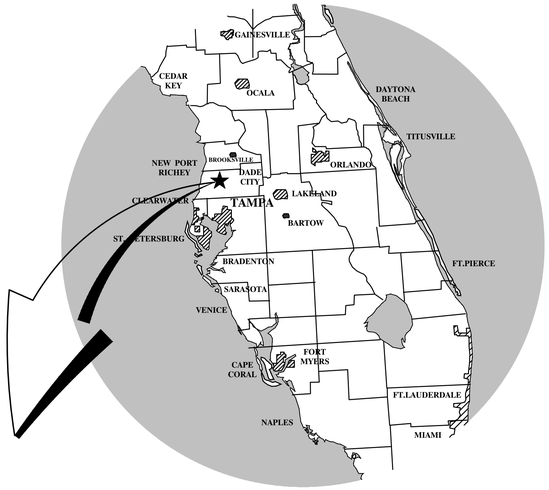
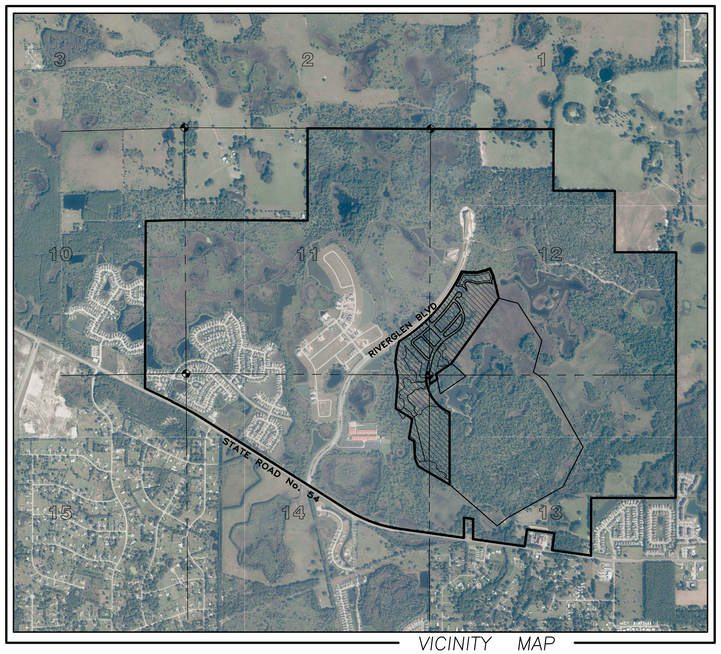


AVALON PARK WEST
PARCEL E

PRELIMINARY DEVELOPMENT PLAN - PARCEL E
CONSTRUCTION & STORMWATER MANAGEMENT PLAN (PHASE 1 ONLY)
SIMULTANEOUS SUBMITTAL (PDPCPSW - RESIDENTIAL)



VICINITY MAP
PASCO COUNTY, FLORIDA
SECTIONS 11, 12, 13 & 14, TOWNSHIP 26 SOUTH, RANGE 20 EAST

INDEX OF CONSTRUCTION PLANS

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49–54	PERMIT LANDSCAPE

PREPARED FOR:

SITEX NR DEVELOPMENT, LLC
3680 Avalon Park East Blvd. Suite 300
Orlando, Florida 32828
Phone: (407) 658–6565

PREPARED BY:

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813–223–3919 Fax: 813–223–3975

PERMIT / FILE NOS.	
PASCO PDD PROJECT NO.	
PASCO COUNTY UTILITIES PROJECT NO.	
SWFWMD	43028470.000
WATER DEP	
SEWER DEP	
RECLAIMED WATER DEP	
PARCEL ID NO.	

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS, STATE OF FLORIDA IN EFFECT AT THE TIME OF PASCO COUNTY APPROVAL, AND ARE IN COMPLIANCE WITH THE STANDARDS THEREIN EXCEPT AS NOTED ON THE PLANS. ANY DEVIATIONS NOTED ON THE PLANS SUBSTANTIALLY COMPLY WITH THE INTENT OF THE STANDARDS.

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
811 Know what's below. Call before you dig.
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

DATE	SHEET NO.	BY

REVISIONS

AVALON PARK WEST
PARCEL E PHASE 1

DATE: BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

DATE: 06/03/2015 JOB NO. STX–NR–002

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = –0.83 Feet

STREET & DRAINAGE	WATER & SANITARY SEWER
DESIGNED BY: SURAK	DESIGNED BY: SURAK
DRAWN BY: MIDDLETON	DRAWN BY: MIDDLETON

FILE: CV

SHEET 1 OF 54

P:\NEW RIVER LAKES EAST\PARCEL E\ENGINEERING\CONDOCS\CV.DWG–COVER SHEET 2015/06/15 1:00 PM DON SCOTT

STORM WATER POLLUTION PREVENTION PLAN

Contained on these plans and within the following notes is a Storm Water Pollution Prevention Plan (SWPPP) which has been developed by Clearview Land Design in accordance with the Florida Department of Environmental Protection's (FDEP) "National Pollutant Discharge Elimination System" (NPDES) Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

The following entities are identified as team members of "SWPPP": Clearview Land Design, the Developer as identified in the title box of these plans, and the site contractor and his sub–contractors. Each team member has specific responsibilities and obligations. In general, all team members, with regard to their involvement and responsibilities on the project, are to implement all necessary storm water management controls to assure compliance with the NPDES Generic Permit for Storm Water Discharges from Construction Activities, the Southwest Florida Water Management District Permit, the applicable local governing agency (i.e. Hillsborough County, Pasco County, etc.) and the guidelines listed in the SWPPP. The duties and responsibilities of the team members as they pertain to the SWPPP are as follows:

CLEARVIEW LAND DESIGN, P.L.

A. Develop SWPPP including, but not limited to, retention/detention ponds, control structures, erosion control methods and locations and stabilization criteria. This design is included within these construction plans and the following notes and instructions.

B. Submit and obtain the necessary design related storm water permits from the Florida Department of Environmental Protection, the Southwest Florida Water Management District and other applicable governmental bodies.

C. Upon notification by the developer of his intent to commence construction, submit a Notice of Intent to the FDEP on behalf of the developer and copy the contractor including SWPPP certification and copy of the permit.

D. Submit to SWFWMD and the operator of the municipal separate storm water system, if applicable, a letter of construction commencement.

E. Complete and submit a Notice of Termination and certification for developer. The NOT's shall be submitted no more than 30 days after
(a) completion of the project and final stabilization of the site or
(b) when responsibility for the site has ended. Final stabilization as defined by EPA is when all soil disturbing activities at the site have been completed and a uniform (e.g. evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures. As an alternative, equivalent permanent stabilization measures (such as riprap, gabions, or geotextiles) may be employed. The client shall notify Clearview Land Design when one of these criteria has been met.

Contractor

A. Sign and return to Clearview a Contractors Certification Form certifying your understanding of and willingness to comply with the Storm Water Pollution Prevention Plan no later than 48 hours prior to commencement of construction. Also, each subcontractor affected by the SWPPP must certify to the contractor that they understand and shall comply with the NPDES permit and SWPPP. A record of these certifications shall be maintained by the contractor on site.

B. During construction, assure compliance with the designed Storm Water Pollution Prevention Plans prepared by Clearview Land Design and the NPDES Generic Permit for Storm Water Discharges from Large and Small Construction Activities.

C. Maintain a copy of the construction plans, which include the Storm Water Pollution Prevention Plan, the NOI, and all inspection reports and certifications on site.

D. Undertake all reasonable Best Management Practices (BMP's) to assure that silted or otherwise polluted storm water is not allowed to discharge from the site during all phases of construction. Stabilization BMP's that may be used include: temporary or permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees and preservation of mature vegetation. Structural erosion and sediment control BMP's that may be used include: straw bale dikes, silt fences, earth dikes, brush barriers, drainage swales, check dams, subsurface drain, pipe slope drain, level spreaders, storm drain inlet protection, outlet protection, sediment traps, and temporary sediment basins. Detention ponds may also be used as temporary sediment basins. Additional BMP's that may need to be implemented include: providing protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials. Providing waste receptacles at convenient locations and providing regular collection of wastes, including building material wastes. Minimizing off–site tracking of sediments. Making adequate preparations, including training and equipment to contain spills of oil and hazardous materials. Complying with applicable state or local waste disposal, sanitary sewer or septic system regulations and the use of appropriate pollution prevention measures for allowable non–storm water components of discharge.

E. Notify Clearview Land Design and the developer in writing of any non–storm water pollution sources which are being stored, or otherwise used during the construction of the project, i.e., fertilizers, fuels, pesticides, other chemicals. This notification should be accompanied with the contractor's design and methods to prevent pollution run–off from these sources.

F. Develop a maintenance and inspection plan which includes, but is not limited to the following:

A. The specific areas to be inspected and maintained that includes all the disturbed areas and material storage areas of the site.

B. The erosion and sediment controls identified in the SWPPP to be maintained and inspected and those additional controls that the contractor deems necessary.

C. Maintenance procedures.

D. The procedure to follow if additional work is required or whom to call.

E. Inspections and maintenance forms.

F. The personnel assigned to each task.

The following shall be inspected a minimum of once a week or within 24 hours after 0.50 inches of rainfall:

- Stabilization measures (once a month if fully stabilized).
- Structural controls.
- Discharge points.
- Construction entrances and exits.
- Areas used for storage of exposed materials.

An inspection form shall be completed for each inspection. Any permit violations should be noted and corrective measures shall be taken no later than 7 days after the inspection occurred. If revisions to the SWPPP are needed, a report form for changes in the SWPPP shall be completed and a copy sent to Clearview Land Design, P.L. The original shall be kept on–site as documentation of the change. If the inspection passes, a certification that the facility is in compliance with the SWPPP and the NPDES permit must be signed by a duly authorized representative of the principal executive official of the operator of the SWPPP with one of the following qualifications:

1. Has successfully completed the Florida Stormwater, Erosion and Sediment Control Inspector Training Program.
2. Successfully completed a similar training program.
3. Has enough practical on the job training to be qualified to perform the inspections.

Retain inspection reports and certifications for at least three years.

G. Site stabilization measures shall be initiated as soon as practical but in no case more than 7 days, in portions of the site where construction activities have temporarily or permanently ceased.

H. Releases in Excess of Reportable Quantities.

1. The discharge of hazardous substances or oil in the stormwater discharge(s) from a facility or activity shall be prevented or minimized in accordance with the applicable stormwater pollution prevention plan for the facility or activity. This permit does not relieve the operator of the reporting requirements of 40 CFR part 117 and 40 CFR part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either 40 CFR 117 or 40 CFR 302, occurs during a 24 hour period:

   a. The operator is required to notify the State Warning Point (800–210–0519 or 850–413–9911) as soon as he or she has knowledge of the discharge;

   b. The operator shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and remedial steps to be taken, to the Florida Department of Environmental Protection, NPDES Stormwater Section, Mail Station 2500, 2600 Blair Stone Road, Tallahassee, Florida 32399–2400; and

   c. The stormwater pollution prevention plan required under Part V of this permit must be modified within 14 calendar days of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

2. This permit does not authorize the discharge of hazardous substances or oil resulting from an on–site spill.

Developer

A. Notify Clearview of your intent to commence construction. Sign the Notice of Intent form as operator of the storm water discharge facility and permittee and return to Clearview Land Design, P.L.

B. Sign a Certification of Storm Water Pollution Prevention Plan and return to Clearview Land Design, P.L.

C. Notify Clearview when it is time to submit a Notice of Termination as defined under Part E of the Clearview Land Design section of the SWPPP. Sign and return to Clearview Land Design, P.L. for submittal to FDEP a Notice of Termination form and certification.

PRE–DEVELOPED SITE INFORMATION:

1. Total site acreage: 98.56 Ac.±
2. Land use: VACANT
3. Vegetation: PINE, OAK, GRASSED
4. Receiving waters or municipal separate storm water system: HILLSBOROUGH RIVER / BASSET BRANCH / NEW RIVER
5. 2 Year/24 Hour rainfall depth: 4.3"
6. Soil types: NEWMAN FINE SAND

PROJECT INFORMATION:

1. Project type: Residential
2. Anticipated construction sequence is as follows:
   1. Complete erosion control installation
   2. Clearing and grubbing
   3. Earthwork activities
   4. Storm water system construction
   5. Utility construction
   6. Base and pavement construction
   7. Final stabilization

   The BMP's listed in Part D of the Contractor section of the SWPPP shall be considered during all phases of construction.
3. Anticipated start date: 11/15/2015
4. Anticipated completion date: 11/15/2017
5. Total acres disturbed: 67.9 Ac. ± (SILT FENCE LIMITS)
6. Pre–developed "C" factor: 0.20
7. Post–developed "C" factor: 0.55
8. The storm water management system, upon completion of construction and appropriate certification and as–built submittals will be operated and maintained by CDD (UNLESS OTHERWISE NOTED) .
9. The potential source of pollution from this project is on–site development and construction activity.

OWNER'S INSTRUCTIONS FOR MAINTENANCE AND INSPECTION OF STORMWATER FACILITIES

The entire stormwater system should be inspected on at least a semi–annual basis. This should include a visual inspection of the pond, pond banks, bleed–down orifices, other control structures, and discharge pipes. These should be kept free of debris and cleaned on a frequency as required to keep them functional, as designed. Mowing/clearing around the structures may be required to prevent vegetation from clogging them.

Wetland plants, if intentionally installed, should be monitored and maintained as required on the approved construction plans. Areas of littoral shelving, which are required to be vegetated but not intentionally planted, should not be cleared of the wetland plants. These areas should have as high a plant coverage as possible, for maximum water filtration.

Sediment sumps, if designed and installed, should have sediment removed as necessary to allow them to efficiently remove suspended particles. They should be re–dug to the original design specifications, if silted in.

For percolation treatment ponds/swales, the owner of the facility shall inspect the pond bottom periodically after heavy rainfall events to check for persistent ponding or pooling of water. All large debris shall be removed and disposed of elsewhere. If prolonged ponding persists, i.e., in excess of 72 hours, the owner shall rake or scarify the surface. If required, the soil in the area of ponding shall be removed and replaced with clean sandy, non–cohesive soils.

Please check the construction plans to see if written reports on monitoring or plant survival rates are required to be sent to any reviewing agencies. Written notes should always be kept which describe maintenance activities undertaken during each inspection.

Specific conditions of all permits may require additional maintenance activities above and beyond those outlined above. Please be aware of all permit conditions as issued by regulatory agencies to ensure permit compliance.

Pond/Lake Excavation Note:
No excavation shall extend below the permitted design depths/elevations shown on the drawings, unless additional testing supports otherwise; and no lower semi–confining unit clayey soil material and/or no limestone materials shall be excavated, regardless if these materials are encountered within the permitted excavation depths/elevations. If any lower semi–confining unit clayey soil materials or limestone materials are encountered above the permitted depths/elevations, then excavation operations shall cease in the general area and the Engineer of Record shall be notified immediately.

NOTE: CONTRACTOR SHALL INSPECT EROSION CONTROL DAILY (INCLUDING BUT NOT LIMITED TO TYPICAL OUTFALLS). CORRECTIVE ACTION SHALL BE TAKEN IMMEDIATELY TO REPAIR OR REPLACE AS NEEDED.

LEGAL DESCRIPTION: SEE PRELIMINARY DEVELOPMENT PLAN

GENERAL EROSION AND TURBIDITY CONTROL NOTES

1. The Site Subcontractor shall be responsible for installation and maintenance of all erosion and turbidity controls and the quality and quantity of offsite or wetland discharges.
2. Prior to construction, the Site Subcontractor is responsible for having his dewatering plan and turbidity control plan approved by the applicable reviewing agencies. Refer to the project's permit approvals and permit conditions for agencies requiring such review and approval. Questions concerning appropriate techniques should be addressed to those agencies and/or discussed with the project engineer and owner.
3. The appropriate turbidity and erosion control methodologies selected by the Site Subcontractor for this project should be made following assessment of the plans and project site specific factors and after consultations as needed with the project engineer and appropriate agencies.
4. The Site Subcontractor will be responsible for obtaining any and all necessary permits for such activity; several factors to consider are listed below:
   4.1. Clay content in excavated materials and/or permeabilities rates
   4.2. Depth of cut in ponds, trenches, or utility lines
   4.3. Ambient ground water levels
   4.4. Actual rainfall amounts and time of year relative to normal rainy season
   4.5. Proximity to wetlands, water bodies or offsite properties
   4.6. 'Class' designation of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvesting areas, etc.)
   4.7. Density, type, and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)
   4.8. Fill height relative to natural grade and length and steepness of the proposed slopes
   4.9. Existing topography and directions of surface flow
   4.10. Type of equipment used
   4.11. Project type
   4.12. Duration of construction activities
   4.13. Separation distance of onsite ponds
   4.14. Ambient quality of surface and groundwater
   4.15. Temporary stockpile locations and heights
5. At the onset of construction, the Site Subcontractor, as the party responsible for implementation of the erosion and sediment control plan, shall assess the above described conditions and factors with respect to relative cost effectiveness and select the appropriate methods of protection. A fairly extensive list of techniques are presented below but it must be stressed that any or all of the following may be necessary to maintain water quality and quantity standards.
6. The construction sequencing should be thought out in advance of initiation to provide adequate protection of water quality.
7. Any offsite disturbance shall be restored to the Pre or better condition.
   7.1. Discharges of water quantities which affect offsite properties or may damage wetlands are also prohibited by regulating agencies.
   7.2. Discharges which exceed 29 N.T.U.'s over the background levels are in violation of state water quality standards.
8. The erosion and turbidity control measures shown hereon are the minimum required for agency approval. Additional control and measures may be required due to the Site Subcontractor's construction sequence & unforeseen weather conditions. Any additional measures deemed necessary by the Site Subcontractor shall be included in the lump sum bid with no extras for materials and labor allowed.
9. Hay bales or silt screens shall be installed prior to land clearing to protect water quality and to identify areas to be protected from clearing activities and maintained for the duration of the project until all soil is stabilized.
10. Floating turbidity barriers shall be in place in flowing systems or in open water lake edges prior to initiation of earthwork and maintained for the duration of the project until all soil is stabilized.
11. No clay material shall be left exposed in any stormwater storage facility.
    11.1. If clay or sandy–clays are encountered during stormwater storage excavation, the Site Subcontractor shall notify the Engineer immediately before proceeding with further excavation.
    11.2. If the Engineer of Record has determined that such soils are non–confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written authorization from the appropriate governing agency.
    11.3. If said soils are left exposed at the permitted and designed depth, the Site Subcontractor shall over–excavate the pond's bottom and side slopes by a minimum of twenty–four (24") inches and backfill with clean sands to help prevent suspension of fine particles in the water column.
12. The installation of temporary erosion control barriers shall be coordinated with the construction of the permanent erosion control features to the extent necessary to assure effective and continuous control of erosion and water pollution throughout the life of the construction phase.
13. The type of erosion control barriers used shall be governed by the nature of the construction operation and soil type that will be exposed. Silty and clayey material may require solid sediment barriers to prevent turbid water discharge, while sandy material may need only silt screens or hay bales to prevent erosion. Floating turbidity curtains should generally be used in open water situations. Diversion ditches or swales may be required to prevent turbid stormwater runoff from being discharged to wetlands or other water bodies. It may be necessary to employ a combination of barriers, ditches, and other erosion/turbidity control measures if conditions warrant.
14. Where pumps are to be used to remove turbid waters from construction areas, the water shall be treated prior to discharge to the wetlands. Treatment methods include, for example, turbid water being pumped into grassed swales or appropriate upland vegetated areas (other than upland preservation areas and wetland buffers), sediment basins, or confined by an appropriate enclosure such as turbidity barriers or low berms, and kept confined until turbidity levels meet State Water Quality Standards.
15. The Permittee shall schedule his operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operation, and the duration of exposed, uncompleted construction to the elements shall be as short as practicable. Clearing and grubbing shall be so scheduled and performed such that grading operations can follow immediately thereafter. Grading operations shall be so scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the project permit.
16. Water derived from various dewatering methods should be passed through sufficiently wide areas of existing upland vegetation to filter out excess turbidity. If this is not sufficient, the water shall be retained in previously constructed permanent stormwater ponds or else retained in temporary sedimentation basins until the clarity is suitable to allow for its discharge. Plugging the outfalls from completed stormwater ponds may be needed to avoid discharge. However, such situations should be monitored closely to preclude berm failure if water levels rise too high.
17. Water can be transported around the site by the use of internal swales or by pumps and pipes.
18. Sheet flow of newly filled or scraped areas may be controlled or contained by the use of brush barriers, diversion swales, interceptor ditches or low berms. Flow should be directed toward areas where sediments can sufficiently settle out.
19. Exposed soils shall be stabilized as soon as possible, especially slopes leading to wetlands. Stabilization methods include solid sod, seeding and mulching or hydromulching to provide a temporary or permanent grass cover mulch blankets, filter fabrics, etc., can be employed to provide vegetative cover.
20. Energy dissipaters (such as rip rap, a gravel bed, hay bales, etc.) shall be installed at the discharge point of pipes or swales if scouring is observed.
21. Attempt to install roadway curb and gutters as soon as possible to reduce the surface area for erosion to occur.
22. Implement storm drain inlet protection (hay bales or gravel) to limit sedimentation within the stormwater system. Perform inspections and periodic cleaning of sediments which wash out into the streets until all soil is stabilized.
23. Water discharge velocities from impounded areas and temporary sedimentation basins shall be restricted to avoid scouring in receiving areas.
24. If water clarity does not reduce to state standards rapidly enough in holding ponds, it may be possible to use chemical agents such as alum to flocculate or coagulate the sediment particles.
25. Hay bales, silt screens, or gravel beds can be added around the pipe or swale discharge points to help clarify discharges. Spreader swales may help dissipate cloudy water prior to contact with wetlands.
26. All fuel storage areas or other hazardous storage areas shall conform to accepted state or federal criteria for such containment areas.
27. Vehicle or equipment washdown areas will be sufficiently removed from wetlands or offsite areas.
28. Fugitive dust controls (primarily by using water spray trucks) shall be employed as needed to control windborn emissions.
29. If the above controls remain ineffective in precluding release of turbid water, especially during pond or utility line dewatering, then the contractor may be compelled to use a vertical dewatering system such as well points or sock drains to withdraw groundwater which may already be clear enough to allow for direct discharge to wetlands.
30. Ongoing inspections and periodic maintenance by the Site Subcontractor shall occur daily (at a minimum) to insure the above methods are working suitably. Corrective action must be taken immediately to repair or replace any damaged BMP's to ensure the above methods are working properly.
31. Site Subcontractors are required to obtain and thoroughly review The Florida Development Manual: A Guide to Sound Land and Water Management, which was developed by the State of Florida Department of Environmental Protection in 1988. This provides fairly in–depth discussions of recommended techniques and also provides specific design and technical standards. A copy of this document is available for review at Clearview Land Design, P.L.

GENERAL CONSTRUCTION NOTES:

1. Prior to construction, the Contractor shall obtain from the Engineer or Owner a copy of all pertinent permits related to this project. It is the Contractor's responsibility to assure that all construction activities are in compliance with the conditions of all permits and approvals. Contractor is also responsible for having his dewatering plan approved by SWFWMD.
2. All construction, materials and workmanship are to be in accordance with Pasco County Land Development Code and DOT Specifications, latest editions.
3. Grass and mulch, or solid sod, all areas in existing rights– of–way disturbed by construction. In the proposed rights–of– way a 16" wide area behind the back of curb shall be solid sodded. The remainder of the proposed rights–of–way shall be stabilized with Sod or Seed & Mulch in accordance with applicable County standards. On slopes 4:1 and flatter, seed & mulch may be used. On slopes steeper than 4:1, sod shall be used. Sod slopes steeper than 4:1 shall be installed with sod pegs per County standards.
4. Contractor is to coordinate all work within, but not limited to Pasco County rights–of–way with utility companies in order to prevent damage to utility lines and making of adjustments to same, if required.
5. Suitable fill obtained through excavation of streets and detention ponds shall be placed on lots and adjacent land in accordance with the Master Drainage and Grading Plan as directed by the Engineer.
6. Sod/Seed & Mulch shall be placed in accordance with applicable City/County standards as well as in accordance with standard and specific conditions in the SWFWMD permit, if applicable. At a minimum this shall include sodding of all pond embankments of a slope 4:1 or greater to the NW (SHWL) line, as well as seeding and mulching of the balance of the pond tracts (including pond berms, excluding the area below NW (SHWL)), sodding a minimum of 16" from the back of curb, and stabilizing all other areas within the project using sod or seed & mulch per County standards. On slopes 4:1 and flatter, seed & mulch may be used. On slopes steeper than 4:1, sod shall be used. Sod slopes steeper than 4:1 shall be installed with sod pegs per County standards.
7. Site clearing shall be performed per the approved construction plans and in accordance with Pasco County Land Development Code. Installation and maintenance of the required barricading and erosion control shall be the responsibility ofthe site development contractor unless otherwise designated.
8. Prior to beginning construction, Contractor shall expose all existing utility inverts to which a tie–in is proposed and have Engineer verify the elevation and adequacy of these inverts.
9. All subsurface construction shall comply with the "Trench Safety Act." The Contractor shall ensure that the method of trench protection and construction is in compliance with the Occupational Safety and Health Administration (OSHA)regulations.
10. Siltation accumulations greater than the lesser of 12 inches or one–half the depth of the siltation barrier shall be immediately removed and placed in upland areas.
11. During land alteration and construction activities, it shall be unlawful to remove vegetation by grubbing or to place soil deposits, debris, solvents, construction material, machinery or other equipment of any kind within the dripline of a tree to remain on the site unless otherwise approved by the County.
12. All erosion control installation and installation coordination shall be the responsibility of the Contractor. Clearview Land Design, if contracted by the Owner, will stake the alignment of the proposed erosion control and shall limit its responsibility and coordination at that point. Be advised that the construction approval and maintenance of the erosion control shall be the sole responsibility of the Site Contractor.
13. Building downspouts to be directed to the on–site storm drainage system.
14. Future expansion areas, if disturbed, to be seeded and mulched or sodded to prevent erosion to existing pavement surfaces.
15. Should any noticeable soil slumping or sinkhole formation become evident, the applicant/developer shall immediately notify the County, Tampa Bay Water (TBW), and SWFWMD, and adopt one or more of the following procedures as determined to be appropriate by the County and SWFWMD:
    15.1. If the slumping or sinkhole formation becomes evident before or during construction activities, stop all work (except for mitigation activities) in the affected area and remain stopped until the County and SWFWMD approve resuming construction activities.
    15.2. Take immediate measures to ensure no surface water drains into the affected areas.
    15.3. Visually inspect the affected area.
    15.4. Excavate and backfill or grout as required to fill the affected area and prevent further subsidence.
    15.5. Use soil reinforcement materials in the backfilling operation,when appropriate.
    15.6. If the affected area is in the vicinity of a water–retention area,maintain a minimum distance of two feet from the bottom of the retention pond to the surface of the lime–rock or karst connection.
    15.7. If the affected area is in the vicinity of a water–retention area and the above methods do not Stabilize the collapse, relocate the retention area.
    15.8. Discharge of storm–water into depressions with direct or demonstrated hydrologic connection to the Floridan Aquifer shall be prohibited.
16. The site shall be graded to within 12 inches of the final grade. Where fill is proposed it shall be placed in compliance with the geotechnical/geological engineering report recommendations (including any lift depths recommended) and compacted to a minimum density of 95% of the modified Proctor maximum dry density. Density tests to confirm compaction shall be required within the building pad area, before the next lift is placed. Upon completion of the land development construction, a professional engineer shall provide a certification to Pasco County that the project, including each pad area, complies with the recommendations of the geotechnical/geological engineering report.
17. The engineer responsible for the project shall certify to the County Engineering Services Director (thru PC Engineering Inspections) that the select material below the stabilized subgrade meets these standards prior to installation of the Base. Certification shall strictly comply with the subgrade certification form available in "Engineering Services Department: A Procedural Guide for the Preparation of Assurances of Completion and Maintenance.
18. The engineer responsible for the project shall certify to County Engineering Services Director that the underdrains have been properly installed prior to the installation of any asphalt. Certification shall strictly comply with the underdrain certification form available in Engineering Services Department: A procedural Guide for the Preparation of Assurance of Completion and Maintenance.
19. If during construction activities any evidence of the presence of State and Federally protected plant and/or animal species is discovered, work shall come to an immediate stop and Pasco County shall be notified within two working days of the plant and/or animal species found on the site.
20. If during construction activities any evidence of historic resources, including but not limited to aboriginal or historic pottery, prehistoric stone tools, bone or shell tools, historic trash pits, or historic building foundation, are discovered, work shall come to an immediate stop and the Florida Department of Historic Resources (State Historic Preservation Officer) and Pasco County shall be notified within two working days of the resources found on the site.
21. Prior to construction, a Building Permit shall be obtained for all structures that have a footer, regardless of size, through the Central Permitting Division; i.e.,including, but not inclusive of, buildings, accessories, dumpster walls, and retaining walls.
22. All first floor elevations (FF) shall be a minimum of one (1) foot above the base flood elevation (and meet the requirements of Pasco County LDC 1104) and be at least sixteen (16) inches above the highest crown line of the street lying between the projection of the side–building lines, unless otherwise approved by the County Administrator (per LDC 902).

ESTIMATED EARTHWORK QUANTITIES (UNADJUSTED)*:

VOLUME:
CUT = 145,000 CY
FILL = 145,000 CY
NET = 0 CY

* PROVIDED AS AN ESTIMATE PER PASCO COUNTY REQUIREMENTS – NOT INTENDED AS A BID QUANTITY

GEOTECHNICAL REPORT
THESE PLANS REFERENCE THE * GEOTECHNICAL REPORT, DATED AUGUST 20, 2014, PREPARED BY * AVAILABLE UPON REQUEST.

SOIL REUSE REQUIREMENTS

At least the following six (6) types of materials are present on–site that require proper handling/treatment by the Contractor, during the course of site development/construction activities, in accordance with the noted reuse requirements for each type. Although some soil material quality control testing will be randomly and periodically performed by the project Geotechnical Consultant, as required, working for the Owner, it is the Contractors sole responsibility to reuse onsite soil materials as described and specified below. All discovered or future filling or material reuse work onsite not in accordance or compliance with these notes, or any future adverse impacts or consequences resulting from the Contractors failure to properly reuse soil materials onsite as specifically described below, will be the Contractors sole responsibility for remedy and repair at his cost. If the Contractor has any questions regarding any of the soil materials onsite, the project Geotechnical reports (which he needs to obtain from the Owner or Geotechnical Consultant/ Engineer), or any questions associated with the notes below, it is presumed that the Contractor will satisfactorily resolve such questions/concerns prior to site demolition, clearing, grubbing, stripping and excavation operations begin.

Please note, local, state and federal rules, laws, and regulations prohibiting soil reuse as described below shall take precedence and shall be followed to the fullest extent.

1. Site Demolition Debris (Site demolition debris, not generally considered an environmental/contamination hazard, includes such items as wood pieces, concrete pieces, plastic pipe pieces,certain metal/steel pieces, or similar. If any such debris or other demolition debris is considered an environmental/contamination hazard, or if burial onsite of such materials is prohibited by the governing environmental agency, then all such materials shall be hauled off site by the Contractor for proper disposal, in accordance with all applicable governing environmental agency requirements. In no case, shall any such debris materials remain, orbe placed by the Contractor, beneath any type of structure, pavement, roadway, house, building, pipeline, slab, etc.)All Site Demolition Debris shall be removed from the site development and disposed of properly in accordance with all applicable governing environmental agency requirements.

2. Clearing and Grubbing Debris (Site clearing and grubbing debris includes all larger organic materials, such items as trees, stumps, limbs, brush, vegetation, or similar; all such materials must be either "burned" or "mulched" by the Contractor prior to reuse or disposal onsite.)If acceptable to the governing environmental agency, then all such "burned" or "mulched" site clearing/grubbing debris, if approved in writing first by the Owner/Geotechnical Consultant/Engineer, could be:
   2.1.1. placed as "mulch" material surface dressing in future landscape areas, stockpiling of such "mulched" materials (amounts/locations), if acceptable, will be directed by the Owner/Geotechnical Consultant//Landscape Architect/Engineer;
   2.1.2. placed in temporarily excavated littoral shelf areas in selected stormwater ponds, or in temporarily excavated selected wetland mitigation ponds, in either case not in side banks and not below the permitted design depth of the pond, or such debris could be buried in temporarily excavated passive recreation/park areas (at least 30 feet from any structure) at approved depths/locations, but all these disposal areas will require adequate soil mixing (mix soil with the mulch) and then refilling (with compaction) to required design grades;
   2.1.3. placed along the bottom of selected floodplain mitigation ponds (not in side banks), not below the permitted excavation depth of the pond, but will require adequate soil cover;
   2.1.4. placed along the bottom of selected deeper stormwater ponds (not in side banks), not below the permitted design depth, but will require adequate soil cover.
   2.2. In all instances, the minimum pond depth (including floodplain and wetland mitigation areas) shall be no less than required by the Engineer.
   2.3. All organic debris burial areas in stormwater pond areas and floodplain mitigation pond areas will require adequate soil cover of 18 – 24 inches (with compaction) by the Contractor, meaning at least an adequate weight/thickness of soil material overtop the buried organic debris, such that there will be no future floating up of debris; and for all organic debris burial areas in littoral shelf areas, wetland mitigation pond areas, and passive recreation/park areas, adequate soil/mulch mixing (with compaction) will be necessary by the Contractor, such that no significant future unacceptable settlement of a littoral shelf area, created wetland area, or park/grassed area will occur. If any of these procedures are contemplated by the Contractor, then the Contractor shall notify the owner/Geotechnical Consultant/Engineer in writing, at the start of construction, with some specific information, including the estimated quantity and types of materials, to which stormwater ponds, floodplain mitigation ponds, wetland mitigation ponds, or passive recreation/park areas they propose to use for this type of organic debris disposal, and what approximate elevations will be the top and bottom of the organic debris.

3. Muck/Peat Organic Materials (Typically generated from wetland or lowland areas, or similar areas, permitted for impact or displacement, including excavation of unsuitable organic materials and refilling with suitable sandy soils to accommodate development; includes significant organic peat materials, organic sandy muck materials, and mucky or organic sand materials, designated either Pt or A–8, per the Unified and AASHTO Soil Classification Systems, respectively; those organic materials whose presence, or placement by the Contractor, is unacceptable beneath any type of structure, pavement, roadway, house, building, pipeline, slab, etc.) If acceptable to the governing environmental agency, then all such muck/peat (significant) organic materials, if approved in writing first by the Owner/Geotechnical Consultant/Engineer, could be:
   3.0.1. placed as "peat/muck/organic matter" surface layer in new or created wetland mitigation areas, stockpiling of such "significant organic" materials (amounts/locations), if acceptable, will be directed by the Owner/Wetland Consultant;
   3.0.2. placed in temporarily excavated littoral shelf areas in selected stormwater ponds, or in temporarily excavated selected wetland mitigation ponds, in either case not in side banks and not below the permitted design depth of the pond, or such organic materials could be buried in temporarily excavated passive recreation/park areas (at least 30 feet from any structure) at approved depths/locations, but all these disposal areas will require adequate soil mixing (mix soil with the organic materials) and then refilling (with compaction) to required design grades;
   3.0.3. placed along the bottom of selected floodplain mitigation ponds (not in side banks), not below the permitted excavation depth of the pond, but will require adequate soil cover;
   3.0.4. placed along the bottom of selected deeper stormwater ponds (not in side banks), not below the permitted design depth, but will require adequate soil cover.
   3.1. All organic debris burial areas in stormwater pond areas and floodplain mitigation pond areas will require adequate soil cover (with compaction) by the Contractor, meaning at least an adequate weight/thickness of soil material overtop the buried organic debris, such that there will be no future floating up of debris; and for all organic debris burial areas in littoral shelf areas, wetland mitigation pond areas, and passive recreation/park areas, adequate soil/organics mixing (with compaction) will be necessary by the Contractor, such that no significant future unacceptable settlement of a littoral shelf area, created wetland area, or park/grassed area will occur.
   3.2. If any of these procedures are contemplated by the Contractor, then the Contractor shall notify the Owner/Geotechnical Consultant/Engineer in writing, at the start of construction, with some specific information, including the estimated quantity and types of materials, to which stormwater ponds, floodplain mitigation ponds, wetland mitigation ponds, or passive recreation/park/landscape berm areas they propose to use for this type of organic material disposal, and what approximate elevations will be the top and bottom of the organic materials.

4. Topsoils/Site Strippings (Typically generated from upland areas, after demolition/clearing/grubbing/discing operations; stripping of surficial organics/topsoils being a requirement over at least all structure, building, concrete slab and pavement areas prior to filling to accommodate development; includes topsoils and organic laden sands; those topsoils/organic sand materials whose presence, or placement by the Contractor, is unacceptable beneath any type of structure, pavement, roadway, house, building, pipeline, slab, etc.)
   4.1. If acceptable to the governing environmental agency, all such topsoils/organic laden sand materials, if approved in writing first by the Owner/Geotechnical Consultant/Engineer, could be:
   4.1.1. placed as fill in new (larger) landscape/grass common areas or landscape berm areas (with compaction), stockpiling of such "topsoils/organic laden sand materials" (amounts/locations), if acceptable, will be directed by the Owner/Landscape Consultant;
   4.1.2. placed in temporarily excavated littoral shelf areas in selected stormwater ponds, or in temporarily excavated selected wetland mitigation ponds, in either case not in side banks and not below the permitted design depth of the pond, or such topsoils/organic laden sand materials could be buried in temporarily excavated passive recreation/park areas (at least 30 feet from any structure) at approved depths/locations, but all these disposal areas will require refilling (with compaction) to required design grades;
   4.1.3. placed along the bottom of selected floodplain mitigation ponds (not in side banks), not below the permitted excavation depth of the pond;
   4.1.4. placed along the bottom of selected deeper stormwater ponds (not in side banks), not below the permitted design depth.
   4.2. All topsoil/organic laden sand disposal areas in littoral shelf areas, wetland mitigation pond areas, passive recreation/park areas, or landscape/berm areas will require adequate compaction by the Contractor, such that no significant future unacceptable settlement of a littoral shelf area, created wetland area, park/grassed area, or landscape berm will occur.
   4.3. If any of these procedures are contemplated by the Contractor, then the Contractor shall notify the Owner/Geotechnical Consultant/Engineer in writing, at the start of construction, with some specific information, including the estimated quantity and types of materials, to which stormwater ponds, floodplain mitigation ponds, wetland mitigation ponds, passive recreation/park areas, or landscape berm areas they propose to use for this type of organic debris disposal, and what approximate elevations will be the top and bottom of the organic debris.

5. Non–Structural Clayey Sand/Clay Materials (Typically generated from pond/lake excavations or from utility pipeline/manhole excavations; such clayey sand/clay materials, with typically 40% fines or more passing the No. 200 sieve, designated either SC, CL, CH or A–4 to A–7, per the Unified and AASHTO Soil Classification Systems, respectively; such clayey sand/clay materials being unsuitable or unacceptable for reuse by the Contractor as building pad fill, structural fill, roadway embankment fill, and pipeline or manhole excavation backfill.)
   5.1. If acceptable to the governing environmental agency, all such clayey sand/clay materials, if approved in writing first by the Owner/Geotechnical Consultant/Engineer, could be:
   5.1.1. placed as fill in new (larger) landscape/grass common areas or landscape berm areas (with compaction), provide some surface drainage relief, use where infiltration and drainage is not an important issue, provide some surface sandy soils (min. of 18–inches) as directed by the Landscape Consultant for planting; stockpiling of such "clayey sand/clay materials" (amounts/locations), if acceptable, will be directed by the Owner/Landscape Consultant;
   5.1.2. placed in temporarily excavated littoral shelf areas in selected stormwater ponds, or in temporarily excavated selected wetland mitigation ponds, in either case not in side banks and not below the permitted design depth of the pond, or such clayey sand/clay materials could be buried in temporarily excavated passive recreation/park areas (at least 30 feet from any structure) at approved depths/locations, but all these disposal areas will require refilling (with compaction) to required design grades, and the top 2 feet (min.) being sand materials (not clayey materials) for turbidity control and planting;
   5.1.3. placed along the bottom of selected floodplain mitigation ponds (not in side banks), not below the permitted excavation depth of the pond; however, a 12–inch layer (min.) of sand material overtop the clayey materials will be necessary for turbidity control.
   5.1.4. placed along the bottom of selected deeper stormwater ponds (not in side banks), not below the permitted design depth, however, a 12–inch layer (min.) of sand material overtop the clayey materials will be necessary for turbidity control.
   5.2. All clayey sand/clay disposal areas in littoral shelf areas, wetland mitigation pond areas, passive recreation/park areas, or landscape/berm areas will require adequate compaction by the Contractor, such that no significant future unacceptable settlement of a littoral shelf area, created wetland area, park/grassed area, or landscape berm will occur.
   5.3. If any of these procedures are contemplated by the Contractor, then the Contractor shall notify the Owner/Geotechnical Consultant/Engineer in writing, at the start of construction, with some specific information, including the estimated quantity and types of materials, to which stormwater ponds, floodplain mitigation ponds, wetland mitigation ponds, passive recreation/park areas, or landscape berm areas they propose to use for this type of clayey sand/clay disposal, and what approximate elevations will be the top and bottom of the clayey materials.

6. Structural Sand Fill Materials (Typically generated from pond/lake excavations, cut from higher elevation areas, or from utility pipeline/manhole excavations; such sand materials, with typically 35% fines or less passing the No. 200 sieve, designated either SP, SP–SM, SM or A–2–4, A–2–6 or A–3, per the Unified and AASHTO Soil Classification Systems, respectively; such sand materials being suitable or acceptable for reuse by the Contractor as building pad fill, structural fill, roadway embankment fill, and pipeline or manhole excavation backfill.)
   6.1. All such sand materials shall be reused onsite by the Contractor, per the Geotechnical reports, as building pad fill, structural fill, roadway embankment fill, and pipeline or manhole excavation backfill; placed by the Contractor in loose lifts not exceeding 12–inches, compacted to at least 95% or 98% modified Proctor (per ASTM D–1557 or AASHTO T–180), whichever is applicable depending upon the future use of the filled area (see Geotechnical reports); with density testing of each fill lift for acceptance by the Geotechnical Consultant, upon Contractor request, prior to the next fill lift being placed.

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813–223–3919 Fax: 813–223–3975
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

GENERAL NOTES

JOB NO. STX–NR–002
DESIGN SURAK
DRAWN MIDDLETON
DATE 06/06/2015
FILE GN

AVALON PARK WEST
PARCEL E PHASE 1

PREPARED FOR: SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = –0.83Feet

N

800 400 0 400 800

SCALE: 1" = 400'

THIS EXHIBIT WAS PREPARED FOR ILLUSTRATIVE PURPOSES ONLY. THE LATEST SUITABLE DIGITAL AERIAL IMAGES HAVE BEEN USED, HOWEVER, THIS MAY NOT ACCURATELY DEPICT CURRENT SITE CONDITIONS. ADDITIONAL ENGINEERING, ENVIRONMENTAL REVIEWS, FIELD SURVEYING AND DATA COLLECTION ARE NECESSARY TO CORRECTLY PORTRAY ACTUAL SITE CONDITIONS. THIS EXHIBIT IS SUBJECT TO CHANGE WITHOUT NOTICE.

DATE OF PHOTOGRAPH: 2014

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

AERIAL SITE PLAN

JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = −0.83 Feet
FILE ASP	SHEET 3 OF 54 SHEETS

PASCO COUNTY WETLAND CATEGORY TABLE

CATEGORY	SIZE (Ac)
I	70.90
II	19.97
III	–
TOTAL	90.87

AVALON PARK WEST PARCEL E WETLAND SUMMARY TABLE

WETLAND IDENTIFICATION	PROJECT PHASE	ACRES ON SITE	WETLAND IMPACT ACRES
25	1	1.94	0
27	1 & 2	0.85/6.03	0
38	1	0.33	0.33
40	1	0.25 *	0.25 *
43	1	0.81	0.81
44	1	2.10	2.10
45	1	1.36	1.36
46	1	0.29 *	0.29 *
47	1	0.58	0.58
48	1 & 2	3.58/1.52	0.72
49	2	1.58	1.58
50	2	1.00	1.00
51	2	1.88	1.88
52	2	0.40	0.40 *
53	2	0.75	0.75
54	2	0.32	0.32 *
55	2	0.14	0.14 *
56	2	0.39	0.39 *
57	1 & 2	13.06/50.96	0
5 **	1	0.24	0
6 **	2	0.51	0
TOTAL ACRES		90.87	12.91

* = SURFACE WATER DITCH
** = ISOLATED WETLAND LESS THAT 0.5 AC. IN SIZE
IMPACTS COMPLY WITH CONCEPTUAL ERP #49013559.009

LEGEND

PROPOSED

- STORM DRAINAGE STRUCTURE
- (10) STRUCTURE NO.
- 80.00 ELEVATION
- 80 CONTOUR
- DIRECTION OF SLOPE
- UD — UDCO — UNDERDRAIN WITH CLEANOUT
- AB# SOIL BORING LOCATION
- STAKED EROSION CONTROL (LIMITS OF CLEARING REPRESENTS) (LIMITS OF WETLAND BUFFER)
- SWFWMD — SWFWMD WETLAND LINE
- WLB — WETLAND BUFFER OFFSITE FROM WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSE (AS APPROVED IN CONCEPTUAL PERMIT)
- CATEGORY — PASCO COUNTY WETLAND CATEGORY TYPE
- * I, II, III — DENOTES 79-G TESTING REQ'D FOR FHA FINANCING
- M/P — PROPOSED MODEL LOT / OR PARKING
- SEASONAL HIGH WETLAND ELEVATION
- PROPOSED WETLAND IMPACTS IN ACCORDANCE W/ APPROVED MASTER PLAN
- PROTECTED UPLANDS

THE EXISTING TREES TO BE PRESERVED AND REMOVED ARE SHOWN ON THE TREE, LANDSCAPE & IRRIGATION PLAN.

AVALON PARK WEST PHASE 1 - PARCEL E UPLAND PRESERVATION TABLE

UPLAND IDENTIFICATION	ACRES ON SITE
98	1.29
6*	2.24
97	0.98
8*	2.06
TOTAL ACRES	6.57

* PROPOSED FOR PRESERVATION AS PART OF THE ENTRANCE ROAD PERMIT.

SITE DATA TABLE

PHASE	UPLAND	WETLAND*	TOTAL AC.	LOTS	GROSS DENSITY	NET DENSITY
1	78.89	19.67	98.56	153	1.55 UN/AC	1.94 UN/AC
2	156.08	58.30	214.38	323	1.51 UN/AC	2.07 UN/AC
TOTAL	234.97	77.97	312.94	476	1.52 UN/AC	2.03 UN/AC

* REPRESENTS POST DEVELOPMENT WETLAND AREA

AVALON PARK WEST PHASE 1 - PARCEL E PARK CALCULATION TABLE

TOTAL UNITS	PARK AREA REQUIRED	PARK AREA PROVIDED
476	4.76 ACRES	4.84 ACRES

AVALON PARK WEST PARCEL E TRACT SUMMARY TABLE

TRACT IDENTIFICATION	PROJECT PHASE	ACRES ON SITE	TRACT DESCRIPTION
B-1	1	45.74	WETLANDS (WCA), OPEN SPACE, DRAINAGE/ACCESS/UTILITY EASEMENTS
B-2	1 & 2	24.19/150.04	WETLANDS (WCA), OPEN SPACE, DRAINAGE/ACCESS/UTILITY EASEMENTS
P-1	1	1.54	NEIGHBORHOOD PARK
P-2	2	1.74	NEIGHBORHOOD PARK
P-3	2	1.57	NEIGHBORHOOD PARK
L-1	1	0.28	LANDSCAPE/OPEN SPACE
L-2	1	0.44	LANDSCAPE/OPEN SPACE
L-3	1	0.13	LANDSCAPE/OPEN SPACE
L-4	1	0.10	LANDSCAPE/OPEN SPACE
L-5	1	0.16	LANDSCAPE/OPEN SPACE
L-6	1	0.14	LANDSCAPE/OPEN SPACE
L-7	2	0.19	LANDSCAPE/OPEN SPACE
L-8	2	0.12	LANDSCAPE/OPEN SPACE
L-9	2	0.05	LANDSCAPE/OPEN SPACE
L-10	2	0.05	LANDSCAPE/OPEN SPACE
L-11	2	0.14	LANDSCAPE/OPEN SPACE

CURVE DATA TABLE

NO.	RADIUS	DELTA	ARC	CHORD	BEARING
1	765.00	10°12'09"	136.22	136.04	N.08°23'04"W.
2	835.00	60°58'00"	888.50	847.17	S.31°46'00"E.
3	3460.00	34°00'05"	2053.29	2023.29	N.41°44'08"E.

PRELIMINARY DEVELOPMENT PLAN

AVALON PARK WEST PARCEL E

PASCO COUNTY, FLORIDA

Owner / Developer

SITEX NR DEVELOPMENT, LLC
405 N. Reo Street
Suite 330
Tampa, Florida 33609
Phone: (813) 288-7735

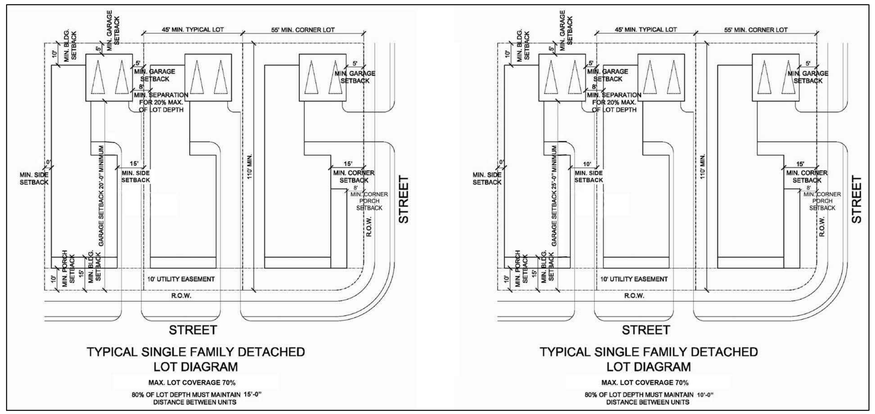
DATE	DESCRIPTION	BY
	REVISIONS	

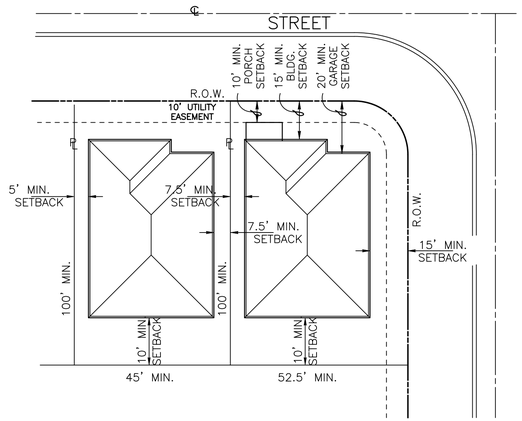
CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

PRELIMINARY DEVELOPMENT PLAN

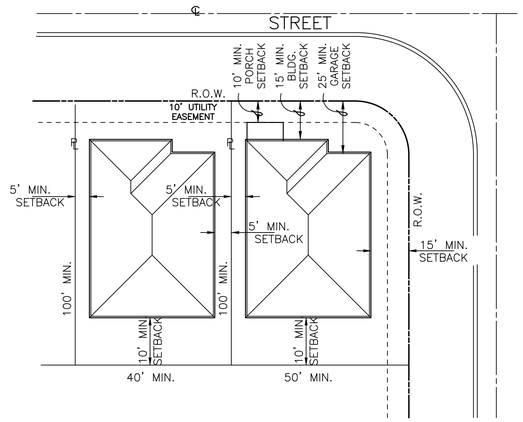
AVALON PARK WEST
PARCEL E PHASE 1

JOB NO.	STX-NR-002
DESIGN	SURAK
DRAWN	MIDDLETON
PREPARED FOR:	SitEx NR Development, LLC
DATE	06/06/2015
	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE	PDP1

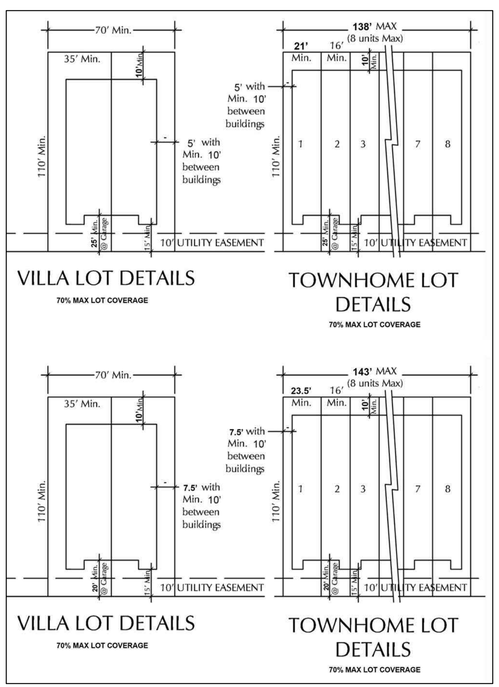




TYPICAL SINGLE FAMILY DETACHED
BUILDING ARRANGEMENT (SFD) w/ 7.5' SIDE-YARD SETBACKS



TYPICAL SINGLE FAMILY DETACHED
BUILDING ARRANGEMENT (SFD) w/ 5' SIDE-YARD SETBACKS



BUILDING SETBACK NOTES

1. If a side yard setback is 7.5' (or 15' between primary structures) the front loaded garage setback shall be a minimimum of 20 feet. If garage is side loaded, regardless of the side setback, minimum garage front setback shall be 15'.
2. Garages may have a minimum side setback of 5', provided they maintain an 8' setback from the primary structure on the adjacent lot.
3. Side-yard setback may be 5' provided the following conditions are met prior to construction plan approval for each phase or unit, or depicted on the construction plans for each phase or unit:
   - The Engineer of Record shall provide to Pasco County signed and sealed design calculations for each typical lot demonstrating compliance with Pasco County drainage criteria.
   - Pasco County typical lots A, B and C will have side yard swales with side slopes no greater than 4:1 and a depth no greater than 15 inches.
   - Side-yard swales shall be sloped to create positive outfall to the front or rear of each lot with velocities no greater than that allowable for grass stabilization as in the FDOT DRainage Manual.
   - Swales shall be sodded in place by the builder.
   - No obstructions shall be permitted in the swale area between the houses that impair the intended function of the swale.
4. Side-yard setback may be 0' on one side (common wall), provided a 5' setback is maintained on the other side with a minimum 10' separation maintained between structures with the conditions noted in No. 3 above.
5. Maximum of eight (8) townhouse units per building. Minimum 10' separation between townhouse buildings.

