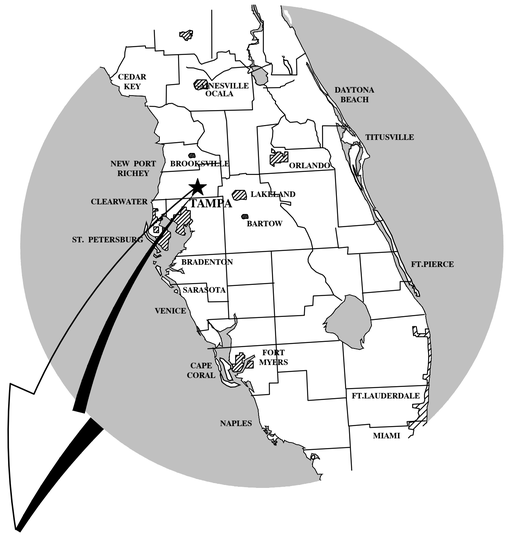
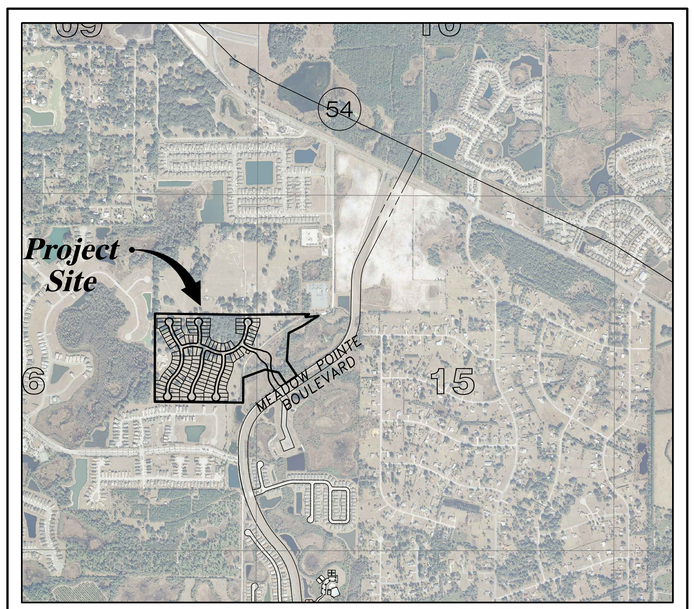


MEADOW POINTE IV
PARCEL EF "PROVENCE"

PRELIMINARY DEVELOPMENT PLAN / CONSTRUCTION PLANS



VICINITY MAP
PASCO COUNTY, FLORIDA
SECTION 15 & 16 – TOWNSHIP 26 SOUTH – RANGE 20 EAST

INDEX OF CONSTRUCTION PLANS

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LS–0 to LS–11	LANDSCAPE PLANS BY ELM

PREPARED FOR:

STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP
405 N. Reo Street
Suite 330
Tampa, Florida 33609
Phone: (813) 288–7735

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.	
ADDRESS / CONTROL NO.	
WATER COMMITMENT	
SEWER COMMITMENT	
SWFWMD	
WATER DEP	
SEWER DEP	
FOLIO	

NOTE:
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

MEADOW POINTE IV
PARCEL EF "PROVENCE"

DATE: JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

DATE: 12/18/2013 JOB NO. SPH–MP–016

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = –0.84 Feet

STREET & DRAINAGE	WATER & SANITARY SEWER
DESIGNED BY: FERREIRA	DESIGNED BY: WILCOX
DRAWN BY: MEETZE	DRAWN BY: WILCOX

FILE: CV SHEET 1 OF 40

P:\WESLEY CHAPEL LAKES\PARCELS E AND F SP\ENGINEERING\DRAWING\CONDOCV\CV.DWG–COVER SHEET 2013/12/19 11:56 AM TIM FERREIRA

