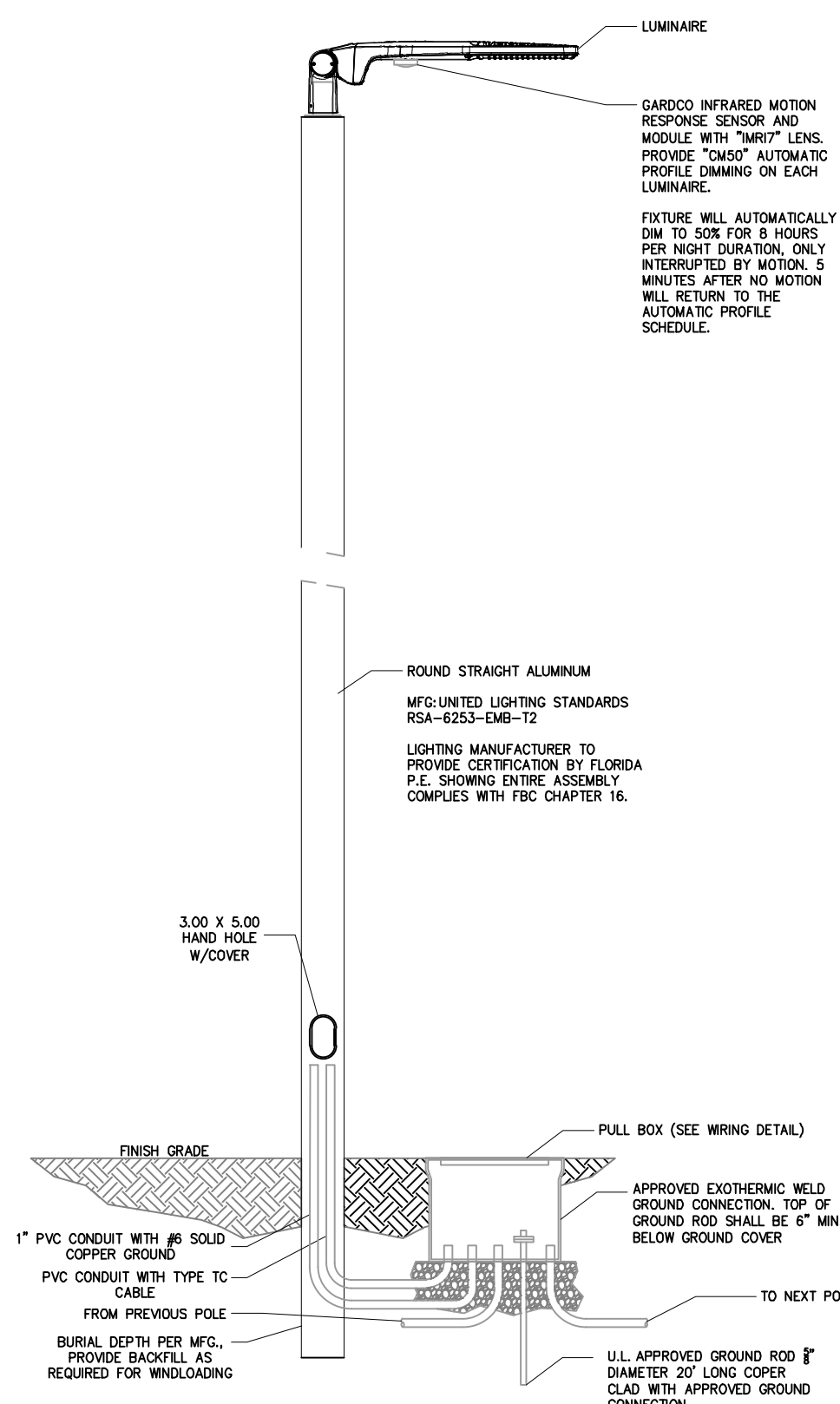
SHEET TITLE

LIGHTING PLAN

SHEET NUMBER	LL-101
PROJECT NUMBER	11074.01



FIXTURE "L3,L4"
POLE DETAIL
TYPICAL




 FIXTURES "L1,L2"
 LIGHT POLE DETAIL
 TYPICAL NOT TO