AVALON PARK WEST PARCEL E PHASE 1
(CONSTRUCTION PLAN)

DESCRIPTION: A parcel of land lying in Sections 11, 12, 13 and 14, Township 26 South, Range 20 East, Pasco County, Florida and being more particularly described as follows:

COMMENCE at the Southwest corner of said Section 12, run thence along the South boundary of said Section 12, N.89°59'07"E., 154.60 feet to the **POINT OF BEGINNING**; thence S.11°56'33"E., 89.71 feet; thence S.56°30'00"W., 185.09 feet to a point on a curve; thence Northerly, 136.22 feet along the arc of a curve to the right having a radius of 765.00 feet and a central angle of 10°12'09" (chord bearing N.06°23'04"W., 136.04 feet); thence S.88°43'00"W., 70.00 feet to a point on a curve; thence Southeasterly, 888.50 feet along the arc of said curve to the left having a radius of 835.00 feet and a central angle of 60°58'00" (chord bearing S.31°46'00"E., 847.17 feet) to a point of tangency; thence S.62°15'00"E., 66.62 feet; thence SOUTH, 1558.91 feet; thence N.59°45'47"W., 786.83 feet; thence N.22°44'18"W., 177.02 feet; thence N.02°59'06"W., 374.72 feet; thence N.59°44'42"W., 128.53 feet; thence N.09°40'46"E., 430.06 feet; thence N.58°16'14"W., 423.28 feet; thence N.04°22'46"E., 635.83 feet; thence N.08°43'23"W., 378.26 feet; thence N.07°42'28"E., 274.03 feet; thence N.16°18'56"E., 180.40 feet to a point on a curve on the Easterly boundary of the (Proposed) right-of-way for the Northerly Extension of RIVER GLEN BOULEVARD; thence along said Easterly boundary of the (Proposed) right-of-way for the Northerly Extension of RIVER GLEN BOULEVARD, Northeasterly, 2053.29 feet along the arc of a curve to the left having a radius of 3460.00 feet and a central angle of 34°00'05" (chord bearing N.41°44'08"E., 2023.29 feet); thence S.84°02'46"E., 140.23 feet; thence S.89°29'55"E., 201.21 feet; thence N.76°03'15"E., 198.85 feet; thence N.65°40'39"E., 87.78 feet; thence S.26°20'40"E., 110.14 feet; thence S.21°23'14"E., 71.80 feet; thence S.13°26'21"E., 494.73 feet; thence S.35°54'40"W., 1736.47 feet; thence S.55°26'57"W., 405.25 feet; thence S.11°56'33"E., 26.26 feet to the **POINT OF BEGINNING .**

Containing 98.562 acres, more or less.

AVALON PARK WEST PARCEL E PHASE 2
(CONSTRUCTION PLAN)

DESCRIPTION: A parcel of land lying in Sections 12, 13 and 14, Township 26 South, Range 20 East, Pasco County, Florida and being more particularly described as follows:

COMMENCE at the Southwest corner of said Section 12, run thence along the South boundary of said Section 12, N.89°59'07"E., 154.60 feet to a point on the Easterly boundary of AVALON PARK WEST PARCEL E PHASE 1, as recorded in Plat Book ___, Pages ___ through ___, inclusive, of the Public Records of Pasco County, Florida; thence along said Easterly boundary of AVALON PARK WEST PARCEL E PHASE 1, the following three (3) courses: 1) N.11°56'33"W., 26.26 feet; 2) N.55°26'57"E., 405.25 feet to the **POINT OF BEGINNING**; 3) N.35°54'40"E., 1736.47 feet; thence S.75°22'10"E., 427.35 feet; thence S.32°48'15"E., 958.48 feet; thence S.15°01'02"W., 708.90 feet; thence S.56°28'04"E., 176.08 feet; thence S.48°36'07"E., 176.09 feet; thence S.29°29'29"E., 1614.33 feet; thence S.26°58'12"W., 964.78 feet; thence S.60°44'27"W., 1359.13 feet; thence S.52°21'55"W., 296.19 feet; thence N.48°59'11"W., 1361.87 feet to the Southeasterly corner of the aforesaid AVALON PARK WEST PARCEL E PHASE 1; thence along the aforesaid Easterly boundary of AVALON PARK WEST PARCEL E PHASE 1, the following six (6) courses: 1) NORTH, 1558.91 feet; 2) N.62°15'00"W., 66.62 feet to a point of curvature; 3) Northwesterly, 888.50 feet along the arc of a curve to the right having a radius of 835.00 feet and a central angle of 60°58'00" (chord bearing N.31°46'00"W., 847.17 feet); 4) N.88°43'00"E., 70.00 feet to a point on a curve; 5) Southerly, 136.22 feet along the arc of said curve to the left having a radius of 765.00 feet and a central angle of 10°12'09" (chord bearing S.06°23'04"E., 136.04 feet); 6) N.56°30'00"E., 185.09 feet; thence S.11°56'33"E., 323.40 feet; thence N.55°26'57"E., 670.00 feet; thence N.47°50'44"W., 416.78 feet to the **POINT OF BEGINNING .**

Containing 214.378 acres, more or less.

NOTES:

1. Owner/Developer: SITEX NR DEVELOPMENT, LLC
   3680 Avalon Park East Boulevard
   Suite 300
   Orlando, Florida 32828
   (407) 658-6565
   Contact: Ross Halle
   Email: rosshl@avalonparkgroup.com
2. Engineer: Clearview Land Design, P.L.
   1213 E. 6th Avenue
   Tampa, Florida 33605
   (813) 223-3919
   Contact: Brian G. Surak, P.E
   Email: brian.surak@clearviewland.com
3. Surveyor: GeoPoint Surveying, Inc
   1403 E. 5th Avenue
   Tampa, Florida 33605
   (813)248-8888
   Contact: John Weigle, PSM
   Email: jweigle@geopointsurvey.com
4. Existing zoning: – MPUD (Petition #GM01-056) The latest rezoning was approved Nov. 14, 2002.
5. Existing Land Use Classification: – RES 3 & RES 6
6. Water and Reclaimed Water service to be provided by Pasco County Utilities.
7. Sewage disposal service to be provided by Pasco County Utilities.
8. Electrical power to be provided by Tampa Electric Company.
9. Telephone service to be provided by Verizon.
10. Street lighting to be provided by a street lighting taxing district and will be provided throughout the subdivision.
11. Fire protection to be provided by – Pasco County Fire Station #15, also Fire Hydrants to be provided as per Pasco County Requirements.
12. The site is currently pasture land; existing upland vegetation consists of Bahia grass, palmetto, and scattered pines.
13. Predominant soil types on-site consist of Eaugallie fine sands within upland areas; Palmetto-Zephyr-Sellers complex in the transitional areas; Chobee soils and Sellers Mucky Loamy fine sands within wetland areas.
14. Recreation areas, conservation areas, and detention ponds will be owned and maintained by the Community Association. Landscape easements along collector and arterial roadways will be dedicated to the Community Association for maintenance. Retention/detention ponds shall maintained by the HOA.
15. Contours shown are based on National Geodetic Vertical Datum of 1929.
16. Proposed rights-of-way for local streets shall be a minimum of fifty (50) feet.
17. All roadway standards to comply with the Manual of Uniform Minimum Standards, State of Florida.
18. All water and wastewater facilities to be installed in compliance with Pasco County Standards for design and construction of water and wastewater facilities.
19. All utility lines shall be installed underground Wherever passible.
20. Project lies within Flood Zone "A", "AH"& "X" as shown on FIRM Panel No. 12101C0432F, revised September 26, 2014. Lines shown have been digitaly translated from Q3 FLOOD DATA supplied by FEMA NATIONAL FLOOD INSURANCE PROGRAM, dated 2014.
21. All roadways to be owned and maintained by the CDD.
22. Sidewalks will be provided on both sides of all roads including non-lot areas. Unless otherwise shown, all sidewalks shall be five (5) feet wide, 4½" thick concrete, and 3000 p.s.i.
23. All easements to be a minimum of five (5) feet in width.
24. Corner lots shall be 10 feet greater in width than the minimum zoning building requirement.
25. Medians and roadside clear zones shall be sodded or seeded & mulched.
26. A minimum of 16" of sod strip will be provided along all roadways per Pasco County requrements.
27. This project will be designed to comply with the new Pasco County Tree Protection & Restoration Ordiance.
28. All residential lots shall have a minimum access width 25 feet along street.
29. Retention/Detention ponds shall be buffered in accordance with Pasco County's landscape ordinance.
30. Wetland setbacks from SWFWMD wetlands shall be a minimum of 15' with an average of 25' as per ERP regulations.
31. This project shall be subject to the Pasco County New Development Fair Share Contrabution for Road Improvements Ordinanace and Shoal Impact Fee Ordinance.
32. All construction work, including road, drainage and utilities, shall be constructed in accordance with Pasco County design standards and tested in compliance with the Pasco County Engineering Service Department Testing Specifications for construction of roads, storm drainage and utilities.
33. All landscaped and sodded areas along collector road will be irrigated.
34. Vehicular-access rights along the rear of all double-frontage lots that abut roads within or adjoining the project shall be dedicated to Pasco County concurrent with final record platting for each phase of any increment or where no plat is required prior to final site plan approval.

SPECIAL NOTE:
If during construction activities any evidence of historic resources, including but not limited to aboriginal or historic pottery, prehistoric stone tools, bone or shell tools, historic trash pits, or historic building foundation, are discovered, work shall come to an immediate stop and the Florida Department of Historic Resources (State Historic Preservation Officer) and Pasco County shall be notified within two working days of the resources found on site.

PRELIMINARY DEVELOPMENT PLAN

AVALON PARK WEST
PARCEL E

PASCO COUNTY, FLORIDA

Owner / Developer

SITEX NR DEVELOPMENT, LLC
3680 Avalon Park East Boulevard, Suite 300
Orlando, Florida 32828
Phone: (407) 658-6565

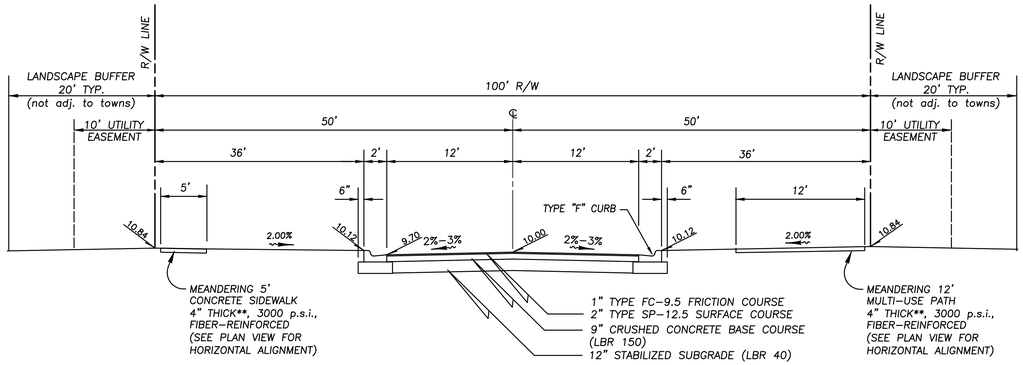
DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

PRELIMINARY DEVELOPMENT PLAN

JOB NO. STX-NR-002	AVALON PARK WEST PARCEL E PHASE 1
DESIGN SURAK	
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE PDP2	SHEET 5 OF 54 SHEETS



REFER TO DRAINAGE DETAILS PLAN FOR UNDERDRAIN DETAILS

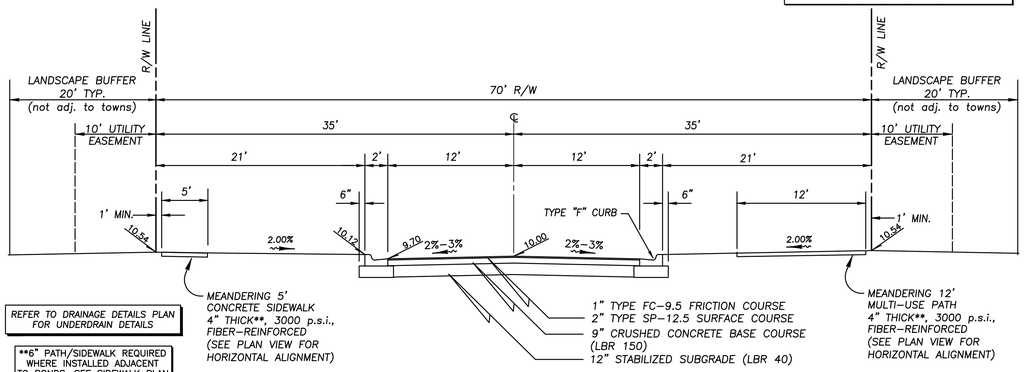
TYPICAL TYPE "1B" STREET – INDIAN SPRINGS TRAIL

DESIGN SPEED: 25 MPH

100' R/W, 24' PAVEMENT

N.T.S.

GRASSING NOTES:
- 16" STRIP OF SOD REQUIRED ON ALL BACK OF CURBS;
- REMAINING GRASS AREAS WITHIN ROW MAY BE SEEDED AND MULCHED ON SLOPES FLATTER THAN 4:1



REFER TO DRAINAGE DETAILS PLAN FOR UNDERDRAIN DETAILS

**6" PATH/SIDEWALK REQUIRED WHERE INSTALLED ADJACENT TO PONDS. SEE SIDEWALK PLAN

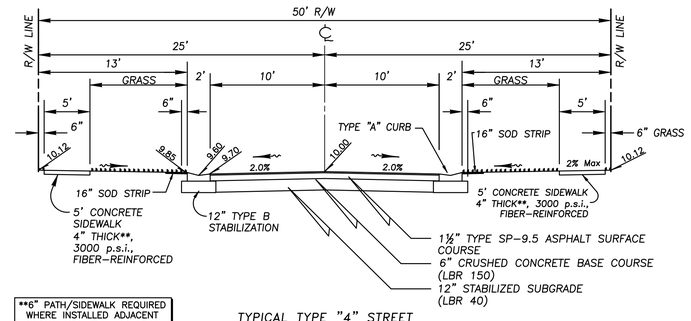
TYPICAL TYPE "1B" STREET – TURTLE BAY DRIVE (SOUTH)

DESIGN SPEED: 25 MPH

100' R/W, 24' PAVEMENT

N.T.S.

GRASSING NOTES:
- 16" STRIP OF SOD REQUIRED ON ALL BACK OF CURBS;
- REMAINING GRASS AREAS WITHIN ROW MAY BE SEEDED AND MULCHED ON SLOPES FLATTER THAN 4:1



**6" PATH/SIDEWALK REQUIRED WHERE INSTALLED ADJACENT TO PONDS. SEE SIDEWALK PLAN

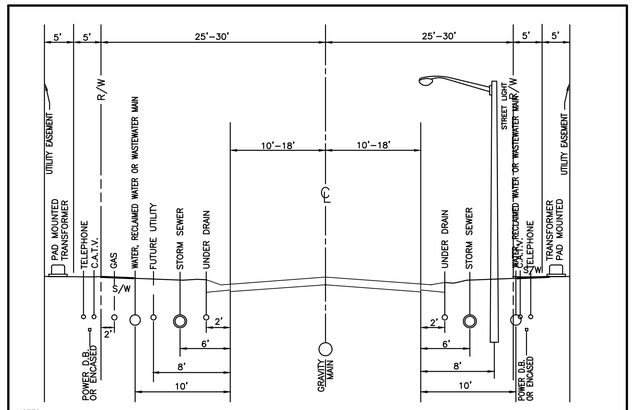
TYPICAL TYPE "4" STREET

20' PAVEMENT

DESIGN SPEED 25 M.P.H.

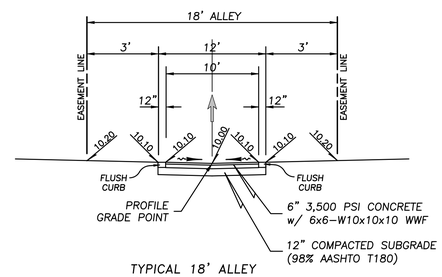
N.T.S.

GRASSING NOTES:
- 16" STRIP OF SOD REQUIRED ON ALL BACK OF CURBS;
- REMAINING GRASS AREAS WITHIN ROW MAY BE SEEDED AND MULCHED ON SLOPES FLATTER THAN 4:1



NOTES:
1. DEPTH OF COVER SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RESPECTIVE UTILITIES.
2. WREC WILL USE THE BACK ±5' WITHIN THE UTILITY EASEMENT. TECO & DUKE ENERGY WILL USE THE FRONT ±5' FEET.

RECOMMENDED UTILITY LOCATIONS
SCALE: N.T.S.



TYPICAL 18' ALLEY W/O UTILITY SERVICES

N.T.S.

PASCO COUNTY PAVEMENT DESIGN CRITERIA

MINIMUM SN*	ROADWAY CLASSIFICATION
2.34	LOCAL
3.50	TYPE 1
3.50	SUBDIVISION COLLECTOR

* FROM PASCO COUNTY LDC SECTION 901

ALTERNATE PAVEMENT CONSTRUCTION NOTES (SOIL CEMENT)

1. SUBGRADE UNDER A SOIL-CEMENT BASE SHALL BE PROOF-ROLLED TO GRADE, AS DIRECTED BY THE ENGINEER AND APPROVED BY THE ENGINEER WITH SUITABLE COMPACTION EQUIPMENT TO ACHIEVE A DENSITY OF NINETY-EIGHT (98%) PERCENT MODIFIED PROCTOR FOR A DEPTH OF TWELVE (12) INCHES PRIOR TO PLACING SOIL-CEMENT BASE.
2. SOIL-CEMENT MIX DESIGN SHALL BE PROVIDED A MINIMUM 30 DAYS IN ADVANCE OF PLACEMENT OF BASE MATERIAL FOR APPROVAL BY THE ENGINEER. THE SOIL-CEMENT PRODUCT SHALL BE IN ACCORDANCE WITH PCA STANDARDS. 300 P.S.I. MINIMUM.
3. SOIL-CEMENT SURFACE SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO ANY PAVING OPERATION.

ALL CLEAR ZONES SHALL BE FREE OF ANY OBSTRUCTIONS.
SEE CLEAR ZONE WIDTHS PER PASCO COUNTY LDC 901.6(D)(6) IN THE FOLLOWING TABLE:

STREET TYPE	FDOT TYPE F & D CURB	FDOT TYPE A, E, & MIAMI CURB
2	4'	6'
3	4'	6'
4	1½'	6'

1. FOR PRIVATE STREETS, ENTRANCE AND EXIT GATE EQUIPMENT, GUARDHOUSE, OR OTHER LIKE STRUCTURE MAY BE SET BACK 1½ FEET FROM THE FDOT TYPE F AND D CURB.
2. WIDTHS IN ABOVE CHART ARE MEASURED FROM FACE OF BARRIER CURB OR EDGE OF PAVEMENT IF NO BARRIER CURB PROVIDED.

Proposed Pavement Structure (All Local Roads – Type 2, 3 & 4):

Layer Coefficients	Thickness
0.44 – Type SP-9.5 Asphalt Surface	1 1/2"
0.15 – Crushed Concrete Base (LBR 150 min.)	6"
0.08 – Stabilized Subgrade (LBR 40 min.)	12"

SN = (0.44) (1.50) + (0.15) (6) + (0.08) (12) = 2.52

Use: 6" Crushed Concrete Base with 1 1/2" Type SP-9.5 Asphalt Surface and 12" Stabilized Subgrade (LBR 40 Min)

Alternate Pavement Structure (All Local Roads – Type 2, 3 & 4):

Layer Coefficients	Thickness
0.44 – Type SP-9.5 Asphalt Surface	1 3/4"
0.15 – Soil Cement Base (300 p.s.i. min.)	8"
0.04 – Stabilized Subgrade (LBR 20)	12"

SN = (0.44) (1.75) + (0.15) (8) + (0.04) (12) = 2.45

Use: 8" Soil Cement Base with 1 3/4" Type SP-9.5 Asphalt Surface and 12" Stabilized Subgrade (LBR 20)

CONTRACTOR MAY PROPOSE ALTERNATE PAVEMENT DESIGNS.
CONTRACTOR SHALL SUBMIT ANY PAVEMENT ALTERNATIVES TO ENGINEER FOR APPROVAL PRIOR TO FINAL SUBGRADE PREPARATIONS.

Proposed Pavement Structure (Type 1 Roads):

Layer Coefficients	Thickness
0.44 – Type FC-9.5 Friction Course	1"
0.44 – Type SP-12.5 Surface Course	2"
0.15 – Crushed Concrete Base (LBR 150 min.)	9"
0.08 – Stabilized Subgrade (LBR 40 min.)	12"

SN = (0.44) (3.0) + (0.15) (9) + (0.08) (12) = 3.63

Use: 9" Crushed Concrete Base with 1" Type FC-9.5 Friction Course, 2" Type SP-12.5 Surface Course and 12" Stabilized Subgrade (LBR 40 Min)

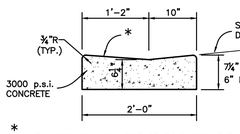
Proposed Pavement Structure (Type 1 Roads):

Layer Coefficients	Thickness
0.44 – Type FC-9.5 Friction Course	1"
0.44 – Type SP-12.5 Surface Course	2 1/2"
0.15 – Soil Cement Base (300 p.s.i. min.)	10"
0.04 – Stabilized Subgrade (LBR 20 min.)	12"

SN = (0.44) (3.5) + (0.15) (10) + (0.04) (12) = 3.52

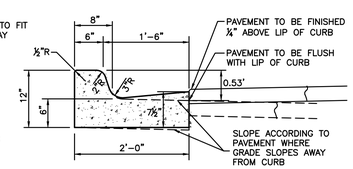
Use: 10" Soil Cement Base with 1" Type FC-9.5 Friction Course, 2 1/2" Type SP-12.5 Surface Course and 12" Stabilized Subgrade (LBR 20 Min)

CONTRACTOR MAY PROPOSE ALTERNATE PAVEMENT DESIGNS.
CONTRACTOR SHALL SUBMIT ANY PAVEMENT ALTERNATIVES TO ENGINEER FOR APPROVAL PRIOR TO FINAL SUBGRADE PREPARATIONS.

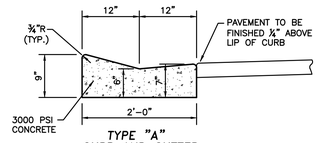


* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN.

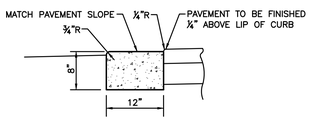
DROP CURB



TYPE "F" CURB AND GUTTER



TYPE "A" CURB AND GUTTER



CONCRETE FLUSH CURB

PASCO COUNTY SUBDIVISION PAVEMENT CONSTRUCTION NOTES (CRUSHED CONCRETE)

1. PAVEMENT WEARING SURFACE SHALL BE ASPHALTIC CONCRETE OF TYPE AND THICKNESS SHOWN IN DETAIL AND SHALL MEET CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) SPECIFICATIONS.
2. PAVEMENT BASE SHALL BE CRUSHED CONCRETE, AS DESIGNATED IN PLANS, AND SHALL BE COMPACTED TO A MINIMUM THICKNESS AS SHOWN.
3. CRUSHED CONCRETE ROAD BASE MATERIAL SHALL MEET THE FOLLOWING CONDITIONS:

THE WORK SPECIFIED UNDER THIS SECTION CONSISTS OF THE CONSTRUCTION OF ROADWAY BASE UTILIZING CRUSHED CONCRETE (RECLAIMED CONCRETE AGGREGATE BASE MATERIAL) ON A PREPARED STABILIZED SUBGRADE OF LBR 40 WITH A DENSITY OF 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY AS DETERMINED BY FM1-T 180, METHOD D, IN CONFORMITY WITH THE LINES, GRADES NOTES AND TYPICAL CROSS SECTIONS SHOWN IN THE PLANS, AND AS DIRECTED BY THE COUNTY ENGINEER.

THE CONSTRUCTION OF CRUSHED CONCRETE BASE SHALL CONFORM TO THE REQUIREMENTS OF THIS SECTION, OR, IN LIEU THEREOF, SUCH REQUIREMENTS AS MAY BE ESTABLISHED BY THE COUNTY ENGINEER DURING CONSTRUCTION. THE COUNTY ENGINEER SHALL HAVE FULL AUTHORITY TO MODIFY THE PROVISIONS OF THIS SECTION AS DEEMED NECESSARY, IN HIS OPINION, TO MEET FIELD CONDITIONS AND REQUIREMENTS.

3.1. MATERIALS

3.1.1. CRUSHED CONCRETE MUST BE PRODUCED FROM A SOURCE APPROVED BY FLORIDA DEPARTMENT OF TRANSPORTATION OR THE COUNTY ENGINEER. THE SUPPLIER SHALL HAVE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) PERMIT REQUIREMENTS SECTION 62-701.730 OR BE QUALIFIED AS A CLEAN DEBRIS SOURCE UNDER DEP RULES. THE RECLAIMED CONCRETE AGGREGATE BASE SHALL CONSIST OF CRUSHED CONCRETE MATERIAL DERIVED FROM THE CRUSHING OF HARD PORTLAND CEMENT CONCRETE.

3.2. COMPOSITION

3.2.1. BASE MATERIAL SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE SIZE	% BY WEIGHT PASSING
2 INCH	100
3/4 INCH	65 TO 95
3/8 INCH	40 TO 85
NO. 4	25 TO 65
NO. 10	20 TO 50
NO. 50	5 TO 25
NO. 200	0 TO 10

3.2.2. CRUSHED CONCRETE BASE SHALL NOT CONTAIN PLASTIC SOILS SUCH THAT THE NO. 40 SIEVE MATERIAL SHALL BE NON-PLASTIC.

3.2.3. LIQUID LIMIT (AS DETERMINED BY AASHTO T80) (LESS THAN 25) PER MATERIAL TYPE

3.2.4. THE FINISHED IN-PLACE CRUSHED CONCRETE BASE LIMEROCK BEARING RATIO SHALL HAVE A MINIMUM (LBR) OF 150.

3.2.5. CRUSHED CONCRETE BASE SHALL BE FREE OF ALL MATERIALS THAT FALL UNDER THE CATEGORY OF SOLID WASTE OR HAZARD MATERIALS AS DEFINED BY THE STATE OR LOCAL JURISDICTION AND SHALL MEET ALL DEP PERMIT REQUIREMENTS WHICH PERTAIN TO CONSTRUCTION, DEMOLITION AND RECYCLING OF THESE MATERIALS. CRUSHED CONCRETE BASE SHALL BE ASBESTOS FREE. THE FOLLOWING LIMITS SHALL NOT BE EXCEEDED:

BITUMINOUS CONCRETE	1.0% BY WEIGHT
BRICKS	1.0% BY WEIGHT
WOOD & OTHER ORGANIC SUBSTANCES	0.5% BY WEIGHT
HEAVY METALS (EXCEPT LEAD)	0.1% BY WEIGHT
LEAD	5 PARTS PER MILLION
REINFORCED STEEL AND WELDED FABRIC	0.1% BY WEIGHT
PLASTER AND GYPSUM BOARD	0.1% BY WEIGHT

3.2.6. THE MATERIAL FOR CRUSHED CONCRETE BASE SHALL CONSIST ONLY OF CRUSHED CONCRETE PAVEMENT AND SUCH ADDITIVE MATERIAL AS MAY BE APPROVED BY THE COUNTY ENGINEER FOR THE PURPOSE OF FACILITATING CONSTRUCTION AND ACHIEVING THE DESIRED CHARACTERISTICS OF THE FINISHED IN-PLACED PRODUCT. APPROVAL FROM THE COUNTY ENGINEER IS REQUIRED BEFORE PLACING MATERIAL FROM MORE THAN ONE SOURCE. ONCE APPROVED, A CHANGE IN THE SOURCE OF BASE MATERIAL SHALL REQUIRE ADDITIONAL ACCEPTANCE TESTING. THE MATERIAL SHALL NOT CONTAIN LUMPS, BALLS OR POCKETS OF SAND OR CLAY MATERIAL IN SIZE OR QUANTITY SUFFICIENT TO BE DETRIMENTAL TO THE PROPER BONDING, FINISHING, STRENGTH OF THE CONCRETE BASE. EXISTING BASE IS TO BE REMOVED TO CONSTRUCT THE NEW BASE.

3.3. EQUIPMENT, PLACEMENT AND SPREADING OF MATERIAL

3.3.1. USE MECHANICAL ROCK SPREADERS, EQUIPPED WITH A DEVICE THAT STRIKES OFF THE ROCK UNIFORMLY TO LAYING THICKNESS AND CAPABLE OF PRODUCING EVEN DISTRIBUTION. FOR ROADWAY WIDTHS OF 20 FEET OR LESS, CROSSOVERS, INTERSECTIONS, RAMP AREAS OR WHERE THE USE OF A MECHANICAL SPREADER IS NOT PRACTICABLE; THE CONTRACTOR MAY SPREAD THE CRUSHED CONCRETE BASE USING BULLDOZERS OR BLADE GRADERS.

3.3.2. TRANSPORT CRUSHED CONCRETE TO THE POINT OF USE, OVER THE BASE PREVIOUSLY PLACED, AND DUMP IT ON THE END OF THE PRECEDING SPREAD. HAULING ON SUBGRADE TO DUMP CRUSHED CONCRETE BASE WILL BE PERMITTED ONLY WHEN, IN THE ENGINEER'S OPINION, THESE OPERATIONS WILL NOT BE DETRIMENTAL TO THE BASE AND SUBGRADE.

3.3.3. CRUSHED CONCRETE SHALL BE SPREAD UNIFORMLY WITHOUT SEGREGATION OF FINE OR COURSE MATERIALS. SEGREGATED AREAS SHALL BE REPLACED WITH PROPERLY GRADED CRUSHED CONCRETE AFTER REMOVAL.

3.3.4. THE MINIMUM THICKNESS OF THE CRUSHED CONCRETE BASE SHALL BE INDICATED ON THE PLANS. WHEN THE SPECIFIED COMPACTED THICKNESS OF THE CRUSHED CONCRETE BASE IS GREATER THAN SIX INCHES, CONSTRUCT THE BASE IN MULTIPLE COURSES OF EQUAL THICKNESS. INDIVIDUAL COURSES SHALL NOT BE LESS THAN THREE INCHES. PLACE CRUSHED CONCRETE MATERIAL TO ENSURE THE TOTAL THICKNESS SINGLE SOURCE INTEGRITY AT ANY STATION LOCATION OF THE BASE.

3.4. COMPACTING, FINISHING AND TESTING REQUIREMENTS

3.4.1. AFTER SPREADING IS COMPLETED THE CRUSHED CONCRETE SHALL BE UNIFORMLY COMPACTED, WITH WATER BEING ADDED AS REQUIRED TO A DENSITY OF NOT LESS THAN ONE HUNDRED PERCENT (100%) OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. DURING FINAL COMPACTION OPERATIONS, IF THE BLADING OF ANY AREAS IS NECESSARY TO OBTAIN THE TRUE GRADE AND CROSS SECTION, FREE OF SCABS AND LAMINATIONS, THE COMPACTING OPERATIONS FOR SUCH AREAS SHALL BE COMPLETED PRIOR TO THE PERFORMANCE OF DENSITY TESTS ON THE FINISHED BASE.

3.4.2. MULTIPLE COURSE BASE: CLEAN THE FIRST COURSE OF FOREIGN MATERIAL, THEN BLADE AND BRING IT TO A SURFACE CROSS-SECTION APPROXIMATELY PARALLEL TO THE FINISHED BASE. BEFORE SPREADING ANY MATERIAL FOR THE UPPER COURSES, OBTAIN DENSITY TESTS FOR THE LOWER COURSES TO DETERMINE THAT THE REQUIRED COMPACTION [NOT LESS THAN ONE HUNDRED PERCENT (100%) OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 HAS BEEN OBTAINED. AFTER SPREADING THE CRUSHED CONCRETE FOR THE TOP COURSE, FINISH AND SHAPE ITS SURFACE TO PRODUCE THE REQUIRED GRADE AND CROSS-SECTION, FREE OF SCABS AND LAMINATIONS, AFTER COMPACTING.

3.4.3. THE MINIMUM DENSITY THAT WILL BE ACCEPTED AT ANY LOCATION OUTSIDE THE TRAVELED ROADWAY (SUCH AS INTERSECTIONS, CROSSOVERS, TURNOUTS, ETC.) SHALL BE 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.

3.5. TESTING OF BASE COURSE

3.5.1. THE MINIMUM FREQUENCY OF SAMPLING AND TESTING OF CRUSHED CONCRETE MATERIAL, LAB DENSITY, FIELD DENSITY AND THICKNESS SHALL ADHERE TO THE FREQUENCY OF TESTING FOR LIMEROCK BASE IN THE MOST CURRENT EDITION OF "PASCO COUNTY ENGINEERING SERVICES DEPARTMENT TESTING SPECIFICATIONS FOR CONSTRUCTION OF ROADS, STORM DRAINAGE AND UTILITIES". ONE PLANT MIX DESIGN, ONE PLANT GRADATION TEST FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (AASHTO T-27) (FM1-T027) INCLUDING A PLASTICITY INDEX (FM-T090) (AASHTO T-90) FROM THE APPROVED SOURCE SHALL BE SUBMITTED AT ONE PER DAY OR CHANGE OF MATERIAL. ONE ROADWAY FIELD TEST FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (ASTM C-136) SHALL BE SUBMITTED PER 500 FEET OF ROAD PER DAY PER MIX DESIGN; MINIMUM ONE PER ROAD.

3.5.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING PERFORMED IN CONNECTION WITH CONSTRUCTION OF THE BASE.

3.6. CORRECTION OF DEFECTS

3.6.1. ALL SEGREGATED AREAS OF FINE OR COURSE CRUSHED CONCRETE SHALL BE REMOVED AND REPLACED WITH PROPERLY GRADED RECLAIMED CONCRETE AGGREGATE BASE MATERIAL. ALL DEFECTS IN MATERIALS AND CONSTRUCTION SHALL BE CORRECTED BY THE CONTRACTOR, AT HIS EXPENSE, AND TO THE SATISFACTION OF THE COUNTY ENGINEER.

3.7. PRIMING AND MAINTENANCE

3.7.1. APPLY THE PRIME COAT ONLY WHEN THE BASE MEETS THE SPECIFIED DENSITY REQUIREMENTS AND WHEN THE MOISTURE CONTENT. AT THE TIME OF PRIMING, ENSURE THAT THE BASE IS FIRM, UNYIELDING AND IN SUCH CONDITION THAT NO UNDUE DISTORTION WILL OCCUR. MAINTAIN THE TRUE CROWN AND TEMPLATE, WITH NO RUTTING OR DISTORTION, WHILE APPLYING THE SURFACE COURSE.

3.8. PASCO COUNTY TESTING SPECIFICATIONS ON CRUSHED CONCRETE BASE

3.8.1. TESTS FOR BASE THICKNESS, AND DENSITY SHALL BE LOCATED NO MORE THAN THREE HUNDRED (300) FEET APART AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND ON THE CENTERLINE OF ROADWAY. THERE SHALL BE NO LESS THAN ONE (1) TEST PER STREET. BEARING VALUE, GRADATION AND FIELD TEST FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (ASTM C-136) SHALL BE NO MORE THAN FIVE HUNDRED (500) FEET.

3.8.2. EXAMPLE: A SEVEN HUNDRED FEET ROAD WOULD REQUIRE TWO FIELD LBR AND GRADATION TESTS, THREE FIELD DENSITY AND THICKNESS TESTS ALONG WITH THE APPROPRIATE LAB TESTING.

4. SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH FDOT INDEX NO. 505, LATEST EDITION. EMBANKMENT FILLS OR NATURAL SANDS TO 24-INCHES BELOW THE BOTTOM OF THE PAVEMENT BASE (IF NO STABILIZED SUBGRADE), OR TO 24-INCHES BELOW THE BOTTOM OF STABILIZED SUBGRADE, SHALL BE SANDY SOILS (A-3 OR SP/SP-SM) WITH TYPICALLY 15% FINES OR LESS PASSING THE NO. 200 SIEVE.
5. A TYPE "B" STABILIZED SUBGRADE WITH A MINIMUM LBR OF 40 AND TESTED AT A FREQUENCY REQUIRED BY FDOT IS REQUIRED BENEATH CRUSHED CONCRETE BASE COURSES.
6. SUBGRADE UNDER A CRUSHED CONCRETE BASE SHALL BE PROOF-ROLLED TO GRADE, AS DIRECTED AND APPROVED BY THE ENGINEER WITH SUITABLE COMPACTION EQUIPMENT TO ACHIEVE A MINIMUM DENSITY OF NINETY-EIGHT (98) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-180 FOR A MINIMUM DEPTH OF TWELVE (12) INCHES.
7. THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF ANY BASE MATERIAL.
8. THE BASE COURSE SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF ANY ASPHALT MATERIAL.
9. CRUSHED CONCRETE SURFACE SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO ANY PAVING OPERATION.
10. ALL CURBS AND GUTTERS SHALL BE PLACED ON A FOUNDATION OF TYPE "B" STABILIZED SUBGRADE WITH A MINIMUM LBR OF 40 AND WHICH HAS BEEN COMPACTED TO A MINIMUM DENSITY OF NINETY-EIGHT (98) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T 180 FOR A MINIMUM DEPTH OF TWELVE (12) INCHES.
11. ROADWAY UNDERDRAIN HAS BEEN LOCATED ON THESE PLANS TO MEET THE MINIMUM STANDARDS OF PASCO COUNTY.PRIOR TO CURB CONSTRUCTION, THE GEOTECHNICAL ENGINEER SHALL REVIEW THE PREDESIGN BORINGS AND, ALONG WITH THEIR FIELD INSPECTION, MAKE A RECOMMENDATION REGARDING ADDITIONAL UNDERDRAIN REQUIREMENTS.
12. SHOULD NO UNDERDRAIN BE SPECIFIED ON THE PLANS THE CONTRACTOR IS TO INCLUDE 1,000 LINEAR FEET OF UNDERDRAIN AT UNIT PRICES FOR BID PURPOSES.
13. ALL PORTLAND CEMENT CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. UNLESS OTHERWISE SPECIFIED.

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

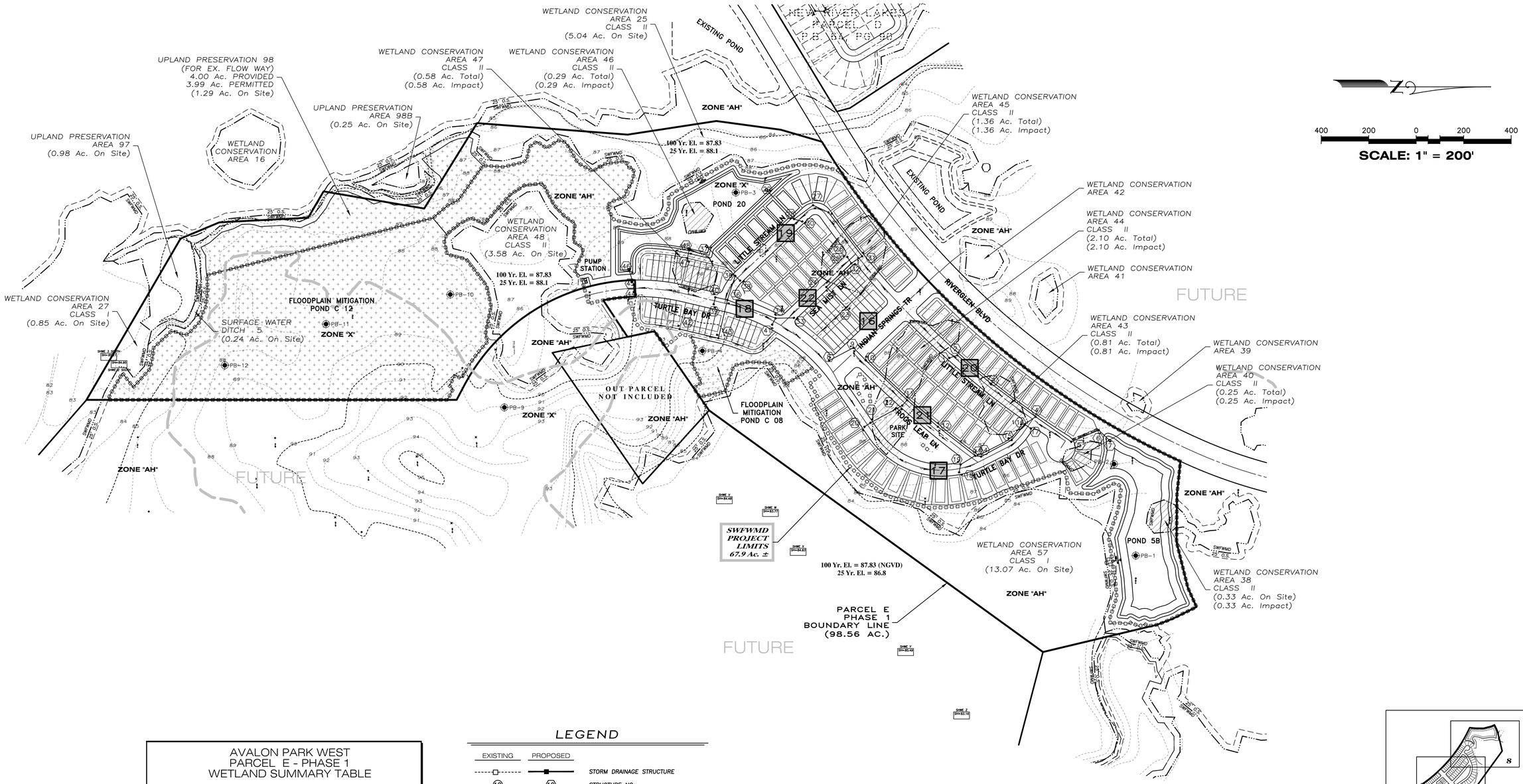
TYPICAL ROADWAY SECTIONS

AVALON PARK WEST

PARCEL E PHASE 1

JOB NO.	STX-NR-002
DESIGN	SURAK
DRAWN	MIDDLETON
PREPARED FOR:	SitEx NR Development, LLC
DATE	06/03/15
FILE	RS

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet



AVALON PARK WEST
PARCEL E - PHASE 1
WETLAND SUMMARY TABLE

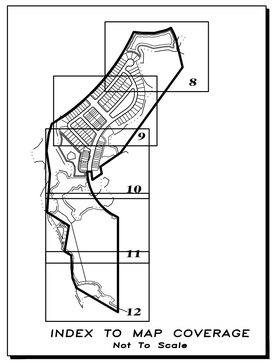
WETLAND IDENTIFICATION	PROJECT PHASE	ACRES ON SITE	WETLAND IMPACT ACRES
25	1	1.94	0
27	1	0.85	0
38	1	0.33	0.33
40	1	0.25 *	0.25 *
43	1	0.81	0.81
44	1	2.10	2.10
45	1	1.36	1.36
46	1	0.29 *	0.29 *
47	1	0.58	0.58
48	1	3.58	0.72
57	1	13.06	0
5 **	1	0.24	0
TOTAL ACRES		25.39	6.44

* = SURFACE WATER DITCH

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
10	10	STRUCTURE NO.
+15.00	+15.00 OR 15.00	SPOT ELEVATION
15	15.00	CONTOUR
		DIRECTION OF SURFACE FLOW
		STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)
	AB# (−14)	POND BORING LOCATION (MAX DEPTH OF EXCAVATION FROM EXISTING GRADE)
	SWFWL	SWFWMD WETLAND LINE
	25'OS	25' OFFSET FROM SWFWD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		PROPOSED SWFWMD WETLAND IMPACTS
		FEMA FLOOD BOUNDARY
	18	PLAN & PROFILE SHEET NO.

NOTES:
1. Elevations Refer to the National Geodetic Vertical Datum 1929 (NGVD 29)
2. Flood Zones "A", "AH" & "X" as shown on FIRM Panel No. 12101C 0432 F, revised September 26, 2014. Lines shown have been digitally translated from Q3 FLOOD DATA supplied by FEMA NATIONAL FLOOD I INSURANCE PROGRAM, dated 1996.
3. The Developer will grant, convey, warrant and dedicate to the County via plat a Non-Exclusive Flow through Easement and reasonable right of access to ensure the free flow of water for general public drainage purposes over, through and under all drainage easements or commonly owned property shown on this plat. In the event the Owner, the District or the Association fails to properly maintain any public or private drainage easements/facilities preventing the free flow of water, the County shall have the reasonable right, but not the obligation, to access and enter upon any public or private drainage easement for the purpose of performing maintenance to ensure the free flow of water.
4. If prehistoric artifacts such as pottery or ceramics, stone tools or metal implements, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time, the project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The applicant, or designee, should contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at 850.245.6333, as well as the appropriate funding agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources.



CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
811 Know what's below. Call before you dig.
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

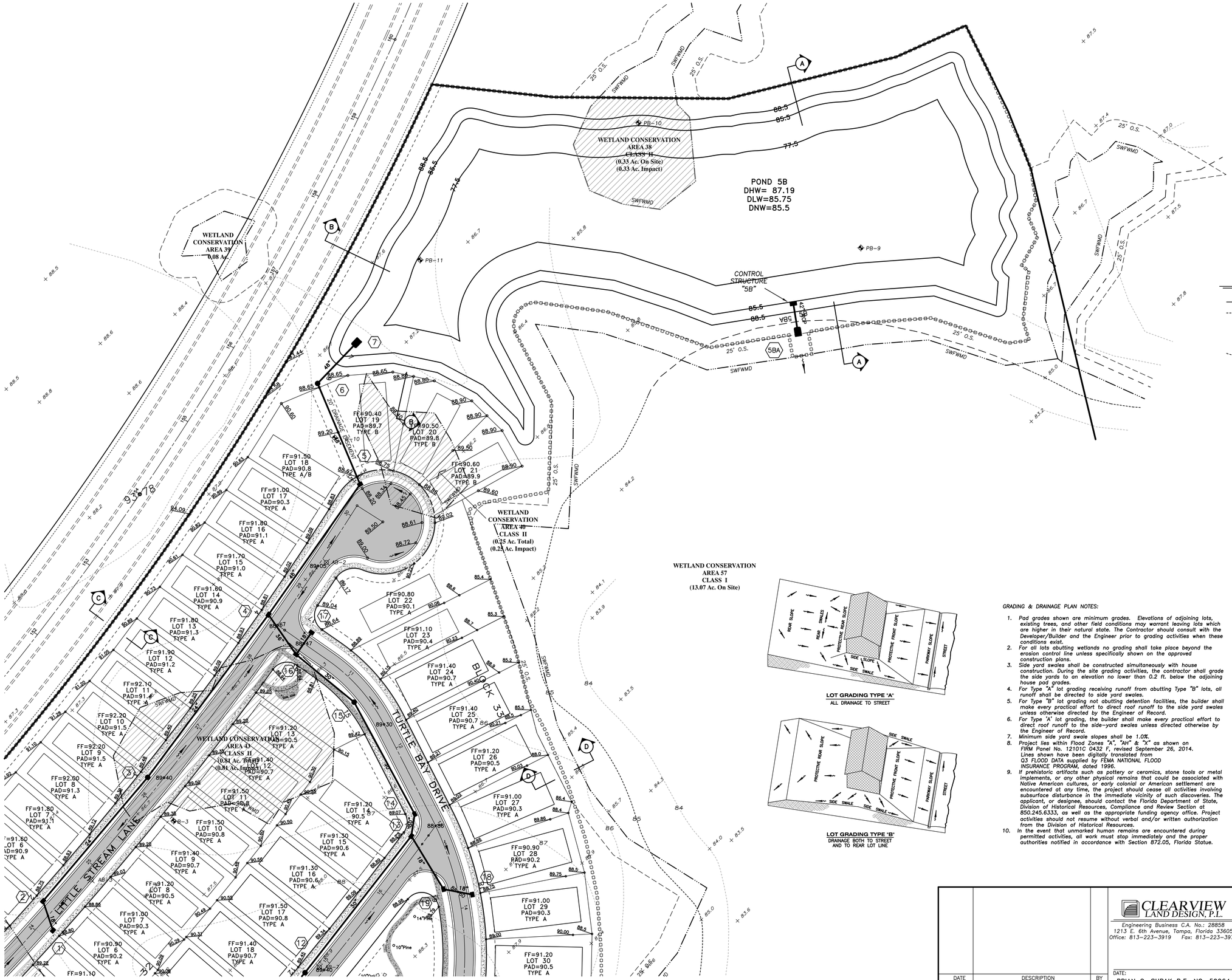
MASTER DRAINAGE PLAN

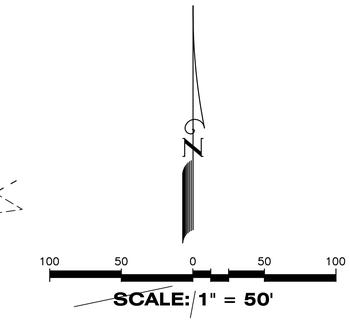
JOB NO. STX-NR-002
DESIGN SURAK
DRAWN MIDDLETON
DATE 06/06/2015
FILE MDKEY

AVALON PARK WEST
PARCEL E PHASE 1

PREPARED FOR: SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = −0.83Feet





LEGEND

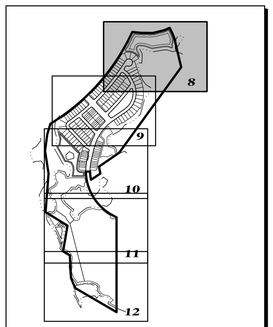
EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
(10)	(10)	STRUCTURE NO.
+15.00	+15.00 OR 15.00	SPOT ELEVATION
15	15.00	CONTOUR
		DIRECTION OF SURFACE FLOW
		STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)
	AB# (-14)	POND BORING LOCATION (MAX DEPTH OF EXCAVATION FROM EXISTING GRADE)
SWFWL		SWFWMD WETLAND LINE
25'OS		25' OFFSET FROM SWFMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		PROPOSED SWFWMD WETLAND IMPACTS
FF=56.00 LOT 4 PAD=55.30 TYPE A		FINISH FLOOR ELEVATION; LOT NUMBER; PAD ELEVATION; LOT GRADING TYPE
		FEMA FLOOD BOUNDARY

LOT GRADING TYPE 'A'
ALL DRAINAGE TO STREET

LOT GRADING TYPE 'B'
DRAINAGE BOTH TO STREET AND TO REAR LOT LINE

GRADING & DRAINAGE PLAN NOTES:

1. Pad grades shown are minimum grades. Elevations of adjoining lots, existing trees, and other field conditions may warrant leaving lots which are higher in their natural state. The Contractor should consult with the Developer/Builder and the Engineer prior to grading activities when these conditions exist.
2. For all lots abutting wetlands no grading shall take place beyond the erosion control line unless specifically shown on the approved construction plans.
3. Side yard swales shall be constructed simultaneously with house construction. During the site grading activities, the contractor shall grade the side yards to an elevation no lower than 0.2 ft. below the adjoining house pad grades.
4. For Type "A" lot grading receiving runoff from abutting Type "B" lots, all runoff shall be directed to side yard swales.
5. For Type "B" lot grading not abutting detention facilities, the builder shall make every practical effort to direct roof runoff to the side yard swales unless otherwise directed by the Engineer of Record.
6. For Type 'A' lot grading, the builder shall make every practical effort to direct roof runoff to the side-yard swales unless directed otherwise by the Engineer of Record.
7. Minimum side yard swale slopes shall be 1.0%.
8. Project lies within Flood Zones "A", "AH" & "X" as shown on FIRM Panel No. 12101C 0432 F, revised September 26, 2014. Lines shown have been digitaly translated from G3 FLOOD DATA supplied by FEMA NATIONAL FLOOD INSURANCE PROGRAM, dated 1996.
9. If prehistoric artifacts such as pottery or ceramics, stone tools or metal implements, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time, the project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The applicant, or designee, should contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at 850.245.6333, as well as the appropriate funding agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources.
10. In the event that unmarked human remains are encountered during permitted activities, all work must stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statue.



INDEX TO MAP COVERAGE
Not To Scale

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

NEIGHBORHOOD GRADING PLAN

AVALON PARK WEST
PARCEL E PHASE 1

JOB NO.	STX-NR-002
DESIGN	SURAK
DRAWN	MIDDLETON
DATE	06/06/2015
FILE	MD01
PREPARED FOR:	SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
(10)	(10)	STRUCTURE NO.
+ 15.00	15.00 OR 15.00	SPOT ELEVATION
15	15.00	CONTOUR
		DIRECTION OF SURFACE FLOW
		STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)
AB# (-14)		POND BORING LOCATION (MAX DEPTH OF EXCAVATION FROM EXISTING GRADE)
SWFWL		SWFWMD WETLAND LINE
25'OS		
		PROPOSED SWFWMD WETLAND IMPACTS

FF=56.00 → FINISH FLOOR ELEVATION
LOT 4 → LOT NUMBER
PAD=55.30 → PAD ELEVATION
TYPE A → LOT GRADING TYPE

FEMA FLOOD BOUNDARY

GRADING & DRAINAGE PLAN NOTES:

1. Pad grades shown are minimum grades. Elevations of adjoining lots, existing trees, and other field conditions may warrant leaving lots which are higher in their natural state. The Contractor should consult with the Developer/Builder and the Engineer prior to grading activities when these conditions exist.
2. For all lots abutting wetlands no grading shall take place beyond the erosion control line unless specifically shown on the approved construction plans.
3. Side yard swales shall be constructed simultaneously with house construction. During the site grading activities, the contractor shall grade the side yards to an elevation no lower than 0.2 ft. below the adjoining house pad grades.
4. For Type "A" lot grading receiving runoff from abutting Type "B" lots, all runoff shall be directed to side yard swales.
5. For Type "B" lot grading not abutting detention facilities, the builder shall make every practical effort to direct roof runoff to the side yard swales unless otherwise directed by the Engineer of Record.
6. For Type 'A' lot grading, the builder shall make every practical effort to direct roof runoff to the side-yard swales unless directed otherwise by the Engineer of Record.
7. Minimum side yard swale slopes shall be 1.0%.
8. Project lies within Flood Zones "A", "AH" & "X" as shown on FIRM Panel No. 12101C 0432 F, revised September 26, 2014. Lines shown have been digitally transited from 03 FLOOD DATA supplied by FEMA NATIONAL FLOOD INSURANCE PROGRAM, dated 1996.
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10. In the event that unmarked human remains are encountered during permitted activities, all work must stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statue.