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: 60.47 Ac.±
2. Land use: VACANT PASTURE
3. Vegetation: PALMETTO, SCATTERED PINE
4. Receiving waters or municipal separate storm water system: BASSET BR. (E) 1455 (W)
5. 2 Year/24 Hour rainfall depth: 4.3"
6. Soil types: POMONA, ZEPHYR, PALMETTO, NEWNAN, EAUGALLIE

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: OCT 2014
4. Anticipated completion date: OCT 2019
5. Total acres disturbed: 46.5 Ac.
6. Pre-developed "C" factor: 0.20
7. Post-developed "C" factor: 0.45
8. The storm water management system, upon completion of construction and appropriate certification and as-built submittals will be operated and maintained by MEADOW POINTE PARCELS E & F CDD
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.

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 twenty-four (24") 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 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.
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, interceptor 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.
30. All sodded slopes over 4 to 1, shall be installed with sod pegs.

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 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 line, as well as seeding and mulching of the balance of the pond tracts (including pond berms, excluding the area below NW), 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 of the 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:
    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.
    2. Take immediate measures to ensure no surface water drains into the affected areas.
    3. Visually inspect the affected area.
    4. Excavate and backfill or grout as required to fill the affected area and prevent further subsidence.
    5. Use soil reinforcement materials in the backfilling operation, when appropriate.
    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.
    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.
    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.

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, or be 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:

a). 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;

b). 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;

c). 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;

d). 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.

In all instances, the minimum pond depth (including floodplain and wetland mitigation areas) shall be no less than required by the Engineer.

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:

a). 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;

b). 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;

c). 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;

d.) 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.

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.

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.)

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:

a). 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;

b). 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;

c). placed along the bottom of selected floodplain mitigation ponds (not in side banks), not below the permitted excavation depth of the pond;

d.) placed along the bottom of selected deeper stormwater ponds (not in side banks), not below the permitted design depth.

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.

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.)

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:

a). 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;

b). 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;

c). 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.
d.) 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.

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.

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.)

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.

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.

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

GENERAL NOTES

JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN FERREIRA
DATE 12/18/2013
FILE GN

MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

N

200 100 0 100 200

SCALE: 1" = 100'

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 BASED ON THE ABOVE.