INDEX TO MAP COVERAGE
Not To Scale

WETL

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

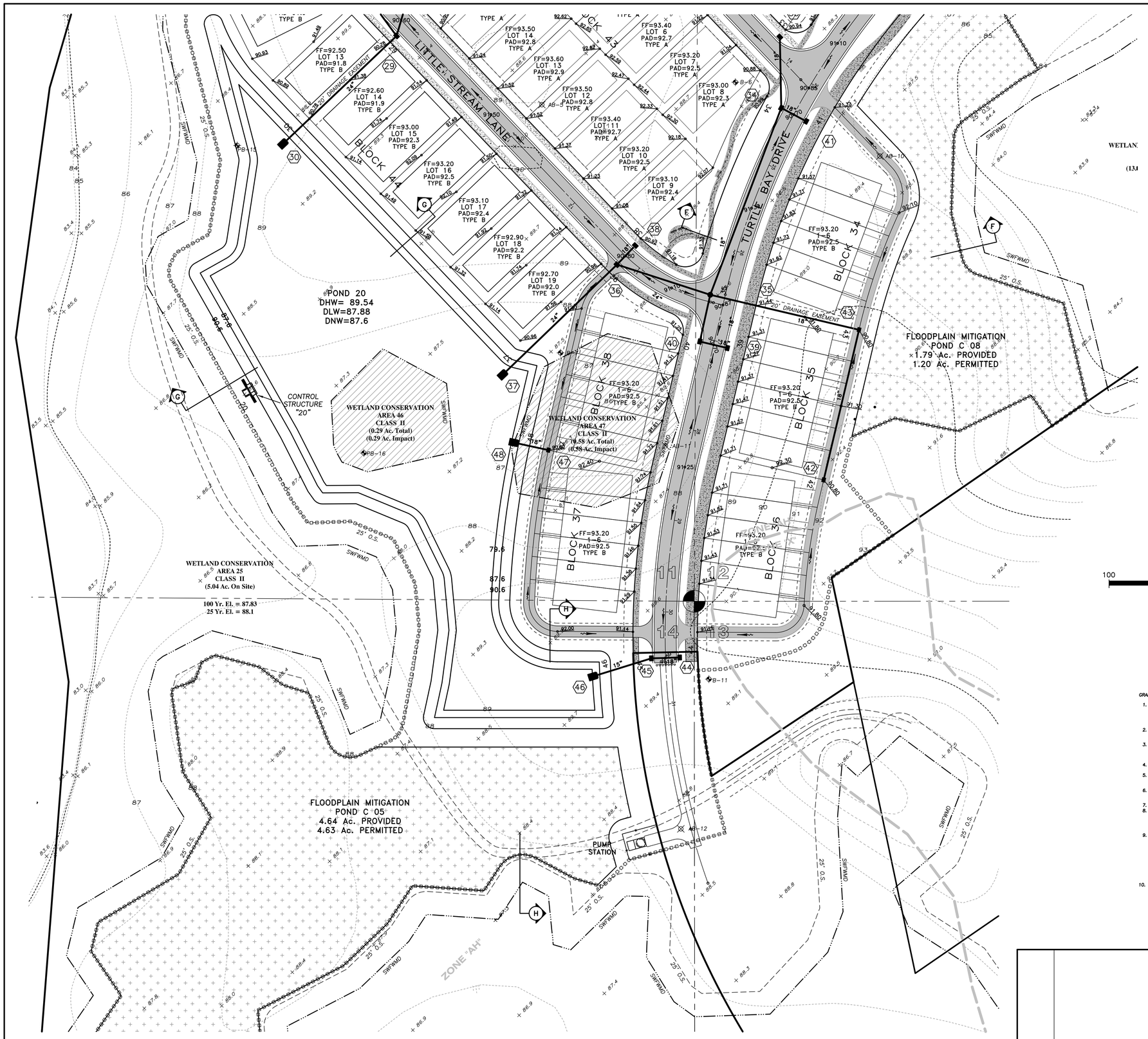
NEIGHBORHOOD GRADING PLAN

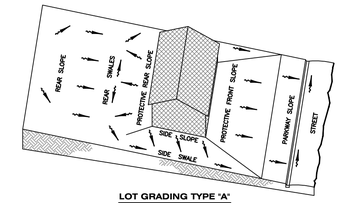
JOB NO. STX-NR-002
DESIGN SURAK
DRAWN MIDDLETON
DATE 06/06/2015
FILE MD02

AVALON PARK WEST
PARCEL E PHASE 1

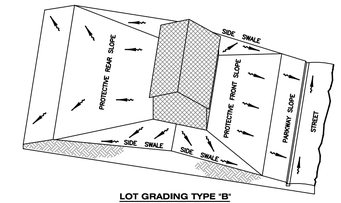
PREPARED FOR: SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet





LOT GRADING TYPE "A"
ALL DRAINAGE TO STREET



LOT GRADING TYPE "B"
DRAINAGE BOTH TO STREET AND TO REAR LOT LINE

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
(10)	(10)	STRUCTURE NO.
+15.00	+15.00 OR 15.00	SPOT ELEVATION
15	15.00	CONTOUR
		DIRECTION OF SURFACE FLOW
		STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)
	AB# (-14)	POND BORING LOCATION (MAX DEPTH OF EXCAVATION FROM EXISTING GRADE)
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25'OS		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		PROPOSED SWFWMD WETLAND IMPACTS
FF=56.00 LOT 4 PAD=55.30 TYPE A		FINISH FLOOR ELEVATION; LOT NUMBER; PAD ELEVATION; LOT GRADING TYPE
		FEMA FLOOD BOUNDARY

100 50 0 50 100

SCALE: 1" = 50'

GRADING & DRAINAGE PLAN NOTES:

1. *Pad grades shown are minimum grades. Elevations of adjoining lots, existing trees, and other field conditions may warrant leaving lots which are higher in their natural state. The Contractor should consult with the Developer/Builder and the Engineer prior to grading activities when these conditions exist.*
2. *For all lots abutting wetlands no grading shall take place beyond the erosion control line unless specifically shown on the approved construction plans.*
3. *Side yard swales shall be constructed simultaneously with house construction. During the site grading activities, the contractor shall grade the side yards to an elevation no lower than 0.2 ft. below the adjoining house pad grades.*
4. *For Type "A" lot grading receiving runoff from abutting Type "B" lots, all runoff shall be directed to side yard swales.*
5. *For Type "B" lot grading not abutting detention facilities, the builder shall make every practical effort to direct roof runoff to the side yard swales unless otherwise directed by the Engineer of Record.*
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7. *Minimum side yard swale slopes shall be 1.0%.*
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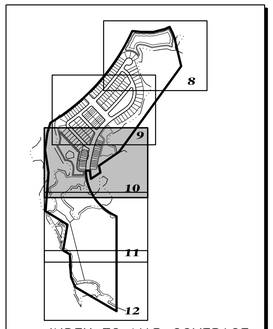

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Not To Scale

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	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

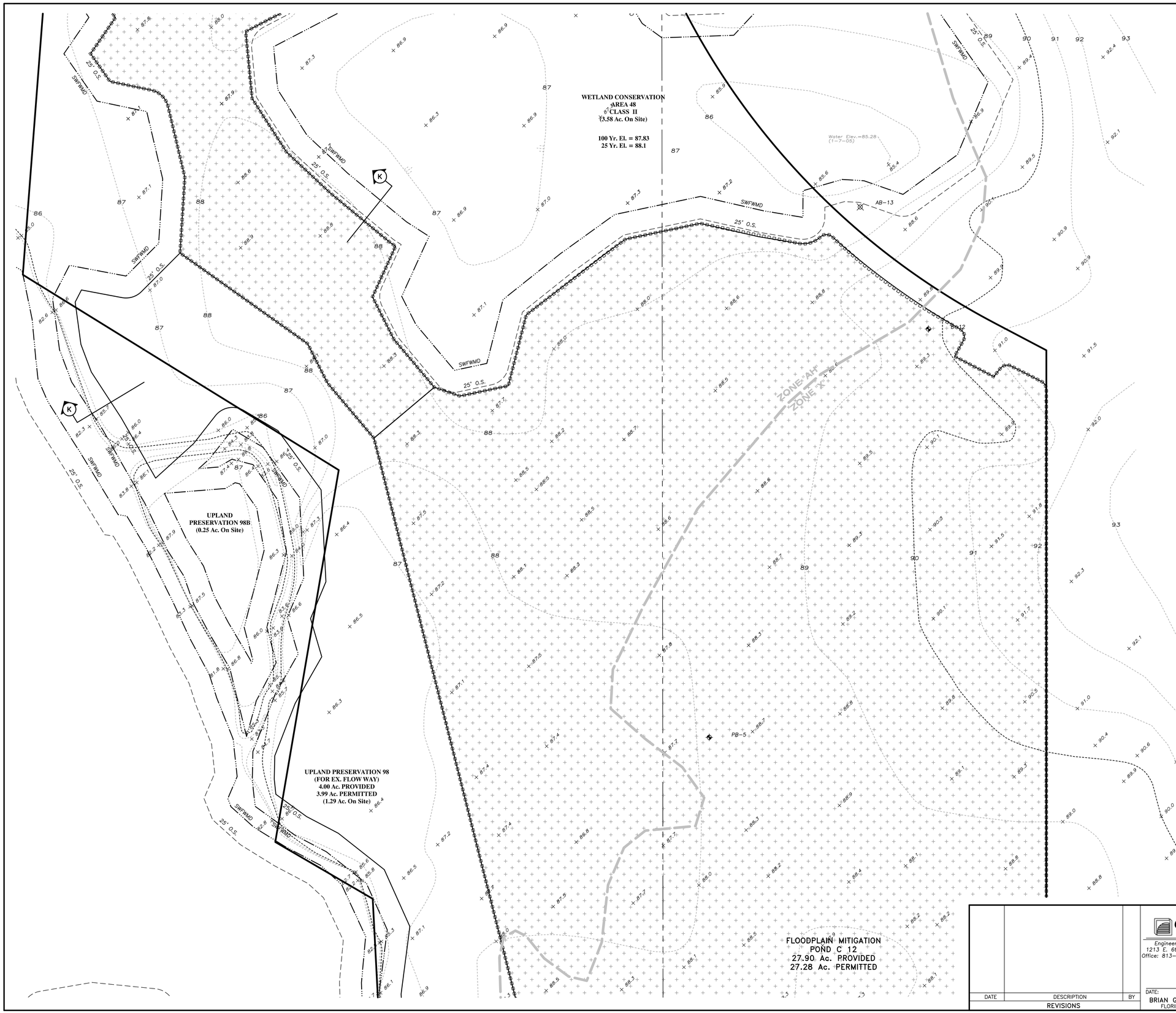
NEIGHBORHOOD GRADING PLAN

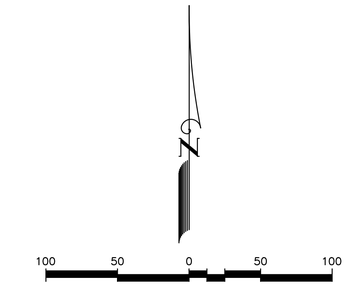
AVALON PARK WEST
PARCEL E PHASE 1

JOB NO.	STX-NR-002
DESIGN	SURAK
DRAWN	MIDDLETON
DATE	06/06/2015
FILE	MD03
PREPARED FOR:	SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet

SHEET 10 OF 54 SHEETS



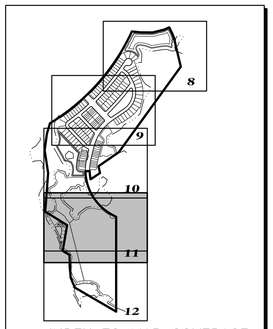


LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
10	10	STRUCTURE NO.
15.00	15.00 OR 15.00	SPOT ELEVATION
15	15.00	CONTOUR
		DIRECTION OF SURFACE FLOW
		STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)
	AB# (-14)	POND BORING LOCATION (MAX DEPTH OF EXCAVATION FROM EXISTING GRADE)
	SWFWL	SWFWMD WETLAND LINE
	25'OS	25' OFFSET FROM SWFMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		PROPOSED SWFWMD WETLAND IMPACTS
		FEMA FLOOD BOUNDARY

GRADING & DRAINAGE PLAN NOTES:

1. Project lies within Flood Zones "A", "AH" & "X" as shown on FIRM Panel No. 12101C 0432 F, revised September 26, 2014. Lines shown have been digitally translated from Q3 FLOOD DATA supplied by FEMA NATIONAL FLOOD INSURANCE PROGRAM, dated 1996.
2. If prehistoric artifacts such as pottery or ceramics, stone tools or metal implements, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time, the project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The applicant, or designee, should contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at 850.245.6333, as well as the appropriate funding agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources.
3. In the event that unmarked human remains are encountered during permitted activities, all work must stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statue.



INDEX TO MAP COVERAGE
Not To Scale

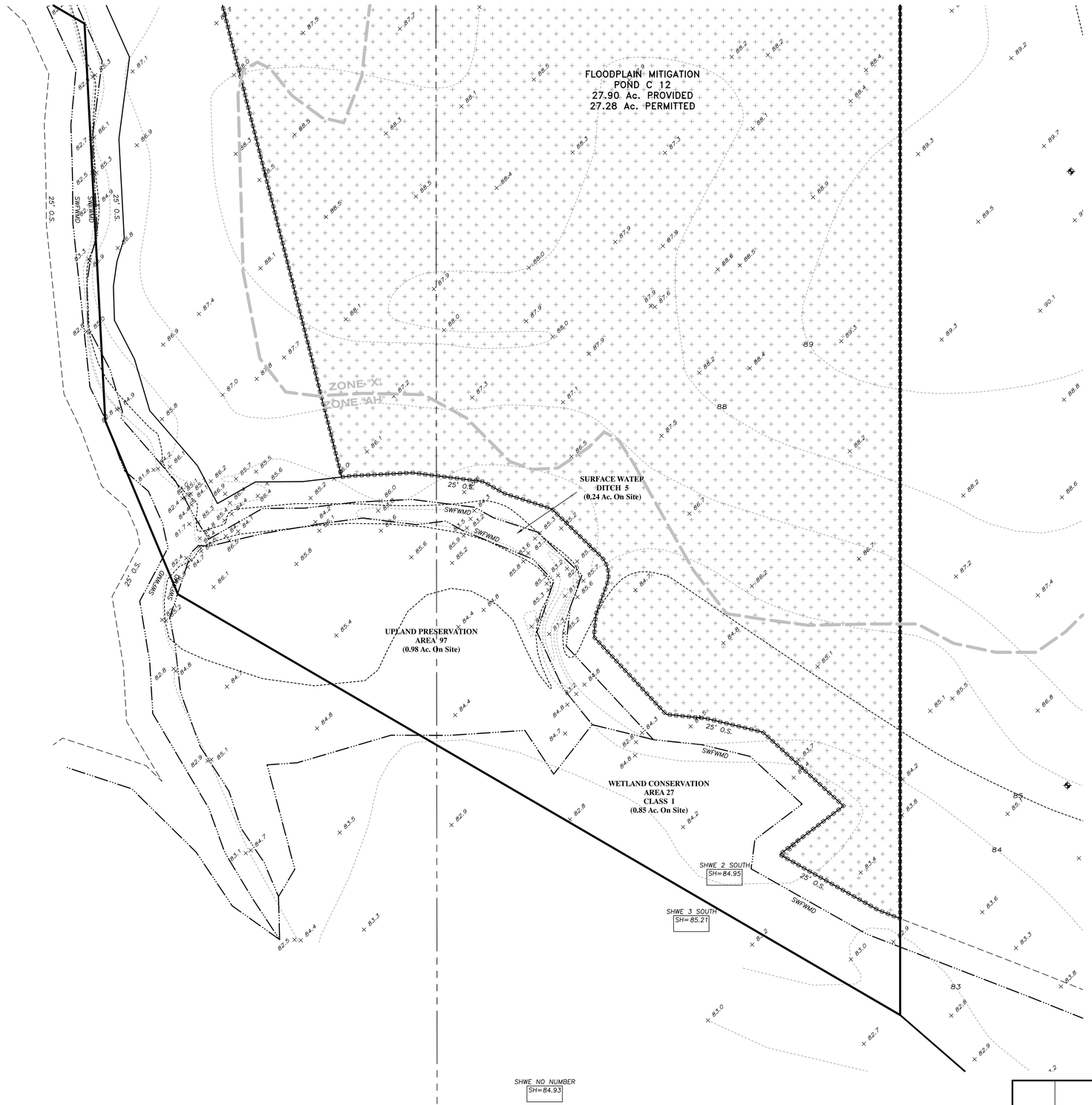
DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

NEIGHBORHOOD GRADING PLAN

JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE MD04	SHEET 11 OF 54 SHEETS



N

100 50 0 50 100

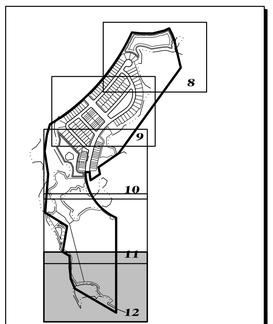
SCALE: 1" = 50'

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
(10)	(10)	STRUCTURE NO.
+15.00	15.00 OR 15.00	SPOT ELEVATION
15	15.00	CONTOUR
		DIRECTION OF SURFACE FLOW
		STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)
	AB# (-14)	POND BORING LOCATION (MAX DEPTH OF EXCAVATION FROM EXISTING GRADE)
	SWFWL	SWFWMD WETLAND LINE
	25'OS	25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		PROPOSED SWFWMD WETLAND IMPACTS
		FEMA FLOOD BOUNDARY

GRADING & DRAINAGE PLAN NOTES:

1. Project lies within Flood Zones "A", "AE" & "X" as shown on FIRM Panel No. 120230 0450 E, revised September 30, 1992. Lines shown have been digitally translated from Q3 FLOOD DATA supplied by FEMA NATIONAL FLOOD INSURANCE PROGRAM, dated 1996.
2. If prehistoric artifacts such as pottery or ceramics, stone tools or metal implements, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time, the project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The applicant, or designee, should contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at 850.245.6333, as well as the appropriate funding agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources.
3. In the event that unmarked human remains are encountered during permitted activities, all work must stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statue.



INDEX TO MAP COVERAGE
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DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

NEIGHBORHOOD GRADING PLAN

AVALON PARK WEST
PARCEL E PHASE 1

JOB NO. STX-NR-002	
DESIGN SURAK	
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE MD05	SHEET 12 OF 54 SHEETS

STORM STRUCTURE DATA

STRUCTURE			LINE							STRUCTURE LOCATION & REMARKS
NO.	TYPE & SIZE	TOP ELEV.	TYPE	DIAM. IN.	LENGTH FEET	SLOPE %	INVERT ELEV. UPPER END	INVERT ELEV. LOWER END	FALL IN FEET	
1	1 CURB INLET	88.72	RCP	18	35	0.40	84.12	83.98	0.14	
2	1 CURB INLET	88.72	RCP	24	186	0.79	83.48	82.01	1.47	
3	TYPE P MH	89.27	RCP	24	233	0.13	82.00	81.70	0.30	
4	1 CURB INLET	88.79	RCP	48	183	0.06	79.40	79.29	0.11	
5	1 CURB INLET	88.62	RCP	48	125	0.07	79.29	79.20	0.09	
6	TYPE J MH	88.60	RCP	48	60	0.07	79.20	79.16	0.04	
7	MES									FDOT INDEX NO. 232
8	1 CURB INLET	90.02	RCP	18	116	0.16	83.40	83.21	0.19	
9	1 CURB INLET	90.18	RCP	18	73	0.16	83.21	83.10	0.12	
10	1 CURB INLET	89.53	RCP	18	242	0.20	83.10	82.61	0.48	
11	1 CURB INLET	88.72	RCP	30	171	0.14	82.61	82.37	0.24	
12	TYPE P MH	89.24	RCP	30	199	0.14	82.37	82.09	0.28	
13	1 CURB INLET	88.67	RCP	30	25	0.23	82.09	82.03	0.06	
14	1 CURB INLET	89.06	RCP	30	146	0.24	82.03	81.68	0.35	
15	TYPE J MH	88.95	RCP	30	86	0.10	81.68	81.60	0.09	
16	1 CURB INLET	88.59	RCP	36	55	0.12	81.10	81.03	0.07	TYPE 'J' STRUCTURE BOTTOM
4										
17	1 CURB INLET	88.59	RCP	18	30	0.20	83.99	83.93	0.06	
16										
18	1 CURB INLET	88.72	RCP	18	33	0.20	84.12	84.05	0.07	
19	1 CURB INLET	88.72	RCP	18	71	0.18	82.30	82.17	0.13	
13										
20	1 CURB INLET	88.77	RCP	18	30	0.21	84.17	84.11	0.06	
21	1 CURB INLET	88.77	RCP	24	151	0.11	82.85	82.68	0.17	
22	1 CURB INLET	88.72	RCP	24	30	0.26	82.68	82.61	0.08	
11	1 CURB INLET									
23	TYPE C GTI	91.30	RCP	18	119	1.43	86.70	85.00	1.70	
24	TYPE P MH	91.25	RCP	18	145	0.20	85.00	84.71	0.29	
25	1 CURB INLET	90.91	RCP	18	54	0.20	84.71	84.60	0.11	
26	1 CURB INLET	90.94		24	233	0.11	84.60	84.34	0.26	
27	TYPE P MH	91.01	RCP	24	71	0.11	84.34	84.27	0.08	
28	TYPE P MH	90.80	RCP	24	98	0.11	84.27	84.16	0.11	
29	1 CURB INLET	90.77	RCP	24	165	0.20	84.16	83.83	0.33	
30	MES									FDOT INDEX NO. 232
31	1 CURB INLET	90.77	RCP	18	35	0.16	86.17	86.11	0.06	
29										
32	1 CURB INLET	90.87	RCP	18	31	0.20	86.27	86.21	0.06	
25										

STORM STRUCTURE DATA

STRUCTURE			LINE							STRUCTURE LOCATION & REMARKS
NO.	TYPE & SIZE	TOP ELEV.	TYPE	DIAM. IN.	LENGTH FEET	SLOPE %	INVERT ELEV. UPPER END	INVERT ELEV. LOWER END	FALL IN FEET	
33	1 CURB INLET	90.93	RCP	18	77	0.16	84.40	84.28	0.12	
34	1 CURB INLET	90.82	RCP	18	217	0.16	84.28	83.93	0.35	
35	TYPE P MH	90.65	RCP	24	106	0.13	83.43	83.29	0.14	
36	TYPE C GTI	90.45		24	167	0.25	83.29	82.87	0.42	
37	MES									FDOT INDEX NO. 232
38	1 CURB INLET	90.92	RCP	18	30	0.20	86.32	86.26	0.06	
36	TYPE C GTI									
39	1 CURB INLET	90.82	RCP	18	30	0.20	86.22	86.16	0.06	
40	1 CURB INLET	90.82	RCP	18	52	0.30	86.16	86.00	0.16	
35	TYPE P MH									
41	1 CURB INLET	90.82	RCP	18	30	0.20	86.22	86.16	0.06	
34	1 CURB INLET									
42	TYPE C GTI	90.80	RCP	18	167	0.20	86.20	85.87	0.33	
43	TYPE C GTI	90.80	RCP	18	166	0.64	85.00	83.94	1.06	
35	TYPE P MH									
44	1 CURB INLET	90.62	RCP	18	30	0.60	86.02	85.84	0.18	
45	1 CURB INLET	90.62	RCP	18	71	0.15	83.80	83.69	0.11	
46	MES									FDOT INDEX NO. 232
47	TYPE C GTI	90.60	RCP	18	43	0.20	84.10	84.01	0.09	
48	MES									FDOT INDEX NO. 232

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

DRAINAGE STRUCTURE DATA

JOB NO. STX-NR-002

DESIGN SURAK

DRAWN MIDDLETON

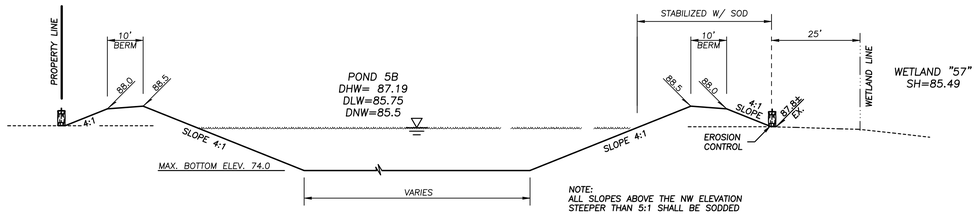
DATE 06/06/2015

FILE ST

AVALON PARK WEST
PARCEL E PHASE 1

PREPARED FOR: SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet



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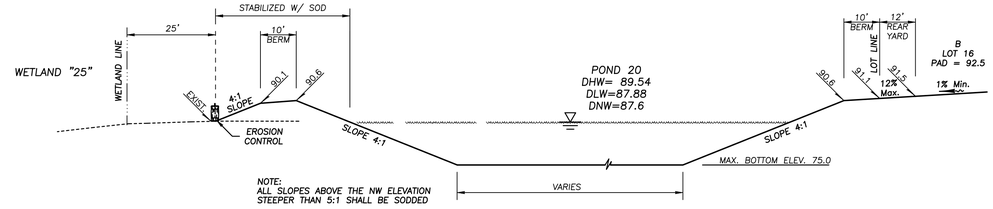

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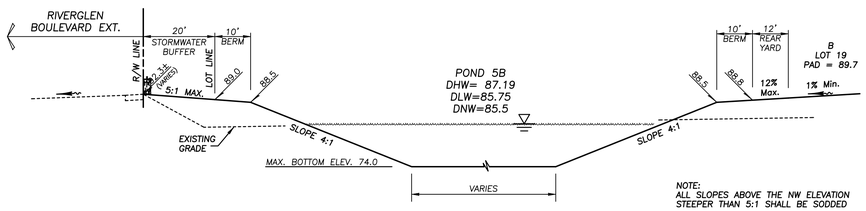

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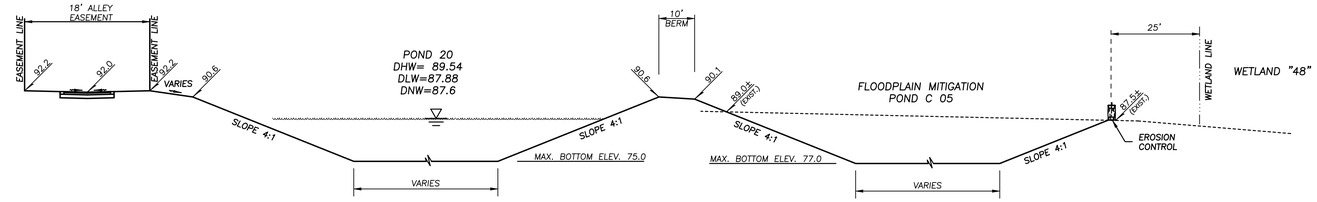

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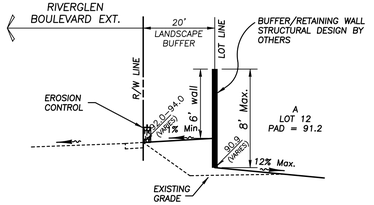

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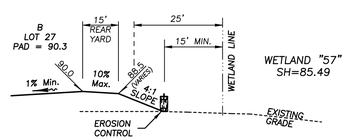

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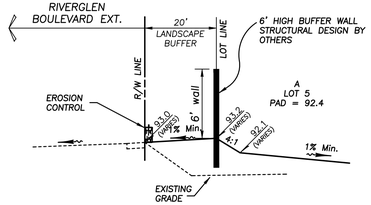

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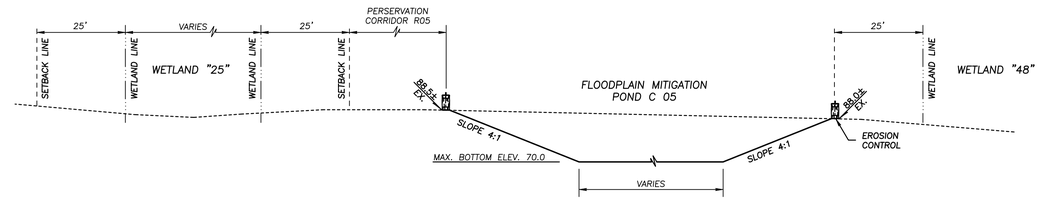

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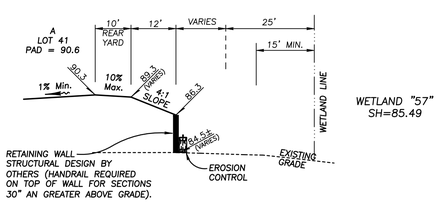

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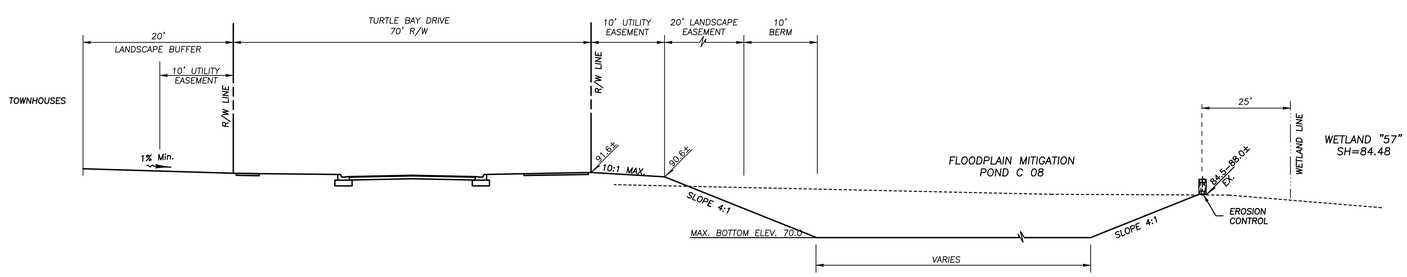

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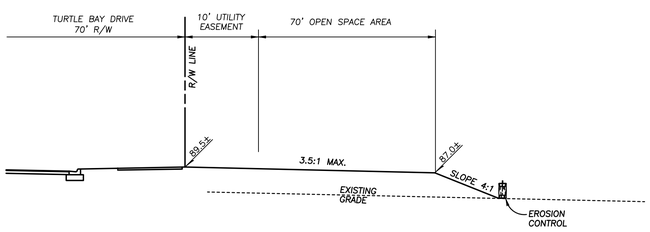

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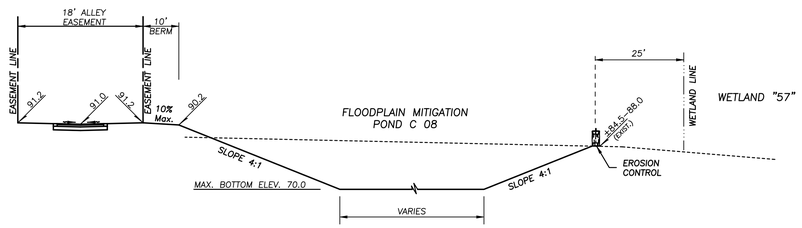


SECTION J–J
N.T.S.

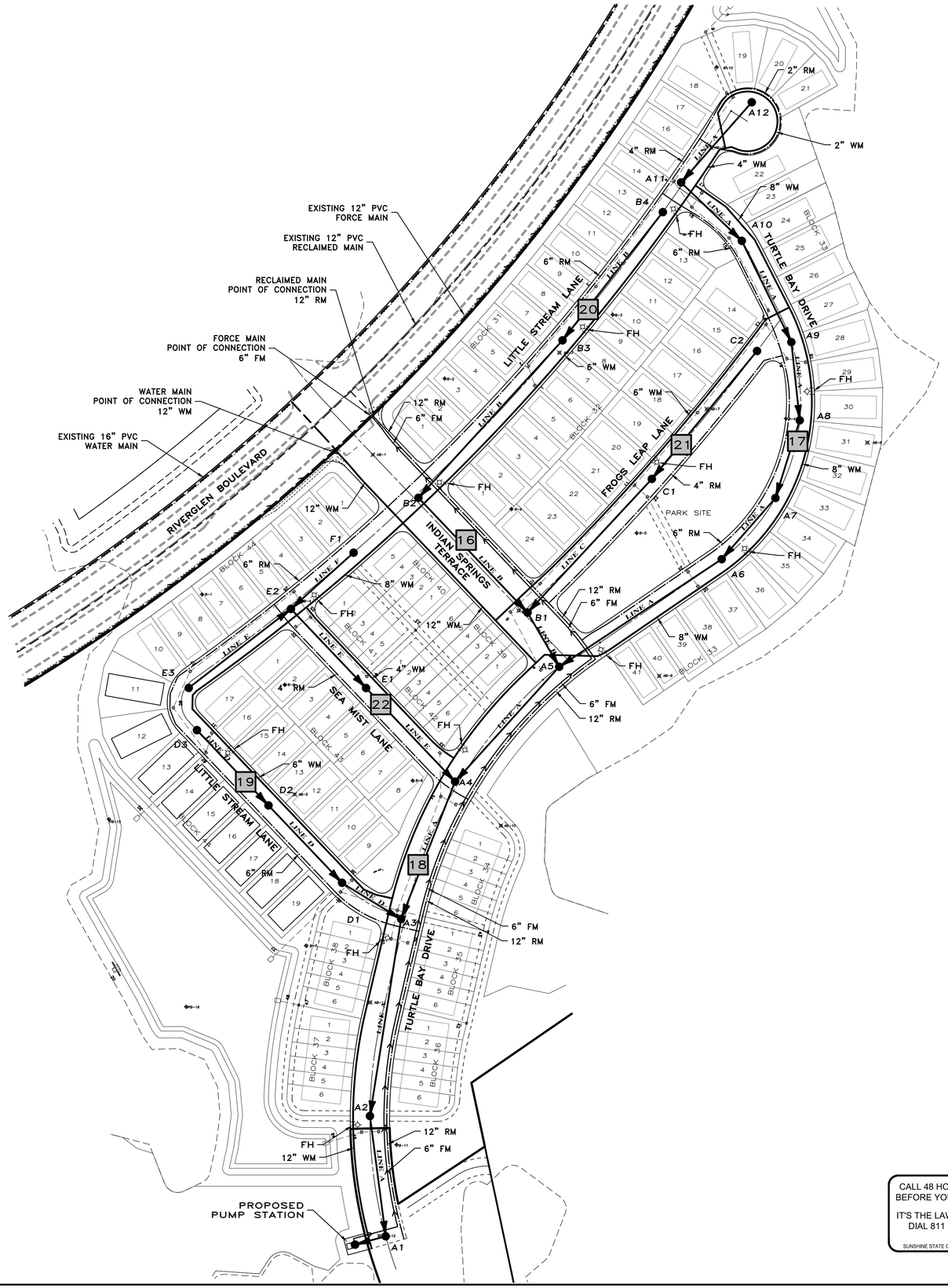
DATE	DESCRIPTION	BY
	REVISIONS	

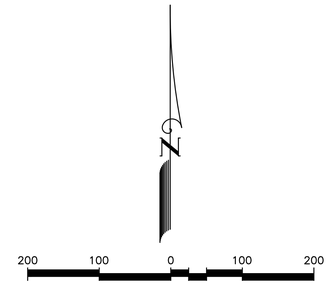
CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813–223–3919 Fax: 813–223–3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

CROSS SECTIONS

JOB NO. STX–NR–002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 =–0.83Feet
FILE SEC	SHEET 14 OF 54 SHEETS





LEGEND

- SWFWMD WETLAND LINE
- 25' OFFSET FROM WETLAND LINE (SHOWN FOR INFORMATIONAL PURPOSES)
- 18 ROADWAY PLAN & PROFILE SHEET
- A2 SANITARY SEWER (SM)
- 6" SINGLE SERVICE
- 6" DOUBLE SERVICE
- FORCE MAIN (FM)
- IRRIGATION & LIGHTING SLEEVE
- RECLAIMED MAIN (RM)
- DOUBLE SERVICE (RM) SHORTSIDE
- SINGLE SERVICE (RM) SHORTSIDE
- SINGLE SERVICE (RM) LONGSIDE W/SERVICE SLEEVE
- DOUBLE SERVICE (RM) LONGSIDE W/SERVICE SLEEVE
- VALVE & BOX
- REDUCER
- PLUG
- BLOW-OFF
- BENDS
- WATER MAIN (WM)
- FIRE HYDRANT
- DOUBLE SERVICE (WM) SHORTSIDE
- SINGLE SERVICE (WM) SHORTSIDE
- SINGLE SERVICE (WM) LONGSIDE W/SERVICE SLEEVE
- DOUBLE SERVICE (WM) LONGSIDE W/SERVICE SLEEVE
- WDSP WATER DISTRIBUTION SAMPLING POINT

SLEEVING NOTES

2"I DENOTES SLEEVE SIZE & LOCATION (SLEEVE LOCATIONS DEPICTED ON WATER, REUSE & SANITARY SEWER PLANS)

- 2"I IRRIGATION
- 2"L LIGHTING
- 2"T TELECOMMUNICATION
- 2"A ADDITIONAL SLEEVE (ADD)

ALL SLEEVING TO BE SCHEDULE 40 PVC MINIMUM THICKNESS. BURY ALL SLEEVES A MINIMUM OF 24" BELOW TOP OF CURB. NO SLEEVES SHALL BE DEEPER THAN 40" BELOW FINISH GRADE.

WHERE SEVERAL SLEEVES ARE REQUIRED, MAINTAIN 6" HORIZONTAL SEPARATION BETWEEN EACH SLEEVE. DO NOT STACK ONE ON TOP OF ANOTHER.

ALL SLEEVES ARE REQUIRED TO BE AT LEAST 2" DIA.

LOCATE ALL SLEEVES WITH PVC ELBOWS ABOVE GRADE. WHEN THERE ARE MULTIPLE SLEEVES ONLY (1) 2" SLEEVE NEEDS TO BE ELBOWED. STAKE WITH A 2 BY 4 AND MARK WITH PAINT.

ENSURE ALL SLEEVES EXTEND 24" MINIMUM BEYOND ALL CURBING OR WALKS AS REQUIRED.

CURBS AT AREA OF CROSSING TO BE MARKED USING CONCRETE SAW TO CREATE A TRIANGLE PATTERN ON THE TOP OF CURB.

ADDITIONAL SLEEVING MAY BE REQUIRED FOR ADDITIONAL UTILITIES. SITE CONTRACTOR TO COORDINATE ADDITIONAL SLEEVING ONSITE.

SEAL THE END OF ALL SLEEVES WITH DUCT TAPE.

FIELD LOCATE SLEEVES TO ENSURE THEY DO NOT LINE UP WITH SIDEWALKS.

WATER & SANITARY SEWER CONSTRUCTION NOTES:

1. Prior to construction, the Contractor shall obtain from the Engineer or Owner a copy of all pertinent permits related to this project. It is the Contractor's responsibility to assure that all construction activities are in compliance with the conditions of all permits and approvals.
2. Grass and mulch, or solid sod, all areas in existing rights-of-way disturbed by construction.
3. Contractor is to coordinate all work within, but not limited to, Pasco County rights-of-way with utility companies in order to prevent damage to utility lines and the making of adjustments to same, if required.
4. All utility materials and workmanship must comply with Standards for Design and Construction of Water, Wastewater and Reclaimed Water Facilities Specs., June 1995 Edition.
5. Contractor shall be responsible for obtaining any and all road crossing or utility permits.
6. The existing underground utility lines shown hereon were taken from documents furnished by others and not field verified, therefore the Engineer cannot guarantee the accuracy of same nor that all are shown. The Contractor shall expose all underground utility lines in coordination with the Owners to his satisfaction and make adjustments to same in the event there are conflicts with new construction.
7. Contractor shall verify locations and depths of existing water and sewer lines prior to beginning construction.
8. The locations and elevation of all service lines are to be determined in the field by Owner and/or Contractor prior to construction of same.
9. Fire hydrant, gate valve and blow-off valve assemblies shall consist of all pipe, valves, tees, fittings, and any and all other appurtenances comprising a complete, working unit.
10. All fire hydrants shall be flow tested and color coded based on flow results.
11. Per NFPA-1, 16.4.3.1.3: where underground water mains and hydrants are to be provided, thay shall be installed, completed, and in service prior to construction work.
12. Fire hydrants shall be installed and in service prior to the accumulation of combustibles.
13. All 4"-12" PVC water main pipe shall be C-900 DR 18, conforming to the requirements found in AWWA Standard, latest edition at the time of plan approval. 16" water main shall be C-905 DR 25 PVC. All service pipe less than 4" in diameter shall be PVC Pressure Pipe; Pressure Rate 200; DR 21 per ASTM Standard D-2241. Water mains smaller than 2" in diameter shall be Class 1120 or 1220 ; Schedule 80 and meet the requirements of ASTM D-1785.
14. All water main pipe and fittings installed under this project shall be color coded or marked in accordance with subparagraph 62-555.320(21)(b)3, Florida Administrative Codes, using blue as the predominant color.
15. All 8" sanitary sewer pipe shall be constructed at a 0.40% minimum slope unless otherwise noted.
16. Force mains shall be constructed of C-900 DR 18 PVC pigmented green.
17. Adjusting manhole tops to match grade and slope of the finish paving shall be included in the respective contract unit price for manholes, payment of which will constitute full compensation for the construction and completion of the manhole, and no additional payment will be allowed or made for adjusting manhole tops.
18. Bends shall be installed in force main or water main to avoid unforeseen conflicts in existing or proposed structures.
19. The joint deflection method shall be used where practical in lieu of installing bends.
20. All valve box assemblies located within roadways or parking areas shall be protected from truck traffic by use of 6" thick reinforced concrete pads poured around valve boxes (see detail).
21. Connections into existing county-owned systems shall be via wet tap. Wet taps shall be performed by the Pasco County Utilities Services Branch at the developer's expense. Material for wet taps larger than 2" shall be provided and installed by the project contractor. Excavation, backfill and surface restoration shall be the contractor's responsibility.
22. Gate valves installed for phasing shall be restrained per current Pasco County standards.
23. Off-road utility easements shall be "stabilized" for access by maintenance vehicles.
24. Stub-out lines on the water main and force main shall have restrained joints from the main line to the stub-out.
25. All PVC pressure pipe shall have a minimum 36" cover.
26. Maintain 5' minimum horizontal separation between reclaimed mains and water mains or force mains.
27. All water mains shall be deflected vertically where crossing storm sewer pipe to obtain a minimum vertical distance of 18 inches between the outside of the water main and the outside of the storm sewer. Joints shall be located such that the distance from the storm sewer and water main joint is as far as practical.
28. Water mains should be laid at least 10 feet horizontally from any existing or proposed storm sewer.
29. At no time should vertical clearance between force main or gravity sewer and water main be less than 18" at crossing of same.
30. At no time should horizontal clearance between force main or gravity sewer and water main be less than 10' when same are paralleling each other.
31. Sanitary sewers, force and reclaimed mains and storm sewers should cross under water mains. Sanitary sewers, force and reclaimed mains and storm sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the invert of the upper pipe and the crown of the lower pipe whenever possible.
32. When sanitary sewers, force and reclaimed mains and storm sewers must cross a water main with less than 18 inches vertical distance, both the sewer and the water main shall be constructed of ductile iron pipe (DIP) at the crossing. (DIP is not required for storm sewers if it is not available in the size proposed). Sufficient lengths of DIP must be used to provide a minimum separation of 10 feet between any two joints. All joints on the water main within 20 feet of the crossing must be leak free and mechanically restrained. A minimum vertical clearance of 6 inches must be maintained at the crossing.
33. Where there is no alternative to sewer and reclaimed pipes crossing over a water main, the criteria for minimum separation of 18 inches between lines and 10 feet between joints shall be required.
34. All crossings shall be arranged so that the sewer and reclaimed pipes joints and the water main pipe joints are equidistant from the point of crossing (pipes centered on the crossing).
35. Where a new pipe conflicts with an existing pipe, the new pipe shall be constructed of DIP and the crossing shall be arranged to meet the requirements above.
36. A minimum 10-foot horizontal separation shall be maintained in parallel installations between any type of sewer (including drainage inlets) and water main whenever possible. A minimum 5-foot horizontal separation shall be maintained in parallel installation between reclaimed water mains and water mains, and between reclaimed water mains and sanitary sewers whenever possible.
37. In cases where it is not possible to maintain a 10-foot horizontal separation between any type of parallel sewer and water main, or a 5-foot separation between reclaimed main and water main, the water main must be laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer, reclaimed main, or force main at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer.
38. Where it is not possible to maintain a vertical distance of 18 inches or a horizontal distance of 10 feet in parallel installations, the water main shall be constructed of DIP and the sewer, reclaimed main or the force main shall be constructed of DIP (if available in the size proposed) with a minimum vertical distance of 6 inches. The water main should be above the sewer, reclaimed main, or force main. Joints on the water main shall be located as far apart as possible from joints on the sewer, reclaimed main, or force main (staggered joints).
39. All subsurface construction shall comply with the "Trench Safety Act." The Contractor shall ensure that the method of trench protection and construction is in compliance with the Occupational Safety and Health Administration (OSHA) Regulations.
40. Fire protection shall meet the requirements of the Pasco County Code, Chapter 46, Fire Prevention and Protection, and plans shall comply with referenced requirements.
41. "Contractor's Responsibilities" regarding wet taps two inches and larger shall be as follows:
    - 2" Only – This excavated trench must be dry or the trench will require rock and a pump to be in place. The minimum distance from the face of the valve to the wall of the trench is to be six feet.
    - 3" and Larger – The contractor will supply a tapping saddle being epoxy coated, a tapping valve with mechanical joint and the equipment to provide, and conduct a pressure test. County personnel will witness the pressure test which must be at 150 psi for a duration of thirty minutes.
    - The contractor is responsible for the excavation before any County personnel will enter an excavated area. If the trench is four feet in depth or deeper, it will require a trench box or sloping, and a ladder according to Occupational Safety and Health (OSHA) standards.
    - The tapping valve will require a blocking device made of suitable material or device. This blocking device will be placed under the valve and remain in place until the tap machine is removed and the tap is completed.
    - Note: if the contractor has not fulfilled his responsibilities, as stated above, prior to the arrival of Pasco County Utilities Operations and Maintenance tapping crew, there will be an additional charge of $92.00.

If you have any questions regarding this information, contact Nelson D. Holt, Field Supervisor, Utilities Services Branch, at (727) 847-8145, or e-mail nholt@pascocountyfl.net.

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW!
DIAL 811
Know what's below. Call before you dig.
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

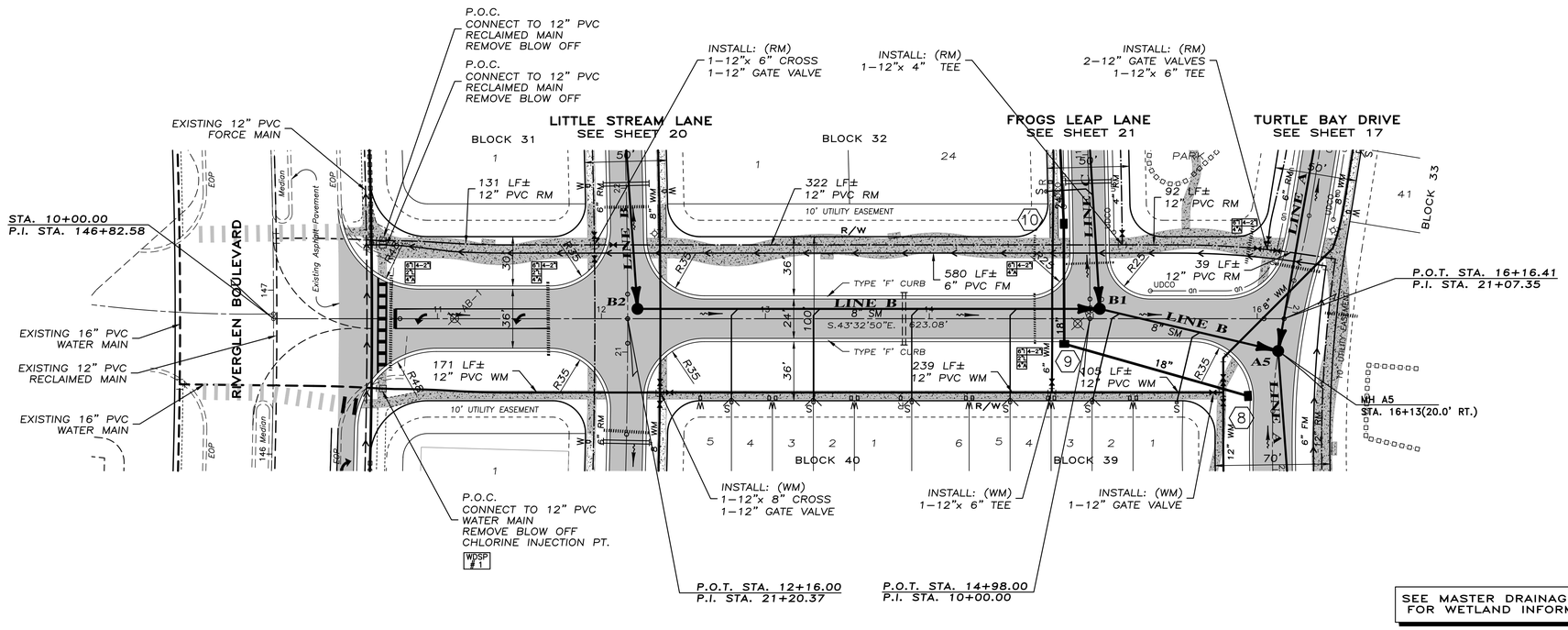
DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

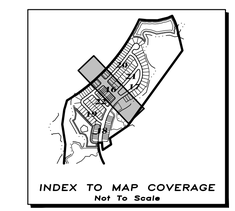
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

WATER & SEWER KEY MAP

JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE WSKEY	SHEET 15 OF 54 SHEETS



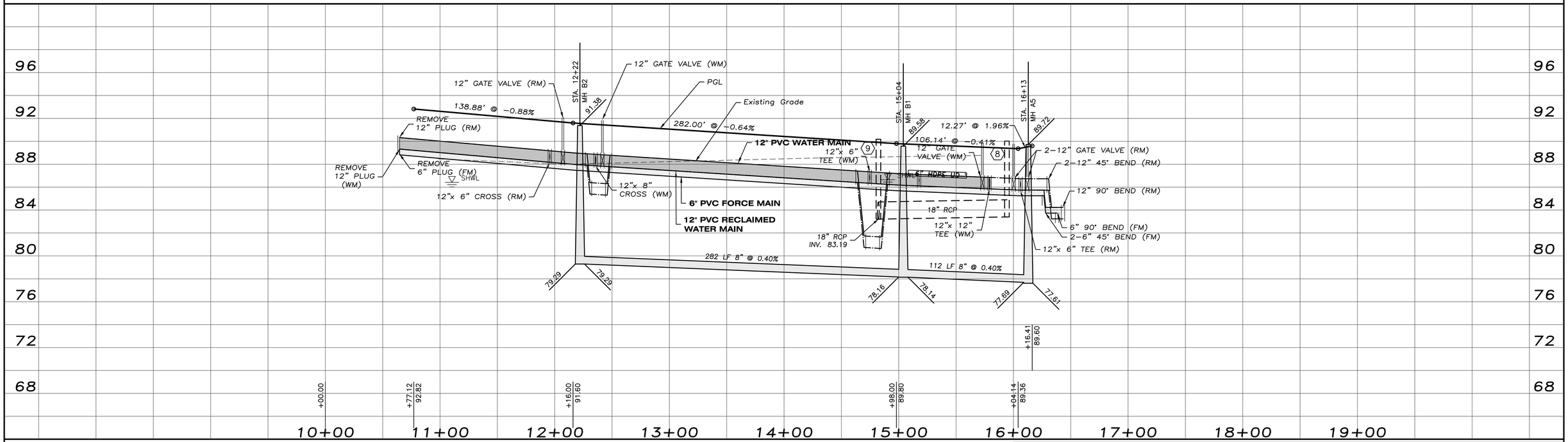
SEE MASTER DRAINAGE PLAN
FOR WETLAND INFORMATION



= DEVELOPER SIDEWALKS (CONSTRUCTED BY SITE CONTRACTOR)
= BUILDER SIDEWALKS (CONSTRUCTED BY BUILDING CONTRACTOR)

INDIAN SPRINGS TERRACE

SCALE: 1" = 4' VERTICAL
1" = 40' HORIZONTAL



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1213 E. 6th Avenue, Tampa, Florida 33605
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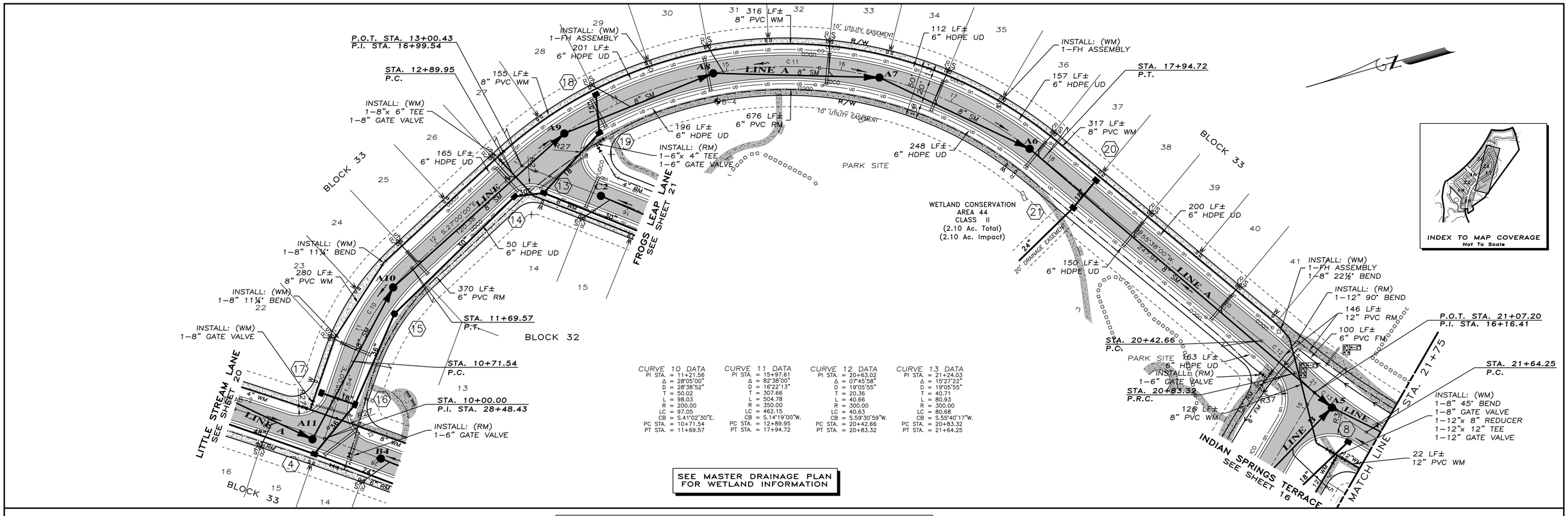
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

ROADWAY PLAN & PROFILE

JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE RP01	SHEET 16 OF 54 SHEETS



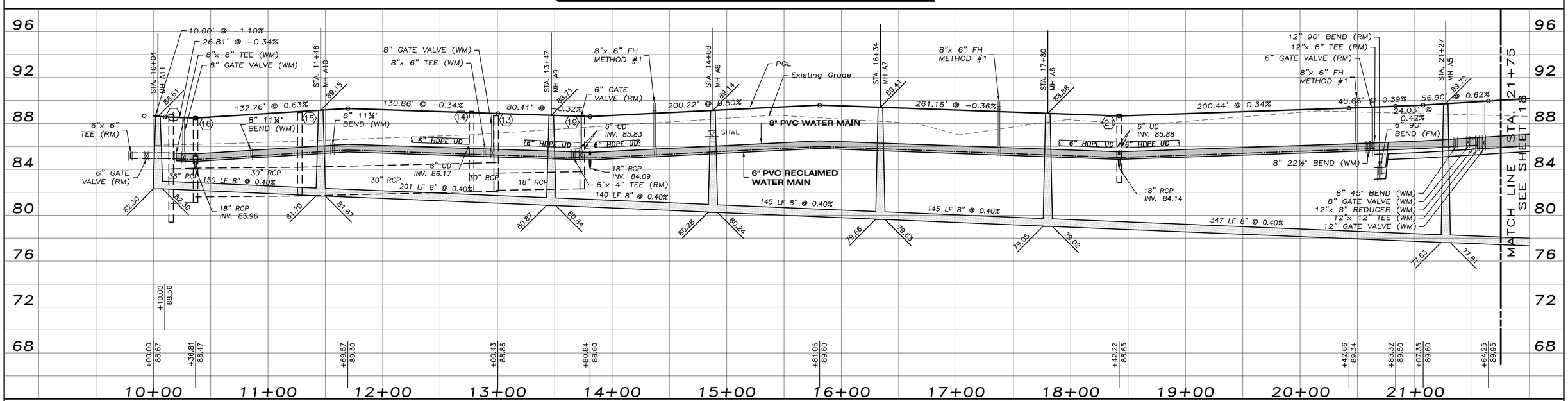
CURVE 10 DATA	CURVE 11 DATA	CURVE 12 DATA	CURVE 13 DATA
PI STA. = 11+21.56	PI STA. = 15+97.61	PI STA. = 20+63.02	PI STA. = 21+24.03
Δ = 28°05'00"	Δ = 82°38'00"	Δ = 07°45'58"	Δ = 15°27'22"
D = 28°38'52"	D = 16°22'13"	D = 19°05'55"	D = 19°05'55"
T = 50.02	T = 307.66	T = 20.36	T = 40.71
L = 98.03	L = 504.78	L = 40.66	L = 80.93
R = 200.00	R = 350.00	R = 300.00	R = 300.00
LC = 97.05	LC = 462.15	LC = 40.63	LC = 80.68
CB = S.41°02'30"E.	CB = S.14°19'00"W.	CB = S.59°30'59"W.	CB = S.55°40'17"W.
PC STA. = 10+71.54	PC STA. = 12+89.95	PC STA. = 20+42.66	PC STA. = 20+83.32
PT STA. = 11+69.57	PT STA. = 17+94.72	PT STA. = 20+83.32	PT STA. = 21+64.25

SEE MASTER DRAINAGE PLAN FOR WETLAND INFORMATION

= DEVELOPER SIDEWALKS (CONSTRUCTED BY SITE CONTRACTOR)
= BUILDER SIDEWALKS (CONSTRUCTED BY BUILDING CONTRACTOR)

TURTLE BAY DRIVE

SCALE: 1" = 4' VERTICAL
1" = 40' HORIZONTAL



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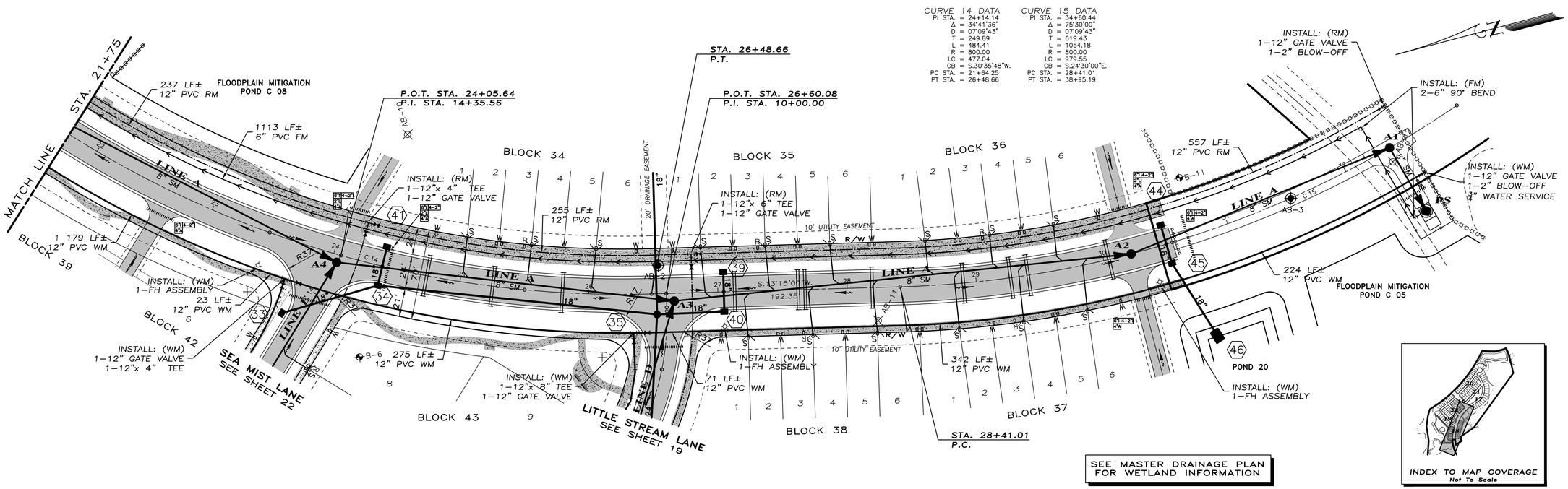
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

ROADWAY PLAN & PROFILE

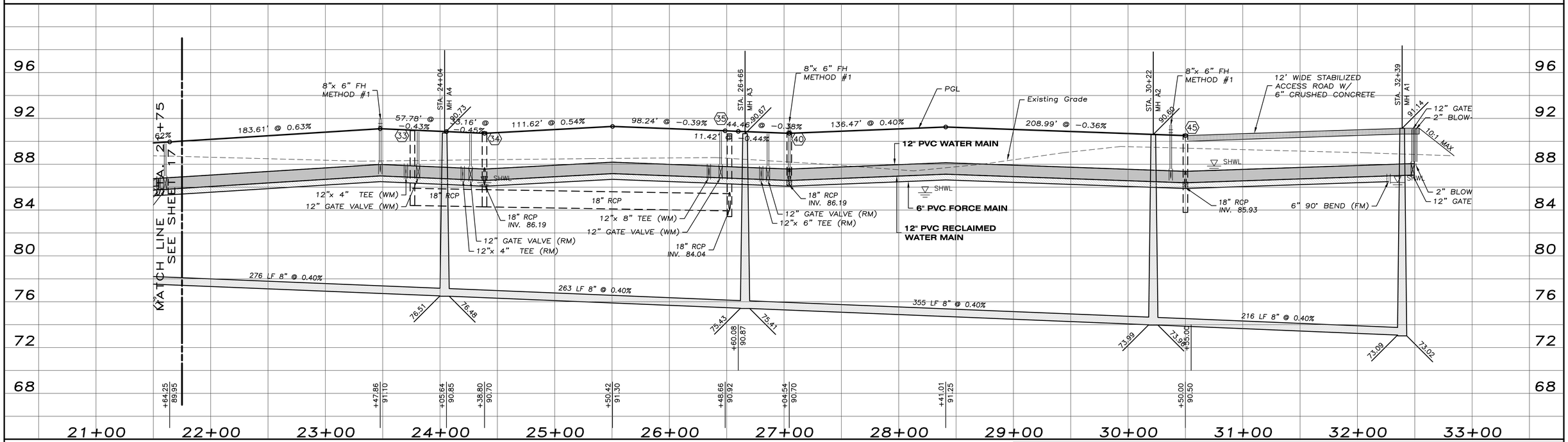
JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE RP02	SHEET 17 OF 54 SHEETS



= DEVELOPER SIDEWALKS (CONSTRUCTED BY SITE CONTRACTOR)
= BUILDER SIDEWALKS (CONSTRUCTED BY BUILDING CONTRACTOR)

TURTLE BAY DRIVE

SCALE: 1" = 4' VERTICAL
1" = 40' HORIZONTAL



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1213 E. 6th Avenue, Tampa, Florida 33605
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DATE:
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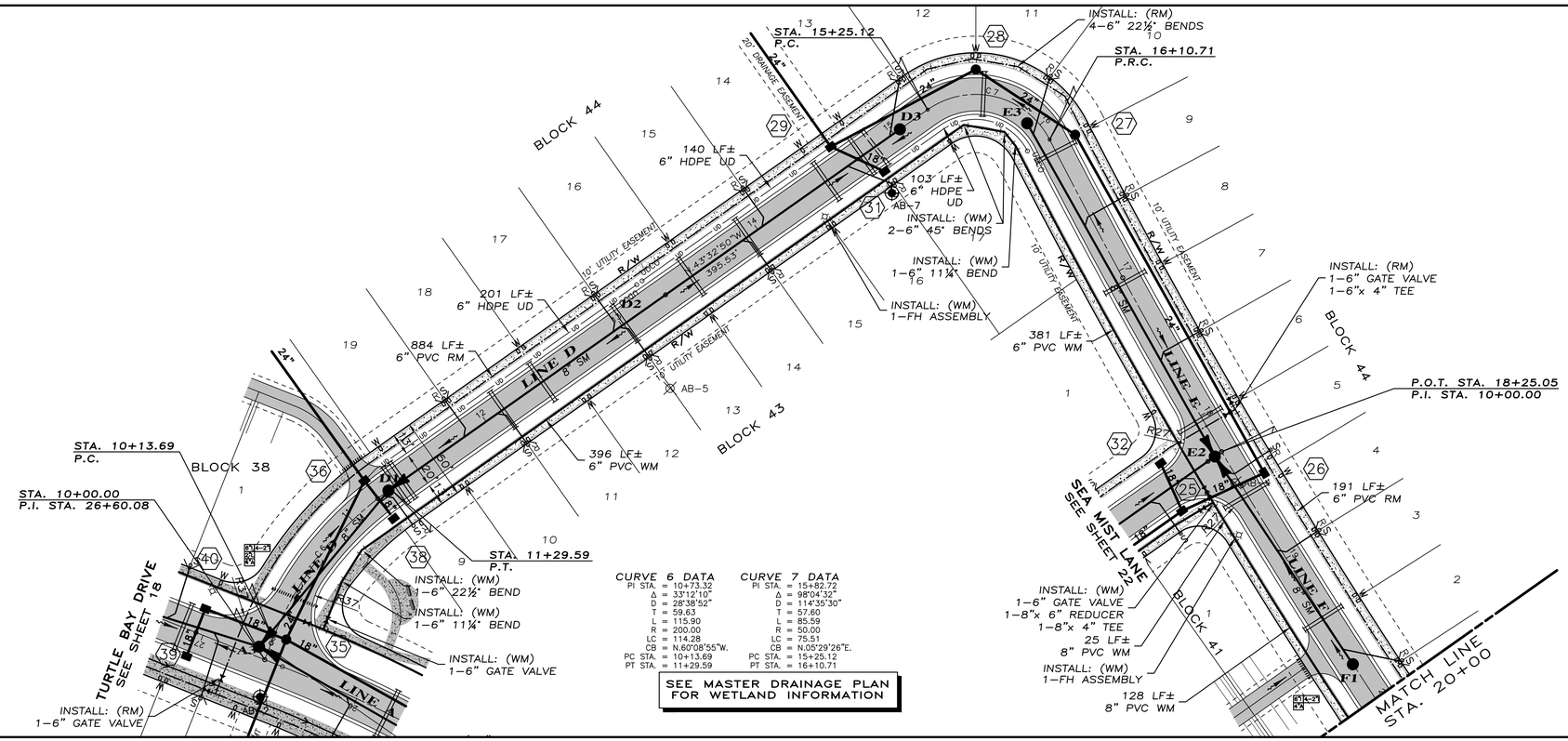
FLORIDA PROFESSIONAL ENGINEER

ROADWAY PLAN & PROFILE

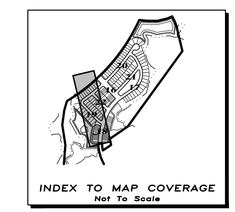
AVALON PARK WEST
PARCEL E PHASE 1

JOB NO.	STX-NR-002
DESIGN	SURAK
DRAWN	MIDDLETON
DATE	06/06/2015
FILE	RP03
PREPARED FOR:	SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet



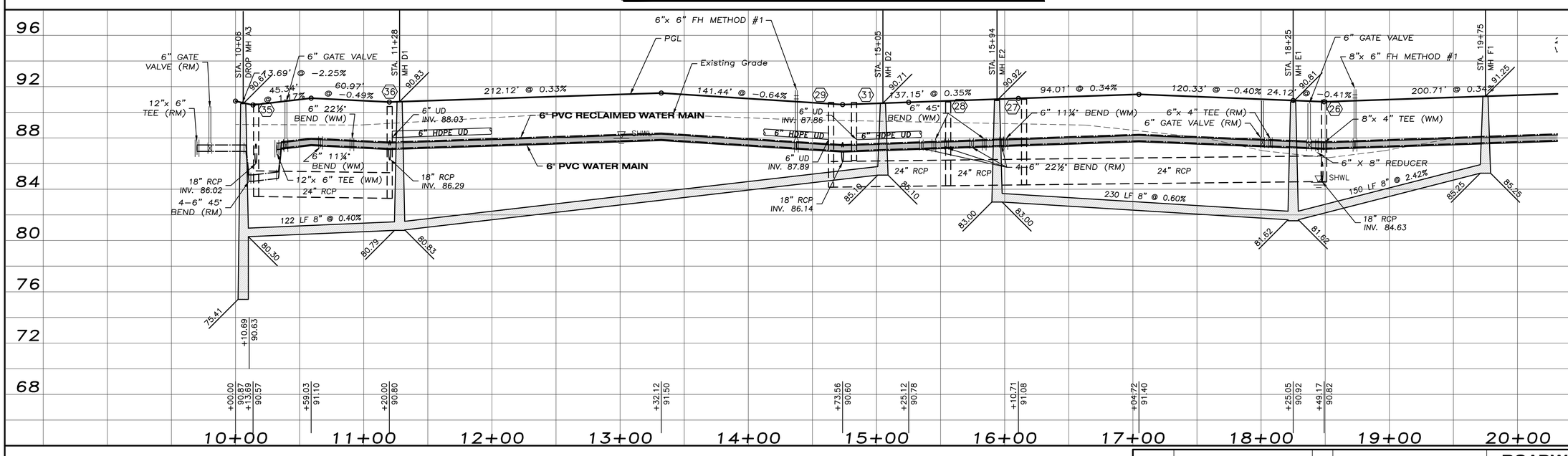
CURVE 6 DATA	CURVE 7 DATA
PI STA. = 10+73.32	PI STA. = 15+82.72
Δ = 33°12'10"	Δ = 98°04'32"
D = 28°38'52"	D = 114°35'30"
T = 59.63	T = 57.60
L = 115.90	L = 85.59
R = 200.00	R = 50.00
LC = 114.28	LC = 75.51
CB = N.60°08'55"W.	CB = N.05°29'26"E.
PC STA. = 10+13.69	PC STA. = 15+25.12
PT STA. = 11+29.59	PT STA. = 16+10.71



= DEVELOPER SIDEWALKS (CONSTRUCTED BY SITE CONTRACTOR)
= BUILDER SIDEWALKS (CONSTRUCTED BY BUILDING CONTRACTOR)

LITTLE STREAM LANE

SCALE: 1" = 4' VERTICAL
1" = 40' HORIZONTAL



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DATE:
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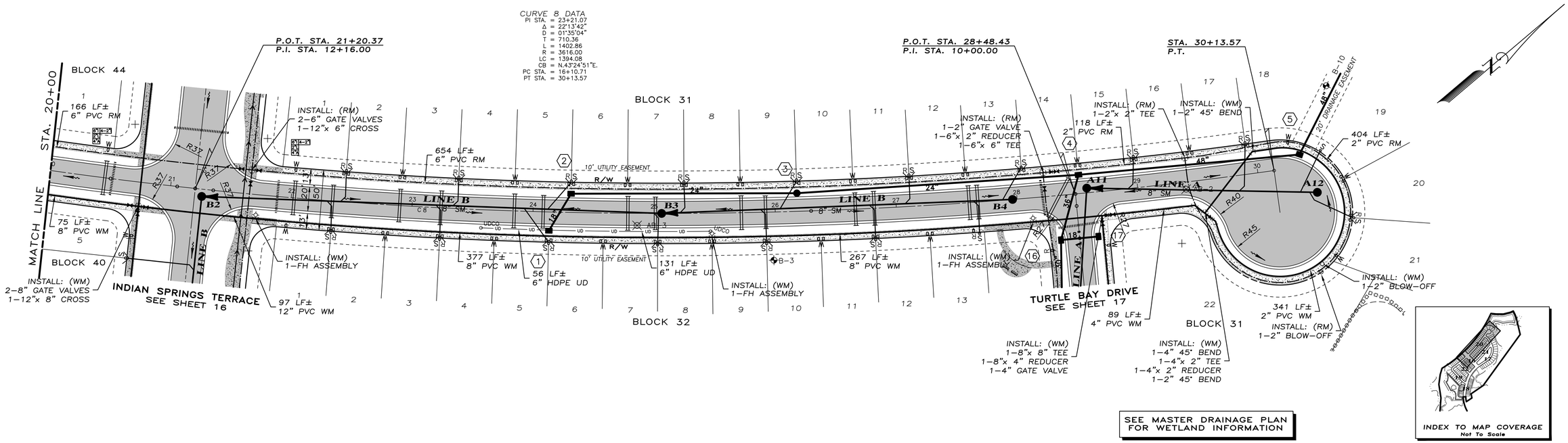
FLORIDA PROFESSIONAL ENGINEER

ROADWAY PLAN & PROFILE

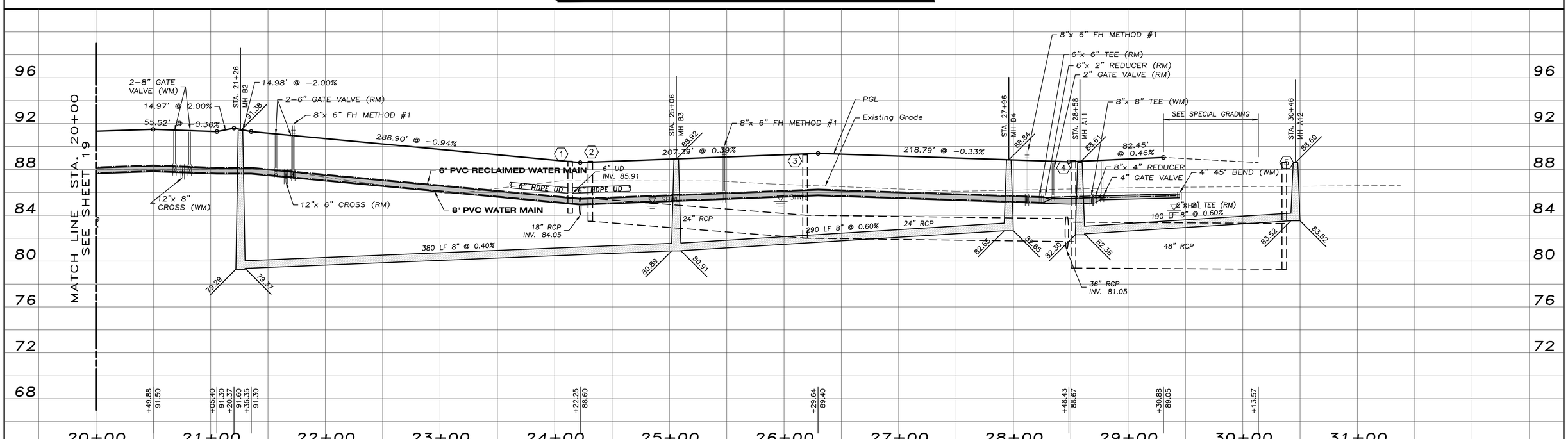
JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE RP04	SHEET 19 OF 54 SHEETS



= DEVELOPER SIDEWALKS (CONSTRUCTED BY SITE CONTRACTOR)
= BUILDER SIDEWALKS (CONSTRUCTED BY BUILDING CONTRACTOR)

LITTLE STREAM LANE

SCALE: 1" = 4' VERTICAL
1" = 40' HORIZONTAL



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FLORIDA PROFESSIONAL ENGINEER

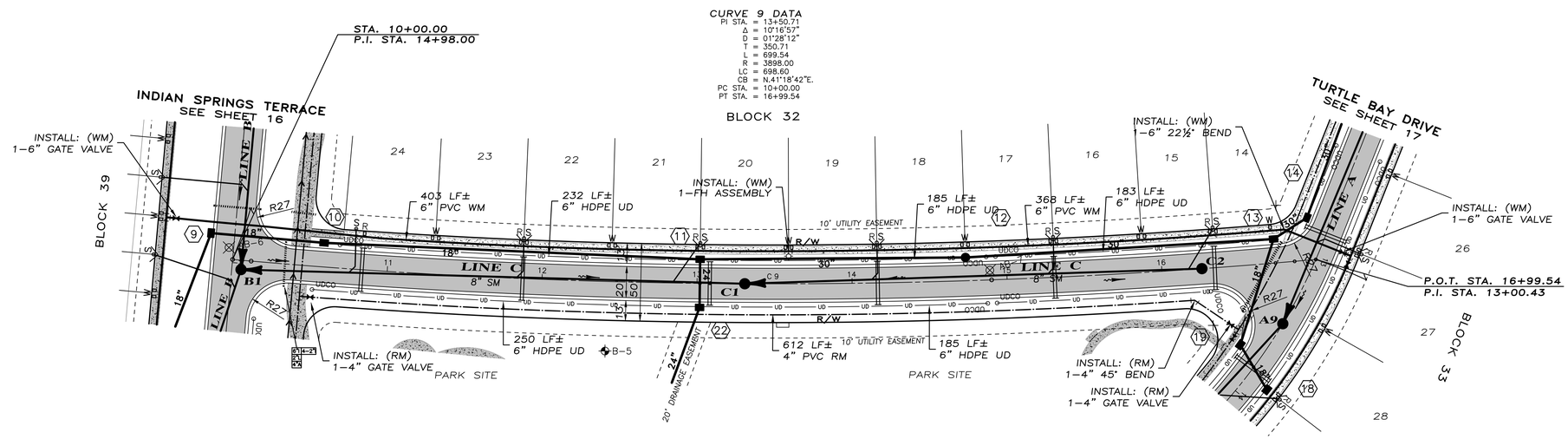
ROADWAY PLAN & PROFILE

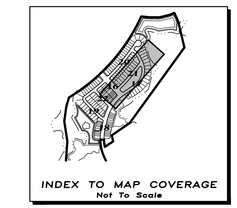
JOB NO. STX-NR-002
DESIGN SURAK
DRAWN MIDDLETON
DATE 06/06/2015
FILE RP05

AVALON PARK WEST
PARCEL E PHASE 1

PREPARED FOR: SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet



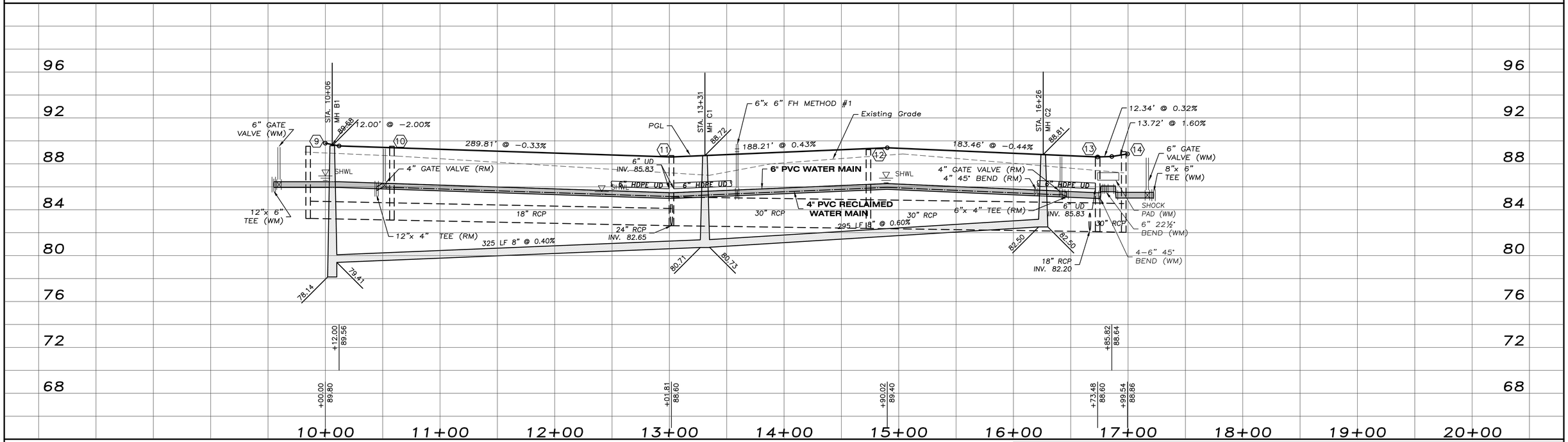


SEE MASTER DRAINAGE PLAN FOR WETLAND INFORMATION

= DEVELOPER SIDEWALKS (CONSTRUCTED BY SITE CONTRACTOR)
= BUILDER SIDEWALKS (CONSTRUCTED BY BUILDING CONTRACTOR)

FROGS LEAP LANE

SCALE: 1" = 4' VERTICAL
1" = 40' HORIZONTAL



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Office: 813-223-3919 Fax: 813-223-3975

DATE:
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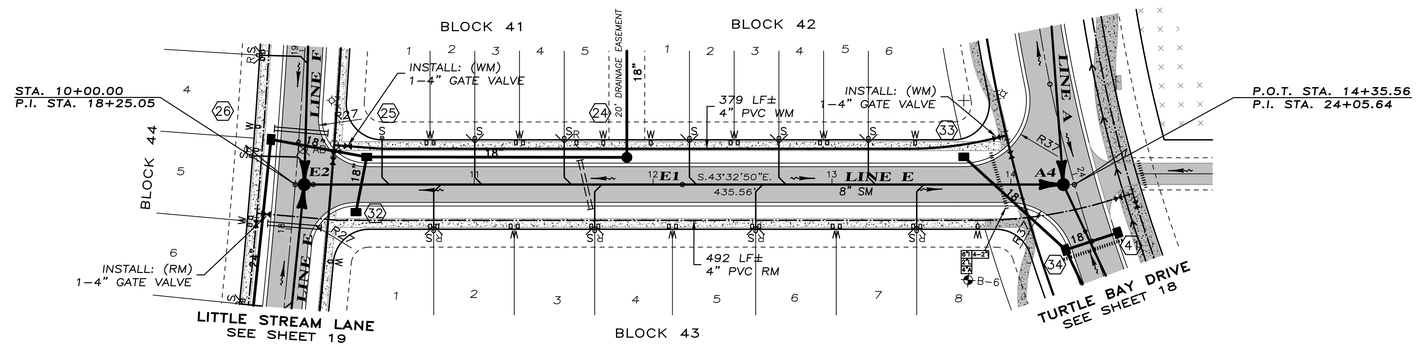
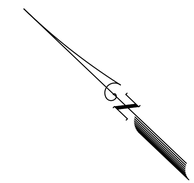
FLORIDA PROFESSIONAL ENGINEER

ROADWAY PLAN & PROFILE

JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE RP06	SHEET 21 OF 54 SHEETS





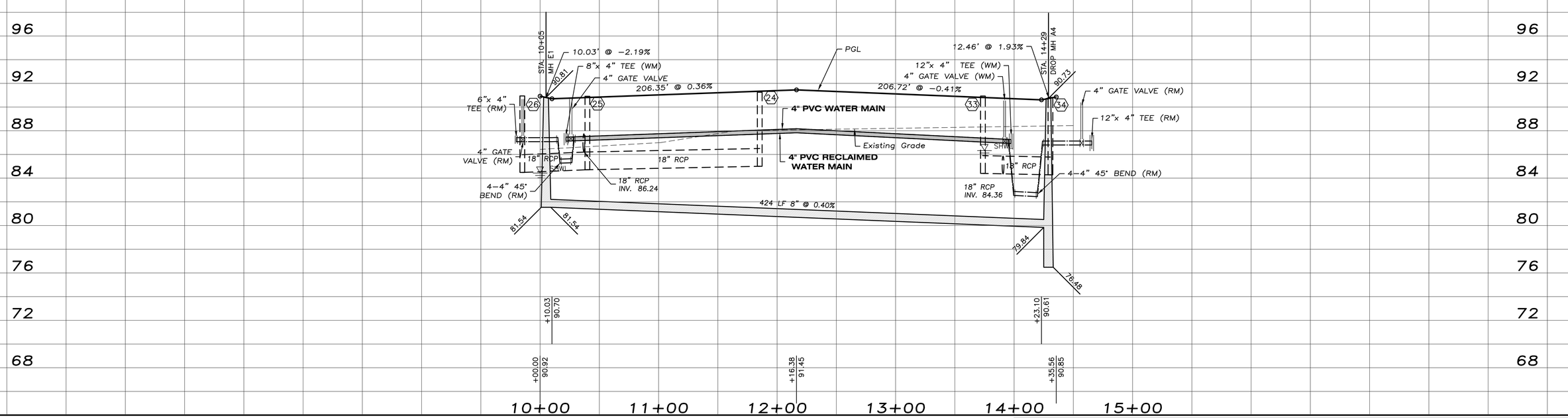
SEE MASTER DRAINAGE PLAN FOR WETLAND INFORMATION

INDEX TO MAP COVERAGE
Not To Scale

= DEVELOPER SIDEWALKS (CONSTRUCTED BY SITE CONTRACTOR)
= BUILDER SIDEWALKS (CONSTRUCTED BY BUILDING CONTRACTOR)

SEA MIST LANE

SCALE: 1" = 4' VERTICAL
1" = 40' HORIZONTAL



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FLORIDA PROFESSIONAL ENGINEER

ROADWAY PLAN & PROFILE

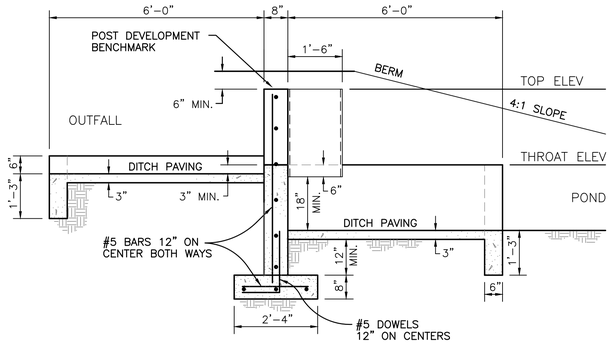
JOB NO. STX-NR-002
DESIGN SURAK
DRAWN MIDDLETON
DATE 06/06/2015
FILE RP07

AVALON PARK WEST
PARCEL E PHASE 1

PREPARED FOR: SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet

SHEET 22 OF 54 SHEETS



SECTION "R-R"
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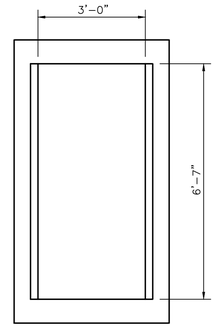
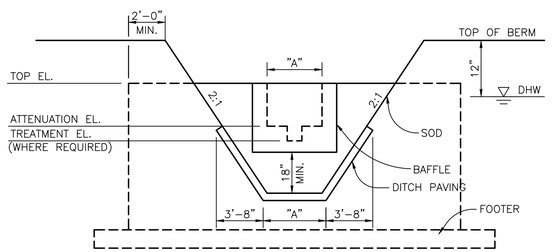


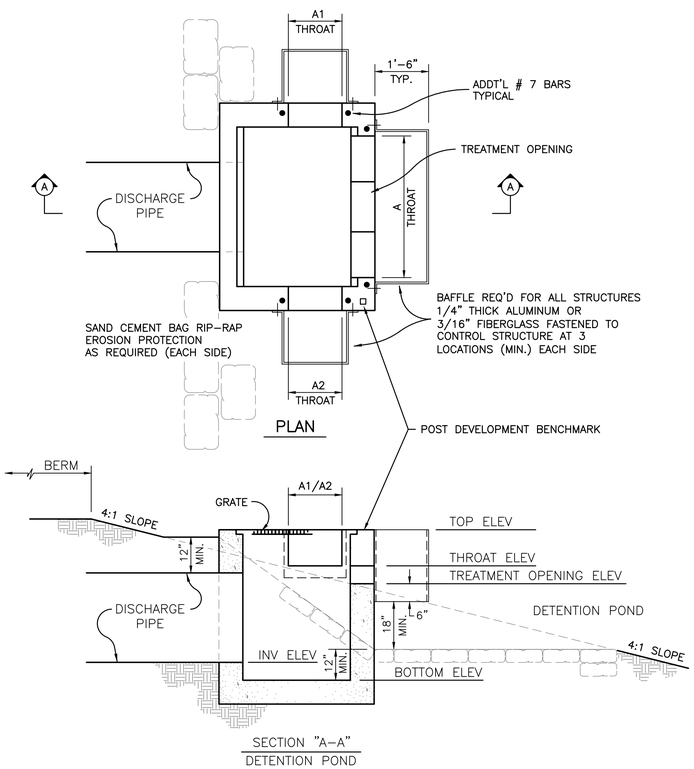
TYPE "H"

CONTROL STRUCTURE DATA

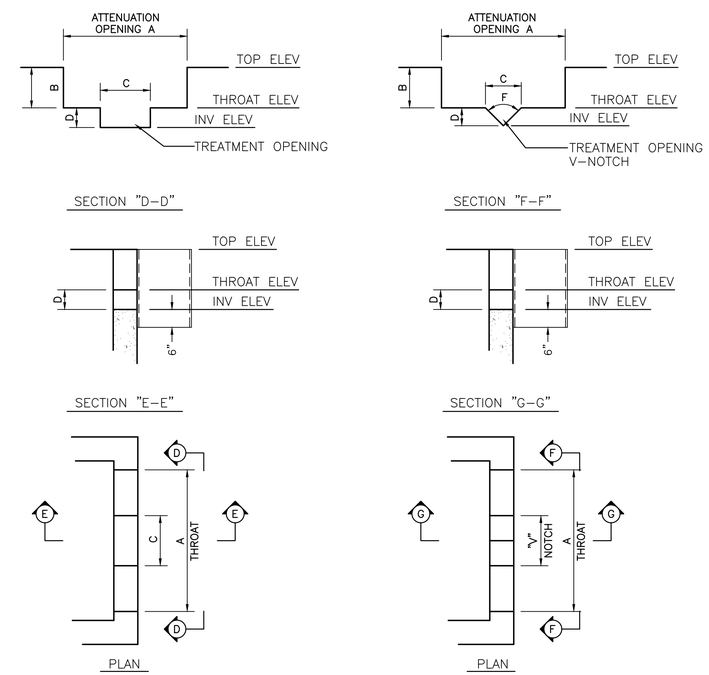
STR. NO.	FDOT BOX TYPE	TOP EL. (FT.)	BOTT. EL. (FT.)	DISCHARGE PIPE			ATTENUATION AND TREATMENT CONTROLS								REMARKS
				TYPE	SIZE (IN.)	INV. EL. (FT.)	STR. TYPE	ATTENUATION OPENING		EL. (FT.)	TREATMENT OPENING			EL. (FT.)	
								A	B		C	D	F'		
CS-5B	H	88.00	82.50	RCP	42	83.00	CS-4	5'-0"	2'-9"'	85.75	11-5/8"	3"	–	85.50	POND 5B
CS-20	WALL	90.10	–	–	–	–	CS-4	3'-2"	2'-2 5/8"	87.88	7-15/16"	3-5/32"	–	87.60	POND 20, L = 25'



SECTION "S-S"
NOT TO SCALE

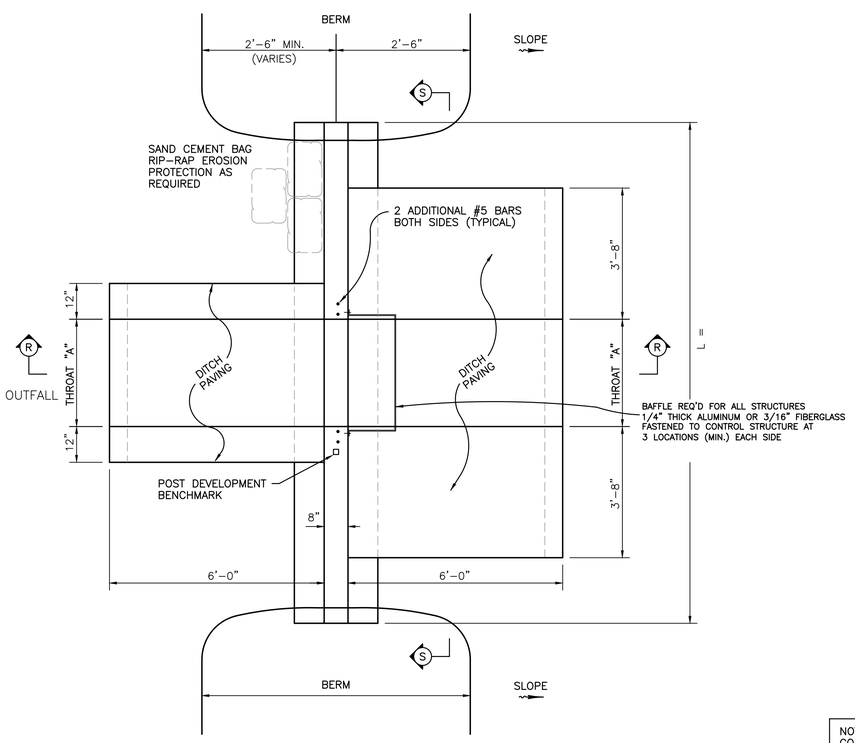


TYPICAL CONTROL STRUCTURE
MODIFIED



TYPE "CS-4"
OPENING

TYPE "CS-5"
OPENING



CONTROL STRUCTURE WALL

NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTING CONTROL STRUCTURES

NOTE:
DRAWING NOT TO SCALE

DATE	DESCRIPTION	BY
	REVISIONS	

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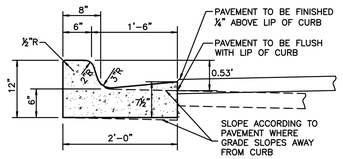
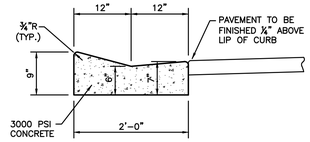
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

CONTROL STRUCTURE DETAILS

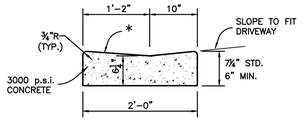
JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE CSTR	SHEET 23 OF 54 SHEETS



TYPE "F" CURB AND GUTTER

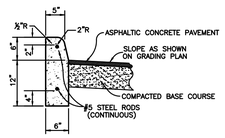


TYPE "A" CURB AND GUTTER

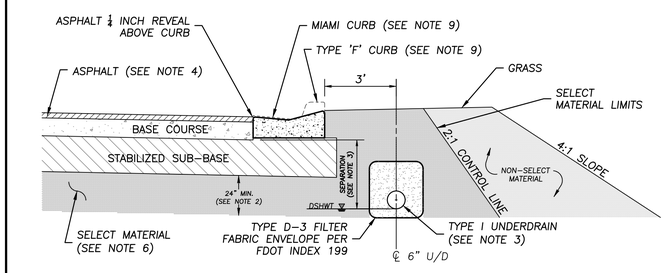


* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN.

DROP CURB



6" UPRIGHT CURB



SECTIONAL VIEW
NTS

1. THE MINIMUM VERTICAL SEPARATION BETWEEN THE DESIGN SEASONAL HIGH WATER TABLE (DHSWT) AND THE BOTTOM OF THE BASE AT THE LOWEST EDGE OF PAVEMENT SHALL BE AS FOLLOWS:

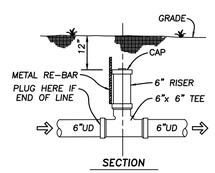
A. LIMEROCK BASE	24 INCH
B. SOIL CEMENT BASE	12 INCH
C. CRUSHED CONCRETE BASE (IF APPROVED)	12 INCH
D. ASPHALT BASE COURSE (ABC)	12 INCH

2. A MINIMUM TWO (2) FEET OF SELECT MATERIAL CONSISTING OF A-1, A-3, OR A-2-4 WITH A MAXIMUM 15% PASSING THE #200 SIEVE BELOW THE STABILIZED SUB BASE.
3. TYPE I UNDERDRAIN PER FDOT INDEX 286
   3.1. MINIMUM UNDERDRAIN SLOPE = 0.2% (FDOT INDEX 500)
   3.2. UNDERDRAIN SHALL HAVE A TYPE D-3 FILTER FABRIC ENVELOPE PER FDOT INDEX 199
   3.3. UNDERDRAIN PIPE SIZE = 6"
   3.4. IF THE VERTICAL SEPARATION BETWEEN DSHWT AND BOTTOM OF BASE IS LESS THAN 2 FEET, UNDERDRAINS SHALL BE CONSTRUCTED ALONG BOTH SIDES OF THE ROAD. IF 2-3 FEET, UNDERDRAINS SHALL BE CONSTRUCTED ALONG ONE SIDE.
   3.5. THE INVERT OF A SIX (6) INCH UNDERDRAIN SHALL BE TWO (2) FEET MINIMUM BELOW THE BOTTOM OF THE BASE.
4. TYPE 2 THRU TYPE 5 ROADWAYS SHALL CONTAIN A MINIMUM OF 1.5 INCH OF SP ASPHALTIC CONCRETE. COLLECTOR ROADWAYS SHALL HAVE A MINIMUM OF THREE (3) INCHES OF SP SPHALTIC CONCRETE. TYPE ROADWAYS MAY BE COMPLETED IN STAGES, INITIALLY 2.25 INCHES OF SP 12.5 (S-1) ASPHALT COURSE WITH REQUIRED PAVEMENT MARKINGS AND 0.75 INCHES OF SP 9.5 (S-3) COURSE INSTALLED WITH ANY THERMOPLASTIC STRIPES, PRIOR TO RELEASE OF THE ASSURANCE FOR MAINTENANCE.
5. THE ROAD DESIGN DRAWINGS SHALL CONTAIN SOIL BORING LOCATIONS WITH EXISTING SOIL DATA, OBSERVED WATER LEVEL AND DSHWT SURFACE. UNDERDRAIN OUTFALL POND DATA AND PROXIMATE WETLAND HYDRO PERIOD ELEVATIONS SHALL ALSO BE IDENTIFIED.
6. SELECT MATERIAL SHALL BE PLACED PER FOOT INDEX DRAWINGS 500 & 505.
7. THE REQUIRED MINIMUM STRUCTURAL NUMBER (SN) SHALL BE;
   2.34 MIN. TYPE 2 ROADWAY
   3.50 MIN. TYPE I ROADWAYS
   3.70 MIN. COUNTY COLLECTOR
   4.00 MIN. COUNTY ARTERIAL
8. SOIL CEMENT BASE SHALL NOT BE CONSTRUCTED OVER STABILIZED SUBGRADE EXCEEDING LBR 20. THE COUNTY ASSIGNED LAYER COEFFICIENT FOR A MAXIMUM 12 INCH DEPTH, LBR 20 SHALL BE 0.04 PER INCH.
9. CURB DESIGN IS SITE SPECIFIC AND SHALL BE IDENTIFIED ON PLANS.

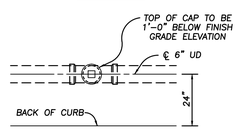
NOTE:
NO DEVIATIONS TO THIS DETAIL WILL BE PERMITTED UNLESS APPROVED BY THE COUNTY ENGINEER.
ANY PROPOSED ALTERATIONS SHALL BE CLEARLY IDENTIFIED AND HIGHLIGHTED ON DETAIL.

ROADWAY DESIGN CRITERIA & UNDERDRAIN DETAIL

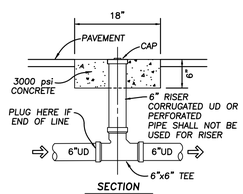
NOTE:
LOCATION OF CLEANOUT TO BE MARKED ON CURB.



SECTION



PLAN



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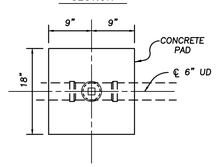
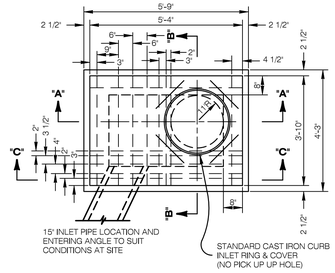


PLAN

CLEANOUT DETAIL
NTS



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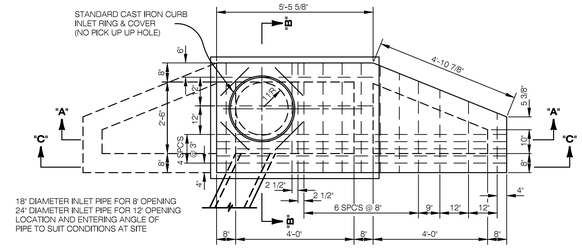

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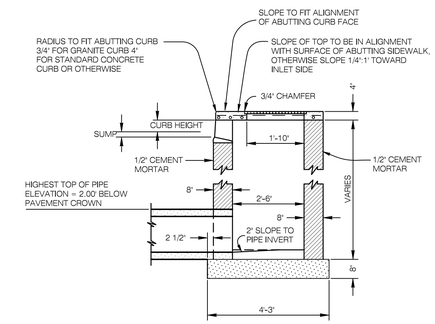
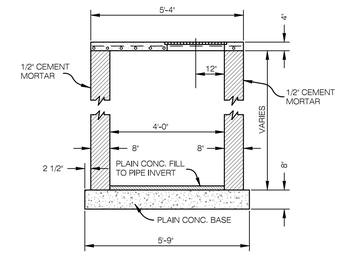
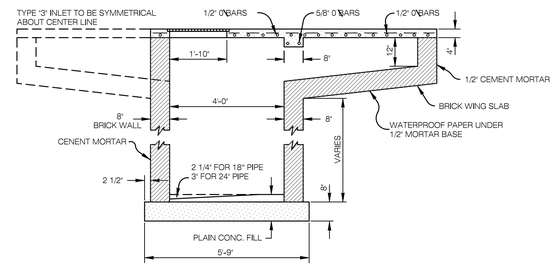


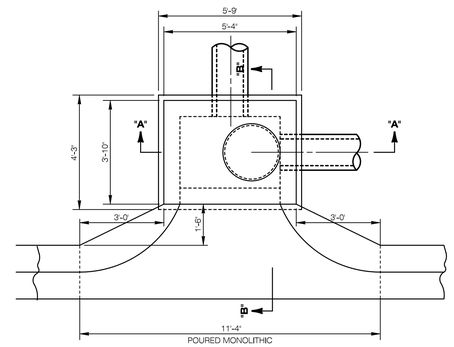
SECTION "B-B"
TYPE "F" CURB ONLY



SECTION "A-A"



SECTION "A-A"



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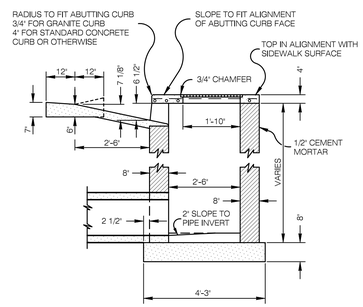
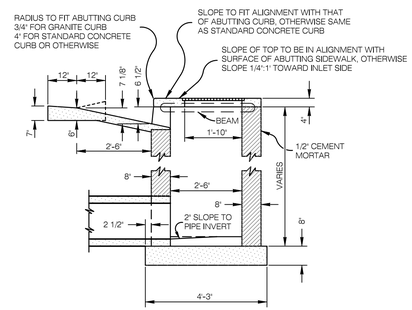
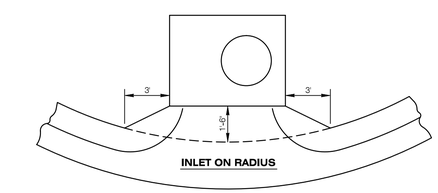


SECTION "B-B"

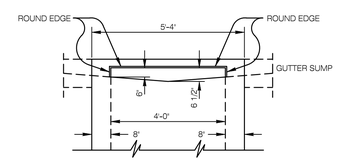


SECTION "B-B"



INLET ON RADIUS

STANDARD INLET FOR MIAMI GUTTER



SECTION "C-C"

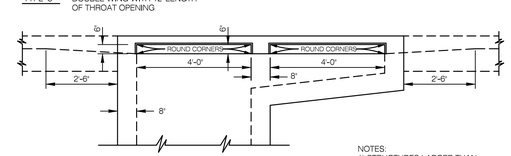
STANDARD STORM WATER CURB INLET TYPE 1

NOTES:
1) STRUCTURES LARGER THAN 4x6 (INSIDE) SHALL BE PRECAST OR CAST-IN-PLACE.
2) ALL INSIDE BRICK WALLS TO BE PLASTERED WITH 1/2" MIN. OF 1:2 CEMENT MORTAR.

BAR SCHEDULE FOR TOP SLAB			
NO.	SIZE	LOCATION	LENGTH
8	1/2" 0	TRANSVERSE BARS	3'-6"
6	1/2" 0	LONGITUDINAL BARS	5'-1"
1	1/2" 0	LONGITUDINAL BARS	2'-8"
5	5/8" 0	TRAFFIC BEARING ONLY	2'-4"

TYPE '2' - SINGLE WING WITH 8' LENGTH OF THROAT OPENING

TYPE '3' - DOUBLE WING WITH 12' LENGTH OF THROAT OPENING



SECTION "C-C"

STANDARD STORM WATER CURB INLET TYPE 2 & 3

NOTES:
1) STRUCTURES LARGER THAN 4x6 (INSIDE) SHALL BE PRECAST OR CAST-IN-PLACE.
2) PAVE WITH BRICK AND MORTAR UP TO SPRING LINE WHEREVER TWO OR MORE PIPES ENTER ONE INLET TO PROVIDE A CHANNEL FOR FLOW OF WATER THROUGH INLET.

BAR SCHEDULE FOR TOP SLAB			
NO.	SIZE	LOCATION	LENGTH
8	1/2" 0	TRANSVERSE BARS - STRAIGHT	3'-6"
1	1/2" 0	TRANSVERSE BARS - STRAIGHT	3'-4"
1	1/2" 0	TRANSVERSE BARS - STRAIGHT	3'-0"
1	1/2" 0	TRANSVERSE BARS - STRAIGHT	2'-9"
1	1/2" 0	TRANSVERSE BARS - STRAIGHT	2'-5"
1	1/2" 0	TRANSVERSE BARS - STRAIGHT	2'-0"
2	5/8" 0	TRANSVERSE BARS - W/ HOOKED ENDS	3'-6"
5	1/2" 0	LONGITUDINAL BARS - STRAIGHT	9'-9"
1	1/2" 0	LONGITUDINAL BARS - STRAIGHT	6'-3"
1	1/2" 0	LONGITUDINAL BARS - STRAIGHT	5'-9"

MUMS NOTE:
THIS CURB INLET HAS BEEN APPROVED BY PASCO COUNTY FOR USE ON NON-FUNCTIONALLY CLASSIFIED ROADWAYS, SUCH AS LOCAL STREETS AND SUBDIVISION COLLECTOR ROADWAYS. IT DOES NOT CONFORM TO THE FLORIDA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION, AND MAINTENANCE FOR STREETS AND HIGHWAYS, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, OR THE DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM. HOWEVER, WE HEREBY CERTIFY THAT IT IS SUITABLE FOR USE AT THE LOCATIONS DEPICTED HEREIN.

DATE	DESCRIPTION	BY
	REVISIONS	

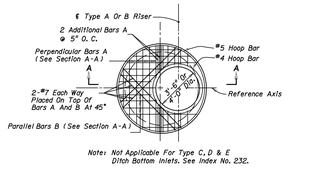
CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

DRAINAGE DETAILS

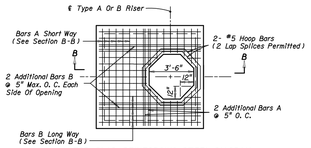
AVALON PARK WEST
PARCEL E PHASE 1

JOB NO.	STX-NR-002
DESIGN	SURAK
DRAWN	MIDDLETON
PREPARED FOR:	SitEx NR Development, LLC
DATE	06/06/2015
	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE	DD

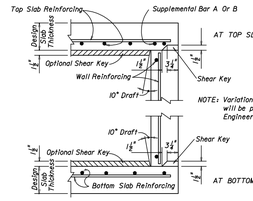


Note: Not Applicable For Type C, D & E Ditch Bottom Inlets. See Index No. 232.