DATE OF PHOTOGRAPH: 2011

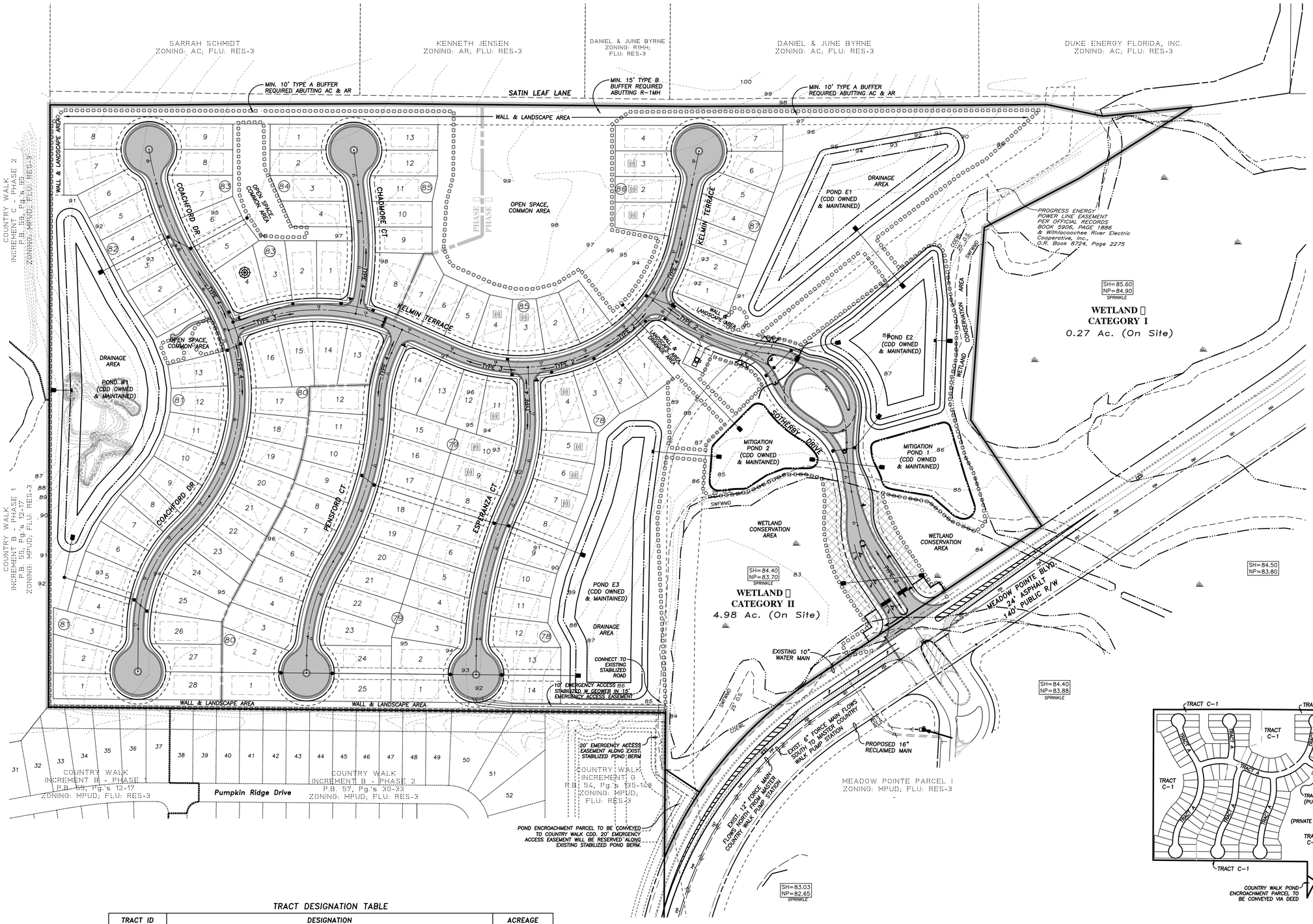
DATE	DESCRIPTION	BY
	REVISIONS	

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

AERIAL SITE PLAN

JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE ASP	SHEET 3 OF 99 SHEETS



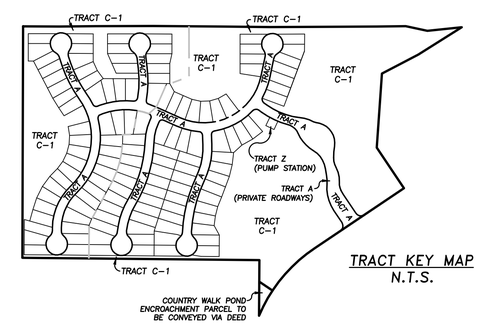
LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
10	10	STRUCTURE NO.
+115.0	+115.00 OR 115x00	SPOT ELEVATION
115	115.00	CONTOUR
		DIRECTION OF SURFACE FLOW
		STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)
		FLOATING TURBIDITY BARRIER
COEWL		ACOE WETLAND LINE
SWFWMD		SWFWMD WETLAND LINE
25' O.S.		25' OFFSET FROM WETLAND LINE (SHOWN FOR INFORMATIONAL PURPOSES)
ZONE A		1992 FEMA FLOOD ZONE BOUNDARY
WETLAND "III"		WETLAND ID*
CATEGORY I		PASCO WETLAND CATEGORY
III A		TOTAL ON-SITE ACREAGE
SH=69.98 NP= N/A		SEASONAL HIGH WATER ELEVATION*
		*TAKEN FROM CURRENT PROJECT APPROVALS
		PROJECT BOUNDARY
M		PROPOSED MODEL LOT OR PARKING
		PROPOSED WETLAND IMPACTS

SEE MASTER DRAINAGE PLAN FOR WETLAND SUMMARY TABLE

REFER TO NEIGHBORHOOD GRADING PLAN (SHEETS 9-14) FOR EASEMENTS

THERE ARE NO KNOWN WELLHEAD PROTECTION AREAS WITHIN 1,000 FEET OF THE DEVELOPMENT



TRACT KEY MAP
N.T.S.