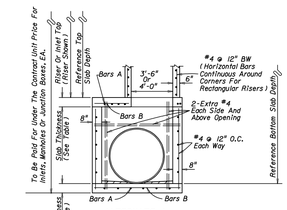
TOP SLAB REINFORCING STEEL DIAGRAM



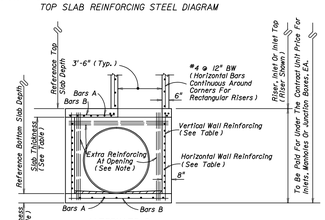
TOP SLAB REINFORCING STEEL DIAGRAM



SLAB TO WALL DETAILS FOR PRECAST ALTERNATE WITH 8" WALLS



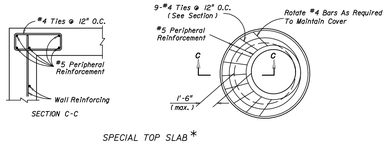
ALTERNATE A
SECTION A-A



ALTERNATE B
SECTION B-B

*NOTE: When the inside diameter of a round structure is not more than 1'-6" larger than the opening in the riser or top slab, the top of the structure or riser shall be constructed according to the "Special Top Slab" details on this sheet.

NOTE: Provide extra reinforcement each side of each opening at 3" maximum spacing equal to half the area of vertical reinforcement removed by the opening and provide the same area of reinforcement above each opening at 3" maximum spacing as removed by the opening.



SPECIAL TOP SLAB *

GENERAL NOTES

1. Standard structure bottoms 4'-0" diameter and smaller (Alt. A) and 3'-6" square (Alt. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted for all structures.
2. Walls of circular structures (Alternate A) constructed in place may be of non-reinforced concrete or brick or reinforced concrete. Precast and rectangular structures (Alternate B) shall be constructed of reinforced concrete only.
3. Wall thickness and reinforcement are for either reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with walls in accordance with either ASTM C478 (up to 96" diameter) or ASTM C76, Class III, B Wall, modified where the elliptical steel cage area is placed in the center one-third of the wall.
4. Top and floor slab thickness and reinforcement are for precast and cast in place construction. Top and floor slabs shall be of Class II concrete. Concrete as specified in ASTM C478 (4000 psi) may be used in lieu of Class I and Class II concrete in precast items manufactured in plants which are under the "Standard Operating Procedures" for the inspection of precast drainage products.
5. All reinforcement shown is ASTM A615/A615M Grade 60 steel, either smooth or deformed. Equivalent area Grade 40 steel or Grade 65KSI welded wire fabric may be substituted according to Index No. 201.
6. Structure bottoms may be used in conjunction with curb inlet tops Types 1, 2, 3, 4, 5, 6, 9, and 10, and any manhole or junction box unless otherwise shown in the plans or other standard drawings. Alt. B structure bottoms may be used in conjunction with curb inlet Types 7 & 8, or any ditch bottom inlet unless otherwise shown in the plans or other standard drawings.
7. Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and storm sewer pipes.
8. Except when ACI hooks are specifically required, reinforcement top and slab shall be straight embedment.
9. All steel bars shall have $1\frac{1}{2}$" minimum cover unless otherwise shown except for precast circular units manufactured under ASTM C76 or ASTM C478. Horizontal steel in rectangular structures shall be lapped a minimum of 24 bar diameters at corners.
10. The corner fillets shown are necessary for rectangular structures used with circular risers and inlet throats and used on skew with rectangular risers, inlet and inlet throats. Fillets will be required in lieu of the bottom slab of the Alt. B riser when used with the Alt. A box. Each fillet shall be reinforced with 2-#5 bars.
11. Inlet throats, riser or manhole tops shall be secured to structures as shown on Index No. 201.
12. Structures with depths over 14' are to be checked for flotation by designer of project drainage.
13. Units larger than specified standard may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Such larger units shall be furnished at no additional cost to the Department. Larger Alternate A units cannot replace Alternate B units without approval of the Engineer. This note applies to this index only.
14. For manhole and junction box tops, for frames and covers, and, for supplementary details see Index No. 201.

STRUCTURE BOTTOMS
TYPE J AND P

1 of 2

SLAB DESIGNS - SQUARE AND RECTANGULAR STRUCTURES

(ALL SLABS 8" THICK - REINFORCING PARALLEL TO SHORT WAY AND LONG WAY)

SHORT-WAY SLAB DEPTH	SHORT-WAY SCHEDULE	LONG-WAY SLAB DEPTH	LONG-WAY SCHEDULE
SIZE: 3'-6" x UNLIMITED			
≥0.5'<29'	B	≥0.5'<40'	B
29'-40'	C		
SIZE: 4'-0" x UNLIMITED			
≥0.5'<19'	B	≥0.5'<34'	B
19'<29'	C	34'-40'	C
29'-40'	D		
SIZE: 5' x 5'			
≥0.5'<3'	C	≥0.5'<3'	C
3'<19'	B	3'<19'	B
19'<28'	C	19'<28'	C
28'<38'	D	28'<38'	D
38'-40'	F	38'-40'	F
SIZE: 5' x 6'			
≥0.5'<3'	C	≥0.5'<3'	C
3'<16'	B	3'<20'	B
16'<24'	C	20'<29'	C
24'<34'	D	29'-40'	D
34'-40'	F		
SIZE: 5' x 7'			
≥0.5'<3'	C	≥0.5'<3'	C
3'<14'	B	3'<22'	B
14'<21'	C	22'<33'	C
21'<29'	D	33'-40'	D
29'-40'	F		
SIZE: 5' x 8'			
≥0.5'<3'	C	≥0.5'<39'	B
3'<8'	B	39'-40'	C
8'<17'	C		
17'<23'	D		
23'-40'	F		
SIZE: 5' x 9'			
≥0.5'<3'	C	≥0.5'<32'	B
3'<8'	B	32'-40'	C
8'<17'	C		
17'<23'	D		
23'-40'	F		

SHORT-WAY SLAB DEPTH	SHORT-WAY SCHEDULE	LONG-WAY SLAB DEPTH	LONG-WAY SCHEDULE
SIZE: 6' x 6'			
≥0.5'<3'	D	≥0.5'<3'	D
3'<4'	C	3'<4'	C
4'<14'	B	4'<14'	B
14'<21'	C	14'<21'	C
21'<28'	D	21'<28'	D
28'-40'	F	28'-40'	F
SIZE: 6' x 7'			
≥0.5'<3'	D	≥0.5'<3'	D
3'<4'	C	3'<4'	C
4'<16'	B	4'<15'	B
16'<19'	C	15'<21'	C
19'<26'	D	21'<30'	D
26'-40'	F	30'-40'	F
SIZE: 6' x 8'			
≥0.5'<3'	D	≥0.5'<3'	D
3'<4'	C	3'<4'	C
4'<7'	B	4'<16'	B
7'<16'	C	16'<23'	C
16'<23'	D	23'<32'	D
23'-40'	F	32'-40'	F
SIZE: 6' x 9'			
≥0.5'<3'	D	≥0.5'<3'	D
3'<15'	C	3'<4'	C
15'<21'	D	4'<18'	B
21'<27'	E	18'<27'	C
27'-40'	G	27'<37'	D
		37'-40'	E
SIZE: 7' x 7'			
≥0.5'<3'	E	≥0.5'<3'	E
3'<4'	D	3'<4'	D
4'<16'	C	4'<16'	C
16'<22'	D	16'<22'	D
22'<28'	E	22'<28'	E
28'-40'	G	28'-40'	G
SIZE: 7' x 8'			
≥0.5'<3'	E	≥0.5'<3'	E
3'<4'	D	3'<4'	D
4'<15'	C	4'<17'	C
15'<21'	D	17'<23'	D
21'<27'	E	23'<29'	E
27'-40'	G	29'-40'	G
SIZE: 7' x 9'			
≥0.5'<3'	E	≥0.5'<3'	E
3'<4'	D	3'<4'	D
4'<12'	C	4'<18'	C
12'<18'	D	18'<24'	D
18'<24'	E	24'<32'	E
24'-40'	G	32'-40'	G

SHORT-WAY SLAB DEPTH	SHORT-WAY SCHEDULE	LONG-WAY SLAB DEPTH	LONG-WAY SCHEDULE
SIZE: 8' x 8'			
≥ 0.5'<3'	D	≥ 0.5'<3'	D
3'<4'	C	3'<4'	C
4'<9'	B	4'<9'	B
9'<17'	C	9'<17'	C
17'<31'	D	17'<31'	D
31'-40'	G	31'-40'	G
SIZE: 8' x 9'			
≥ 0.5'<3'	D	≥ 0.5'<3'	E
3'<4'	C	3'<4'	D
4'<16'	B	4'<18'	C
16'<22'	C	18'<25'	D
22'<29'	D	25'<32'	F
29'-40'	F	32'-40'	G
SIZE: 9' x 9'			
≥ 0.5'<3'	F	≥ 0.5'<3'	F
3'<14'	C	3'<14'	C
14'<20'	D	14'<20'	D
20'<26'	E	20'<26'	E
26'-40'	G	26'-40'	G

WALL DESIGNS - RECTANGULAR STRUCTURES

VERTICAL REINFORCING WALL DEPTH	VERTICAL REINFORCING SCHEDULE	HORIZONTAL REINFORCING WALL DEPTH	HORIZONTAL REINFORCING SCHEDULE
SIZE: 3'-6" * SEE NOTE BELOW			
≥1.17'-40'	A	≥1.17'-40'	B
SIZE: 4'-0"			
≥1.17'-40'	A	≥1.17'-40'	B
SIZE: 5'-0"			
≥1.17'-40'	A	≥1.17' <33'	B
		33'-40'	C
SIZE: 6'-0"			
≥1.17'-40'	A	≥1.17' <22'	B
		22'-40'	C
SIZE: 7'-0"			
≥1.17'-40'	A	≥1.17' <15'	B
		15' <25'	C
		25'-40'	D
SIZE: 8'-0"			
≥1.17'-40'	A	≥1.17' <11'	B
		11' <19'	C
		19' <29'	D
		29'-40'	F
SIZE: 9'-0"			
≥1.17'-40'	A	≥1.17' <15'	C
		15' <22'	D
		22'-40'	F

* Precast structures 3'-6" x 3'-6" maybe cast with 6" walls to depths of 15'. See Index No. 201.

SLAB DESIGNS - ROUND STRUCTURES

SLAB DEPTH	SLAB THICKNESS	REINFORCING (2 WAYS) SCHEDULE
SIZE: 3'-6"		
≥0.5'-40'	8"	C
SIZE: 4'-0"		
≥0.5'-40'	8"	C
SIZE: 5'-0"		
≥0.5'<30'	8"	C
30'-40'	8"	D
SIZE: 6'-0"		
≥0.5'<8'	8"	B
8'<18'	8"	C
18'<30'	8"	D
30'<37'	8"	E
37'-40'	8"	G
SIZE: 8'-0"		
≥0.5'<9'	10"	C
9'<15'	10"	D
15'<23'	10"	E
23'<33'	12"	E
33'-40'	12"	G
SIZE: 10'-0"		
≥0.5'<6'	10"	C
6'<11'	10"	D
11'<17'	10"	E
17'<23'	12"	E
23'-40'	12"	G
SIZE: 12'-0"		
≥0.5'<6'	12"	C
6'<11'	12"	D
11'<16'	12"	E
16'<20'	14"	E
20'-40'	14"	G

GENERAL NOTES

1. Size is the inside dimension(s) of a structure.
2. Slab reinforcement is appropriate for top, intermediate, and bottom slabs.
3. Slab depth is measured from finished grade to top of slab.
4. Wall design depth is measured to the top of the bottom slab for boxes and to the top of the intermediate slab for risers.
5. Wall height is the distance between top of lower slab to bottom of upper slab.
6. Wall sizes exceeding 9'-0" require a special design.

REINFORCING SCHEDULE

SCHEDULE	GRADE 60 STEEL OR 65 KSI (WIRE FABRIC) In²/ft
A	0.20
B	0.24
C	0.37
D	0.53
E	0.73
F	1.06
G	1.45

STRUCTURE BOTTOMS
TYPE J AND P

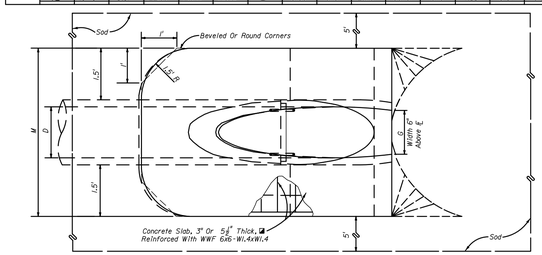
2 of 2

DIMENSIONS AND QUANTITIES

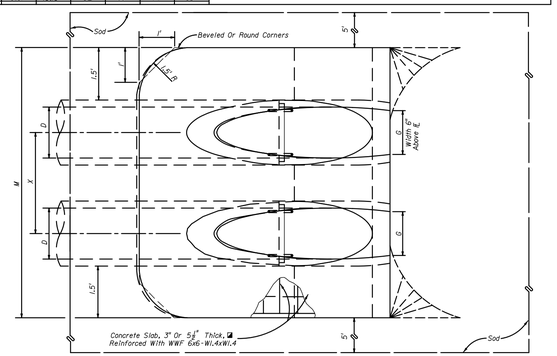
	D	X	A	B	C	E	F	G	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	5½" CONCRETE SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SQ. YDS.) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
2d Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	4.63'	7.61'	9.79'	12.31'	1.19'	0.38	0.58	0.77	0.96	21	54	77	100
	18"	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	22	25	28	31
	24"	3'-5"	2.06'	3.81'	5.91'	3.56'	7'	1.73'	5.52'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	24	28	32	35
	30"	4'-3"	2.21'	4.95'	7.12'	4.56'	8'	2.00'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	26	31	35	40
	36"	5'-1"	2.35'	6.08'	8.33'	5.56'	9'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.96	2.54	28	34	39	45
	42"	6'-0"	2.54'	7.21'	9.55'	6.56'	10'	2.45'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	30	37	43	50
	48"	6'-9"	2.43'	8.33'	10.76'	7.56'	11'	2.65'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	32	39	47	54
	54"	7'-8"	2.62'	9.44'	11.96'	8.56'	12'	2.83'	8.42'	15.08'	23.75'	31.42'	1.46'	1.31	2.44	3.58	4.72	34	42	51	59
	60"	8'-6"	2.68'	10.56'	13.18'	9.56'	14'	3.00'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	36	45	55	64
	66"	9'-5"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	38	48	58	68
	72"	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	40	51	62	73
4d Slope	15"	2'-7"	2.27'	4.09'	6.30'	4.03'	8'	1.22'	4.63'	7.61'	9.79'	12.31'	1.19'	0.57	0.87	1.15	1.44	23	26	29	32
	18"	2'-10"	2.36'	5.12'	7.46'	5.03'	9'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	25	28	31	35
	24"	3'-5"	2.53'	7.18' ◇	9.77'	7.03' △	11'	1.73'	5.52'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.74	2.20	28	32	36	40
	30"	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	6.08'	10.33'	14.58'	18.83'	1.29'	1.03	1.74	2.39	3.05	31	36	41	46
	36"	5'-1"	2.87'	11.31' ◇	14.18'	11.03' ◇	15'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	1.32	2.21	3.08	3.96	34	40	46	52
	42"	6'-0"	3.06'	13.17'	16.42'	13.03'	17'	2.45'	7.25'	13.25'	19.25'	25.25'	1.38'	1.68	2.76	3.91	5.09	36	44	51	58
	48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.33	4.73	6.17	41	48	56	63
	54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	44	52	61	69
	60"	8'-6"	3.56'	19.55'	23.37'	19.03'	23'	3.00'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	47	56	66	75
	66"	9'-5"	3.73'	21.62'	25.30'	21.03'	25'	3.18'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	49	59	69	80
	72"	10'-0"	3.92'	22.68'	26.59'	23.03'	27'	3.30'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.87	13.13	52	63	74	85

◪ See General Note No. 3.
See Sheet 5 Of 6 For 3" Slab Quantities

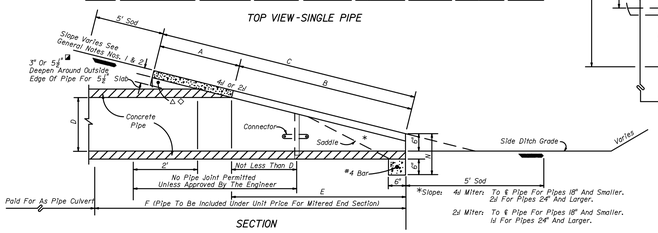
B E
△ 6.42' △ 6.25 Dimensions permitted to allow use of 8' standard pipe lengths.
◇ 10.40 ◇10.10' Dimensions permitted to allow use of 12' standard pipe lengths.
△◇ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE



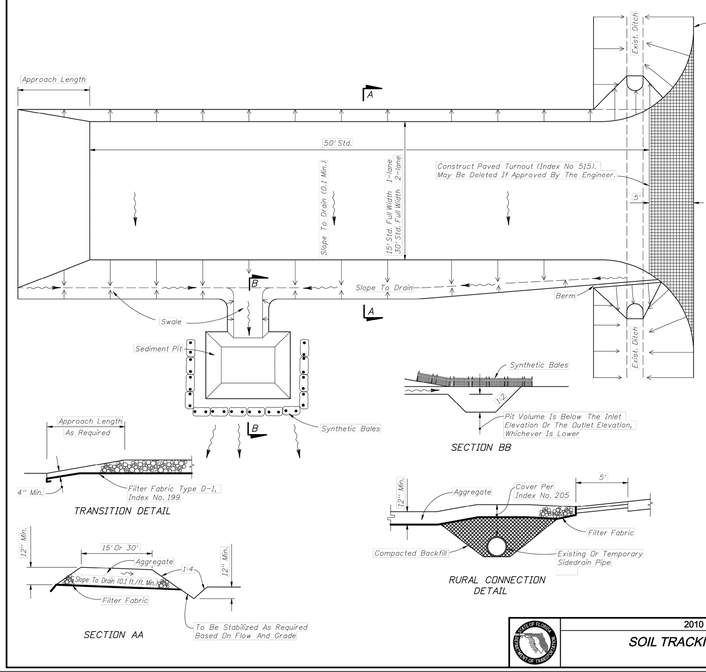
SECTION

NOTE: See sheet 6 for details and notes.

CROSS DRAIN
MITERED END SECTION
SINGLE AND MULTIPLE ROUND CONCRETE PIPE
FDOT INDEX #272

GENERAL NOTES

1. Mitered end sections for pipe sizes 15", 18" and 24" round or equivalent pipe arch or elliptical pipe are permitted within the clear zone. When the slope intersection permits, the mitered end section may be located with the culvert opening as close as 8' beyond the outside edge of the shoulder.
2. Slope and ditch transitions shall be used when the normal roadway slope must be flattened to place end section outside clear zone. See detail left.
3. The reinforced concrete slab shall be constructed for all sizes of cross drain pipe and cast in place with Class I concrete. Slabs shall be $5\frac{1}{2}$" thick unless 3" thickness called for in plans.
4. Concrete pipe used in the assembly of mitered end sections shall be selective lengths to avoid excessive connections.
5. Corrugated metal pipe galvanizing that is damaged during beveling and perforating for mitered end section shall be repaired.
6. That portion of corrugated metal pipe in direct contact with the concrete slab shall be bituminous coated prior to placing of the concrete.
7. Unless otherwise designated in the plans, concrete pipe mitered end sections may be used with any type of cross drain pipe; corrugated steel pipe mitered end sections may be used with any type of cross drain pipe except aluminum pipe; and, corrugated aluminum mitered end sections may be used with any type of cross drain pipe except steel pipe. When bituminous coated metal pipe is specified for cross drain pipe, mitered end sections shall be constructed with like pipe or concrete pipe.
8. When the mitered end section pipe is dissimilar to the cross drain pipe, a concrete jacket shall be constructed in accordance with Standard Index 280.
9. When existing multiple cross drain pipes are spaced other than the dimensions shown in this detail, or have non-parallel axes, or have non-uniform sections, the mitered end sections will be constructed either separately as single pipe mitered end sections or collectively as multiple pipe end sections as directed by the Engineer; however, mitered end sections will be paid for each based on each independent pipe end.
10. The cost of all pipe(s), fasteners, reinforcing, connectors, anchors, concrete, sealants, jackets, and coupling bands shall be included in the cost for the mitered end section. Sodding shall be paid for separately under the contract unit price of Sodding, SY.
11. Mitered end sections shall be paid for under the contract unit price for Mitered End Section (CD), Each, based on each independent pipe end. Mitered end sections use for detention/retention basin outlets are to be paid for under the contract unit price for Mitered End Section, (BD), Each.



GENERAL NOTES

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

2010 FDOT Design Standards

SOIL TRACKING PREVENTION DEVICE
TYPE A

Last Revision	Sheet No.
07/01/07	1 of 1

Index No.
106

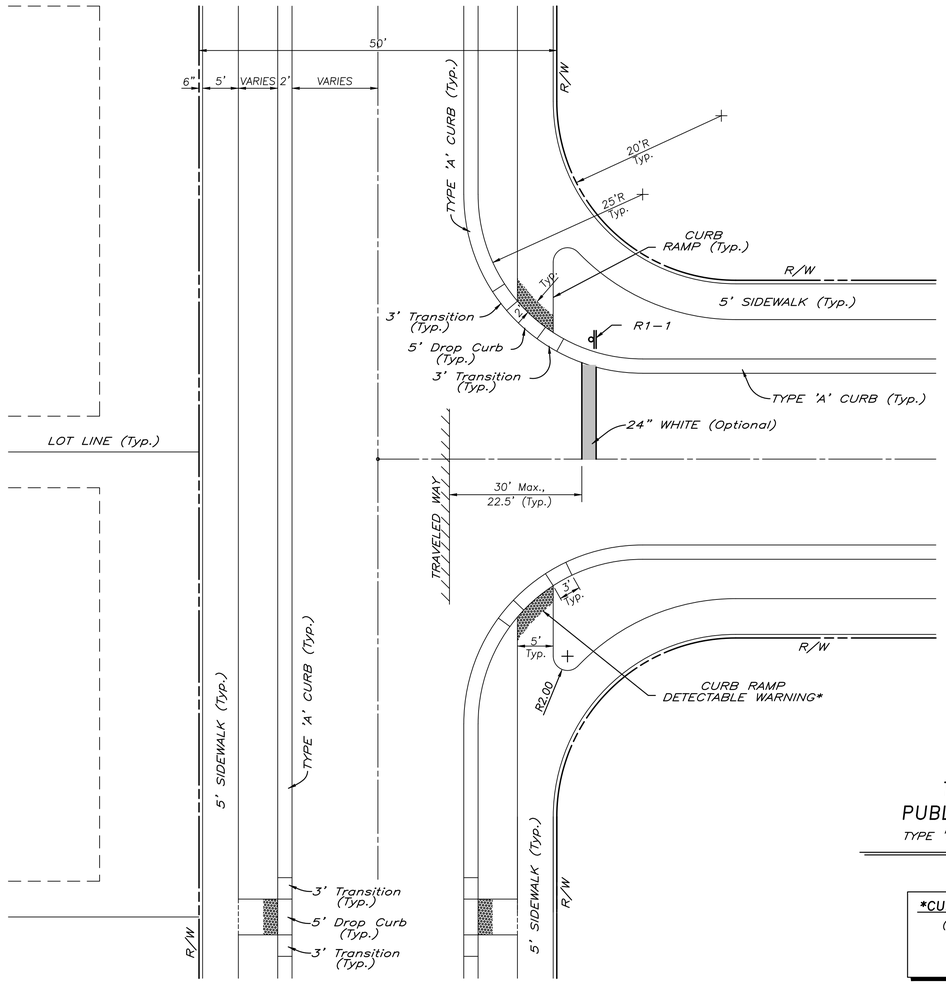
DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

DRAINAGE DETAILS

JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE DD	SHEET 25 OF 54 SHEETS



"T" INTERSECTION

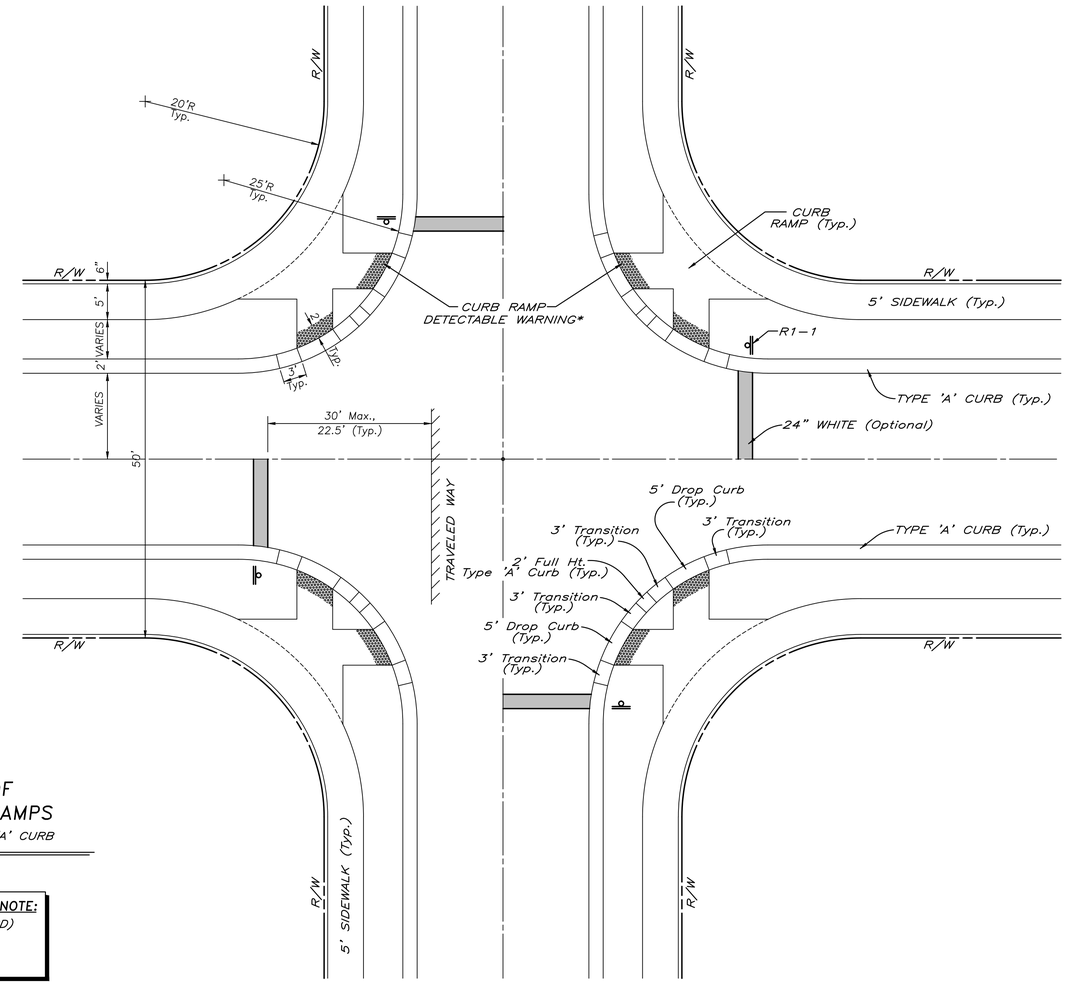
TYPICAL PLACEMENT OF PUBLIC SIDEWALK CURB RAMPS

TYPE "2", "3" & "4" STREETS – TYPE 'A' CURB

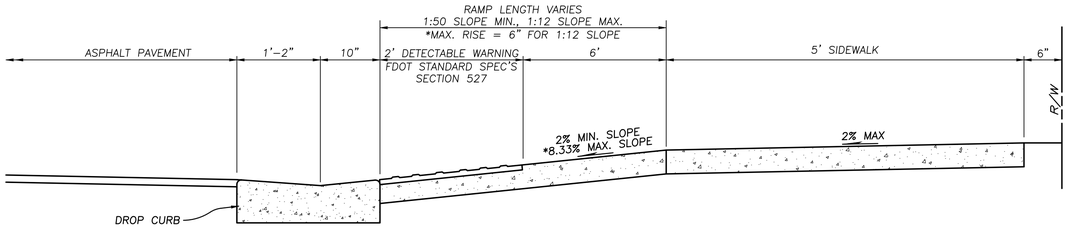
N.T.S.

***CURB RAMP DETECTABLE WARNING NOTE:**

(REFER TO LOCAL COLOR STANDARD)
BLACK – FDOT & PASCO
YELLOW – CITY OF TAMPA
RED – HILLSBOROUGH COUNTY



"CROSS" INTERSECTION



SIDEWALK RAMP PROFILE

NOT TO SCALE

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

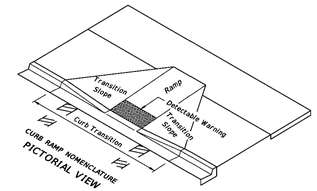
SIDEWALK DETAILS

JOB NO. STX-NR-002
DESIGN SURAK
DRAWN MIDDLETON
DATE 06/06/2015
FILE SWD

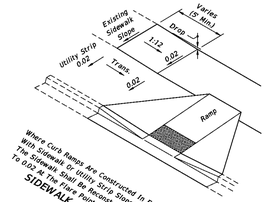
AVALON PARK WEST
PARCEL E PHASE 1

PREPARED FOR: SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

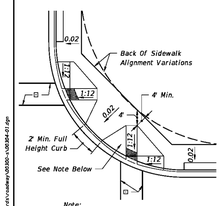


CURB RAMP NOMENCLATURE
PICTORIAL VIEW



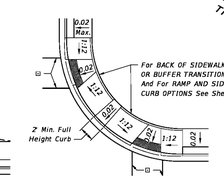
Where Curb Ramps Are Constructed In Existing Sidewalks With Sidewalk Or Utility Strip Slopes Greater Than 0.02, The Sidewalk Shall Be Reconstructed To Reduce The Slopes To 0.02 At The Ramp Points.

SIDEWALK UTILITY STRIP TRANSITION

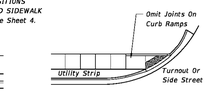


Note:
When crosswalk markings are required, ramp runs must fall within crosswalk limits and where practical, be parallel with the projected crosswalk alignment. The bottom of the ramp beyond the curb line shall have a clear space 48" minimum within the markings of a marked crosswalk. If no crosswalk markings are present, the bottom of the ramp beyond the curb ramp shall have a clear space 48" minimum outside active traffic lanes.

⊡ Crosswalk widths and configuration vary; must conform to Index No. 17344 and 17346.



Note: A portion of one or both ramps may extend outside the return.



LINEAR SIDEWALK RAMPS

GENERAL NOTES

1. Public sidewalk curb ramps shall be constructed in the public right of way at locations that will provide continuous unobstructed pedestrian circulation paths to pedestrian areas, elements and facilities in the public right of way and to accessible pedestrian routes on adjacent sites. Curbed facilities with sidewalks and those without sidewalks are to have curb ramps constructed at all street intersections and at turnouts that have curbed returns. Partial curb returns shall extend to the limit prescribed by Index No. 515 to accommodate curb ramps. Ramps constructed at locations without sidewalks shall have a landing constructed at the top of each ramp, see Sheet 5.
2. The location and orientation of curb ramps shall be as shown in the plans.
3. Curb ramp running slopes at unrestrained sites shall not be steeper than 1:12 and cross slope shall be 0.02 or flatter. Transition slopes shall not be steeper than 1:12.

   When altering existing pedestrian facilities where existing site development precludes the accommodation of a ramp slope of 1:12, a running slope between 1:12 and 1:10 is permitted for a rise of 6" maximum and a running slope of between 1:10 and 1:8 is permitted for a rise of 3" maximum. Where compliance with the requirements for cross slope cannot be fully met, the minimum feasible cross slope shall be provided.

   Ramp running slope is not required to exceed 8' in length, except at sites where the plans specify a greater length.
4. If a curb ramp is located where pedestrians must walk across the ramp, then the walk shall have transition slopes to the ramp; the maximum slope of the transitions shall be 1:12. Ramps with curb returns may be used at locations where other improvements provide guidance away from that portion of curb perpendicular to the sidewalk; improvements for guidance are not required at curb ramps for linear pedestrian traffic.
5. Curb ramp detectable warning surfaces shall extend the full width of the ramp and 24" deep. Detectable warning surfaces shall be constructed in accordance with Specification 527. See Sheet 6 for detectable warning layouts. Transition slopes are not to have detectable warnings. Detectable warnings are required on sidewalks at intersecting roads, streets and railroads. For requirements for detectable warnings on sidewalks at intersecting driveways, see Index 310.
6. Where a curb ramp is constructed within existing curb, curb and gutter and/or sidewalk, the existing curb or curb and gutter shall be removed to the nearest joint beyond the curb transitions or to the extent that no remaining section of curb or curb and gutter is less than 5' long. The existing sidewalk shall be removed to the nearest joint beyond the transition slope or walk around or to the extent that no remaining section of sidewalk is less than 5' long. For details of Concrete Sidewalk See Index 310.
7. Alpha-numeric identifications are for reference (plans, permits, etc.).
8. Public sidewalk curb ramps are to be paid for as follows:

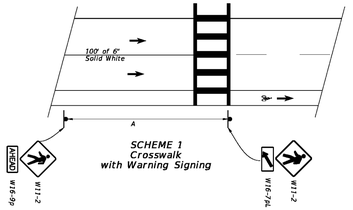
   Ramps, reconstructed sidewalks, walk around sidewalks, sidewalk landings and sidewalk curbs are to be paid for under the contract unit price for Sidewalk Concrete, (__" Thick), SY. Curb transitions and reconstructed curbs are to be paid for under the contract unit price for the parent curb, i.e., Concrete Curb (Type __), LF or Concrete Curb and Gutter (Type __), LF.

   When a separate pay item for the removal and disposal of existing curb, curb and gutter, and/or sidewalk is not provided in the plans, the cost of removal and disposal of these features shall be included in the contract unit price for new curb, curb and gutter and/or sidewalk respectively.
9. Acceptance Criteria for Detectable Warnings:

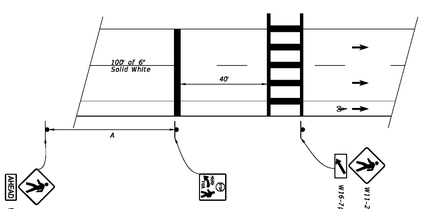
   a. The ramp detectable warning surface shall be complete and uniform in color and texture
   b. 90% of the individual truncated domes must comply with the design criteria
   c. There may be no more than 4 non-complying domes in any one square foot of surface
   d. No two adjacent domes may be non-compliant
   e. Surface may not deviate more than 0.10" from a true plane
10. All sidewalk surfaces, ramp surfaces, and landings with a cross slope shown in this Index to be 0.02 shall be 0.02 maximum. All ramp surfaces and ramp transition slopes with a slope shown in this Index to be 1:12 shall be 1:12 maximum.

TYPICAL PLACEMENT OF PUBLIC SIDEWALK CURB RAMPS AT CURBED RETURNS

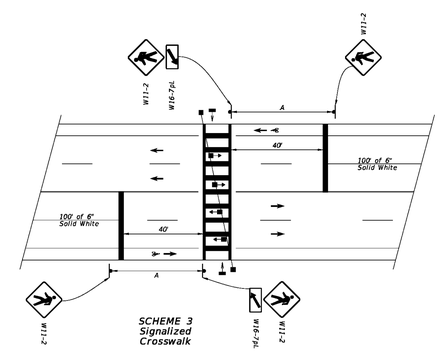
LAST REVISION	REVISION	DESCRIPTION:	FDOT DESIGN STANDARDS FY 2012/2013	PUBLIC SIDEWALK CURB RAMPS	INDEX NO.	SHEET NO.
01/01/11					304	1



SCHEME 1
Crosswalk
with Warning Signing



SCHEME 2
Crosswalk
with Stop Signing



SCHEME 3
Signalized
Crosswalk

APPROACH SPEED MPH	A-SUGGESTED DISTANCE (Ft.)
25 Or Less	200
26 To 35	250
36 To 45	300

1. Plans shall indicate which crosswalk scheme is to be used.
2. The details shown do not depict the signing and markings for multi-lane roadways with divided medians. For these applications, additional signs shall be installed on the median side. Minimum width of Mid-Block Crosswalks is 10'.
3. All mid-block crosswalks shall use special emphasis crosswalk markings.
4. Crosswalk marking should utilize preformed marking materials.

LAST REVISION	REVISION	DESCRIPTION:	FDOT DESIGN STANDARDS FY 2012/2013	SPECIAL MARKING AREAS	INDEX NO.	SHEET NO.
01/01/12					17346	10

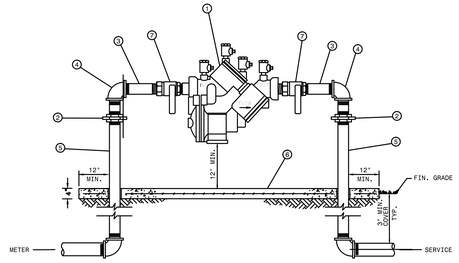
DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

SIDEWALK DETAILS

JOB NO. STX-NR-002	AVALON PARK WEST PARCEL E PHASE 1
DESIGN SURAK	
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE SWD	SHEET 27 OF 54 SHEETS



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	BACKFLOW PREVENTER ASSEMBLY, REDUCED PRESSURE ZONE
2	2	UNIONS - GALV.
3	2	NIPPLES - BRASS
4	2	ELBOWS - GALV. 90°
5	2	RISER - GALV.
6	*	CONCRETE SLAB
7	2	BALL VALVES - BRASS OR S.S. (PROVIDED WITH BFP ASS'Y)

NOTE:
- FIELD ADJUST AND CUT ITEM 5 TO THE PROPER LENGTH.
- MINIMUM CLEARANCE OF 24" TO BE MAINTAINED AROUND DEVICE FOR TESTING.
- ENTIRE ASSEMBLY TO BE PAINTED SAFETY BLUE.
- CONCRETE SLAB TO EXTEND 12" MIN. AROUND ENTIRE DEVICE.
- DEVICE MUST BE LISTED WITH THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH.

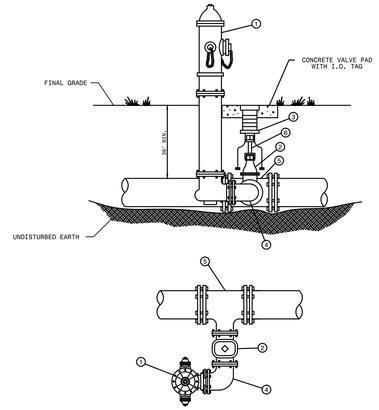
CREATED 02/24/03
REVISED

REDUCED PRESSURE BACKFLOW PREVENTER (SINGLE SERVICE: 3/4", 1", 1-1/2", 2")

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 11



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	HYDRANT, FIRE (5 1/4" VALVE MIN.), PAINTED YELLOW
2	1	6" VALVE, GATE, MJ RESILIENT WEDGE
3	1	BOX, VALVE SLIP TYPE
4	1	6" BEND, ANCHORING, D.I.
5	1	TEE, ANCHORING, MJ
6	*	VALVE EXTENSION ROD, AS NECESSARY (3' MAX. BELOW GRADE)

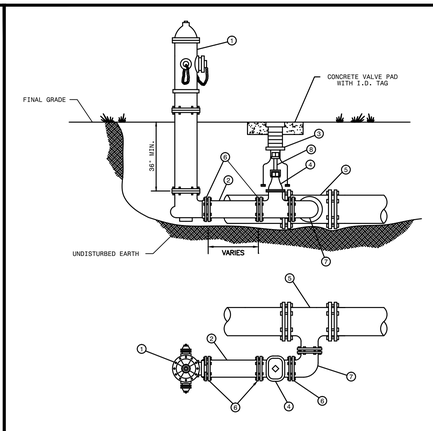
CREATED 02/24/03
REVISED

FIRE HYDRANT PARALLEL TO THE MAIN

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 22



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	HYDRANT, FIRE (5 1/4" VALVE MIN.), PAINTED YELLOW
2	*	6" PIPE, P.V.C. (DR-18)
3	1	BOX, VALVE SLIP TYPE
4	1	6" VALVE, GATE, M.J. RESILIENT WEDGE
5	1	TEE, ANCHORING, M.J.
6	*	6" RESTRAINER GLAND (MEGALUG)
7	1	BEND, ANCHORING, D.I.
8	*	VALVE EXTENSION ROD, AS NECESSARY (3' MAX. BELOW GRADE)

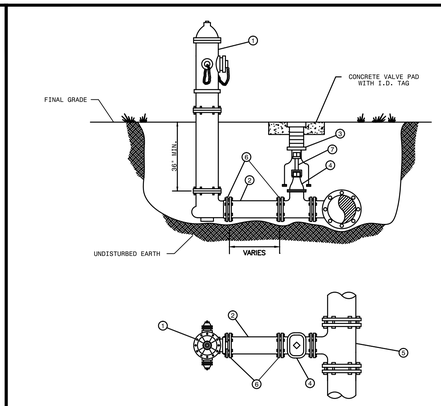
CREATED 02/24/03
REVISED

FIRE HYDRANT PARALLEL TO THE MAIN

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 23



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	HYDRANT, FIRE (5 1/4" VALVE MIN.), PAINTED YELLOW
2	*	6" PIPE, P.V.C. (DR-18)
3	1	BOX, VALVE SLIP TYPE
4	1	6" VALVE, GATE, M.J. RESILIENT WEDGE
5	1	TEE, ANCHORING, M.J.
6	*	6" RESTRAINER GLAND (MEGALUG)
7	*	VALVE EXTENSION ROD, AS NECESSARY (3' MAX. BELOW GRADE)

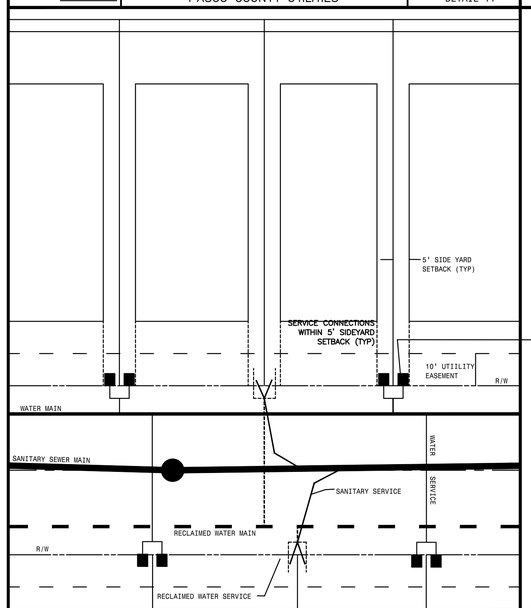
CREATED 02/24/03
REVISED

FIRE HYDRANT PERPENDICULAR TO THE MAIN

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 24



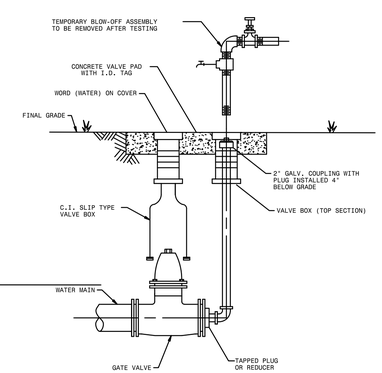
CREATED 02/24/03
REVISED

STANDARD 40' (DETACHED) SINGLE FAMILY TYPICAL UTILITY CONNECTION DETAIL

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 21



NOTES:
- MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED IN JOINT RESTRAINT TABLE (DETAIL 46)
- VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

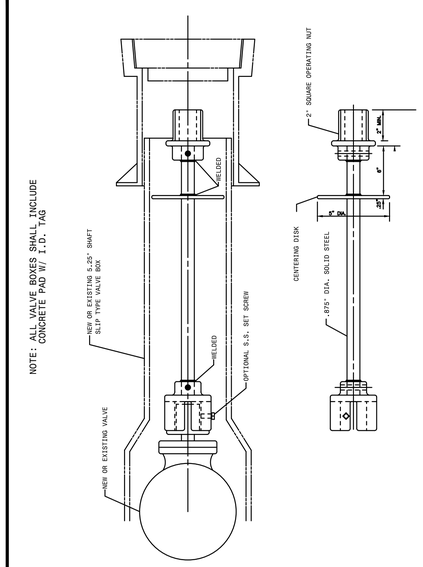
CREATED 02/24/03
REVISED

PERMANENT BLOW-OFF DETAIL

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 25



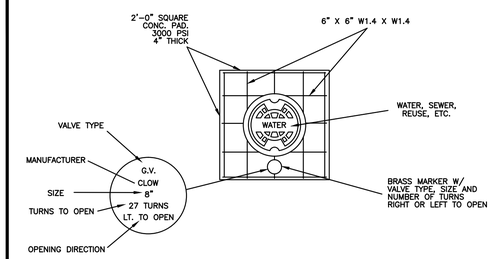
CREATED 02/24/03
REVISED

VALVE EXTENSION RODS

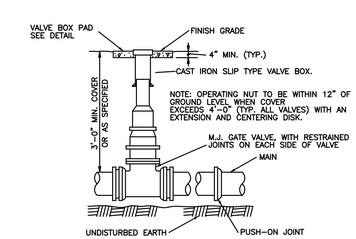
PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 26



TYPICAL CONCRETE VALVE PAD



CREATED 02/24/03
REVISED

VALVE BOX DETAIL SLIP TYPE

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 27

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
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1213 E. 6th Avenue, Tampa, Florida 33605
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DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

WATER & RECLAIMED SYSTEM DETAILS

JOB NO. STX-NR-002

AVALON PARK WEST
PARCEL E PHASE 1

DESIGN SURAK

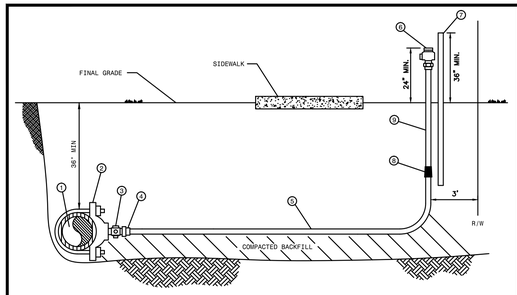
DRAWN MIDDLETON

PREPARED FOR: SitEx NR Development, LLC

DATE 06/06/2015

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet

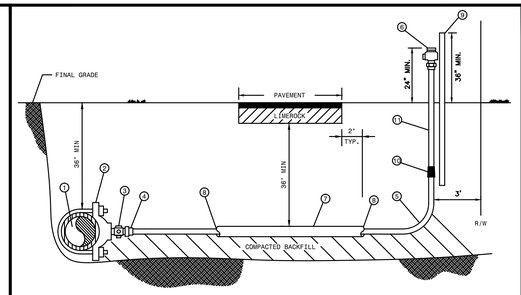
FILE WD



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (W.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	1	3/4" WATER OR 1" REUSE CURB STOP BALL
		VALVE W/ LOCK WINGS (F.I.P. x COMP.)
7	1	2" x 4" P.T. MARKER STAKE
8	1	1" x 3/4" COUPLING (COMP. x COMP.) WATER ONLY
9	1	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'

NOTES: - ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" - 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

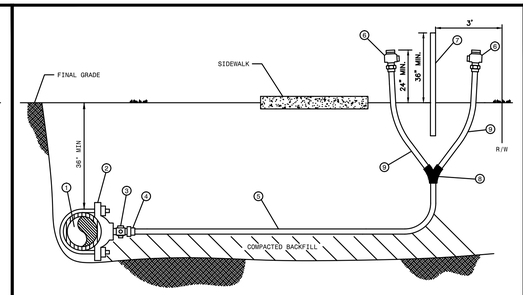
CREATED 02/24/03 REVISED	SINGLE NEAR SIDE WATER SERVICE - 3/4" SINGLE NEAR SIDE REUSE SERVICE - 1" POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 16	



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (W.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	1	3/4" WATER OR 1" REUSE CURB STOP BALL
		VALVE W/ LOCK WINGS (F.I.P. x COMP.)
7	*	2" CASING, PVC OR HDPE - 2' BEYOND EDGE PAVEMENT
8	*	SEALER, RAM-NEK
9	1	2" x 4" P.T. MARKER STAKE
10	1	1" x 3/4" COUPLING (COMP. x COMP.) WATER ONLY
11	1	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'

NOTES: - ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" - 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

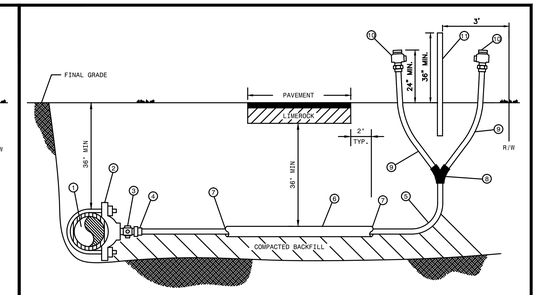
CREATED 02/24/03 REVISED	SINGLE FAR SIDE WATER SERVICE - 3/4" SINGLE FAR SIDE REUSE SERVICE - 1" POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 17	



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (W.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	1	3/4" WATER OR 1" REUSE CURB STOP BALL
		VALVE W/ LOCK WINGS (F.I.P. x COMP.)
7	1	2" x 4" P.T. MARKER STAKE
8	1	1" x 3/4" WYE BRANCH (COMP. x COMP.) WATER ONLY
		1" x 1" WYE BRANCH (COMP. x COMP.) REUSE ONLY
9	1	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'

NOTES: - ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" - 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

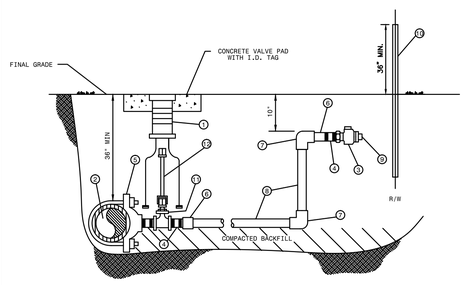
CREATED 02/24/03 REVISED	DOUBLE NEAR SIDE WATER SERVICE - 3/4" DOUBLE NEAR SIDE REUSE SERVICE - 1" POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 18	



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (W.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	*	2" CASING, PVC OR HDPE - 2' BEYOND EDGE PAVEMENT
7	*	SEALER, RAM-NEK
8	1	WYE BRANCH FOR POLY TUBING
9	2	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'
10	2	3/4" WATER OR 1" REUSE CURB STOP BALL
		VALVE W/ LOCK WINGS (F.I.P. x COMP.)
11	1	2" x 4" P.T. MARKER STAKE

NOTES: - ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" - 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

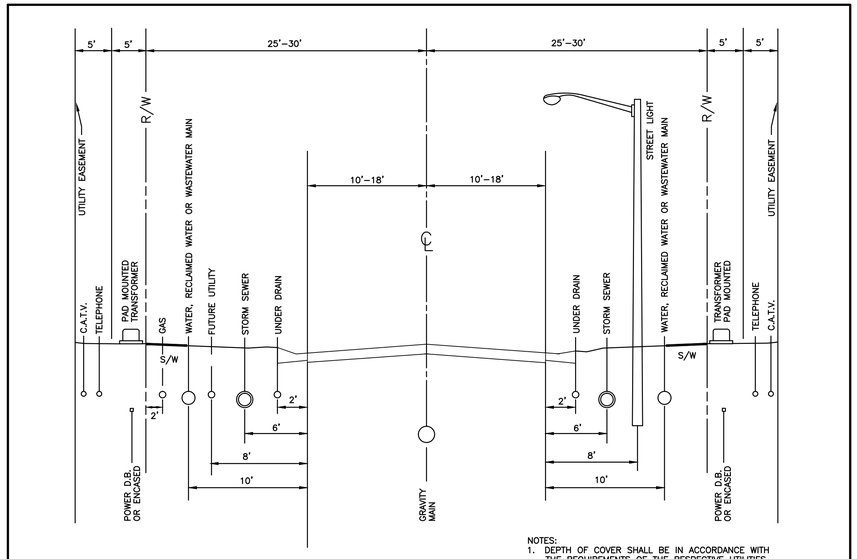
CREATED 02/24/03 REVISED	WATER AND REUSE LATERAL SERVICE 3/4" (DOUBLE - FAR SIDE) POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 19	



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	BOX, VALVE CAST IRON SLIP TYPE
2	*	4" & LARGER PIPE, PVC (DR-18) OR D.I.P. (CLASS 50)
3	2	1 1/2", 2" CURB STOP BALL VALVE W/ LOCK WINGS (FIP x FIP OR FIP x CTS)
4	3	1 1/2", 2" NIPPLE, BRASS OR STAINLESS STEEL
5	1	1 1/2", 2" SADDLE, SERVICE (I.P. THREADS)
6	2	1 1/2", 2" ADAPTER (PVC SCH 40 / SLIP x FPT OR BRASS MIP x CTS)
7	2	1 1/2", 2" 90° ELBOW (SLIP x SLIP) SCH 40 (NOT REQUIRED FOR HDPE)
8	*	1 1/2", 2" PIPE, PVC (SCH 40) OR HDPE (3408) - LENGTH VARIES
9	1	1 1/2", 2" PLUG, THREADED (W/ TEFLON TAPE)
10	1	2" x 4" P.T. MARKER STAKE
11	1	2" GATE VALVE, IRON BODY W/ SQUARE NUT
12	1	VALVE EXTENSION ROD, AS REQUIRED (3" MAX. BELOW GRADE)

NOTE: - A VALVE BOX SHALL BE REQUIRED ON ALL GATE VALVES.
- SERVICE SADDLES SHALL BE INSTALLED ON ALL TAPS TO P.V.C. (DR-18) WATER MAINS.
- 2" GATE VALVE TO BE RESILIENT WEDGE IRON BODY TYPE WITH 2" OPERATING UNIT.
- SADDLES 4" AND LARGER TO BE DUCTILE IRON DUAL STRAP TYPE.
- 1 1/2" BRASS REDUCER BUSHING REQUIRED WITH ITEM NO. 11 FOR 1 1/2" SERVICE.
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.
- 4" DIAMETER CASING REQUIRED FOR ROAD CROSSINGS

CREATED 02/24/03 REVISED	WATER AND REUSE LATERAL SERVICE 1 1/2" OR 2" SERVICE LATERAL PVC (SCHEDULE 40)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 20	



NOTES:
1. DEPTH OF COVER SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RESPECTIVE UTILITIES.
2. WREC WILL USE THE BACK ±5' WITHIN THE UTILITY EASEMENT. TECO & DUKE ENERGY WILL USE THE FRONT ±5' FEET.

RECOMMENDED UTILITY LOCATIONS

SCALE: N.T.S.

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

WATER & RECLAIMED SYSTEM DETAILS

JOB NO. STX-NR-002	AVALON PARK WEST PARCEL E PHASE 1
DESIGN SURAK	
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE WD	SHEET 29 OF 54 SHEETS

PIPE RESTRAINT LENGTHS IN FEET
COMMON FITTINGS

WATER MAINS - TEST PRESSURE 150 PSI						
		FITTING TYPE				
		11-1/4°	22-1/2°	45°	90°	DEAD END
PIPE SIZE	4"	2'	4'	8'	20'	45'
	6"	3'	6'	12'	28'	63'
	8"	4'	7'	15'	36'	82'
	10"	4'	9'	18'	43'	98'
	12"	5'	10'	21'	50'	116'
	16"	6'	13'	26'	63'	148'
	20"	7'	15'	31'	76'	179'
	24"	9'	17'	36'	87'	208'

FORCE MAINS - TEST PRESSURE 100 PSI						
		FITTING TYPE				
		11-1/4°	22-1/2°	45°	90°	DEAD END
PIPE SIZE	4"	1'	3'	6'	13'	30'
	6"	2'	4'	8'	19'	42'
	8"	2'	5'	10'	24'	55'
	10"	3'	6'	12'	29'	66'
	12"	3'	7'	14'	34'	77'
	16"	4'	8'	18'	42'	99'
	20"	5'	10'	21'	50'	119'
	24"	6'	11'	24'	58'	139'

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE FITTING ALONG THE PIPE IN BOTH DIRECTIONS (EXCEPT DEAD ENDS).

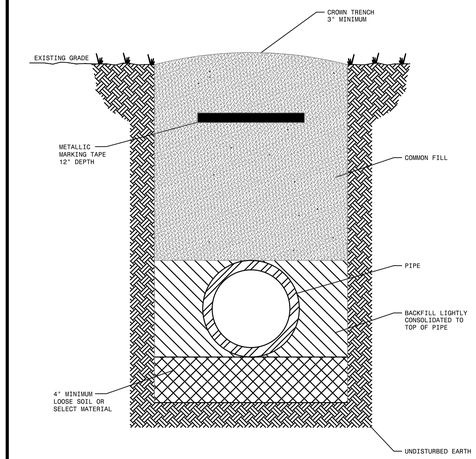
CREATED 02/24/03 REVISED	RESTRAINED JOINT TABLE COMMON FITTINGS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 28

PIPE RESTRAINT LENGTHS IN FEET
TEES (BRANCH SIDE)

WATER MAINS - TEST PRESSURE 150 PSI										
		BRANCH SIZE								
		3"	4"	6"	8"	10"	12"	16"	20"	24"
RUN SIZE	3"	6'	14'	30'	—	—	—	—	—	—
	4"	2'	11'	28'	44'	—	—	—	—	—
	6"	1'	2'	22'	40'	52'	—	—	—	—
	8"	1'	1'	16'	35'	48'	62'	—	—	—
	10"	1'	1'	10'	30'	44'	58'	83'	—	—
	12"	1'	1'	3'	25'	40'	55'	80'	103'	—
	16"	1'	1'	1'	14'	31'	48'	75'	98'	119'
	20"	1'	1'	1'	2'	22'	40'	69'	94'	116'
	24"	1'	1'	1'	1'	11'	31'	63'	89'	111'

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE TEE ALONG THE BRANCH FOR THE DISTANCE INDICATED. A MINIMUM OF 5 FEET OF RESTRAINED PIPE MUST BE INSTALLED ON BOTH RUNS OF THE TEE. MEGALUG TYPE RESTRAINERS ARE REQUIRED ON ALL JOINTS.

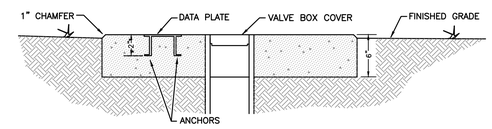
CREATED 02/24/03 REVISED	RESTRAINED JOINT TABLE TEES (BRANCH SIDE)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 29



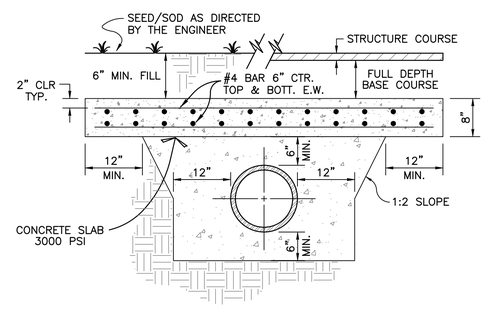
NOTES: –LOOSE SOIL OR SELECT MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS AND FOREIGN MATERIAL.
–COMMON FILL TO BE PLACED AND COMPACTED IN 12" LAYERS. ROLLING EQUIPMENT SHALL NOT BE USED FOR COMPACTION UNTIL A MINIMUM OF 18" OF COMMON FILL HAS BEEN PLACED AND COMPACTED OVER THE PIPE. THREE FEET OF FILL SHALL BE PLACED BEFORE A HYDROHAMMER MAY BE USED FOR COMPACTION.

NTS

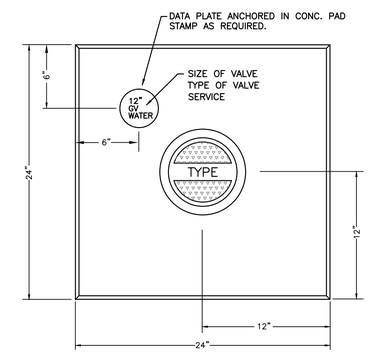
CREATED 02/24/03 REVISED	PIPE LAYING CONDITIONS STANDARD UNPAVED AREAS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 32



NOTE:
ALL PRESSURIZED PIPE WILL BE INSTALLED AT A MAXIMUM DEPTH OF FIVE FEET. TO MEET THIS REQUIREMENT, AT CROSSINGS WITH STORM SEWER OR SANITARY SEWER PIPING, PRESSURIZED PIPE MAY NEED TO BE CONSTRUCTED ON TOP. IF A MINIMUM THREE FEET OF COVER IS NOT ACHIEVABLE, A CONCRETE SHOCK PAD WILL BE INSTALLED (SEE DETAIL BELOW).



CONCRETE SHOCK PAD



CONCRETE VALVE PAD
(FOR UNPAVED AREAS)

NOTES:

CONCRETE TO BE TYPE I GENERAL PORTLAND CEMENT WITH 3/4" TOP SIZE AGGREGATE AND SHALL DEVELOP A 28-DAY STRENGTH OF 3000 P.S.I.

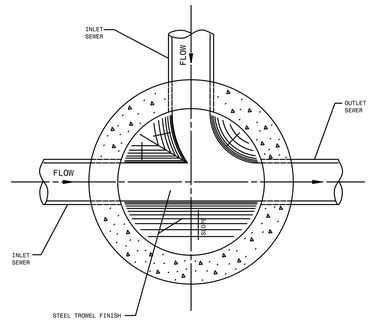
CONCRETE VALVE PAD SHALL BE POURED IN PLACE AND SHALL BE SET 1/2" ABOVE FINISHED GRADE

DATE	DESCRIPTION	BY
	REVISIONS	

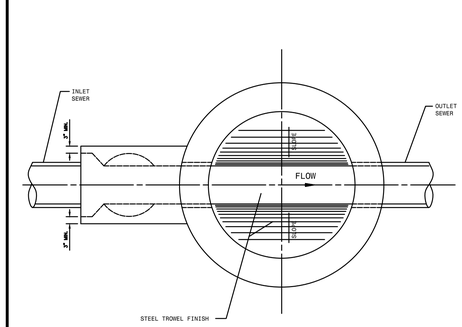
CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

WATER & RECLAIMED SYSTEM DETAILS

JOB NO. STX-NR-002	AVALON PARK WEST PARCEL E PHASE 1
DESIGN SURAK	
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE WD	SHEET 30 OF 54 SHEETS



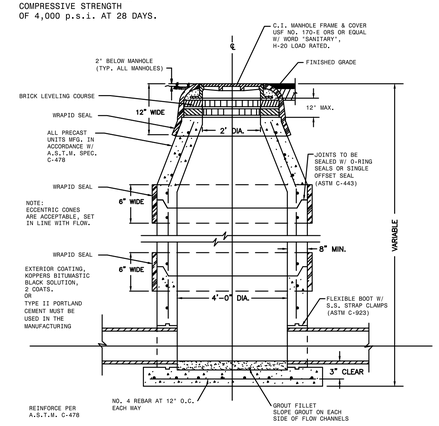
CREATED 02/24/03	STANDARD MANHOLE (BENCH AND INVERTS)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 36



NOTE:
DROP MANHOLE TO BE USED WHEN THE DIFFERENCE BETWEEN INVERTS IS 2' OR MORE.

CREATED 02/24/03	DROP MANHOLE (BENCH AND INVERTS)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 37

NOTE:
PRECAST CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 p.s.i. AT 28 DAYS.



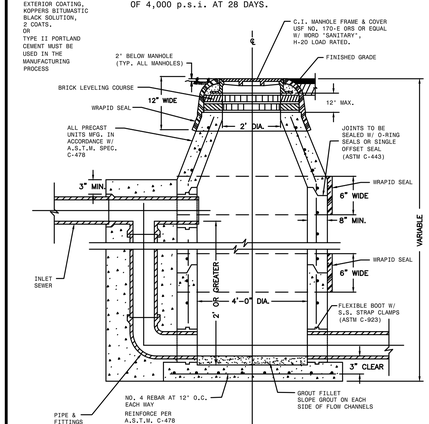
NOTE: 1. WRAPID SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS: ON ALL JOINTS ON AIR RELEASES, MANHOLES, GREASE/WATER, OIL/WATER SEPARATORS, AND WETWELLS.
2. WRAPID SEAL MUST BE USED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
3. PASCO COUNTY SHALL HAVE THE OPTION OF SPECIFYING THE TYPE OF INTERIOR LINING TO BE INSTALLED FOR EACH INDIVIDUAL MANHOLE.
4. PASCO COUNTY SHALL HAVE THE OPTION OF REQUIRING A NEGATIVE PRESSURE TEST PER ASTM C-1244
5. LIFT HOLES MUST NOT PENETRATE THE WALLS

CREATED 02/24/03	STANDARD MANHOLE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 38

NOTE:
ECCENTRIC CONES ARE ACCEPTABLE, SET IN LINE WITH FLOW.

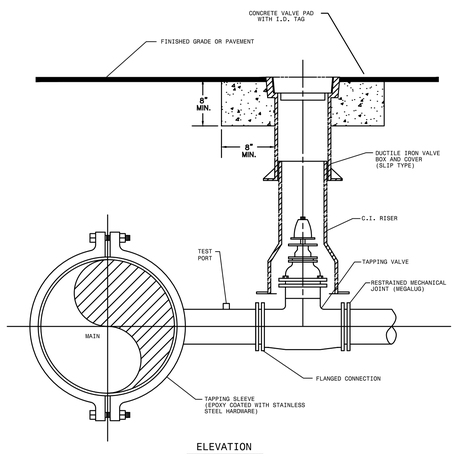
EXTERIOR COATING, KOPPERS BITUMASTIC BLACK SOLUTION, 2 COATS. OR TYPE II PORTLAND CEMENT MUST BE USED IN THE MANUFACTURING PROCESS

NOTE:
PRECAST CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 p.s.i. AT 28 DAYS.



NOTE: 1. WRAPID SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS: ON ALL JOINTS ON AIR RELEASES, MANHOLES, GREASE/WATER, OIL/WATER SEPARATORS, AND WETWELLS.
2. WRAPID SEAL MUST BE USED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
3. PASCO COUNTY SHALL HAVE THE OPTION OF SPECIFYING THE TYPE OF INTERIOR LINING TO BE INSTALLED FOR EACH INDIVIDUAL MANHOLE.
4. PASCO COUNTY SHALL HAVE THE OPTION OF REQUIRING A NEGATIVE PRESSURE TEST PER ASTM C-1244
5. LIFT HOLES MUST NOT PENETRATE THE WALLS

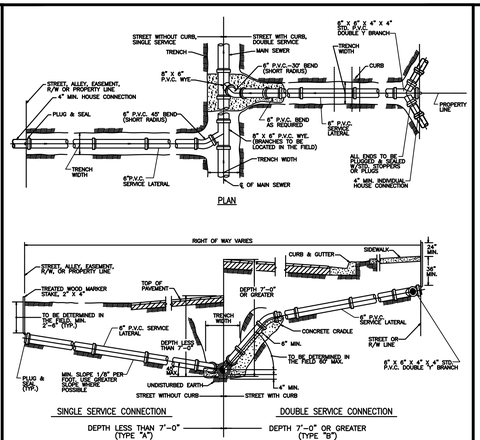
CREATED 02/24/03	DROP MANHOLE (PRE-CAST ONLY)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 39



ELEVATION

NOTES:
- SADDLE CONNECTION WILL BE TESTED TO 150 PSI PRIOR TO TAPPING MAIN.
- MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED BY COUNTY/ENGINEER.
- VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

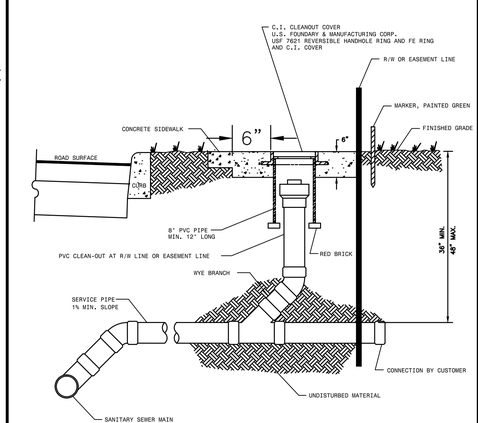
CREATED 02/24/03	WATER, REUSE, AND FORCE MAIN TAPPING DETAIL W/ VALVE LOCATION	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 34



SECTION

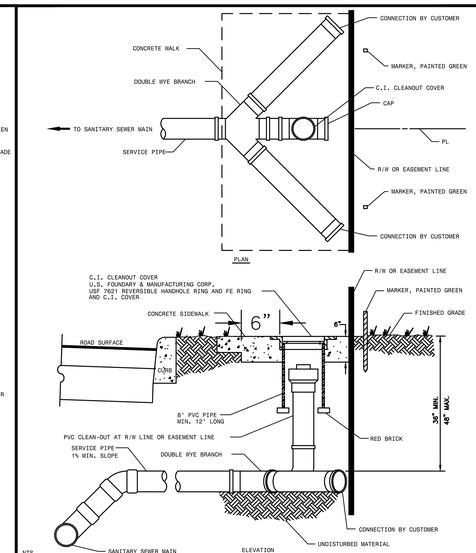
NOTE:
- CONTRACTOR SHALL MAKE, ON A CLEAN SET OF PLANS, THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE OF EACH SERVICE LATERAL AND THEN GIVE TO ENGINEER FOR RECORD PURPOSES.
- PROVIDE 2" x 4" PRESSURE TREATED WOOD MARKER STAKE AT ALL SANITARY SERVICES (INCLUDE IN PIPE PRICE). TOP OF STAKE TO BE PAINTED WITH GREEN PAINT.
- THE MINIMUM DIAMETER OF ALL SERVICE LATERALS SHALL BE 6 INCHES.

CREATED 02/24/03	SEWER LATERAL CONNECTION	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 41



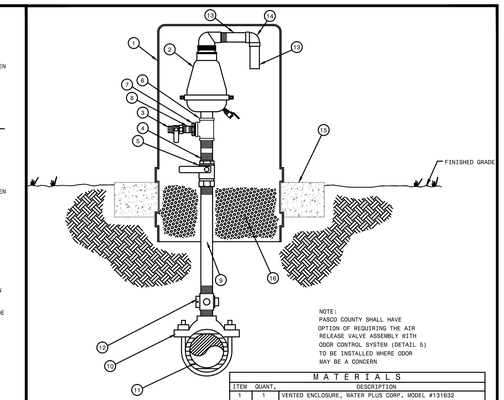
NTS

CREATED 02/24/03	SANITARY SEWER - SINGLE WYE CONNECTION AND TYPICAL CLEAN-OUT	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 42



NTS

CREATED 02/24/03	SANITARY SEWER - DOUBLE WYE CONNECTION AND TYPICAL CLEAN-OUT	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 43



NOTE:
PASCO COUNTY SHALL HAVE OPTION OF REQUIRING THE AIR RELEASE VALVE ASSEMBLY WITH ODOR CONTROL SYSTEM (DETAIL 5) TO BE INSTALLED WHERE ODOR MAY BE A CONCERN

NOTE:
VENTED ENCLOSURE TO BE COLOR CODED AS FOLLOWS:

WATER MAIN – BLUE
FORCE MAIN – GREEN
REUSE MAIN – PURPLE

MATERIALS

ITEM	QUANT.	DESCRIPTION
1	1	VENTED ENCLOSURE, WATER PLUS CORP. MODEL #131632
2	1	AIR RELEASE VALVE 2" NPT (SEE BELOW)
		SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D-025
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP, S.S.
4	1	2" x 4" NIPPLE, S.S.
5	1	2" BALL VALVE, S.S.
6	1	2" TEE, S.S.
7	1	2" X 1" REDUCER, S.S.
8	1	1" SHORT NIPPLE, S.S.
9	1	2" PIPE, S.S. LENGTH AS REQUIRED
10	1	2" DOUBLE STRAP TAPPING SADDLE, S.S.
11	1	4" & LARGER PIPE, D.I. OR PVC (DR:18)
12	1	2" CORPORATION BRASS
13	2	1-1/2" PIPE, PVC, LENGTH AS REQUIRED
14	1	1-1/2" x 90° ELBOW, PVC
15	1	CONCRETE SLAB AROUND ENCLOSURE
16	1	#57 WHITE ROCK

CREATED 02/24/03	STANDARD AIR RELEASE VALVE ASSEMBLY (VERTICAL PIPE LAYOUT)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 4

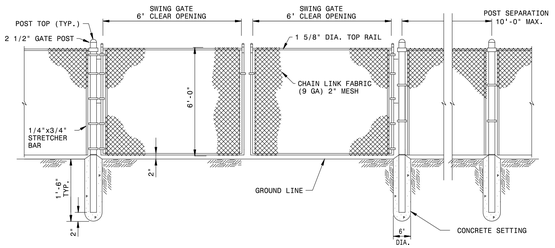
DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

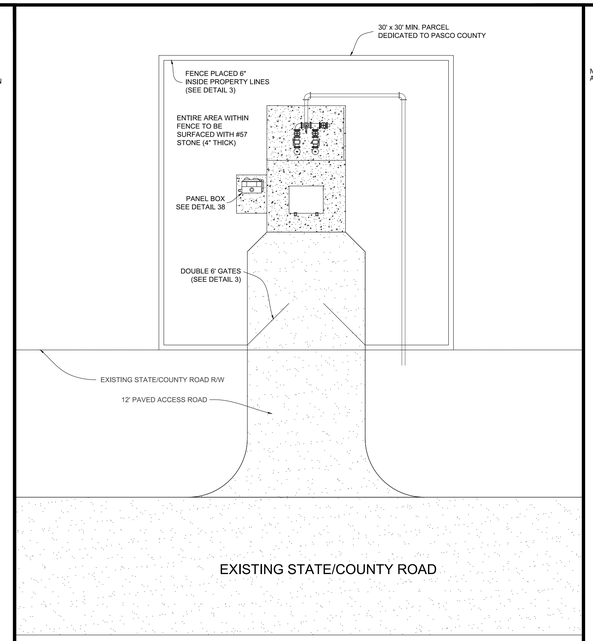
SANITARY SEWER SYSTEM DETAILS

JOB NO. STX-NR-002	AVALON PARK WEST PARCEL E PHASE 1
DESIGN SURAK	
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE SD	SHEET 31 OF 54 SHEETS

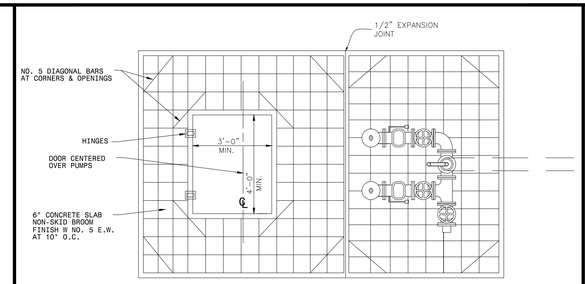


MATERIALS	
ITEM	DESCRIPTION
TYPE	CHAIN LINK
HEIGHT	4', 6', 8' - AS SPECIFIED BY COUNTY
FABRIC	9 GAUGE
POST	2-1/2" DIA. - .085 WALL THICKNESS (MINIMUM)
TOP RAILS	1-5/8" DIA. - .080 WALL THICKNESS (MINIMUM)
GATE	4' x 6' SWING TYPE W/ 2" DIA. - .085 WALL
	THICKNESS (MINIMUM)
	FRAMEWORK (LOCATED AS INDICATED ON METER
	SPEC. SHEET)
LATCH	FORK TYPE - PADLOCK COMPATIBLE

CREATED 02/24/03 REVISED	FENCE SPECIFICATIONS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 04

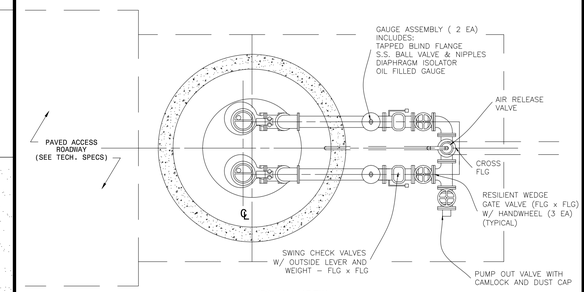


CREATED 02/24/03 REVISED	PUMP STATION (DUPLEX) SITE PLAN & ACCESS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 47



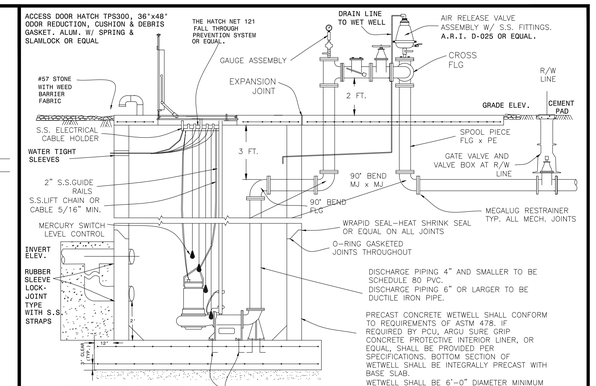
SLAB PLAN VIEW
LIFT STATION & PIPING

NOTE: PUMP OUT ASSEMBLY CAN BE PLACED ON EITHER SIDE TO BEST ACCOMMODATE PROPOSED LAYOUT



PLAN VIEW
LIFT STATION & PIPING

CREATED 02/24/03 REVISED	PUMP STATION SLAB & PIPING PLAN	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 48



ELEVATION TYPICAL
LIFT STATION & PIPING

NOTES:

1. ALL PIPING WITHIN THE WETWELL (LARGER THAN 4") AND ALL ABOVE GROUND PIPING SHALL BE MANUFACTURED FLANGED PIPE. FIELD FABRICATED FLANGES (UNI-FLANGE OR MEGAFLANGE) WILL NOT BE PERMITTED.

2. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE PROVIDED WITH CERAMIC EPOXY INTERIOR LINING (PROTECTO 401). IN ADDITION, ALL PIPE & FITTINGS WITHIN THE WETWELL SHALL BE PROVIDED WITH POLYETHYLENE SHRINK WRAPPED EXTERIOR COATING.

3. ALL UNDERGROUND FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT AND SHALL BE PROVIDED WITH PROTECTO 401 INTERIOR LINING.

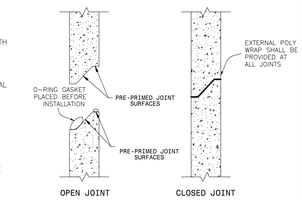
4. IF LIFT CABLES ARE USED, LIFTING RINGS MUST BE PROVIDED EVERY 4 FT.

5. INDIVIDUAL WALL PENETRATION SLEEVES SHALL BE PROVIDED FOR EACH PUMP CABLE.

6. ALL HARDWARE (INCLUDING FLANGE BOLTS & NUTS) SHALL BE STAINLESS STEEL.

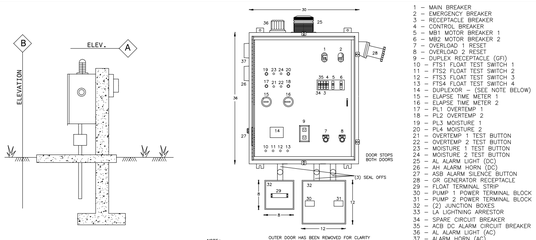
7. ALL ABOVE GROUND PIPING TO BE PAINTED SAFETY GREEN.

8. SLAB ELEVATION TO BE 12 IN. ABOVE C/L OF ROADWAY OR 12 IN. ABOVE 100 YEAR FLOOD PLAIN - WHICHEVER IS HIGHER.



PRECAST JOINT DETAIL

CREATED 02/24/03 REVISED	DUPLEX PUMP STATION ELEVATION & PIPING PROFILE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 49



1 - MAIN BREAKER
2 - EMERGENCY BREAKER
3 - RECEPTACLE BREAKER
4 - CONTROL BREAKER
5 - MB1 MOTOR BREAKER 1
6 - MB2 MOTOR BREAKER 2
7 - OVERLOAD 1 RESET
8 - OVERLOAD 2 RESET
9 - DUPLEX RECEPTACLE (GFI)
10 - FTS1 FLOAT TEST SWITCH 1
11 - FTS2 FLOAT TEST SWITCH 2
12 - FTS3 FLOAT TEST SWITCH 3
13 - FTS4 FLOAT TEST SWITCH 4
14 - DUPLEXOR - (SEE NOTE BELOW)
15 - ELAPSE TIME METER 1
16 - ELAPSE TIME METER 2
17 - PL1 OVERTEMP 1
18 - PL2 OVERTEMP 2
19 - PL3 MOISTURE 1
20 - PL4 MOISTURE 2
21 - OVERTEMP 1 TEST BUTTON
22 - OVERTEMP 2 TEST BUTTON
23 - MOISTURE 1 TEST BUTTON
24 - MOISTURE 2 TEST BUTTON
25 - AL ALARM LIGHT (DC)
26 - AH ALARM HORN (DC)
27 - ASB ALARM SILENCE BUTTON
28 - GR GENERATOR RECEPTACLE
29 - FLOAT TERMINAL STRIP
30 - PUMP 1 POWER TERMINAL BLOCK
31 - PUMP 2 POWER TERMINAL BLOCK
32 - LA LIGHTNING ARRESTOR
33 - LA LIGHTNING ARRESTOR
34 - SPARE CIRCUIT BREAKER
35 - ACB DC ALARM CIRCUIT BREAKER
36 - AL ALARM LIGHT (AC)
37 - ALARM HORN (AC)

NOTE:
BREAKER, MODULAR CONTROL UNIT & RESETS MOUNTED FOR OPERATION THROUGH INNER SAFETY DOOR

HOUR METERS G.F.I. RECEPTACLE TO BE MOUNTED ON INNER SAFETY DOOR

SEE TECHNICAL SPECIFICATION FOR DETAILS

PANEL BOX ELEV.

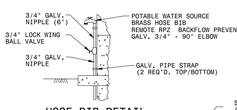
NOTE:
POSITION PANEL BOX SO OPERATOR'S BACK IS NOT TO WET WELL WHILE FACING BOX

PANEL BOX TO BE LOCATED TO ALLOW UNOBSTRUCTED ACCESS TO WET WELL BY PAVED ACCESS ROAD

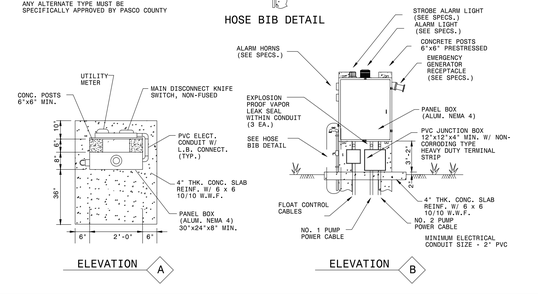
PANEL ELEVATION SHALL BE ABOVE 100-YEAR FLOOD ELEV. AND MUST BE SHOWN ON ALL PLANS

DUPLEXOR SHALL BE AN T.T.I. 6012 ANY ALTERNATE TYPE MUST BE SPECIFICALLY APPROVED BY PASCO COUNTY

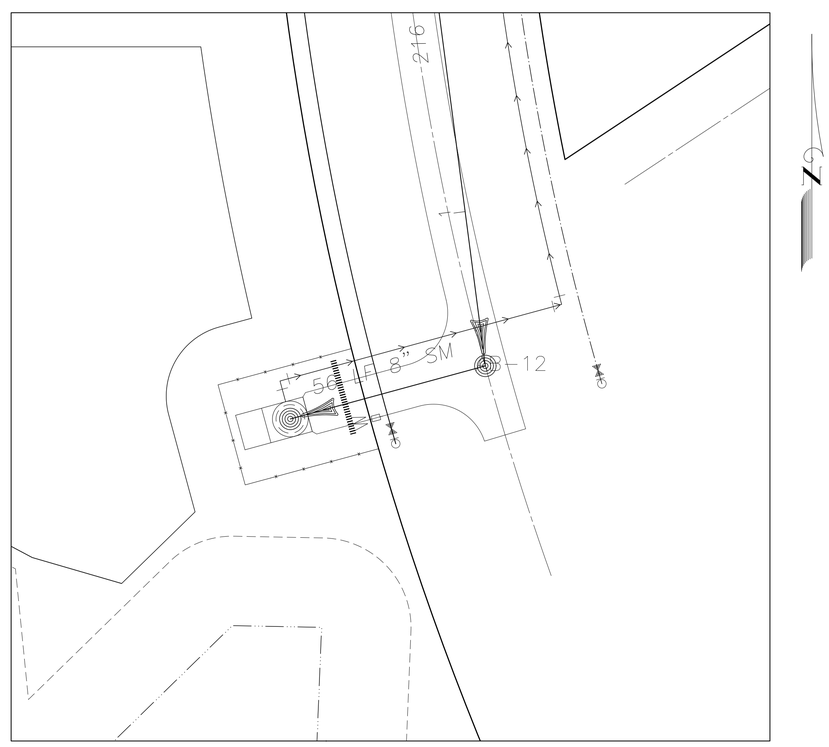
PANEL BOX COMPONENT LAY-OUT



HOSE BIB DETAIL



CREATED 02/24/03 REVISED	STANDARD PUMP STATION (DUPLEX) PANEL BOX ELEVATION & COMPONENT LAY-OUT	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 50



SITE PLAN

40 20 0 20 40

SCALE: 1 " = 20'

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

PUMP STATION DETAILS

JOB NO. STX-NR-002	AVALON PARK WEST PARCEL E PHASE 1
DESIGN SURAK	
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE PS1	SHEET 32 OF 54 SHEETS

WASTEWATER PUMP STATION DESIGN PARAMETERS

AVALON PARK WEST, PARCEL E PHASE 1 WASTEWATER PUMP STATION E-1

LOCATION: TURTLE BAY DRIVE (S/T/R: 14/26S/20E)
NEAREST CROSS STREET

I. DESIGN CAPACITY

A. AVERAGE DAILY FLOW (SEE BEXLEY SOUTH MPUD WASTEWATER UTILITIES SERVICE PLAN)

476 SINGLE-FAMILY UNITS (200 GPD/UNIT) = 95,200 GPD

0 PEOPLE, CLUBHOUSE (10 GPD/PERSON) = 0 GPD

B. PEAK INFLUENT RATE (PEAK FACTOR = 3.8 (PER STANDARDS FOR DESIGN AND CONSTRUCTION SECTION C.3)

$\frac{\text{ADF x PEAK FACTOR}}{1440} = \frac{95{,}200 \text{ GPD x } 3.8}{1440} = 251$ GPM

C. DESIGN MINIMUM FLOW

$\frac{\text{ADF x } 0.20}{1440} = \frac{95{,}200 \text{ GPD x } 0.20}{1440} = 13.0$ GPM

D. DESIGN PUMP CAPACITY (MINIMUM REQUIRED) = 251 GPM

E. VELOCITY IN FORCE MAIN @ MAX. PUMPING RATE = 2.0 ft/s

II. WETWELL DESIGN (DUPLEX SYSTEM)

A. DESIGN CRITERIA

1. MAXIMUM PUMP MOTOR CYCLE RATE = 6 STARTS PER HOUR
2. MAXIMUM DETENTION TIME AT MINIMUM FLOW = 30 MINUTES

B. PUMP CONTROL LEVEL SETTINGS

1. PUMP CYCLING RATES ARE AT A MAXIMUM WHEN INFLOW EQUALS ONE-HALF THE DESIGN PUMPING RATE OF 251 GPM.
2. WETWELL VOLUME REQUIRED BETWEEN LEAD PUMP START AND PUMP SHUT OF LEVEL =

$V = \frac{\text{CYCLE PERIOD x (1/2) PUMP RATE}}{4}$

$V = \frac{10 \text{ MIN. x } (1/2)\ (251) \text{ GPM}}{4} = 314$ GALLONS

3. WETWELL DIAMETER = 6 FEET

$\frac{\pi\ (D)^2 \text{ x } 7.48 \text{ GAL./C.F.}}{4} = \frac{7.48\ (\pi)(D)^2}{4} = \frac{7.48\ (\pi)(8)^2}{4} = 376$ GALS./FT.DEPTH

4. WETWELL LEVEL CHANGE BETWEEN PUMP STOP AND LEAD PUMP START =

$\frac{314.0}{\text{(II.B.2-GAL.)}} / \frac{211.5}{\text{(II.B.3-GAL./FT.DEPTH)}} = 1.5'$ DESIGN FOR 18 INCHES

5. CONTROL ELEVATIONS

TOP OF SLAB	EL. 92.00
INFLUENT INVERT	EL. 68.00
HIGH WATER ALARM	EL. 67.50
LAG PUMP ON	EL. 67.00
LEAD PUMP ON	EL. 66.50
ALL PUMPS OFF	EL. 65.00
BOTTOM	EL. 61.67

III. SYSTEM CURVE CALCULATIONS

A. FRICTION LOSSES

1. PUMPING STATION PIPING:

	ITEM	SIZE (INCHES)	QUANITY	FRICTION LOSS (ea.)	TOTAL
A	CROSS	4	1	21	21
B	90° ELBOW	4	5	11	55
C	CHECK VALVE	4	1	25	25
D	GATE VALVE	4	1	2.5	2.5
				TOTAL =	104
				4" (DIA.) DI PIPE LENGTH =	35
				TOTAL EQUIVALENT LENGTH =	139

2. FORCE MAIN PIPING:

	ITEM	SIZE (INCHES)	QUANITY	FRICTION LOSS (ea.)	TOTAL
A	TEE	8"x 6"	1	45	45
B	90° ELBOW	6	3	11	33
C	GATE VALVE	6	1	5	5
D	PLUG VALVE	6	0	2.5	0
E	SIDE OUTLET CROSS	6	0	0	0
F	WYE	6	0	0	0
G	45° ELBOW	6	0	5	10
H	22 1/2° ELBOW	6	0	2.5	0
I	11 1/4° ELBOW	6	5	2.5	12.5
J	REDUCER	12"x 8"	0	8	0
				6" FITTING TOTAL =	106
				6" (DIA.) PVC PIPE LENGTH =	1793
				TOTAL EQUIVALENT 6" LENGTH =	1889
				8" FITTING TOTAL =	0
				8" (DIA.) PVC PIPE LENGTH =	0
				TOTAL EQUIVALENT 8" LENGTH =	0

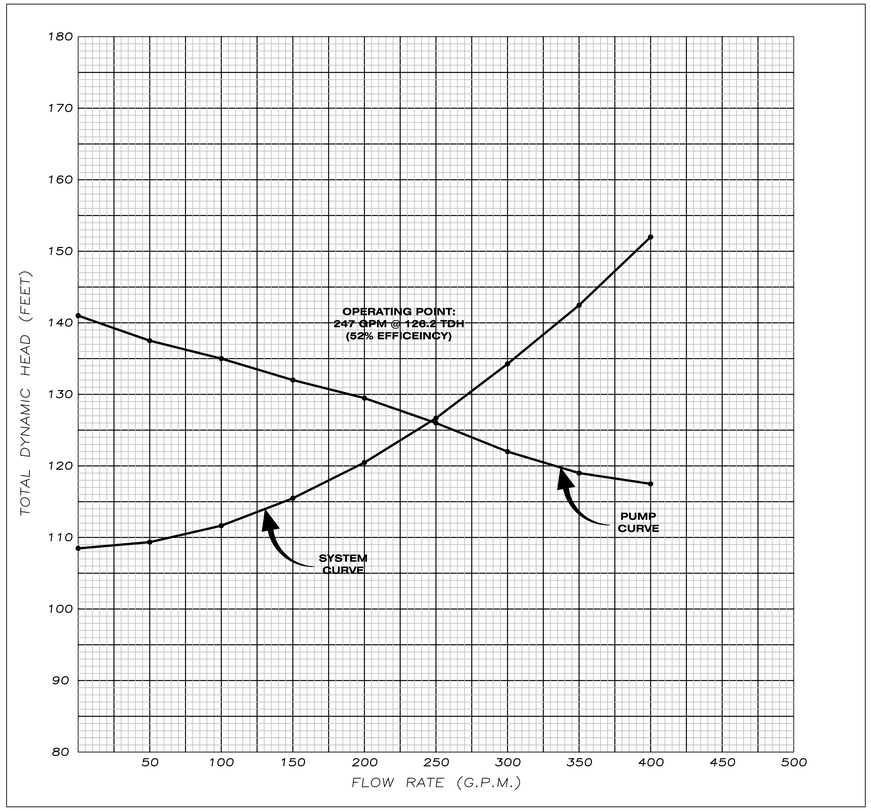
B. STATIC HEAD

1. PIPE CENTERLINE AT DISCHARGE POINT = ELEV. 91.0±
2. LOW WATER LEVEL (ALL PUMPS OFF) = ELEV. 65.8±
3. TOTAL STATIC HEAD = 25.2 FT.

C. PRESSURE AT POINT OF CONNECTION:

1. 5 psi (per PASCO COUNTY) = ELEV. 83.2±

SYSTEM CURVE vs. PUMP CHARACTERISTIC CURVE



SYSTEMS HEAD COMPUTATIONS – TOTAL FRICTION LOSSES IN FEET

FLOW RATE (G.P.M.)

FLOW RATE (GPM)	0	50	100	150	200	250	300	350	400	450	500
ITEM: PUMP STATION PIPING (EQUIVALENT LENGTH) 139 L.F. OF 6" DIP	0.0	0.3	1.2	2.6	4.4	6.6	9.3	12.3	15.8	19.6	23.9
FORCE MAIN PIPING (EQUIVALENT LENGTH) 2,530 L.F. OF 6" PVC	0.0	0.6	2.1	4.5	7.7	11.7	16.4	21.7	27.8	34.6	42.1
FORCE MAIN PIPING (EQUIVALENT LENGTH) 0 L.F. OF 8" PVC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STATIC HEAD = 19.5'	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
DESIGN PRESSURE AT POINT OF CONNECTION (BEST/WORST SYSTEM CURVES)	13.9 / 83.2	13.9 / 83.2	13.9 / 83.2	13.9 / 83.2	13.9 / 83.2	13.9 / 83.2	13.9 / 83.2	13.9 / 83.2	13.9 / 83.2	13.9 / 83.2	13.9 / 83.2
TOTAL LOSSES (BEST/WORST CASE)	39.1 / 108.4	40.0 / 109.3	42.4 / 111.7	46.2 / 115.5	51.2 / 120.5	57.4 / 126.7	64.8 / 134.1	73.1 / 142.4	82.7 / 152.0	93.3 / 162.6	105.1 / 174.4

PUMP DATA

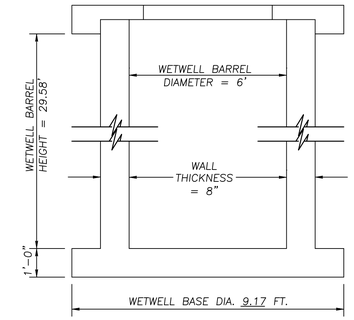
HYDROMATIC MODEL S4K

RPM: 1750, IMPELLER DIAMETER 11.0 in

20 HP, 460 V, 3 PHASE

OPERATING POINTS ARE: 250 GPM @ 126' TDH

FLOTATION CALCULATIONS – CONCRETE WETWELL



ASSUMPTIONS

CONCRETE = 150 LBS./FT.^{3}
SATURATED SOIL = 120 LBS./FT.^{3}
WATER = 62.4 LBS./FT.^{3}
NO WATER IN WET WELL
NEGLECT TOP SLAB WEIGHT
NEGLECT SOIL FRICTION
ROUND BARREL
CIRCULAR BASE
WATER TABLE AT GRADE

BARREL WEIGHT = $[(7.33)^2 - (6)^2]\ (\pi/4)\ (17.42)\ (150) =$ 53,703 LB. ↓

BOTTOM SLAB WEIGHT = $(8.33)^2\ (\pi/4)\ (1)\ (150) =$ 9,907 LB. ↓

SOIL WEIGHT = $[(8.33)^2 - (7.33)^2]\ (\pi/4)\ (17.42)\ (120 - 62.4) =$ 43,736 LB. ↓

TOTAL WEIGHT = 107,346 LB. ↓

WEIGHT OF WATER DISPLACED:

$[(7.33)^2\ (\pi/4)\ (17.42) + (8.33)^2\ (\pi/4)\ (1)]\ (62.4) =$ 78,656 LB. ↑

$\frac{107{,}346 \text{ LB.}\downarrow}{78{,}656 \text{ LB.}\uparrow} = 1.36$ SAFETY FACTOR

DATE	DESCRIPTION	BY
	REVISIONS	

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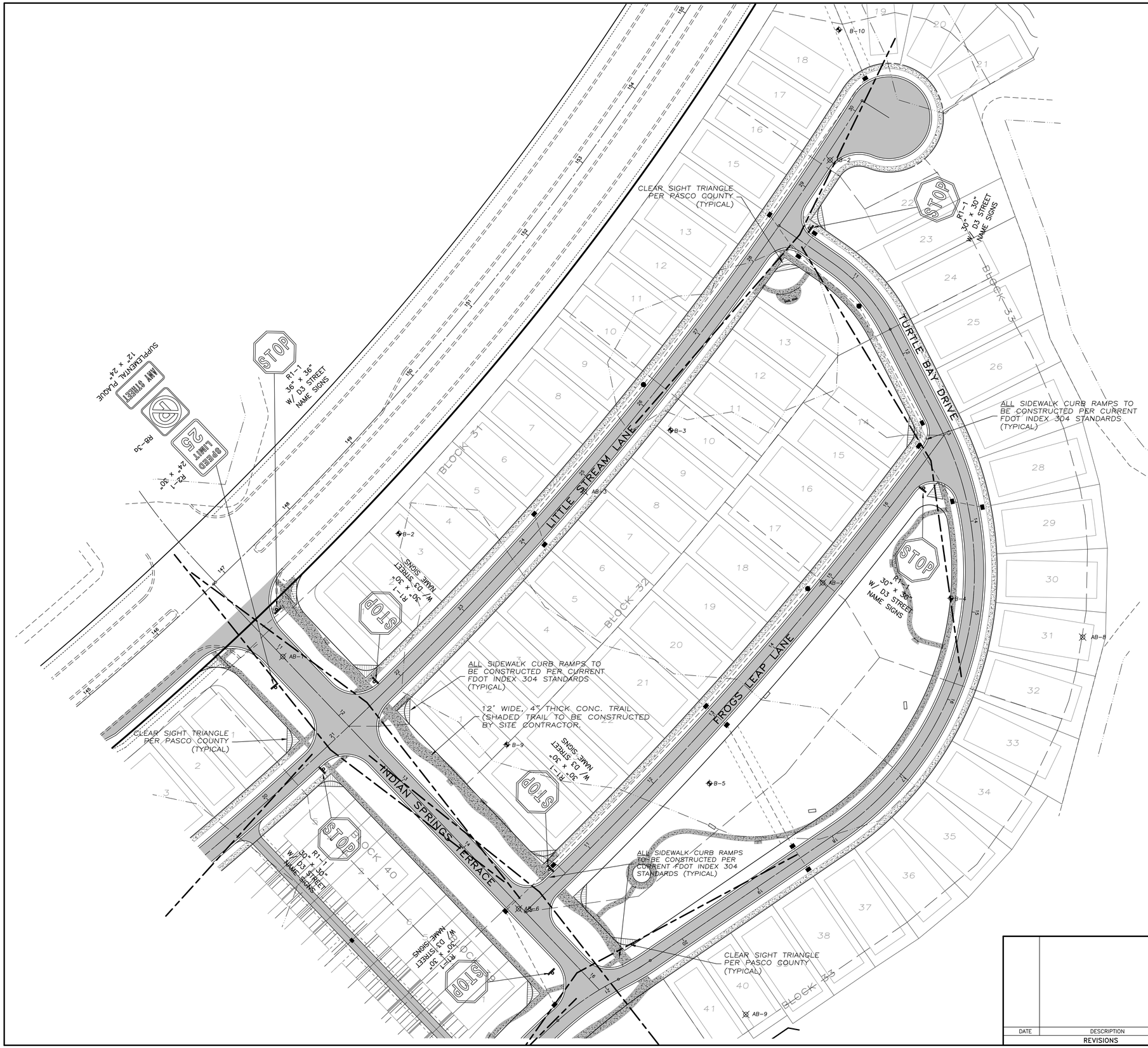
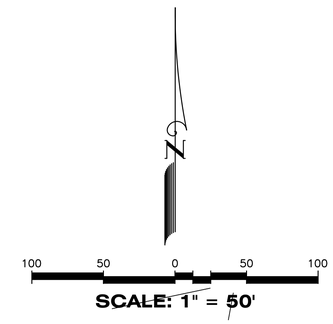
Office: 813-223-3919 Fax: 813-223-3975

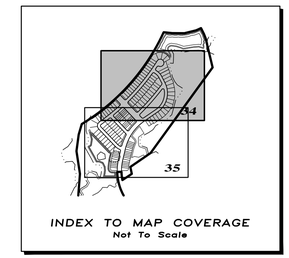
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

PUMP STATION DETAILS

JOB NO. STX-NR-002	AVALON PARK WEST PARCEL E PHASE 1
DESIGN SURAK	
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE PS2	SHEET 33 OF 54 SHEETS







SIGHT TRIANGLE LEGEND

LIMITS OF CLEAR SIGHT PER FDOT INDEX 546 & MANUAL OF UNIFORM MINIMUM STANDARDS (FLORIDA GREENBOOK)

CLEAR SIGHT TRIANGLE PER PASCO COUNTY

STANDARD NOTES (PRIVATE ROADWAYS):

1. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN CONFORMANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
2. STREET NAME SIGNS SHALL BE 6" ON LOCAL ROADS AND 9" ON COLLECTOR AND ARTERIAL ROADS. SIX-INCH SIGNS SHALL HAVE 4" SERIES C LETTERS AND 9" SIGNS SIGNS SHALL HAVE 6" SERIES B LETTERS. ALL STREET NAME SIGNS ON PRIVATE STREETS (NON-COUNTY MAINTAINED) SHALL BE STANDARD D3 STREET NAMES WITH THE COLORS REVERSED, WHITE BACKGROUND WITH GREEN LETTERS AND BORDER. AT INTERSECTIONS WITH COUNTY MAINTAINED ROADS, THE COUNTY MAINTAINED ROAD SHALL BE GREEN BACKGROUND WITH WHITE LETTERS.
3. CONTRACTOR MUST CONTACT ENGINEER OF RECORD PRIOR TO ORDERING STREET NAME SIGNS. APPROVED STREET NAMES CAN NOT BE DETERMINED UNTIL RECORDING OF THE PLAT.
4. EXISTING STRIPING AND OTHER PAVEMENT MARKINGS TO BE REMOVED SHALL BE DONE AS NECESSARY BY HYDROBLASTING. GRINDING IS NOT PERMITTED.
5. THE SIDEWALK THAT IS TO BE INSTALLED BY THE INDIVIDUAL SHALL BE CONSTRUCTED PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY TO ITS CORRESPONDING DWELLING UNIT. ALONG NON LOT AREAS, SIDEWALKS SHALL BE CONSTRUCTED WITH INFRASTRUCTURE IMPROVEMENTS TO PROVIDE AN UNINTERRUPTED SIDEWALK THROUGHOUT THE SUBDIVISION. MAINTENANCE OF SIDEWALK SHALL BE THE RESPONSIBILITY OF HOMEOWNERS ASSOCIATION OR AN ENTITY OTHER THAN PASCO COUNTY.
6. SIDEWALK CLEAR ZONE SHALL BE FREE OF OBSTACLES, THIS INCLUDES SHRUBS, TREES, FENCES, ABOVE GROUND UTILITIES I.E. POWER POLES, STREET LIGHTS, GUY ANCHORS, FIRE HYDRANTS, MAIL BOXES, STREET SIGNS AND UTILITY MARKERS ETC.
7. SIDEWALKS WILL BE PROVIDED ON BOTH SIDES OF ALL ROADS INCLUDING NON-LOT AREAS. UNLESS OTHERWISE SHOWN, ALL SIDEWALKS SHALL BE FIVE (5) FEET WIDE, 4" THICK CONCRETE, AND 3000 P.S.I., FIBER-REINFORCED, SIDEWALKS SHALL BE CONSTRUCTED ON A NON-YIELDING SUBGRADE, AND 6" IN THICKNESS IS REQUIRED WHERE SIDEWALK IS
8. CROSSED BY A DRIVEWAY.
9. DETECTABLE WARNING SURFACES SHALL BE ALIGNED IN THE DIRECTION OF TRAVEL.
10. CURB RAMPS ARE REQUIRED AT ALL INTERSECTIONS AND SHALL BE CONSTRUCTED BY THE SITE DEVELOPER WITH INFRASTRUCTURE IMPROVEMENTS PER FDOT INDEX 304.
11. ANY TRAFFIC CONTROL DEVICE FOR A PRIVATE ROADWAY PLACED IN A COUNTY OR STATE RIGHT-OF-WAY SHALL BE INSTALLED ON THE APPROPRIATE BREAKAWAY POST ASSEMBLY.

DATE	DESCRIPTION	BY
	REVISIONS	

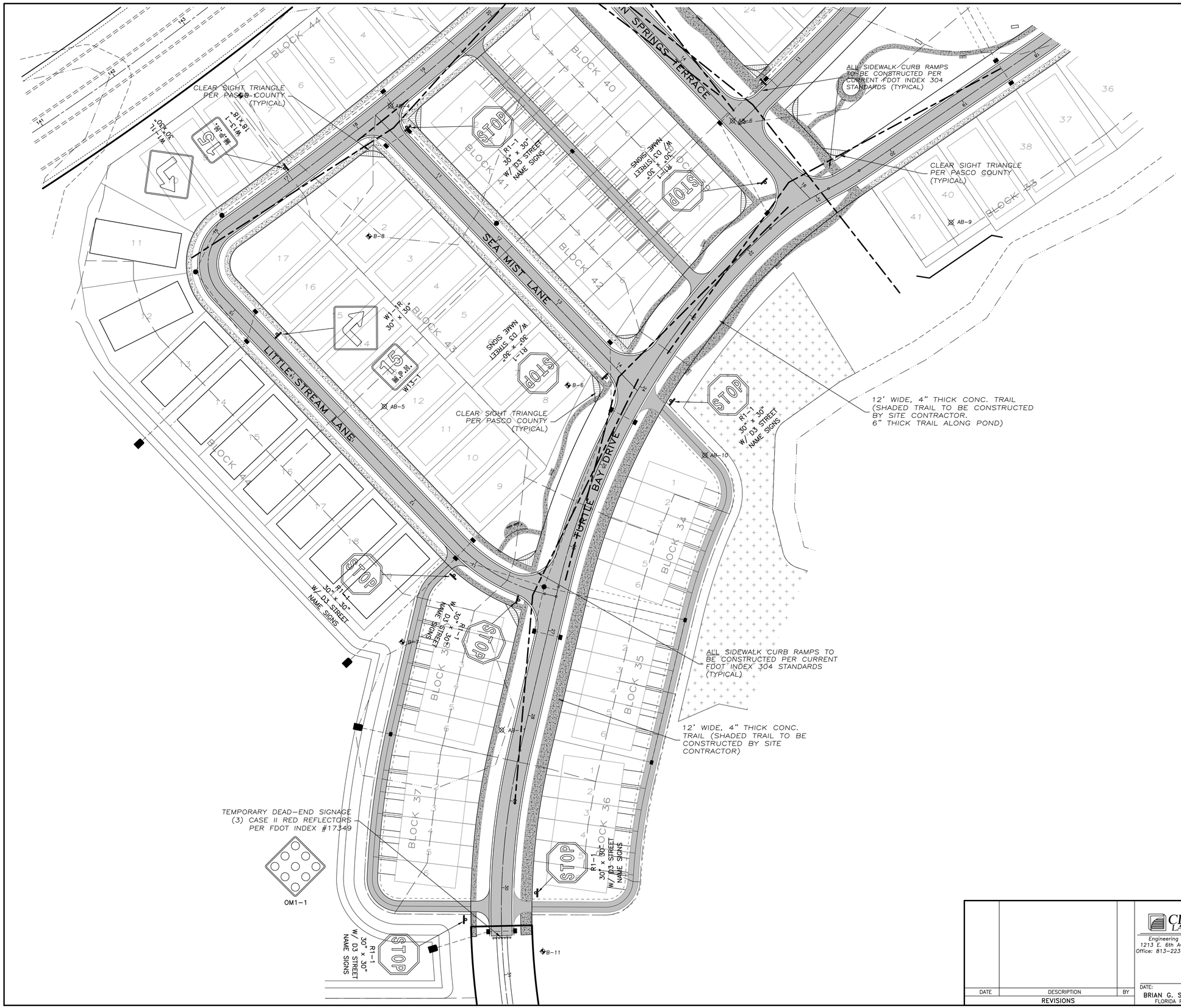
CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

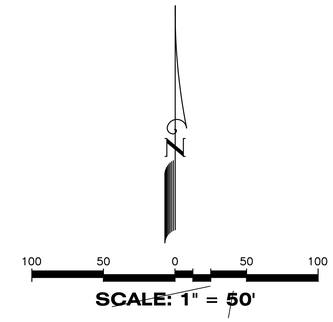
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

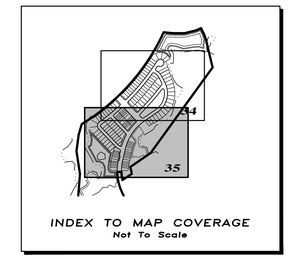
SIDEWALK, SIGNING & PAVEMENT MARKING PLAN

AVALON PARK WEST
PARCEL E PHASE 1

JOB NO.	STX-NR-002
DESIGN	SURAK
DRAWN	MIDDLETON
PREPARED FOR:	SitEx NR Development, LLC
DATE	06/06/2015
	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE	SPM01







SIGHT TRIANGLE LEGEND

LIMITS OF CLEAR SIGHT PER FDOT INDEX 546 & MANUAL OF UNIFORM MINIMUM STANDARDS (FLORIDA GREENBOOK)

CLEAR SIGHT TRIANGLE PER PASCO COUNTY

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DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

SIDEWALK, SIGNING & PAVEMENT MARKING PLAN

JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet
FILE SPM02	SHEET 35 OF 54 SHEETS

STORM WATER POLLUTION PREVENTION PLAN

Contained on these plans and within the following notes is a Storm Water Pollution Prevention Plan (SWPPP) which has been developed by Clearview Land Design in accordance with the Florida Department of Environmental Protection's (FDEP) "National Pollutant Discharge Elimination System" (NPDES) Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

The following entities are identified as team members of "SWPPP": Clearview Land Design, the Developer as identified in the title box of these plans, and the site contractor and his sub-contractors. Each team member has specific responsibilities and obligations. In general, all team members, with regard to their involvement and responsibilities on the project, are to implement all necessary storm water management controls to assure compliance with the NPDES Generic Permit for Storm Water Discharges from Construction Activities, the Southwest Florida Water Management District Permit, the applicable local governing agency (i.e. Hillsborough County, Pasco County, etc.) and the guidelines listed in the SWPPP. The duties and responsibilities of the team members as they pertain to the SWPPP are as follows:

Clearview Land Design, P.L.