TRACT DESIGNATION TABLE

TRACT ID	DESIGNATION	ACREAGE
TRACT A	PRIVATE RIGHT-OF-WAY; UTILITY EASEMENT	7.8±
TRACT C-1	WETLAND CONSERVATION AREA; DRAINAGE AREA; COMMON AREA; LANDSCAPE AREA; WALL & LANDSCAPE AREA; EMERGENCY ACCESS EASEMENT; UTILITY EASEMENT	29.8±
TRACT Z	PUBLIC PUMP STATION	0.03±

NOTES:
1. TRACT ACREAGE IS MORE OR LESS AND SUBJECT TO MINOR CHANGE BASED UPON FINAL DETERMINATION WITH PLATTING.

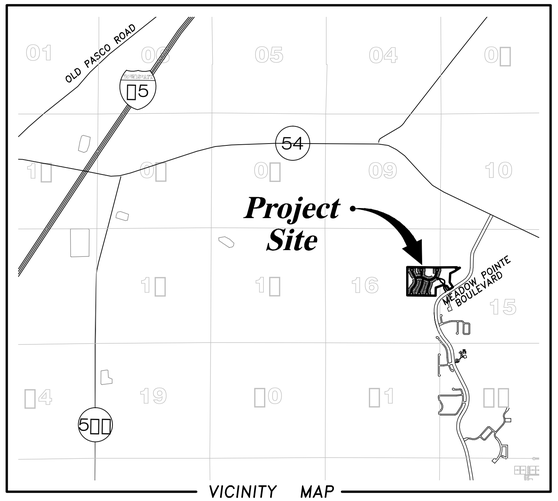
DATE	DESCRIPTION	BY
	REVISIONS	

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

PRELIMINARY DEVELOPMENT PLAN

MEADOW POINTE IV PARCEL EF "PROVENCE"

JOB NO.	SPH-MP-016
DESIGN	FERREIRA
DRAWN	GAM
DATE	12/18/2013
FILE	PDP
PREPARED FOR:	STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet



VICINITY MAP
PASCO COUNTY, FLORIDA
SECTION 15 & 16 – TOWNSHIP 26 SOUTH – RANGE 20 EAST

MEADOW POINTE IV
PARCELS "E & F"

DESCRIPTION: A parcel of land lying in Sections 15 and 16, Township 26 South, Range 20 East, Pasco County, Florida, and being more particularly described, as follows:

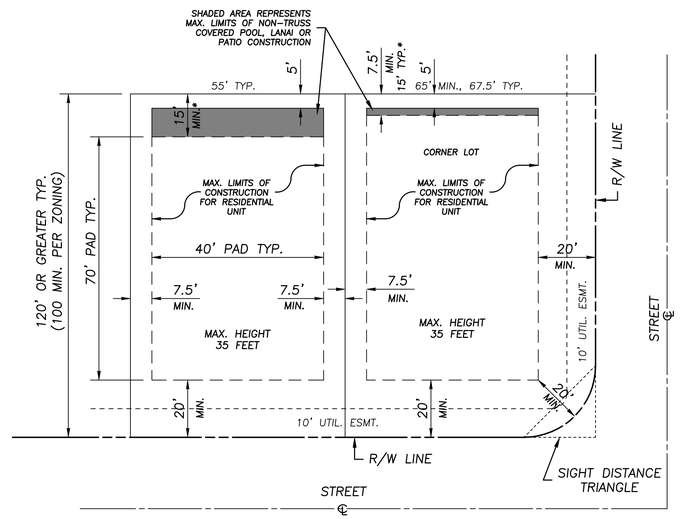
Commence at the Northwest corner of said Section 15, run thence along the West boundary of the Northwest 1/4 of said Section 15, S.00°17'42"W., 1321.75 feet to the Northwest corner of the Southwest 1/4 of said Northwest 1/4 of Section 15, said point also being the POINT OF BEGINNING; thence along the North boundary of said Southwest 1/4 of the Northwest 1/4 of Section 15, N.89°29'12"E., 978.23 feet to a point on the Westerly Maintained Right-of-way for SMITH ROAD, per Pasco County Florida Right-of-way Map, Project No. X-9089.00; thence along the Westerly and Southerly right-of-way lines of said SMITH ROAD, the following five (5) courses: 1) S.71°49'24"W., 5.34 feet; 2) S.60°46'19"W., 58.45 feet; 3) S.20°02'12"E., 15.83 feet 4) N.84°08'15"E., 217.46 feet; 5) N.81°28'38"E., 174.75 feet to a point on the aforesaid North boundary of the Southwest 1/4 of the Northwest 1/4 of Section 15; thence along said North boundary of the Southwest 1/4 of the Northwest 1/4 of Section 15, N.89°29'12"E., 13.30 feet to the Northwest corner of the Southeast 1/4 of aforesaid Northwest 1/4 of Section 15; thence along the North boundary of said Southeast 1/4 of the Northwest 1/4 of Section 15, N.89°29'12"E., 273.70 feet to a point on the Westerly right-of-way line of MEADOW POINTE BOULEVARD, as recorded in Official Records Book 6414, Page 1644 and Official Records Book 6414, Page 1656, of the Public Records of Pasco County, Florida; thence along said Westerly right-of- way of MEADOW POINTE BOULEVARD the following four (4) courses: 1) S.01°19'20"W., 17.93 feet to a point of curvature; 2) Southwesterly, 697.93 feet along the arc of a curve to the right having a radius of 729.00 feet and a central angle of 54°51'13" (chord bearing S.28°44'57"W., 671.58 feet) to a paint of tangency; 3) S.56°10'34"W., 1181.98 feet to a point of curvature; 4) Southwesterly, 496.99 feet along the arc of a curve to the left having a radius of 854.00 feet and a central angle of 33°20'37" (chord bearing S.39°30'15"W., 490.01 feet) to a point on the West boundary of the Northwest 1/4 of the Southwest 1/4 of said Section 15; thence along said West line of the Northwest 1/4 of the Southwest 1/4 of Section 15, N.00°26'13"E., 310.90 feet to a point on the South boundary of the Southeast 1/4 of the Northeast 1/4, of said Section 16; thence along said South boundary of the Southeast 1/4 of the Northeast 1/4 of Section 16, N.89°27'55"W., 1324.90 feet to the Southwest corner of said Southeast 1/4 of the Northeast 1/4 Section 16; thence along the West boundary of said Southeast 1/4 of the Northeast 1/4 of Section 16, N.00°08'50"E., 1322.76 feet to the Northwest corner of said Southeast 1/4 of the Northeast 1/4 of Section 16; thence along the North boundary of said Southeast 1/4 of the Northeast 1/4 of Section 16, S.89°15'10"E., 1332.60 feet to the POINT OF BEGINNING.

LESS AND EXCEPT:

WETLAND PARCEL #1
DESCRIPTION: A parcel of land lying in Section 15, Township 26 South, Range 20 East, Pasco County, Florida, and being more particularly described as follows:
Commence at the Northwest corner of said Section 15, run thence along the West boundary of the Northwest 1/4 of said Section 15, S.00°17'42"W., 1321.75 feet to a point on the North boundary of the Southwest 1/4 of said Northwest 1/4 of Section 15; thence along said North boundary of the Southwest 1/4 of the Northwest 1/4 of Section 15, the following two (2) courses: 1) N.89°29'12"E., 1162.03 feet to the POINT OF BEGINNING; 2) continue N.89°29'12"E., 168.00 feet; thence N.89°32'32"E., 273.69 feet to a point on the Westerly right-of-way line of MEADOW POINTE BOULEVARD, as recorded in Official Records Book 6414, Page 1644 and Official Records Book 6414, Page 1656, of the Public Records of Pasco County, Florida; thence along said Westerly right-of-way line of MEADOW POINTE BOULEVARD the following three (3) courses: 1) S.01°19'20"W., 17.93 feet to a point of curvature; 2) Southwesterly, 697.93 feet along the arc of a curve to the right having a radius of 729.00 feet and a central angle of 54°51'13" (chord bearing S.28°44'57"W., 671.58 feet) to a point of tangency; 3) S.56°10'34"W., 581.98 feet; thence N.33°49'26"W., 274.18 feet; thence N.04°00'00"E., 414.38 feet; thence N.62°35'50"E., 229.28 feet; thence N.57°42'55"E., 337.58 feet to the POINT OF BEGINNING.