A. Develop SWPPP including, but not limited to, retention/detention ponds, control structures, erosion control methods and locations and stabilization criteria. This design is included within these construction plans and the following notes and instructions.

B. Submit and obtain the necessary design related storm water permits from the Florida Department of Environmental Protection, the Southwest Florida Water Management District and other applicable governmental bodies.

C. Upon notification by the developer of his intent to commence construction, submit a Notice of Intent to the FDEP on behalf of the developer and copy the contractor including SWPPP certification and copy of the permit.

D. Submit to SWFWMD and the operator of the municipal separate storm water system, if applicable, a letter of construction commencement.

E. Complete and submit a Notice of Termination and certification for developer. The NOT's shall be submitted no more than 30 days after
(a) completion of the project and final stabilization of the site or
(b) when responsibility for the site has ended. Final stabilization as defined by EPA is when all soil disturbing activities at the site have been completed and a uniform (e.g. evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures. As an alternative, equivalent permanent stabilization measures (such as riprap, gabions, or geotextiles) may be employed. The client shall notify Clearview Land Design when one of these criteria has been met.

Contractor

A. Sign and return to Clearview a Contractors Certification Form certifying your understanding of and willingness to comply with the Storm Water Pollution Prevention Plan no later than 48 hours prior to commencement of construction. Also, each subcontractor affected by the SWPPP must certify to the contractor that they understand and shall comply with the NPDES permit and SWPPP. A record of these certifications shall be maintained by the contractor on site.

B. During construction, assure compliance with the designed Storm Water Pollution Prevention Plans prepared by Clearview Land Design and the NPDES Generic Permit for Storm Water Discharges from Large and Small Construction Activities.

C. Maintain a copy of the construction plans, which include the Storm Water Pollution Prevention Plan, the NOI, and all inspection reports and certifications on site.

D. Undertake all reasonable Best Management Practices (BMP's) to assure that silted or otherwise polluted storm water is not allowed to discharge from the site during all phases of construction. Stabilization BMP's that may be used include: temporary or permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees and preservation of mature vegetation. Structural erosion and sediment control BMP's that may be used include: straw bale dikes, silt fences, earth dikes, brush barriers, drainage swales, check dams, subsurface drain, pipe slope drain, level spreaders, storm drain inlet protection, sediment traps, sediment traps, and temporary sediment basins. Detention ponds may also be used as temporary sediment basins. Additional BMP's that may need to be implemented include: providing protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials. Providing waste receptacles at convenient locations and providing regular collection of wastes, including building material wastes. Minimizing off-site tracking of sediments. Making adequate preparations, including training and equipment to contain spills of oil and hazardous materials. Complying with applicable state or local waste disposal, sanitary sewer or septic system regulations and the use of appropriate pollution prevention measures for allowable non-storm water components of discharge.

E. Notify Clearview Land Design and the developer in writing of any non-storm water pollution sources which are being stored, or otherwise used during the construction of the project, i.e., fertilizers, fuels, pesticides, other chemicals. This notification should be accompanied with the contractor's design and methods to prevent pollution run-off from these sources.

F. Develop a maintenance and inspection plan which includes, but is not limited to the following:

A. The specific areas to be inspected and maintained that includes all the disturbed areas and material storage areas of the site.

B. The erosion and sediment controls identified in the SWPPP to be maintained and inspected and those additional controls that the contractor deems necessary.

C. Maintenance procedures.

D. The procedure to follow if additional work is required or whom to call.

E. Inspections and maintenance forms.

F. The personnel assigned to each task.

The following shall be inspected a minimum of once a week or within 24 hours after 0.50 inches of rainfall:

- *Stabilization measures (once a month if fully stabilized).*
- *Structural controls.*
- *Discharge points.*
- *Construction entrances and exits.*
- *Areas used for storage of exposed materials.*

An inspection form shall be completed for each inspection. Any permit violations should be noted and corrective measures shall be taken no later than 7 days after the inspection occurred. If revisions to the SWPPP are needed, a report form for changes in the SWPPP shall be completed and a copy sent to Clearview Land Design, P.L. The original shall be kept on-site as documentation of the change. If the inspection passes, a certification that the facility is in compliance with the SWPPP and the NPDES permit must be signed by a duly authorized representative of the principal executive official of the operator of the SWPPP with one of the following qualifications:

1. *Has successfully completed the Florida Stormwater, Erosion and Sediment Control Inspector Training Program.*
2. *Successfully completed a similar training program.*
3. *Has enough practical on the job training to be qualified to perform the inspections.*

Retain inspection reports and certifications for at least three years.

G. Site stabilization measures shall be initiated as soon as practical but in no case more than 7 days, in portions of the site where construction activities have temporarily or permanently ceased.

H. Releases in Excess of Reportable Quantities.

1. *The discharge of hazardous substances or oil in the stormwater discharge(s) from a facility or activity shall be prevented or minimized in accordance with the applicable stormwater pollution prevention plan for the facility or activity. This permit does not relieve the operator of the reporting requirements of 40 CFR part 117 and 40 CFR part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either 40 CFR 117 or 40 CFR 302, occurs during a 24 hour period:*
   - a. *The operator is required to notify the State Warning Point (800-210-0519 or 850-413-9911) as soon as he or she has knowledge of the discharge;*
   - b. *The operator shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and remedial steps to be taken, to the Florida Department of Environmental Protection, NPDES Stormwater Section, Mail Station 2500, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and*
   - c. *The stormwater pollution prevention plan required under Part V of this permit must be modified within 14 calendar days of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.*
2. *This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.*

Developer

A. Notify Clearview of your intent to commence construction. Sign the Notice of Intent form as operator of the storm water discharge facility and permittee and return to Clearview Land Design, P.L.

B. Sign a Certification of Storm Water Pollution Prevention Plan and return to Clearview Land Design, P.L.

C. Notify Clearview when it is time to submit a Notice of Termination as defined under Part E of the Clearview Land Design section of the SWPPP. Sign and return to Clearview Land Design, P.L. for submittal to FDEP a Notice of Termination form and certification.

PRE-DEVELOPED SITE INFORMATION:

1. *Total site acreage:* 98.56 Ac.±
2. *Land use:* VACANT
3. *Vegetation:* PINE, OAK, GRASSED
4. *Receiving waters or municipal separate storm water system:* HILLSBOROUGH RIVER / BASSET BRANCH / NEW RIVER
5. *2 Year/24 Hour rainfall depth:* 4.3"
6. *Soil types:* NEWMAN FINE SAND

PROJECT INFORMATION:

1. *Project type:* Residential
2. *Anticipated construction sequence is as follows:*
   1. Complete erosion control installation
   2. Clearing and grubbing
   3. Earthwork activities
   4. Storm water system construction
   5. Utility construction
   6. Base and pavement construction
   7. Final stabilization

   The BMP's listed in Part D of the Contractor section of the SWPPP shall be considered during all phases of construction.
3. *Anticipated start date:* 11/15/2015
4. *Anticipated completion date:* 11/15/2017
5. *Total acres disturbed:* 67.9 Ac. ± (SILT FENCE LIMITS)
6. *Pre-developed "C" factor:* 0.20
7. *Post-developed "C" factor:* 0.55
8. *The storm water management system, upon completion of construction and appropriate certification and as-built submittals will be operated and maintained by* CDD (UNLESS OTHERWISE NOTED) .
9. *The potential source of pollution from this project is on-site development and construction activity.*

OWNER'S INSTRUCTIONS FOR MAINTENANCE AND INSPECTION OF STORMWATER FACILITIES

The entire stormwater system should be inspected on at least a semi-annual basis. This should include a visual inspection of the pond, pond banks, bleed-down orifices, other control structures, and discharge pipes. These should be kept free of debris and cleaned on a frequency as required to keep them functional, as designed. Mowing/clearing around the structures may be required to prevent vegetation from clogging them.

Wetland plants, if intentionally installed, should be monitored and maintained as required on the approved construction plans. Areas of littoral shelving, which are required to be vegetated but not intentionally planted, should not be cleared of the wetland plants. These areas should have as high a plant coverage as possible, for maximum water filtration.

Sediment sumps, if designed and installed, should have sediment removed as necessary to allow them to efficiently remove suspended particles. They should be re-dug to the original design specifications, if silted in.

For percolation treatment ponds/swales, the owner of the facility shall inspect the pond bottom periodically after heavy rainfall events to check for persistent ponding or pooling of water. All large debris shall be removed and disposed of elsewhere. If prolonged ponding persists, i.e., in excess of 72 hours, the owner shall rake or scarify the surface. If required, the soil in the area of ponding shall be removed and replaced with clean sandy, non-cohesive soils.

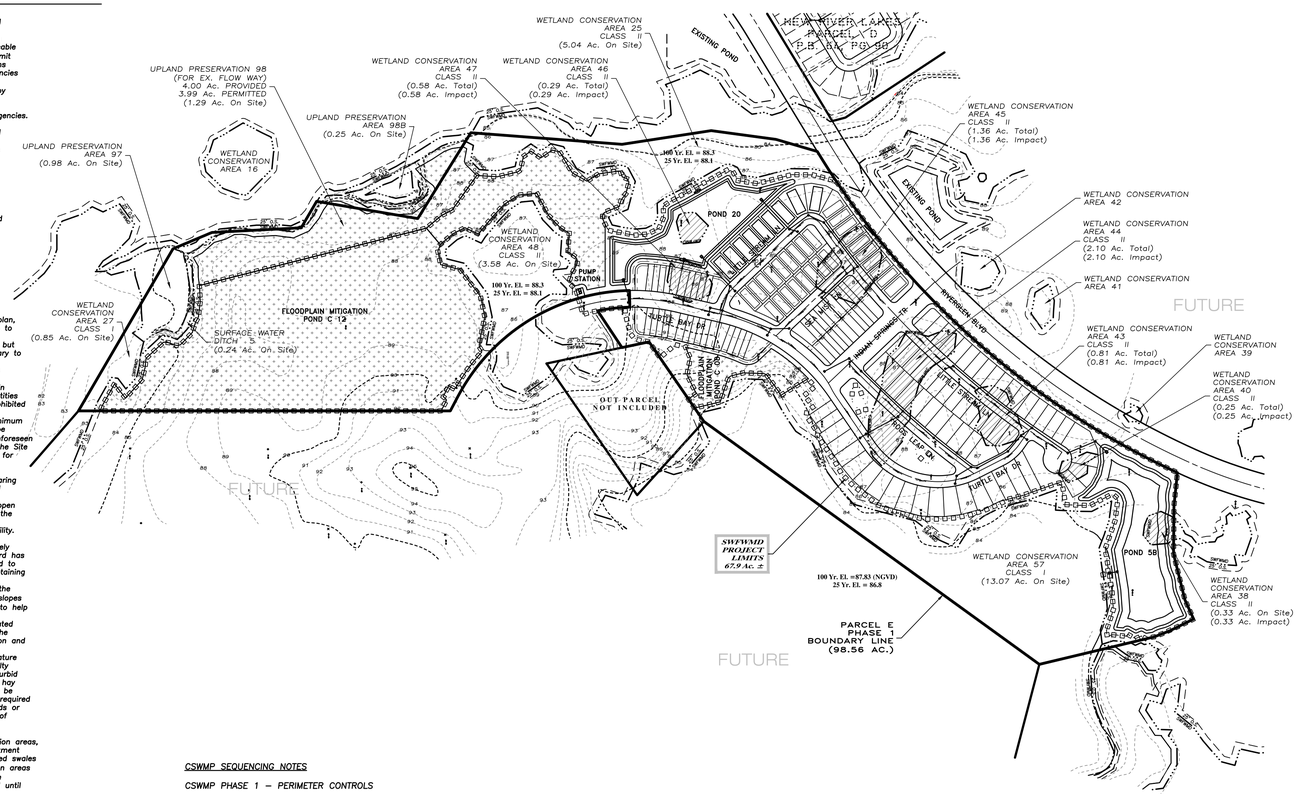
Please check the construction plans to see if written reports on monitoring or plant survival rates are required to be sent to any reviewing agencies. Written notes should always be kept which describe maintenance activities undertaken during each inspection.

Specific conditions of all permits may require additional maintenance activities above and beyond those outlined above. Please be aware of all permit conditions as issued by regulatory agencies to ensure permit compliance.

NOTE: CONTRACTOR SHALL INSPECT EROSION CONTROL DAILY (INCLUDING BUT NOT LIMITED TO TYPICAL OUTFALLS TO OFWs). CORRECTIVE ACTION SHALL BE TAKEN IMMEDIATELY TO REPAIR OR REPLACE AS NEEDED.

GENERAL EROSION AND TURBIDITY CONTROL NOTES

1. *The Site Subcontractor shall be responsible for installation and maintenance of all erosion and turbidity controls and the quality and quantity of offsite or wetland discharges.*
2. *Prior to construction, the Site Subcontractor is responsible for having his dewatering plan and turbidity control plan approved by the applicable reviewing agencies. Refer to the project's permit approvals and permit conditions for agencies requiring such review and approval. Questions concerning appropriate techniques should be addressed to those agencies and/or discussed with the project engineer and owner.*
3. *The appropriate turbidity and erosion control methodologies selected by the Site Subcontractor for this project should be made following assessment of the plans and project site specific factors and after consultations as needed with the project engineer and appropriate agencies. The Site Subcontractor will be responsible for obtaining any and all necessary permits for such activity; several factors to consider are listed below:*
   - *A. Clay content in excavated materials and/or permeabilities rates*
   - *B. Depth of cut in ponds, trenches, or utility lines*
   - *C. Ambient ground water levels*
   - *D. Actual rainfall amounts and time of year relative to normal rainy season*
   - *E. Proximity to wetlands, water bodies or offsite properties*
   - *F. 'Class' designation of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvesting areas, etc.)*
   - *G. Density, type, and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)*
   - *H. Fill height relative to natural grade and length and steepness of the proposed slopes*
   - *I. Existing topography and directions of surface flow*
   - *J. Type of equipment used*
   - *K. Project type*
   - *L. Duration of construction activities*
   - *M. Separation distance of onsite ponds*
   - *N. Ambient quality of surface and groundwater*
   - *O. Temporary stockpile locations and heights*
4. *At the onset of construction, the Site Subcontractor, as the party responsible for implementation of the erosion and sediment control plan, shall assess the above described conditions and factors with respect to relative cost effectiveness and select the appropriate methods of protection. A fairly extensive list of techniques are presented below but it must be stressed that any or all of the following may be necessary to maintain water quality and quantity standards. The construction sequencing should be thought out in advance of initiation to provide adequate protection of water quality.*
5. *Discharges which exceed 29 N.T.U.'s over the background levels are in violation of state water quality standards. Discharges of water quantities which affect offsite properties or may damage wetlands are also prohibited by regulating agencies.*
6. *The erosion and turbidity control measures shown hereon are the minimum required for agency approval. Additional control and measures may be required due to the Site Subcontractor's construction sequence & unforeseen weather conditions. Any additional measures deemed necessary by the Site Subcontractor shall be included in the lump sum bid with no extras for materials and labor allowed.*
7. *Hay bales or silt screens shall be installed prior to land clearing to protect water quality and to identify areas to be protected from clearing activities and maintained for the duration of the project until all soil is stabilized.*
8. *Floating turbidity barriers shall be in place in flowing systems or in open water lake edges prior to initiation of earthwork and maintained for the duration of the project until all soil is stabilized.*
9. *No clay material shall be left exposed in any stormwater storage facility. If clay or sandy-clays are encountered during stormwater storage excavation, the Site Subcontractor shall notify the Engineer immediately before proceeding with further excavation. If the Engineer of Record has determined that such soils are non-confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written authorization from the appropriate governing agency.*
   If said soils are left exposed at the permitted and designed depth, the Site Subcontractor shall over-excavate the pond's bottom and side slopes by a minimum of twelve (12") inches and backfill with clean sands to help prevent suspension of fine particles in the water column.
10. *The installation of temporary erosion control barriers shall be coordinated with the construction of the permanent erosion control features to the extent necessary to assure effective and continuous control of erosion and water pollution throughout the life of the construction phase.*
11. *The type of erosion control barriers used shall be governed by the nature of the construction operation and soil type that will be exposed. Silty and clayey material may require solid sediment barriers to prevent turbid water discharge, while sandy material may need only silt screens or hay bales to prevent erosion. Floating turbidity curtains should generally be used in open water situations. Diversion ditches or swales may be required to prevent turbid stormwater runoff from being discharged to wetlands or other water bodies. It may be necessary to employ a combination of barriers, ditches, and other erosion/turbidity control measures if conditions warrant.*
12. *Where pumps are to be used to remove turbid waters from construction areas, the water shall be treated prior to discharge to the wetlands. Treatment methods include, for example, turbid water being pumped into grassed swales or appropriate upland vegetated areas (other than upland preservation areas and wetland buffers), sediment basins, or confined by an appropriate enclosure such as turbidity barriers or low berms, and kept confined until turbidity levels meet State Water Quality Standards.*
13. *The Permittee shall schedule his operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operation, and the duration of exposed, uncompleted construction to the elements shall be as short as practicable. Clearing and grubbing shall be so scheduled and performed such that grading operations can follow immediately thereafter. Grading operations shall be so scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the project permit.*
14. *Water derived from various dewatering methods should be passed through sufficiently wide areas of existing upland vegetation to filter out excess turbidity. If this is not sufficient, the water shall be retained in previously constructed permanent stormwater ponds or else retained in temporary sedimentation basins until the turbidity is suitable to allow for its discharge. Plugging the outfalls from completed stormwater ponds may be needed to avoid discharge. However, such situations should be monitored closely to preclude berm failure if water levels rise too high.*
15. *Water can be transported around the site by the use of internal swales or by pumps and pipes.*
16. *Sheet flow of newly filled or scraped areas may be controlled or contained by the use of brush barriers, diversion swales, dercaptor ditches or low berms. Flow should be directed toward areas where sediments can sufficiently settle out.*
17. *Exposed soils shall be stabilized as soon as possible, especially slopes leading to wetlands. Stabilization methods include solid sod, seeding and mulching or hydromulching to provide a temporary or permanent grass cover mulch blankets, filter fabrics, etc., can be employed to provide vegetative cover.*
18. *Energy dissipaters (such as rip rap, a gravel bed, hay bales, etc.) shall be installed at the discharge point of pipes or swales if scouring is observed.*
19. *Attempt to install roadway curb and gutters as soon as possible to reduce the surface area for erosion to occur.*
20. *Implement storm drain inlet protection (hay bales or gravel) to limit sedimentation within the stormwater system. Perform inspections and periodic cleaning of sediments which wash out into the streets until all soil is stabilized.*
21. *Water discharge velocities from impounded areas and temporary sedimentation basins shall be restricted to avoid scouring in receiving areas.*
22. *If water clarity does not reduce to state standards rapidly enough in holding ponds, it may be possible to use chemical agents such as alum to flocculate or coagulate the sediment particles.*
23. *Hay bales, silt screens, or gravel beds can be added around the pipe or swale discharge points to help clarify discharges. Spreader swales may help dissipate cloudy water prior to contact with wetlands.*
24. *All fuel storage areas or other hazardous storage areas shall conform to accepted state or federal criteria for such containment areas.*
25. *Vehicle or equipment washdown areas will be sufficiently removed from wetlands or offsite areas.*
26. *Fugitive dust controls (primarily by using water spray trucks) shall be employed as needed to control windborn emissions.*
27. *If the above controls remain ineffective in precluding release of turbid water, especially during pond or utility line dewatering, then the contractor may be compelled to use a vertical dewatering system such as well points or sock drains to withdraw groundwater which may already be clear enough to allow for direct discharge to wetlands.*
28. *Ongoing inspections and periodic maintenance by the Site Subcontractor shall occur daily (at a minimum) to insure the above methods are working suitably. Corrective action must be taken immediately to repair or replace any damaged BMP's to ensure the above methods are working properly.*
29. *Site Subcontractors are required to obtain and thoroughly review The Florida Development Manual: A Guide to Sound Land and Water Management, which was developed by the State of Florida Department of Environmental Protection in 1988. This provides fairly in-depth discussions of recommended techniques and also provides specific design and technical standards. A copy of this document is available for review at Clearview Land Design, P.L.*



CSWMP SEQUENCING NOTES

CSWMP PHASE 1 – PERIMETER CONTROLS

1. *Install silt fence(s) pertinent to the current limits of construction. Clear only those areas necessary to install silt fence(s).*
2. *Prepare temporary parking and storage area.*
3. *Stop all activities and contact the Civil Engineer and Agency Representatives to perform an inspection.*

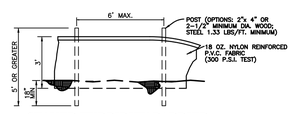
CSWMP PHASE 2 – SITE CONSTRUCTION

4. *Begin clearing and grubbing the site in those areas pertinent to the current limits of construction.*
5. *Begin grading the site in those areas pertinent to the current limits of construction.*
6. *Proceed with site work. Install utilities, underdrains, storm sewers, curb and gutter, etc. pertinent to the limits of construction. Exposed soils shall be stabilized as soon as possible.*
7. *All disturbed areas shall be permanently stabilized. Stabilization methods include solid sod, seeding and mulching or hydromulching to provide a temporary or permanent grass cover. Mulch blankets, filter fabrics, etc., can be employed to provide vegetative cover.*

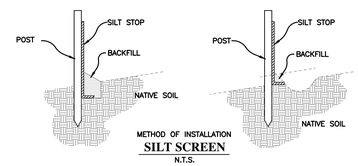
N

600 300 0 300 600

SCALE: 1" = 300'



STAKED TURBIDITY BARRIER
N.T.S.



METHOD OF INSTALLATION
SILT SCREEN
N.T.S.

EROSION CONTROL DETAILS

NOTE: THE EROSION BARRIERS, AS SHOWN, ARE NOT TO BE CONSTRUED TO MEAN THAT THEY ARE ALL THAT MAY BE REQUIRED. THE CONTRACTOR IS TO TAKE WHATEVER MEASURES NECESSARY TO CONTROL EROSION THROUGHOUT THE PROJECT.

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
(10)	(10)	STRUCTURE NO.
+ 15.00	15.00 OR 15x00	SPOT ELEVATION
15	15.00	CONTOUR
		DIRECTION OF SURFACE FLOW
		STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)
		FLOATING TURBIDITY BARRIER

Applicant Name: SitEx NR Development, LLC

Applicant Signature: _____

DATE: _____

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975
DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

CONSTRUCTION SURFACE WATER MANAGEMENT PLAN

JOB NO. STX-NR-002

AVALON PARK WEST

PARCEL E PHASE 1

DESIGN: SURAK

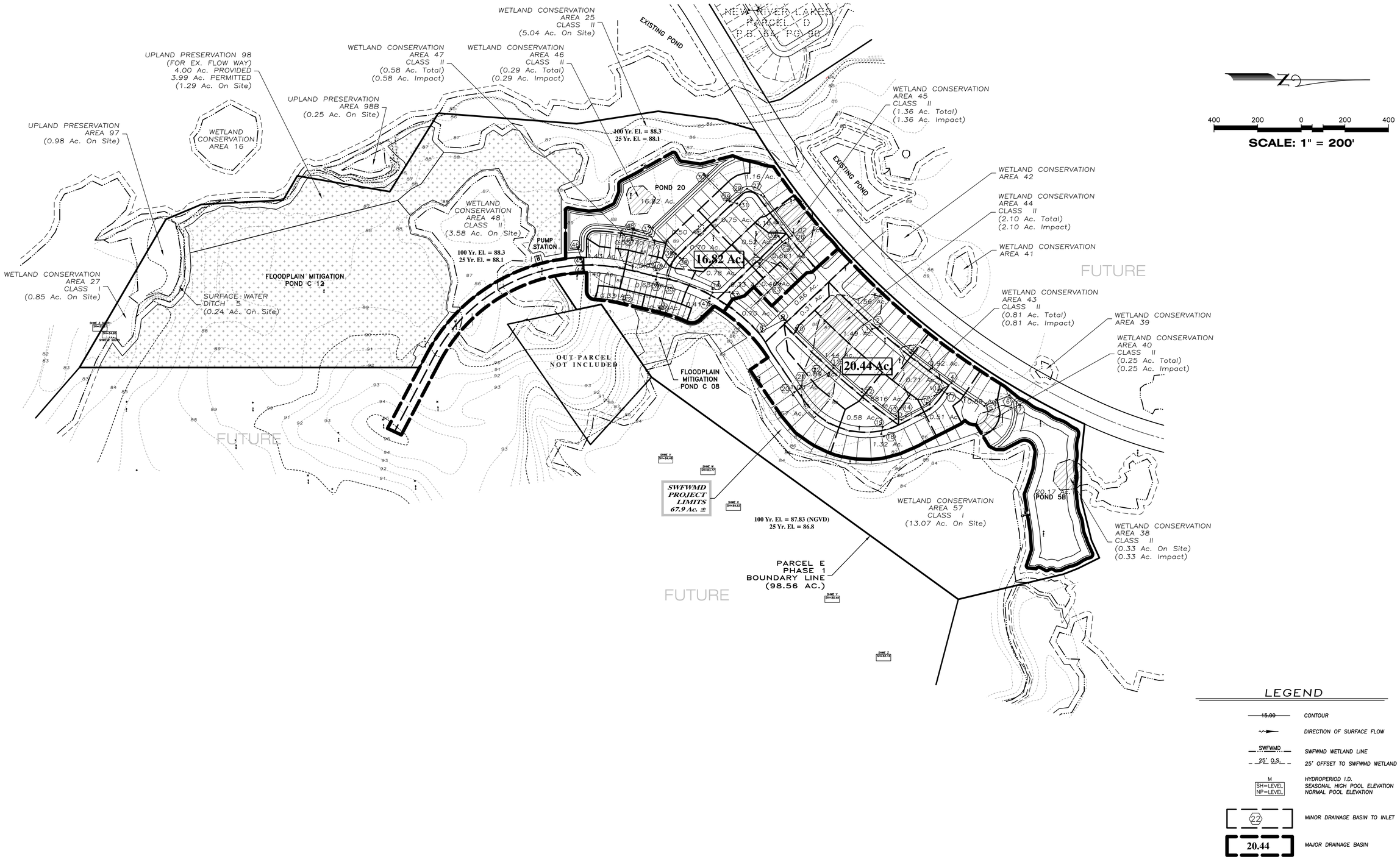
DRAWN: MIDDLETON

PREPARED FOR: **SitEx NR Development, LLC**

DATE: 06/06/2015

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

FILE: CSWMP



LEGEND

15.00	CONTOUR
	DIRECTION OF SURFACE FLOW
SWFWMD	SWFWMD WETLAND LINE
25' O.S.	25' OFFSET TO SWFWMD WETLAND LINE
M SH=LEVEL NP=LEVEL	HYDROPERIOD I.D. SEASONAL HIGH POOL ELEVATION NORMAL POOL ELEVATION
22	MINOR DRAINAGE BASIN TO INLET
20.44	MAJOR DRAINAGE BASIN

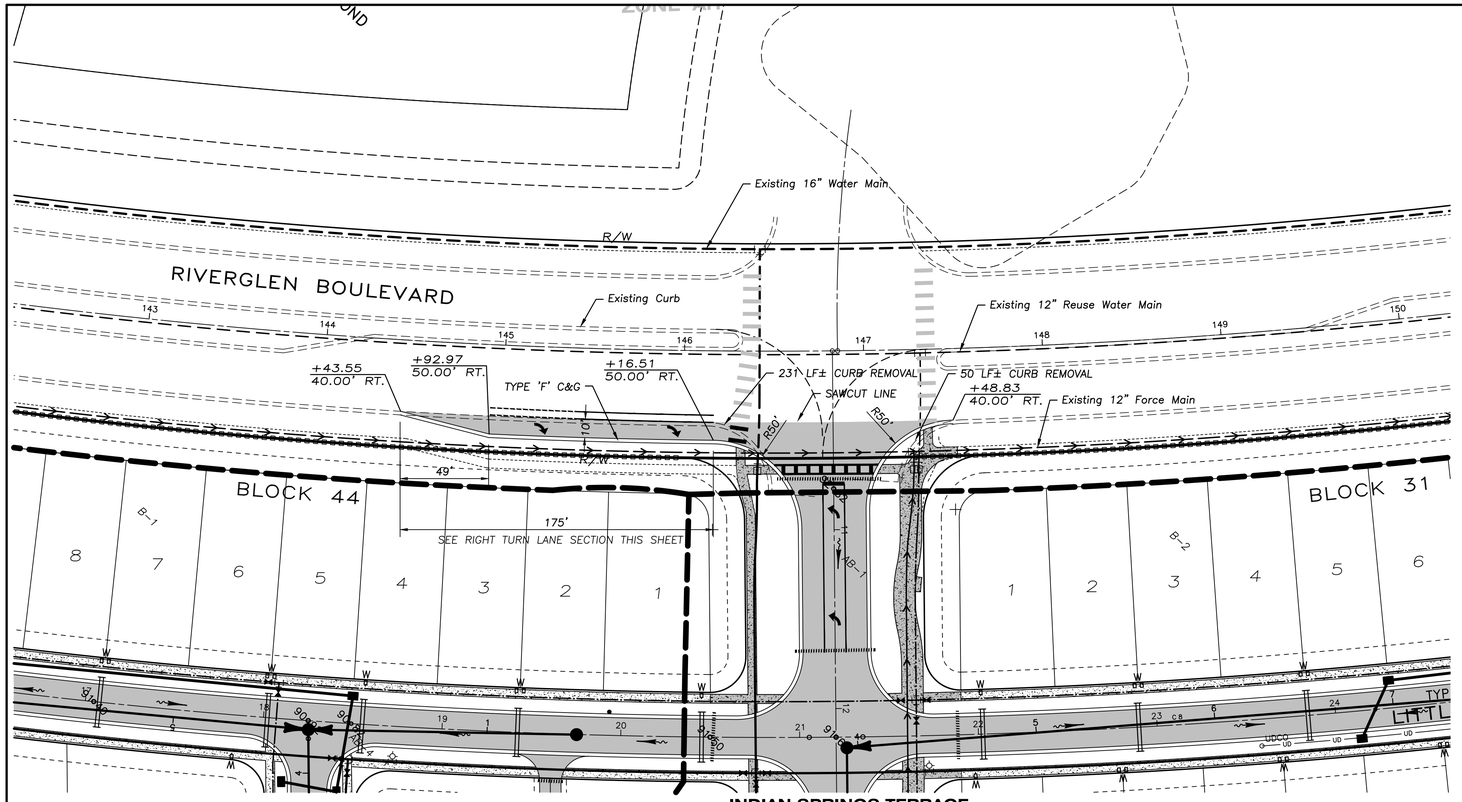
DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

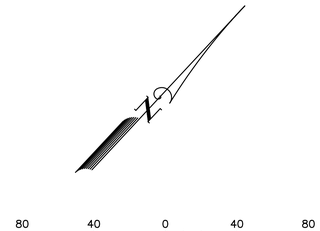
DRAINAGE AREA MAP

JOB NO. STX-NR-002	AVALON PARK WEST
DESIGN SURAK	PARCEL E PHASE 1
DRAWN MIDDLETON	PREPARED FOR: SitEx NR Development, LLC
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = −0.83Feet
FILE DRA	SHEET 37 OF 54 SHEETS



INDIAN SPRINGS TERRACE

SEE SHEET 16



SCALE: 1" = 40'

SPECIFICATIONS FOR DESIGN AND INSTALLATION
OF TRAFFIC CONTROL DEVICES ON COUNTY ROADS

1) Purpose:

These specifications have been developed to provide developers with a uniform system for installation of traffic control devices on the County road system. A uniform system provides for reduced maintenance costs and a high standard of visibility for drivers. All required traffic control devices shall be installed by the developer of the project.

2) Florida State Statute 316.0745:

2.1) Any and all traffic control devices installed on the County road system shall conform to Florida State Statute 316.0745, Uniform Signals and Devices.

2.2) This statute requires that all devices conform to Florida Department of Transportation (FDOT) Specifications. The FDOT has adopted the Federal Manual on Uniform Traffic Control Devices as the standards to be used in the State of Florida.

3) Pavement Markings:

3.1) All pavement markings shall be thermoplastic or preformed tapes; raised pavement markers shall be class "B".

3.2) Pavement markings and raised pavement markers shall be installed on all roads classified other than residential with an ADT greater than 500 vehicles, or if other conditions exist that require pavement markings, (see M.U.T.C.D. Section 3B-1).

4) Traffic Control Signs:

4.1) All sign blanks shall be of a type currently certified by the FDOT for use in the State of Florida.

4.2) All sign faces shall be High Intensity grade and of a type currently certified by the FDOT for use in the State of Florida.

4.3) All signs shall be no less than the standard size as specified by the Federal Manual on Uniform Traffic Control Devices. No minimum size signing shall be accepted. Larger signs shall be used when required by design speed, etc.

4.4) Street name signs shall be 6" on local roads, and 9" on collector and arterial roads. Six inch signs shall have 4" series C letters and 9" signs shall have 6" series B letters. All street name signs on private roads shall be standard D3 street name signs with the colors reversed. White background with green letters and border. At intersections with county maintained roads, the county maintained road shall be green background with white letters and border. Street name sign brackets for 6" signs 30" long or less, or 9" signs 24" long or less, shall have a 5 inch blade or cross. All other street name signs shall be mounted with brackets with a 12 inch blade or 8 inch cross. All street name sign brackets shall be supplied with bolts, set screws will not be accepted.

4.5) On roads to be maintained by Pasco County, all signs other than street names shall be date coded with a yellow reflective label affixed to the back of the sign. It will be punched to show month, day and year of installation (See Sample Label). Alternate label designs providing the date code information may be used if a sample is submitted and approved by Pasco County prior to installation.

Sample Label: size 2" x 4"

WARNING

REMOVAL OF, OR DEFACING ANY TRAFFIC CONTROL
DEVICE IS PUNISHABLE BY FINE AND/OR IMPRISONMENT
REPORT DAMAGE BY CALLING (727) 847-2411

INSTALLED

J	F	M	A	M	J	J	A	S	O	N	D
10's	20's	30's	–	1	2	3	4	5	6	7	8	9
01	02	03	04	05	06	07	08	09			

4.6) All post systems, mounting brackets and hardware shall be of a type currently in use by the Pasco County Public Works Department and currently certified by the Florida Department of Transportation for use in the State of Florida. Alternative systems, etc., shall only be used if approved by the County Engineer.

5) Certification of materials:

5.1) All traffic control devices and materials shall be on the current FDOT APPROVED PRODUCTS LIST. Proof of certification is required for all traffic control devices.

5.2) A Traffic Control Devices Submittal Data Form shall be submitted for approval prior to installation of any traffic control device. No traffic control device shall be installed until the certification submittal has been approved by the Traffic Operations Division. These forms are available from the Traffic Operations Division. Copies of the approved Traffic Control Devices Submittal Data Form shall be sent to the contractor and the Engineering Inspections Division.

6) Traffic Control Devices Plan:

6.1) A detailed set of plans for required traffic control devices shall be submitted for all road construction, site development, subdivision, and Right-of-Way Use Permits. These plans shall be in conformance with FDOT design standards. All plans shall be signed and sealed by a registered professional engineer in the State of Florida.

6.2) With the submittal of final plans to the Development Review Division, two additional sets of the traffic control plan portion of the entire plan shall be submitted. These two sets will be forwarded to the Traffic Operations Division.

7) Cost Estimate:

An engineer's cost estimate shall be required for all proposed traffic control devices. The estimate shall be provided in conjunction with the Traffic Control Devices Submittal Data Form (See Section 5.2).

8) Inspection and Acceptance:

8.1) Upon completion of the installation of the traffic control devices, the contractor shall call the Engineering Inspections Division for an inspection at (727) 847-8154.

8.2) The inspection shall be made by the Engineering Inspection Division within 48 hours (two working days) of the request.

8.3) An inspection report shall be made by the Engineering Inspections Division. Copies of the report shall be sent to the Engineer and the developer.

8.4) No roadway shall be open to the public until all traffic control devices have been inspected and accepted by Pasco County.

NOTES FOR PRIVATE ROADWAYS:

1. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN CONFORMANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.

2. STREET NAME SIGNS SHALL BE 6" ON LOCAL ROADS AND 9" ON COLLECTOR AND ARTERIAL ROADS. SIX-INCH SIGNS SHALL HAVE 4" SERIES C LETTERS AND 9" SIGNS SIGNS SHALL HAVE 6" SERIES B LETTERS. ALL STREET NAME SIGNS ON PRIVATE STREETS (NON-COUNTY MAINTAINED) SHALL BE STANDARD D3 STREET NAMES WITH THE COLORS REVERSED, WHITE BACKGROUND WITH GREEN LETTERS AND BORDER. AT INTERSECTIONS WITH COUNTY MAINTAINED ROADS, THE COUNTY MAINTAINED ROAD SHALL BE GREEN BACKGROUND WITH WHITE LETTERS.

3. CONTRACTOR MUST CONTACT ENGINEER OF RECORD PRIOR TO ORDERING STREET NAME SIGNS. APPROVED STREET NAMES CAN NOT BE DETERMINED UNTIL RECORDING OF THE PLAT.

4. EXISTING STRIPING AND OTHER PAVEMENT MARKINGS TO BE REMOVED SHALL BE DONE AS NECESSARY BY HYDROBLASTING. GRINDING IS NOT PERMITTED.

UTILITIES PROVIDERS LIST

Bright House Networks, LLC
Mike Kiker
813-862-0522 ext 84263
michael.kiker@mybrighthouse.com

Verizon Florida Inc.
David Wynns
813-627-8343
David.wynns@verizon.com

Pasco County Utilities
Paul Hamar
727-847-8145
Phamar@pascocountyfl.net

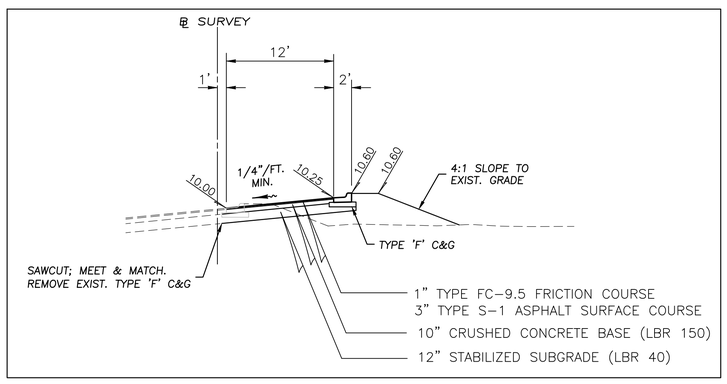
TECO Peoples Gas - Tampa
Luis Castellanos
813-275-3743
jlcastellanos@tecoenergy.com

Withlacoochee River Electric Cooperative
Corey Littlefield
352-588-5115 ext 1131
rlittlefield@wrec.net

PAVEMENT STRUCTURE FOR TURN LANE ON RIVERGLEN BLVD:

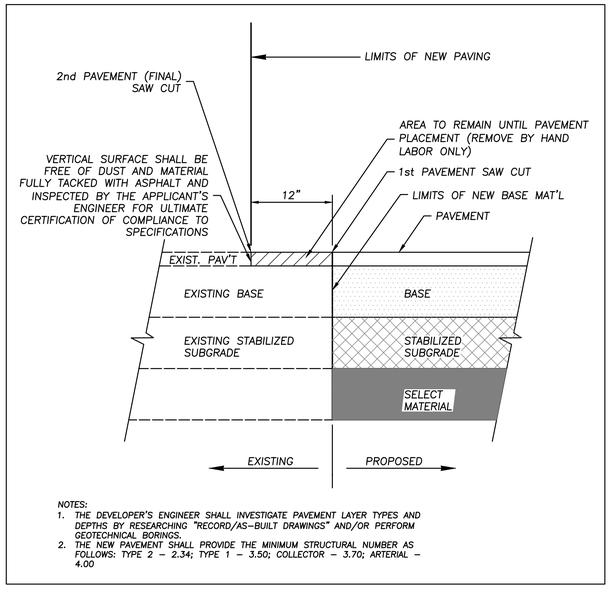
Layer Coefficients	Thickness
0.44 - Type FC-9.5 Asphalt Surface	1"
0.44 - Type SP-9.5 Asphalt Surface	3"
0.15 - Crushed Concrete Base (LBR 150 min.)	10"
0.08 - Stabilized Subgrade (LBR 40 min)	12"

SN = (0.44) (1) + (0.44) (3) + (0.15) (10) + (0.08) (12) = 4.22



RIGHT TURN LANE SECTION

N.T.S.



NOTES:
1. THE DEVELOPER'S ENGINEER SHALL INVESTIGATE PAVEMENT LAYER TYPES AND DEPTHS BY RESEARCHING "RECORD/AS-BUILT DRAWINGS" AND/OR PERFORM GEOTECHNICAL BORINGS.
2. THE NEW PAVEMENT SHALL PROVIDE THE MINIMUM STRUCTURAL NUMBER AS FOLLOWS: TYPE 2 - 2.34; TYPE 1 - 3.50; COLLECTOR - 3.70; ARTERIAL - 4.00

PAVEMENT TIE-IN SAW CUT DETAIL

N.T.S.

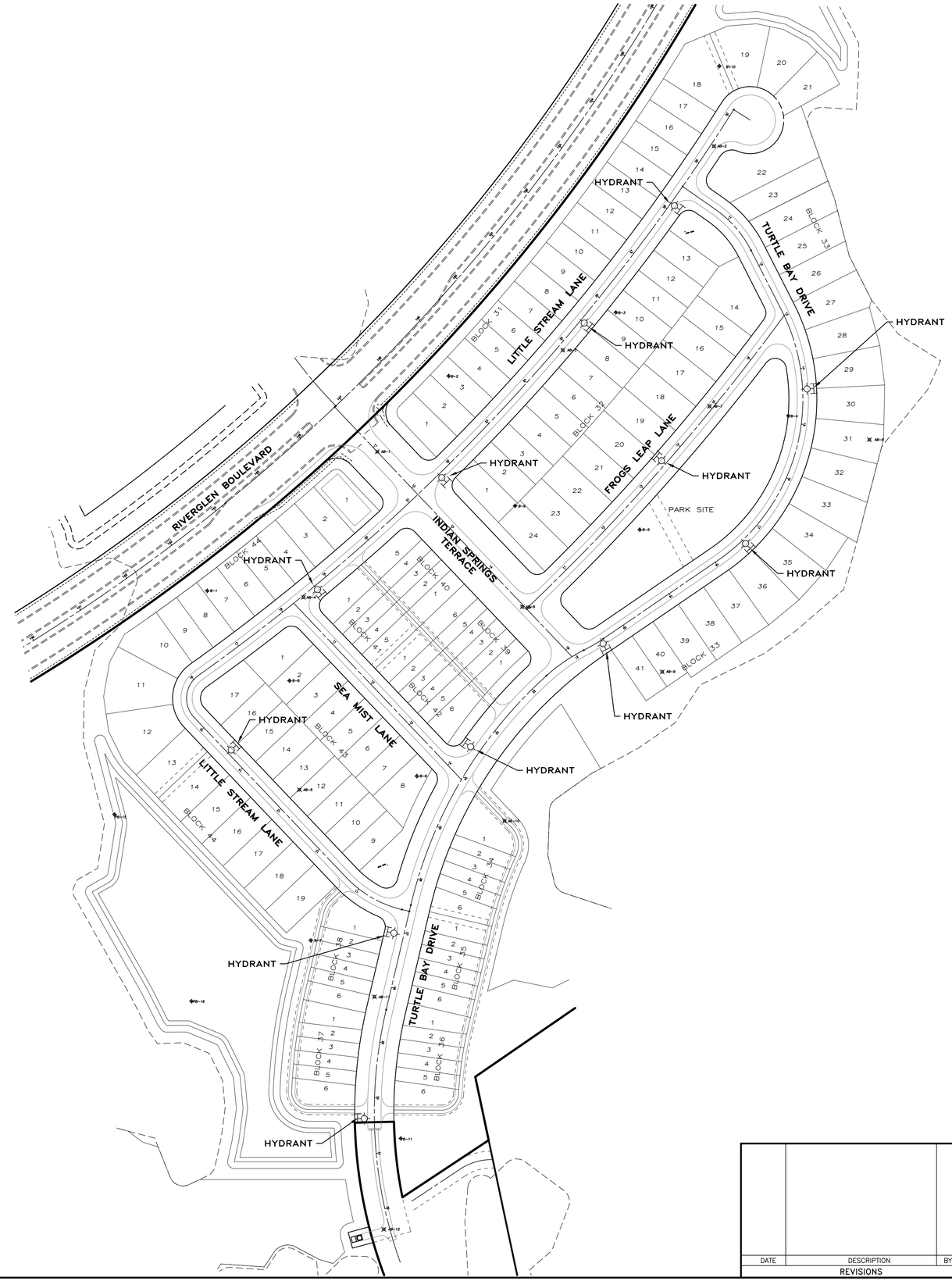
DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

RIVERGLEN BLVD. WIDENING PLAN

JOB NO. STX-NR-002	*AVALON PARK WEST*
DESIGN SURAK	*PARCEL E PHASE 1*
DRAWN MIDDLETON	PREPARED FOR: **SitEx NR Development, LLC**
DATE 06/06/2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE INT	**SHEET 38 OF 54 SHEETS**



N

200 100 0 100 200

SCALE: 1" = 100'

FIRE HYDRANT LOCATION

DATE	DESCRIPTION	BY
	REVISIONS	

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Office: 813-223-3919 Fax: 813-223-3975

DATE:
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

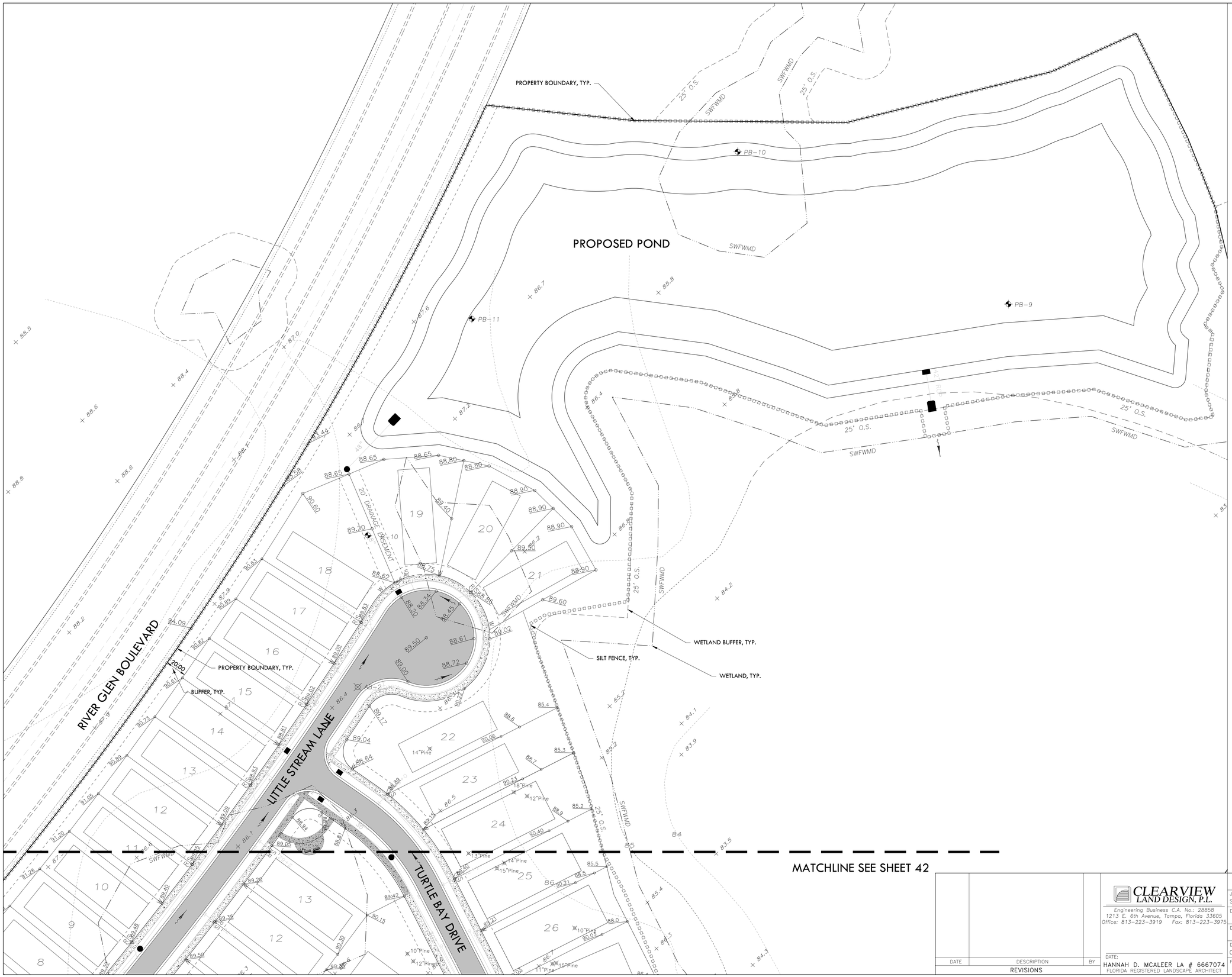
ADDRESS PLAN

AVALON PARK WEST
PARCEL E PHASE 1

JOB NO.	STX-NR-002
DESIGN	SURAK
DRAWN	MIDDLETON
DATE	06/06/2015
FILE	AP
PREPARED FOR:	SitEx NR Development, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet

SHEET 39 OF 54 SHEETS



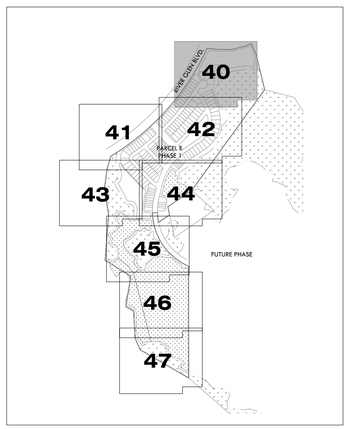
LEGEND

10" Pine	Tree to remain
10"Pine	Tree proposed for removal
	Proposed erosion control fence
	Proposed fence / tree barricade
	Wetland
	Wetland buffer
84.5	Surveyed grade
84	Contour line (Elevation)
90.18	Proposed grade

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

TREE REPLACEMENT PLAN

JOB NO. STX-NR-006

DESIGN HM

DRAWN HM

DATE 05-26-2015

FILE TRP

NEW RIVER LAKES PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

SHEET 40 OF 54 SHEETS

P:\New River Lakes East\Parcel E\Engineering\ConDoc\TRP.dwg

EXISTING POND
NOT INCLUDED SHOWN
FOR REFERENCE ONLY

PARCEL D
NOT INCLUDED SHOWN
FOR REFERENCE ONLY

RIVER GLEN BOULEVARD

INDIAN SPRINGS TERRACE

LITTLE STREAM LANE

SEA MIST LANE

ALLEY

PROPERTY BOUNDARY, TYP.

BUFFER, TYP.

MATCHLINE SEE SHEET 43

MATCHLINE SEE SHEET 42

MATCHLINE SEE SHEET 44

LEGEND

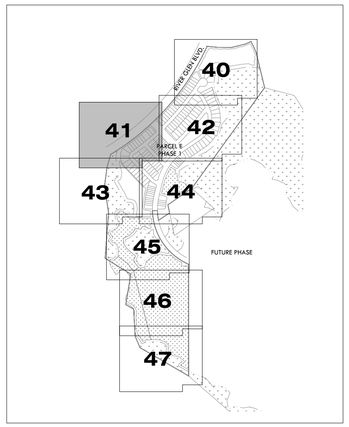
10" Pine	Tree to remain
10"Pine	Tree proposed for removal
	Proposed erosion control fence
	Proposed fence / tree barricade
	Wetland
	Wetland buffer
84.5	Surveyed grade
84	Contour line (Elevation)
90.18	Proposed grade

N

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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TREE REPLACEMENT PLAN

JOB NO. STX-NR-006

NEW RIVER LAKES
PARCEL E PHASE 1

DESIGN HM

DRAWN HM

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

DATE 05-26-2015

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

FILE TRP

SHEET 41 OF 54 SHEETS

P:\New River Lakes East\Parcel E\Engineering\ConDoc\TRP.dwg

MATCHLINE SEE SHEET 40

MATCHLINE SEE SHEET 41

MATCHLINE SEE SHEET 44

RIVER GLEN BOULEVARD

LITTLE STREAM LANE

TURTLE BAY DRIVE

FROGS LEAP LANE

INDIAN SPRINGS TERRACE

ALLEY

PARK SITE

PROPERTY BOUNDARY, TYP.

BUFFER, TYP.

20' DRAINAGE EASEMENT

TREE BARRICADE TO PROTECT TREES WITHIN CONSTRUCTION AREAS.

PLACE SILT FENCE ON OUTSIDE EDGE OF FENCE.

SWFWMD

LEGEND

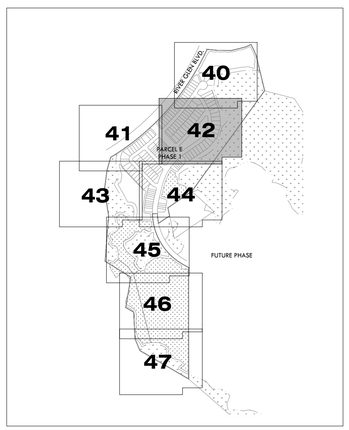
10" Pine	Tree to remain
10"Pine	Tree proposed for removal
	Proposed erosion control fence
	Proposed fence / tree barricade
	Wetland
	Wetland buffer
84.5	Surveyed grade
84	Contour line (Elevation)
90.18	Proposed grade

N

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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DATE:
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FLORIDA REGISTERED LANDSCAPE ARCHITECT

TREE REPLACEMENT PLAN

JOB NO. STX-NR-006

DESIGN HM

DRAWN HM

DATE 05-26-2015

FILE TRP

NEW RIVER LAKES
PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

SHEET 42 OF 54 SHEETS

P:\New River Lakes East\Parcel E\Engineering\ConDoc\TRP.dwg

MATCHLINE SEE SHEET 41

PARCEL D
NOT INCLUDED SHOWN
FOR REFERENCE ONLY

RIVER GLEN BOULEVARD

PROPERTY BOUNDARY, TYP.

LITTLE STREAM LANE

DRAINAGE EASEMENT

PROPOSED POND

WETLAND

SWFWMD

25' O.S.

PB-15

PB-16

MATCHLINE SEE SHEET 44

MATCHLINE SEE
SHEET 45

LEGEND

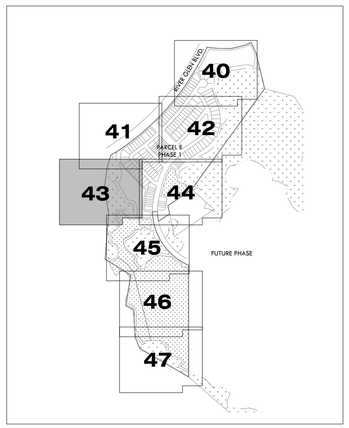
10" Pine	Tree to remain
10"Pine	Tree proposed for removal
	Proposed erosion control fence
	Proposed fence / tree barricade
	Wetland
	Wetland buffer
84.5	Surveyed grade
84	Contour line (Elevation)
90.18	Proposed grade

N

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

TREE REPLACEMENT PLAN

JOB NO. STX-NR-006	*NEW RIVER LAKES PARCEL E PHASE 1*
DESIGN HM	
DRAWN HM	PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**
DATE 05-26-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE TRP	**SHEET 43 OF 54 SHEETS**

MATCHLINE SEE SHEET 41 MATCHLINE SEE SHEET 42

SEA MIST LANE

LITTLE STREAM LANE

TURTLE BAY DRIVE

ALLEY

ALLEY

PROPOSED FLOODPLAIN MITIGATION (TYP.)

20' DRAINAGE EASEMENT

SWFWMD

25' O.S.

PROPERTY BOUNDARY, TYP.

PHASE 1 LIMITS, TYP.

OUT PARCEL NOT INCLUDED

MATCHLINE SEE SHEET #

MATCHLINE SEE SHEET #

LEGEND

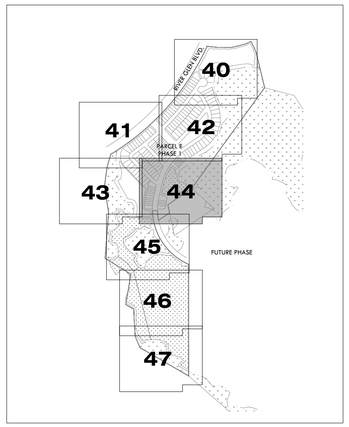
10" Pine	Tree to remain
10"Pine	Tree proposed for removal
	Proposed erosion control fence
	Proposed fence / tree barricade
	Wetland
	Wetland buffer
84.5	Surveyed grade
84	Contour line (Elevation)
90.18	Proposed grade

N

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

TREE REPLACEMENT PLAN

JOB NO. STX-NR-006	NEW RIVER LAKES PARCEL E PHASE 1
DESIGN HM	
DRAWN HM	PREPARED FOR: SITEX NR DEVELOPMENT, LLC
DATE 05-26-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE TRP	SHEET 44 OF 54 SHEETS

MATCHLINE SEE SHEET 43

MATCHLINE SEE SHEET 44

PROPOSED FLOODPLAIN MITIGATION (TYP.)

PUMP STATION

LIFT STATION

FUTURE PHASE

WETLAND

WETLAND

WETLAND

PROPERTY BOUNDARY, TYP.

MATCHLINE SEE SHEET 46

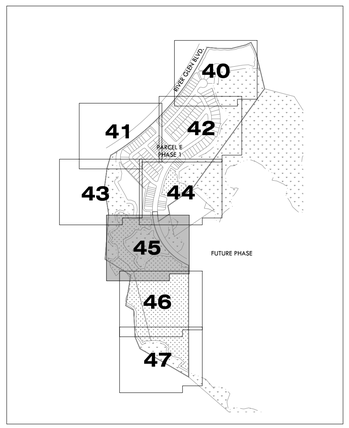
LEGEND

- Tree to remain
- Tree proposed for removal
- Proposed erosion control fence
- Proposed fence / tree barricade
- Wetland
- Wetland buffer
- Surveyed grade
- Contour line (Elevation)
- Proposed grade

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

TREE REPLACEMENT PLAN

JOB NO. STX-NR-006

DESIGN HM

DRAWN HM

DATE 05-26-2015

FILE TRP

NEW RIVER LAKES PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

SHEET 45 OF 54 SHEETS

MATCHLINE SEE SHEET 45

PROPOSED FLOODPLAIN MITIGATION (TYP.)

PHASE 1 LIMITS, TYP.

FUTURE PHASE

MATCHLINE SEE SHEET 47

LEGEND

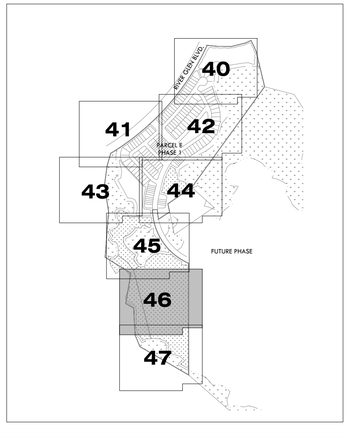
- 10" Pine — Tree to remain
- 10"Pine — Tree proposed for removal
- Proposed erosion control fence
- Proposed fence / tree barricade
- Wetland
- Wetland buffer
- 84.5 — Surveyed grade
- 84 — Contour line (Elevation)
- 90.1G — Proposed grade

N

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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1213 E. 6th Avenue, Tampa, Florida 33605
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DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

TREE REPLACEMENT PLAN

JOB NO. STX-NR-006	NEW RIVER LAKES PARCEL E PHASE 1
DESIGN HM	
DRAWN HM	PREPARED FOR: SITEX NR DEVELOPMENT, LLC
DATE 05-26-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE TRP	SHEET 46 OF 54 SHEETS

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MATCHLINE SEE SHEET 46

PROPOSED FLOODPLAIN MITIGATION (TYP.)

PROPERTY BOUNDARY, TYP.

PHASE 1 LIMITS, TYP.

FUTURE PHASE

SWFWMD

25' O.S.

LEGEND

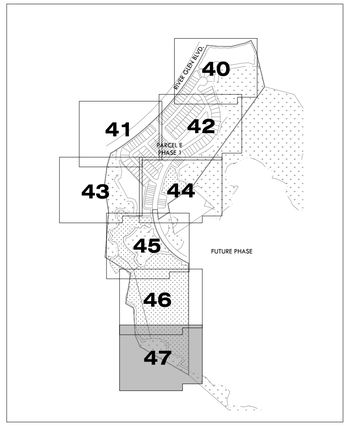
- Tree to remain
- Tree proposed for removal
- Proposed erosion control fence
- Proposed fence / tree barricade
- Wetland
- Wetland buffer
- Surveyed grade
- Contour line (Elevation)
- Proposed grade

N

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

TREE REPLACEMENT PLAN

JOB NO. STX-NR-006
DESIGN HM
DRAWN HM
DATE 05-26-2015
FILE TRP

NEW RIVER LAKES PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

SHEET 47 OF 54 SHEETS

TREE REMOVAL AND REPLACEMENT NOTES

1. A tree removal permit is required for removal of all trees over 5" dbh with certain exceptions as defined in Pasco County LDC 802.3.A.

2. Tree location survey identifying all trees 10" dbh and greater shall be submitted to County for review.

3. Tree survey shall be completed 3 years or less in advance of submittal unless otherwise approved by the Zoning Administrator.

4. To meet tree survey timeline guidelines as determined in code, a certified arborist reviewed trees and established an average growth factor that is reflected in the tree table, this sheet.

5. Efforts shall be made to minimize tree removal. Design shall take into consideration the design of infrastructure and hardscape elements and the vigor of the existing trees.

6. Trees equal to 10" dbh and greater are required to be replaced in accordance with Pasco County LDC, Section 802.3.C.

7. For all live oaks which require replacement, the total caliper inches of replacement trees shall equal the total caliper inches of the live oaks removed, rounded to the nearest whole number.

8. For all other trees which require replacement, the total caliper inches of replacement trees shall equal the total caliper inches of the live oaks removed, rounded to the nearest whole number.

9. Pruning or trimming of trees to remain on site shall be in accordance with ANSI 300A, 2001 as amended.

10. Credit for replacement will be given for trees planted in addition to the required trees by code.

11. If tree replacement requirements cannot be met on site, the County Administrator may approve a monetary contribution to the Tree Mitigation Fund at the rate established by the resolution of the BCC.

12. Invasive or exotic species located within a project area shall be removed.

13. Prior to clearing and grubbing, and removal of any tree, preserved areas shall be clearly marked with 3' ht. min. barriers to create a protected zone during construction. The barrier shall encompass the tree's dripline.

14. Where needed to protect preserved trees from erosion, silt barriers, hay bales or other erosion control shall be required.

19. Trees outside of general construction zone to be protected with silt fence barrier or method as described in Civil Engineering Plans.

20. Trees within general construction zone to be protected with fence and silt fence barrier as shown in detail this sheet.

21. No storage, movement, or cleaning of equipment, material or debris shall be placed within the protected zone.

22. No excavation shall occur within protected zone.

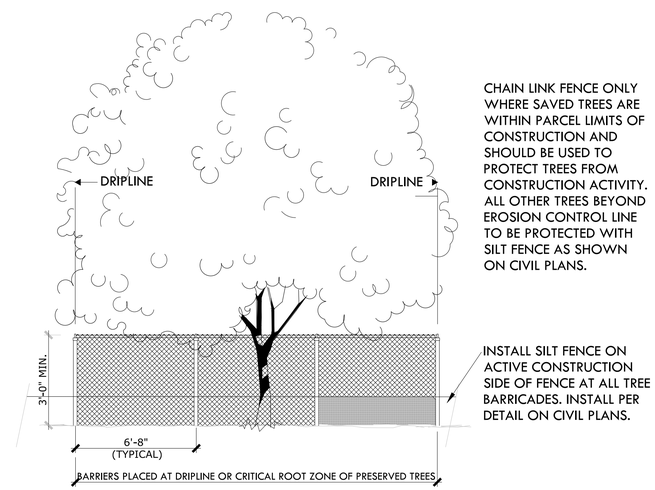
23. No fire burning shall be allowed within 30' of the protected zone.

24. When tunneling or trenching for utilities is allowed in protected zones, it shall be done in accordance with the "Tree and Protection for Builders and Developers, as amended and published by the Florida Department of Agriculture and Consumer Services. Trenching shall occur no closer to the tree's trunk than 2/3 of the drip line radius.

Parcel E Phase 1 Tree Table				
Retained Trees	**Total**	**Oaks**	**Other**	**Palms**
Total # Trees Saved	**79**	52	27	0
Total Surveyed Inches Saved	**1,447**	1,054	393	0
Total Inches Saved w/ Avg. Growth Factor	**1,624.75**	1,171.00	453.75	N/A
Removed Trees	**Total**	**Oaks**	**Other**	**Palms**
Total # Trees Removed	**1,120**	375	745	5
Total Surveyed Inches Removed	**15,362**	5,479	9,883	N/A
Total Inches Removed w/ Avg. Growth Factor	**17,882.00**	6,322.75	11,559.25	N/A
**Excludes trees outside of Phase 1 Boundary*				

AGRICULTURAL EXEMPTION

1. Existing trees to be removed will be harvested in compliance with the agricultural exemption (LDC section 802.3.a.9)



TREE BARRICADE DETAIL - ELEVATION

TREES WITHIN CONSTRUCTION LIMITS AT PARK

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
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DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

TREE REPLACEMENT CHARTS & DETAILS

JOB NO. STX-NR-006
DESIGN HM
DRAWN HM
DATE 05-26-2015
FILE TRP

NEW RIVER LAKES
PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet

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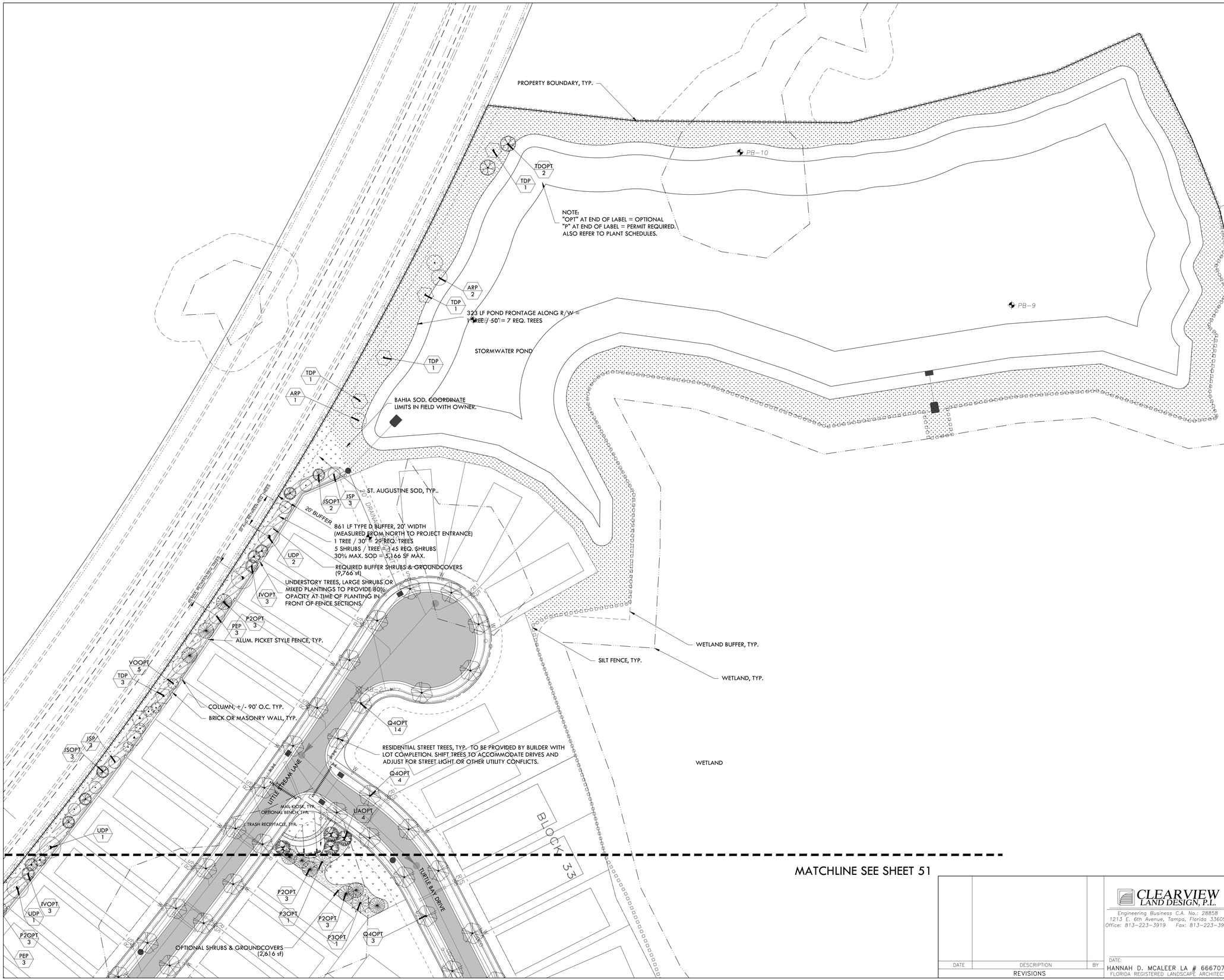


LEGEND

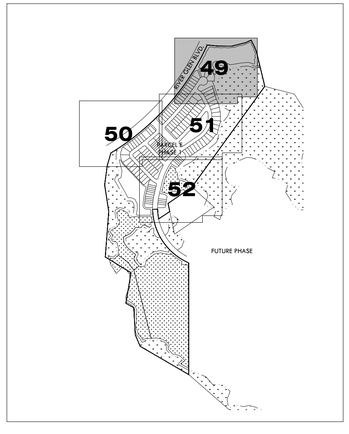
- 10" Pine — Tree to remain
- Proposed erosion control fence
- Wetland
- Wetland buffer
- Code required shrubs & groundcovers
- Optional required shrubs & groundcovers

Refer to plant schedule for tree symbols & required vs optional trees.

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

PERMIT LANDSCAPE PLAN

JOB NO. STX-NR-006
DESIGN HM
DRAWN HM
DATE 05-26-2015
FILE PLP

NEW RIVER LAKES PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
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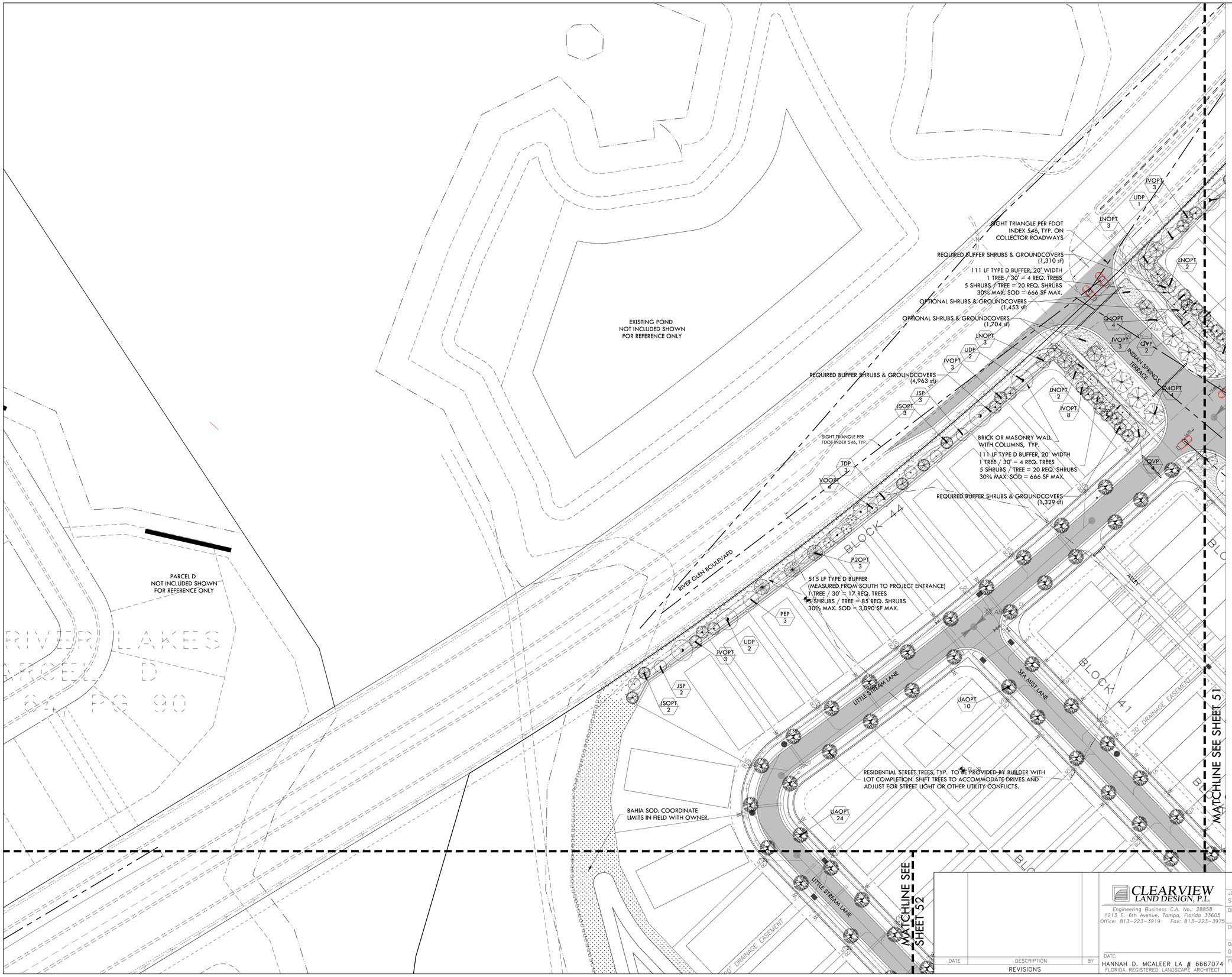
SHEET 49 OF 54 SHEETS



LEGEND

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- Wetland
- Wetland buffer
- Code required shrubs & groundcovers
- Optional required shrubs & groundcovers

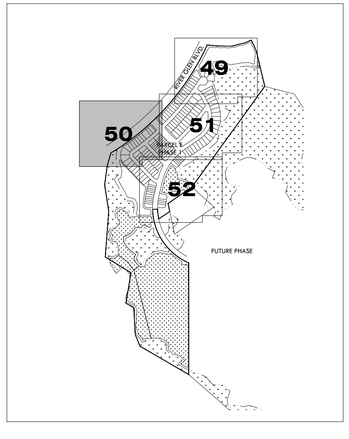
Refer to plant schedule for tree symbols & required vs optional trees.

N

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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PERMIT LANDSCAPE PLAN

JOB NO. STX-NR-006

DESIGN HM

DRAWN HM

DATE 05-26-2015

FILE PLP

NEW RIVER LAKES PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
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SHEET 50 OF 54 SHEETS

MATCHLINE SEE SHEET 49

MATCHLINE SEE SHEET 50

MATCHLINE SEE SHEET 52

RIVER GLEN BOULEVARD

LITTLE STREAM LANE

FROGS LEAP LANE

INDIAN SPRINGS TERRACE

TURTLE BAY DRIVE

BLOCK 31

BLOCK 32

BLOCK 33

BLOCK 40

BLOCK 39

BLOCK 42

ALLEY

PARK

PARK SITE

WETLAND

OPTIONAL SHRUBS & GROUNDCOVERS (2,616 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (1,448 sf)

RESIDENTIAL STREET TREES, TYP. TO BE PROVIDED BY BUILDER WITH LOT COMPLETION. SHIFT TREES TO ACCOMMODATE DRIVES AND ADJUST FOR STREET LIGHT OR OTHER UTILITY CONFLICTS.

MULCH BELOW EXISTING TREES AS NEEDED. 2" DEPTH. FIELD REVIEW TO DETERMINE SUPPLEMENTAL EDGE PLANTINGS OF SAW PALMETTO AND NATIVE GRASSES.

OPTIONAL BENCH, TYP.

OPTIONAL SHRUBS & GROUNDCOVERS (2,498 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (1,778 sf)

HORIZONTAL CLEARANCE PER FDOT INDEX 700, TYP. ON COLLECTOR ROADWAYS

OPTIONAL SHRUBS & GROUNDCOVERS (517 sf)

UNDERSTORY TREES, LARGE SHRUBS OR MIXED PLANTINGS TO PROVIDE 80% OPACITY AT TIME OF PLANTING IN FRONT OF FENCE SECTIONS.

232 LF TYPE D BUFFER, 20' WIDTH
1 TREE / 20' = 8 REQ. TREES
5 SHRUBS / TREE = 40 REQ. SHRUBS
30% MAX. SOD = 1,392 SF MAX.

REQUIRED BUFFER SHRUBS & GROUNDCOVERS (2,997 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (3,179 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (1,244 sf)

OPEN PLAY AREA 100' x 100'

OPTIONAL SHRUBS & GROUNDCOVERS (2,114 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (1,574 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (6,652 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (680 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (2,588 sf)

SIGHT TRIANGLE PER FDOT INDEX 546, TYP. ON COLLECTOR ROADWAYS

OPTIONAL SHRUBS & GROUNDCOVERS (1,435 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (254 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (472 sf)

BAHIA SOD. COORDINATE LIMITS IN FIELD WITH OWNER.

MULCH BELOW EXISTING TREES AS NEEDED. 2" DEPTH. FIELD REVIEW TO DETERMINE SUPPLEMENTAL EDGE PLANTINGS OF SAW PALMETTO AND NATIVE GRASSES.

LEGEND

- Tree to remain (10" Pine)
- Proposed erosion control fence
- Wetland
- Wetland buffer
- Code required shrubs & groundcovers
- Optional required shrubs & groundcovers

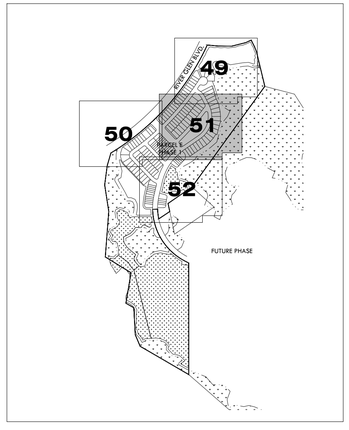
Refer to plant schedule for tree symbols & required vs optional trees.

N

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

PERMIT LANDSCAPE PLAN

JOB NO. STX-NR-006

DESIGN HM

DRAWN HM

DATE 05-26-2015

FILE PLP

NEW RIVER LAKES PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

SHEET 51 OF 54 SHEETS

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MATCHLINE SEE SHEET 50

MATCHLINE SEE SHEET 51½

AND NATIVE GRASSES.

BLOCK 43

SEA MIST LANE

LITTLE STREAM LANE

TURTLE BAY DRIVE

BLOCK 34

BLOCK 35

BLOCK 36

BLOCK 37

BLOCK 38

ALLEY

20' DRAINAGE EASEMENT

RESIDENTIAL STREET TREES, TYP.: TO BE PROVIDED BY BUILDER WITH LOT COMPLETION. SHIFT TREES TO ACCOMMODATE DRIVES AND ADJUST FOR STREET LIGHT OR OTHER UTILITY CONFLICTS.

OPTIONAL SHRUBS & GROUNDCOVERS (5,076 sf)

OPTIONAL BENCH, TYP.

MAIL KIOSK, TYP.

OPTIONAL SHRUBS & GROUNDCOVERS (1,643 sf)

OPTIONAL SHRUBS & GROUNDCOVERS (1,011 sf)

PROPERTY BOUNDARY, TYP.

WETLAND

PROPOSED FLOODPLAIN MITIGATION (TYP.)

BAHIA SOD. COORDINATE LIMITS IN FIELD WITH OWNER.

PHASE 1 LIMITS, TYP.

OUT PARCEL
NOT INCLUDED

PROPOSED STORMWATER POND

97 LF POND FRONTAGE ALONG R/W = 1 TREE / 50' = 2 REQ. TREES

PROPERTY BOUNDARY, TYP.

BAHIA SOD. COORDINATE LIMITS IN FIELD WITH OWNER.

PROPOSED FLOODPLAIN MITIGATION (TYP.)

LEGEND

- 10" Pine — Tree to remain
- Proposed erosion control fence
- Wetland
- Wetland buffer
- Code required shrubs & groundcovers
- Optional required shrubs & groundcovers

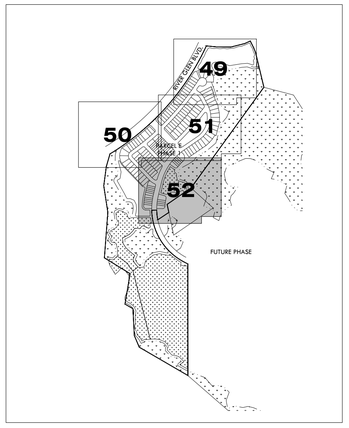
Refer to plant schedule for tree symbols & required vs optional trees.

N

0 40' 80' 120'

SCALE: 1" = 40'

KEY MAP



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FILE PLP

NEW RIVER LAKES PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83Feet

SHEET 52 OF 54 SHEETS

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PERMIT LANDSCAPE NOTES

1. This Landscape Plan is for permitting purposes only. Additional trees, shrubs, groundcovers, and landscape materials may be added for aesthetic or environmental benefits. Additional landscape shall comply with Pasco County requirements and standards.
2. No reference to engineering or survey shall be made from this Landscape Plan.
3. Landscape shall be maintained by entity other than Pasco County. Avalon Park Group (or its successors) will be responsible for maintenance. All required landscape shall be maintained in a healthy condition in perpetuity in accordance with Pasco County LDC. Owner responsible for ongoing maintenance to prevent the establishment of prohibited exotic species.
4. Landscape shall employ sustainable principles and practices which include Florida Friendly Landscape and utilize low maintenance plant species. Plan shall meet The "Right Plant / Right Place" concept. This includes grouping plants together based on water, soil, climate and light requirements.
5. All plants shall be Florida Grade No. 1 or better as defined by the Department of Agriculture, Grades and Standards for Nursery Plants.
6. A maximum 50% of the plant materials, other than trees shall be non-drought tolerant plants.
7. A minimum 30% of the plant materials, other than trees and turf grass shall be native Floridian species, as defined in the most current Appendix A of Pasco County LDC.
8. Plants shall be grouped together based on water, soil, and light requirements.
9. All landscape shall be installed in accordance with Florida chapter, International Society of Arboriculture Standards for Planting and Florida Nursery Growers and Landscape Association.
10. No plants from the most current Appendix B and/or Appendix C of Pasco County LDC shall be planted on the project site.
11. Shade trees utilized to meet requirements of the code shall have a mature spread of 20' and at time of planting have a min. 2" cal. and min. 6' ht.
12. Multi-trunk trees shall be 6' ht. min., have 3 trunks min. with 1" min. cal. per trunk.
13. Where overhead utilities exist, understory trees shall be planted with a spacing of 30' o.c. Trees that exceed 25' ht. at maturity shall be planted no closer than 20' to the overhead utility.
14. Palm trees may be substituted at a 3:1 ratio, to meet no more than 30% of required shade trees. Phoenix species, excluding Roebellini, may be planted to count for one tree. Palms to meet shade tree requirements shall be 10' c.t. min. and planted in groups.
15. Required shrubs shall be 18" ht. min. at time of planting. Shrubs shall obtain 24" ht. within 1 year of planting to form a continuous appearance. Shrubs shall be spaced 36"o.c. max.
16. Dwarf varieties of shrubs used to meet code requirements shall be 14" ht. min. at time of planting and spaced 36" o.c. max.
17. Groundcovers shall be spaced to provide complete coverage within 1 year of planting.
18. Planting beds shall be covered with 3" layer of mulch type specified in planting list. Mulch depth shall be measured after compaction. Mulch shall be free of litter, rocks, sticks, and other debris. No more than 20% of mulched areas may be stone or gravel. Remove mulch from canopies of shrubs and properly tuck in mulch along edges.
19. A 3' min. diameter ring shall be applied around all existing trees that do not fall within a mulched planting bed and/or are surrounded by turf. Mulch rings shall be sized appropriately for size of tree. Where sodded between planting beds or mulch rings, maintain 3' minimum sod strip. Where 3' between mulch areas is unobtainable, fill in area with mulch. Mulch shall not be placed directly against the plant stem or tree trunk.
20. Beds shall be kept free of disease, pests, weeds, and other debris.
21. Groundcovers and shrubs shall be planted with triangular spacing for optimum growth and fill in of planting bed.
22. Any required plant material that is removed or dies shall be replaced within 30 days.
23. All trees shall be guaranteed for a period of one year from the date of acceptance.
24. Trees used for Tree Replacement shall be in accordance with Pasco County LDC 602.7: All trees used to meet the requirements of tree replacement shall be equal to or greater than two (2) inches in caliper. Multi-trunked trees shall be equal to or greater than three (3) inches in caliper, with a minimum of 3 trunks.
25. To provide diversity, trees required shall be provided according to the chart below. Even distribution shall be strived for.

Required Trees	Required Species
1-5	1
6-10	2
11-15	3
16-20	4
21-25	5
26-30	6
31-35	7
35+	8

26. Trees and other landscape material shall be planted in such a manner as not to impede the storm-water run off to or in a ditch, swale or pond and away from the pipes, underdrains and sidewalk without obstructing the maintenance access to the stormwater facility.
27. Landscape shall be placed to avoid conflict with existing or proposed overhead and underground utilities.
28. Trees shall not be planted within any easement so as to interfere with the use of that easement, nor under existing or planned overhead utilities, nor in rights-of-way without County approval through the associated review process.
29. All portions of a lot upon which development has commenced but not continued for a period of 30 days shall be planted with a grass species or ground cover to prevent erosion and encourage soil stabilization. Adequate coverage shall be achieved within 45 days.
30. All necessary permits for the work, prior to commencement of operations on-site shall be obtained.
31. All work within the right-of-way areas shall require a R.O.W. use permit and conform to the standards and specifications of all applicable local and/or state highway jurisdictions.
32. All utility locations, existing and proposed shall be located prior to commencement of work. Field adjustments may be made as necessary to avoid utility conflicts.

PERMIT IRRIGATION NOTES

1. An underground irrigation system shall be installed in compliance with Pasco County Land Development Code and meet the Irrigation Ordinance.
2. 50% maximum of on-site green space shall utilize irrigation techniques other than micro-irrigation when a conventional system is used.
3. Irrigation system shall be zoned according to plant moisture requirements. Sod shall be separately zoned from any zone that irrigates trees, shrubs, and/or groundcovers.
4. Reclaim Water to be used when available for irrigation. Common areas to be irrigated by reclaim water source. Refer to Engineering Plans.
5. Irrigation system shall be designed to avoid overspray, runoff, or flow onto non-irrigated areas.
6. Automatic controller shall be used to program irrigation cycles.
7. Rain sensor device shall be incorporated into irrigation system and be placed where it will be unobstructed to rainfall.
8. Irrigation system shall be maintained to ensure efficient water use.
9. Irrigation system shall be checked and properly working for a min. of 24 hours prior to planting.

SIGHT VISIBILITY NOTES

1. Sight visibility triangles shall be maintained as shown per FDOT Index 546, Passenger Car.
2. All plant material, including sod, groundcovers, shrubs and trees shall be maintained to keep clear sight areas free from obstructions at all times. Maintain minimum and maximum plant heights and clear areas per Sight Window Detail, as shown in most recent FDOT Index 546.

MINIMUM LANDSCAPE REQUIREMENTS FOR THIS PROJECT

Note: Landscape in addition to the minimum requirements may be shown on this plan and is optional landscape. Refer to plan notes and planting schedule.

LDC 905.2.E-D Landscaping and Screening Requirements
1,376 +/- LF Type D Buffer, 20' width = 46 Trees and 230 Shrubs Min. (20' Buffer along River Glen Blvd. Provided)
454 +/- LF Type D Buffer, 20' width = 16 Trees and 80 Shrubs Min. (20' Buffer along Indian Spring Terrace Provided)

Type D Buffer: A landscape buffer shall be required adjacent to any road right-of-way external to the development project and adjacent to any non-local access roads internal to a development and adjacent to all double frontage lots.

1. Shade and understory trees shall be planted an average of thirty (30) feet apart. Min. spacing = 20'. Max. spacing = 45'
2. The remainder of the buffer shall be landscaped with shrubs at a min. rate of 5 shrubs per tree or palm and groundcover plants.
3. All portions of buffer not devoted to hardscape or landscape features shall be sodded. 30% max. sod in buffer area. The remainder shall be landscaped with shrubs and groundcovers.
4. Whenever a wall is used, it shall be masonry or other ornamental, 8' ht. max. Wooden fences shall be prohibited.

LDC 905.2.D.6 Water Management Systems
420+/- LF Pond Adjacent to Right of Way = 9 Trees Min. (At 2 Locations)

All manmade dry and wet retention areas visible from right-of-way or located within a required buffer shall include trees at a rate of 1 tree per 50 linear feet of retention pond bank.
Retention / detention ponds and swales shall be permitted within a required buffer provided they meet the following:

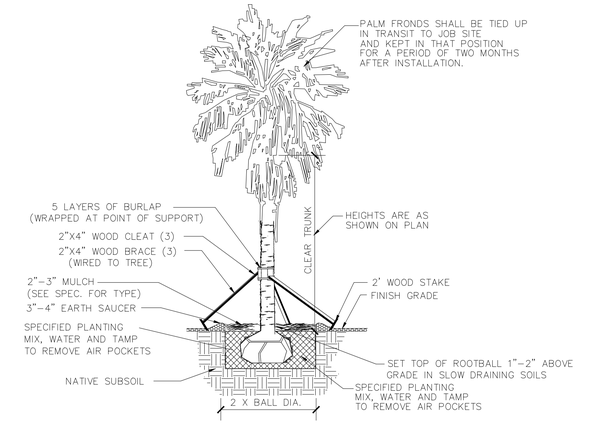
1. Ponds or swales shall not exceed, at any location within the required buffer, 70% of the required buffer width. A minimum 5' wide level planting area shall be maintained between the pond or swale and the public right-of-way or adjacent parcel.
2. Required vegetation shall be chosen and placed such that the functionality of the stormwater design is not impeded.
3. To reduce soil erosion and visually soften the edge of the water management areas, trees shall be planted along the banks at a rate of t tree per 50 linear feet of pond bank.
4. The banks of dry retention areas shall be sodded to the pond bottom. Wet areas shall be sodded to the seasonal high water line. Bahia grass may be used or planted in retention/detention areas, drainage areas, and wetland setback and mitigation areas.

PLANT SCHEDULE

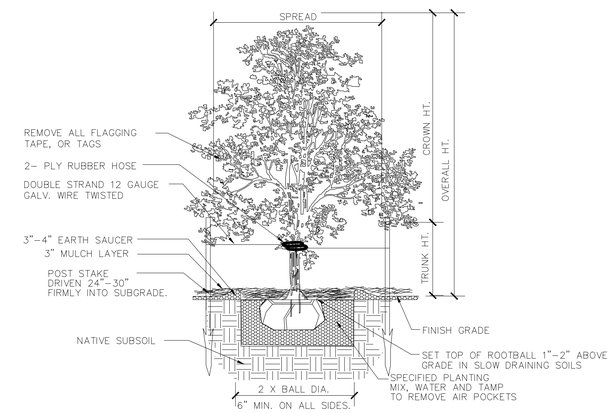
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	NATIVE	DROUGHT	REMARKS
	ARP	3	Acer rubrum	Red Maple	30 gal	2"Cal	8-10' HT x 5-6' SPR	Native	Medium	Permit Required Tree. Single straight central leader. Even branching distributed throughout canopy. Dense foliage. 5' ct.
	ICOPT	3	Ilex cassine	Dahoon Holly	30 gal	2"Cal	8-10' HT x 3-4' SPR	Native	Medium	Optional Additional Tree. Single, straight trunk. Even branching and dense canopy distributed throughout. Full to ground to 2' max. ct.
	IVOPT	49	Ilex vomitoria	Yaupon Holly	3 gal	3"Cal	8-10' HT x 5' SPR	Native	High	Optional Additional Tree. Multitrunk. Full head with even branching. 3 trunk min. 1" cal. ea.
	JSOPT	13	Juniperus silicicola	Southern Red Cedar	30 gal	2"Cal	8-10' HT x 3-4' SPR	Native	High	Optional Additional Tree. Straight trunk with symmetrical head. Full to ground. Dense canopy with no gaps.
	JSP	14	Juniperus silicicola	Southern Red Cedar	30 gal	2"Cal	8-10' HT x 3-4' SPR	Native	High	Permit Required Tree. Straight trunk with symmetrical head. Full to ground. Dense canopy with no gaps.
	LMOPT	19	Lagerstroemia x `Muskogee`	Multi-Trunk Lavender Crape Myrtle	45 gal	3"Cal	10-12' HT x 5-6' SPR	Non-Native	Medium	Optional Additional Tree. 3 trunk min. 5 trunk max. Matched in groups. Full head with even branching. Near equal size trunks at 1" cal. min. each.
	LNOPT	15	Lagerstroemia x `Natchez`	Standard White Crape Myrtle	65 gal	N/A	8-10' HT x 6' SPR	Non-Native	High	Optional Additional Tree. Multi-trunk. 5 trunks min. Full even canopy. Proportionate head to tree size.
	P2OPT	22	Pinus elliotti	Slash Pine	30 gal	2.5"Cal	10-12' HT x 4-5' SPR	Native	High	Optional Additional Tree. Single trunk.No large gaps on trunk devoid of branching. Needles present and full along majority of each branch.
	PEP	9	Pinus elliotti	Slash Pine	30 gal	2.5"Cal	10-12' HT x 4-5' SPR	Native	High	Permit Required Tree. Single trunk.Highest point of tree in center. Evenly distributed branching around the circumference and along the height of tree. No large gaps on trunk devoid of branching. Needles present and full along majority of each branch.
	P3OPT	4	Pinus elliotti	Slash Pine	65 gal	3.5"Cal	12-14' HT x 5-6' SPR		Native	Optional Additional Tree. Single trunk. Evenly distributed branching around the circumference and along the height of tree. No large gaps on trunk devoid of branching. Needles present and full along majority of each branch.
	POOPT	2	Platanus occidentalis	American Sycamore	FG	4"Cal	16-18' HT x 8-10' SPR	Native	Medium	Additional Optional Tree. Single, straight central leader. Full canopy with even branching distributed throughout the height and circumference of tree. 5' CT.
	Q4OPT	186	Quercus virginiana	Southern Live Oak	100 gal	4"Cal	14-16' HT x 6-8' SPR	Native	High	Optional Additional Tree. Single, straight central leader. Even branching distributed throughout canopy. Well-spaced limbs around entire circumference of tree. May substitute w/ FG w/ approval from LA
	QVP	8	Quercus virginiana	Southern Live Oak	30 gal	2"Cal	10-12' HT x 4-5' SPR	Native	High	Permit Required Tree. Single, straight central leader. Even branching distributed throughout canopy. Well-spaced limbs around entire circumference of tree.
	Q6OPT	3	Quercus virginiana	Southern Live Oak	FG	6"Cal	18-20' HT x 10-12' SPR	Native	High	Optional Additional Tree. Single, straight central leader. Even branching distributed throughout canopy. Well-spaced limbs around entire circumference of tree. May substitute w/ container or RPG w/ approval by LA.
	S12OPT	8	Sabal palmetto	Cabbage Palmetto	FG	N/A	12' CT	Native	High	Optional Additional Tree. Single, straight, slick trunk. Regenerated.
	S16OPT	5	Sabal palmetto	Cabbage Palmetto	FG	N/A	16' CT	Native	High	Optional Additional Tree.Single, straight, slick trunk. Regenerated.
	S8OPT	6	Sabal palmetto	Cabbage Palmetto	FG	N/A	8' CT	Native	High	Optional Additional Tree. Single, straight, slick trunk. Regenerated.
	TDP	15	Taxodium distichum	Bald Cypress	30 gal	2.5"Cal	10-12' HT x 4-5' SPR	Native	High	Permit Required Tree. Single, straight central leader with branching distributed evenly throughout the height and circumference of tree. RPG container.
	TDOPT	25	Taxodium distichum	Bald Cypress	30 gal	2.5"Cal	8-10' HT x 4-5' SPR	Native	High	Single, straight central leader with branching distributed evenly throughout the height and circumference of tree. RPG container.
	UAOPT	62	Ulmus americana	American Elm	30 gal	2"Cal	8-10' HT x 3-4' SPR	Native	High	Optional Additional Tree. Single, straight central leader. Even branching distributed throughout canopy. Well-spaced limbs around entire circumference of tree.
	UDP	10	Ulmus parvifolia `Emer II`	Chinese Elm	100 gal	3.5"Cal	14-16' HT x 7-8' SPR	Non-Native	High	Permit Required Tree. Single, straight central leader. Even branching distributed throughout canopy. Well-spaced limbs around entire circumference of tree.
	VOOPT	37	Viburnum obovatum	Walter's Viburnum	30 gal	N/A	6-7' HT x 5' SPR	Native	High	Optional Additional Tree. Multi-trunk. Even, full, near symetrical heads, full and even branching. No large gaps.

SHRUBS & GROUNDCOVERS

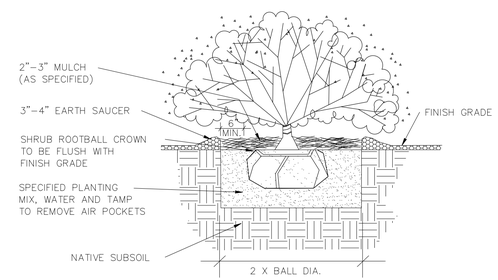
	REQUIRED BUFFER SHRUBS & GROUNDCOVERS	20,366 sf
	Buffer to be planted at rate of 5 shrubs per required tree. Refer to plan for quantities. Shrubs: 18" min. ht. Dwarf Shrubs: 14" min. ht. Groundcovers to provide finished appearance within 1 year of planting. Required shrubs to reach 24" within 1 year of planting. No single species to consitute more than 25% of required plantings. Estimated percentages shown but may vary within allowable code. Where wall is substituted for fence, 80% opacity to be achieved with understory trees, large shrubs, and/or mixed plantings.	
	Cyrtomium falcatum / Holly Fern 10% 3 gal 30" oc 10" HT. Non-Native. Drought Tolerant.	
	Hamelia patens `Compacta` / Compact Firebush 20% 3 gal 36" oc 18" HT, Native. Drought Tolerant	
	Lantana montevidensis / Trailing Lantana 10% 1 gal 24" oc 10" HT. Non-Native. Drought Tolerant	
	Liriope muscari `Super Green Giant` / Super Green Giant Lily Turf 5% 1 gal 18" oc 10" HT. Non-Native. Drought Tolerant	
	Serenoa repens / Saw Palmetto 5% 3 gal 36" oc 18" HT. Native. Drought Tolerant	
	Tripsacum dactyloides / Fakahatchee Grass 15% 1 gal 36" oc 18" HT. Native. Drought Tolerant	
	Tripsacum floridanum / Dwarf Fakahatchee 10% 3 gal 30" oc 18" HT. Native. Drought Tolerant	
	Viburnum obovatum `Densa` / Walter's Viburnum `Densa` 10% 3 gal 36" oc 18" HT. Native. Drought Tolerant.	
	Viburnum rufidulum / Southern Rusty Blackhaw 10% 3 gal 36" oc 18" HT. Native. Drought Tolerant.	
	Zamia floridana / Coontie 5% 3 gal 36" oc 14" HT. Native. Drought Tolerant.	
	OPTIONAL SHRUBS & GROUNDCOVERS	39,884 sf
	Only groundcovers that will not exceed 18" mature height to be placed within sight triangles. Field verify with LA or Owner. Provide spacing based on selected species to achieve full coverage within 1 year of planting. Shrubs: 18" min. ht. Dwarf Shrubs: 14" min. ht. Groundcovers to provide finished appearance within 1 year of planting. These plantings are optional and additional to the minimum required by code. Optional plantings may be planted in full or partial areas as shown.	
	Hamelia patens `Compacta` / Compact Firebush 5% 3 gal 36" oc 18" HT, Native. Drought Tolerant	
	Ilex vomitoria `Schillings` / Schillings Holly 10% 3 gal 30" oc 10" HT. Native. Drought Tolerant.	
	Lantana montevidensis / Trailing Lantana 10% 1 gal 24" oc 10" HT. Non-Native. Drought Tolerant	
	Liriope muscari `Super Green Giant` / Super Green Giant Lily Turf 5% 1 gal 18" oc 10" HT. Non-Native. Drought Tolerant	
	Philodendron selloum / Split Leaf Philodendron 5% 3 gal 48" oc 24" HT. Non-Native. Drought Tolerant.	
	Rhaphiolepis indica `Alba` / White Indian Hawthorn 10% 3 gal 30" oc 10" HT. Non-Native. Drought Tolerant.	
	Trachelospermum asiaticum / Star Jasmine 10% 1 gal 18" oc 6" HT. 8" Runners. Non-Native. Drought Tolerant.	
	Trachelospermum jasminoides `Variegatum` / Variegated Confederate Jasmine 10% 1 gal 18" oc 6" HT. 8" Runners. Non-Native. Drought Tolerant.	
	Tripsacum dactyloides / Fakahatchee Grass 15% 1 gal 36" oc 18" HT. Native. Drought Tolerant	
	Tripsacum floridanum / Dwarf Fakahatchee 10% 3 gal 30" oc 18" HT. Native. Drought Tolerant	
	Zamia floridana / Coontie Palm 10% 3 gal 30" oc 10" HT. Native. Drought Tolerant	



A **PALM TREE**
SCALE: N.T.S.



B **TREE STAKING DETAIL**
SCALE: N.T.S.



C **SHRUB PLANTING DETAIL**
SCALE: N.T.S.

DATE	DESCRIPTION	BY
	REVISIONS	

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NEW RIVER LAKES PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
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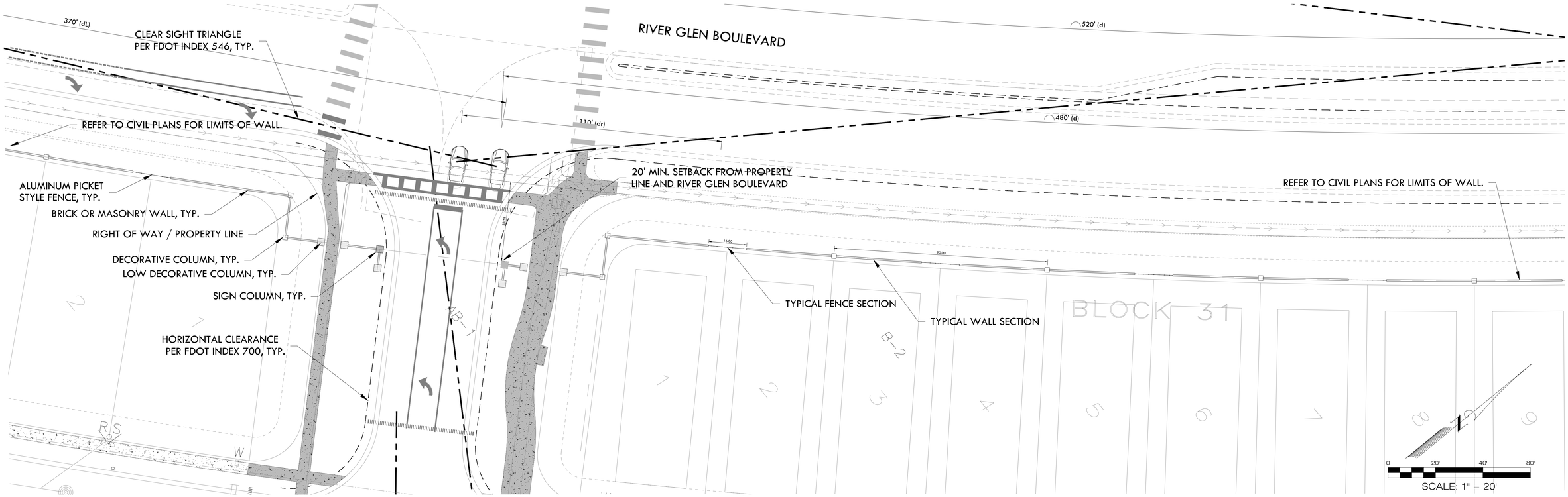
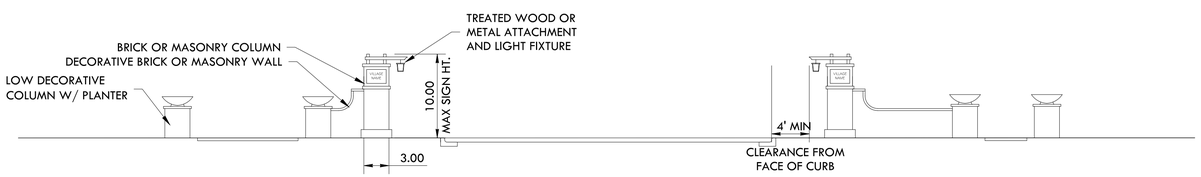


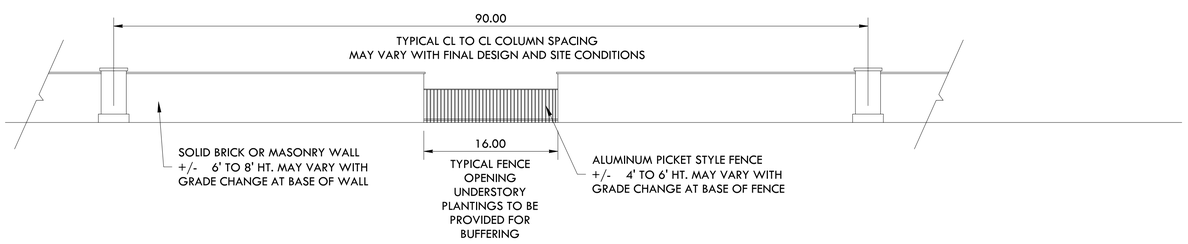
ENTRANCE HARDSCAPE PLAN DETAIL

SCALE: 1"=20'



ENTRANCE HARDSCAPE CONCEPTUAL ELEVATION VIEW FACING SOUTH FROM RIVER GLEN BOULEVARD

NOT TO SCALE



BUFFER WALL AND FENCE CONCEPTUAL ELEVATION

NOT TO SCALE

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
HANNAH D. MCALEER LA # 6667074
FLORIDA REGISTERED LANDSCAPE ARCHITECT

SIGN & WALL DETAILS

JOB NO. STX-NR-006
DESIGN HM
DRAWN HM
DATE 05-26-2015
FILE HP

NEW RIVER LAKES PARCEL E PHASE 1

PREPARED FOR: **SITEX NR DEVELOPMENT, LLC**

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83Feet

SHEET 54 OF 54 SHEETS

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