SITE DATA TABLE

UPLANDS	WETLANDS	TOTAL ACRES	LOTS	GROSS DENSITY	NET DENSITY
55.22 Ac.±	5.25 Ac.±	60.47 Ac.±	125	2.26 DU/Ac	2.07 DU/Ac



SMALLEST REGULAR LOT DETAILS
TYPICAL 55' LOT
– NOT TO SCALE –

MINIMUM LOT STANDARDS (TAKEN FROM MPUD 7060):

Typical Single–Family Building Arrangement (Minimum 50.00–50.99–Foot–Wide Lot)

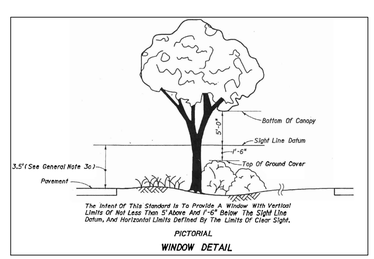
1. Minimum Lot Width of 50.00 Feet
2. Minimum Lot Depth of 100.00 Feet
3. Minimum Front–Yard Setback of 20 Feet for Garage and 15.00 feet for Building
4. Minimum Side–Yard Setback of 7.5 Feet
5. Minimum Rear–Yard Setback of 15.00 Feet
6. Minimum Lot Area of 5,000.00 Square Feet
7. Maximum Lot Coverage of 50 Percent–Principal Structure
8. Maximum Lot Coverage of 15 Percent–Accessory Structure

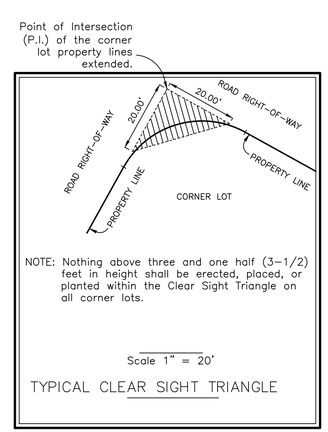
NEIGHBORHOOD PARK REQUIREMENTS:

Parcel EF is included within the Meadow Pointe Neighborhood Park variance.

INTERSECTION CLEAR SIGHT REQUIREMENTS:

1. *Local Intersections shall remain unobstructed per "Typical Clear Sight Triangle Detail" and FDOT Index 546 "Window Detail" shown below.*





PRELIMINARY PLAN NOTES:

1. *Owner:* Maxcy Development Group Holdings – Meadow Pointe IV, Inc.
   5020 W. Linebaugh Ave., Suite 250
   Tampa, FL. 33624
   (813) 915–3449
2. *Developer:* Standard Pacific of Florida
   405 N. Reo Street, Suite 330
   Tampa, Florida 33609
   (813) 288–7735
3. *Engineer:* Clearview Land Design, P.L.
   1213 E. 6th Ave.
   Tampa, Florida 33605
   (813) 223–3919
4. *Surveyor:* GeoPoint Surveying, Inc.
   1403 E. 5th Ave.
   Tampa, Florida 33605
   (813) 248–8888
5. Existing Zoning: MPUD Petition No. 7060 (Current Approval 07–09–2013)
6. Existing Land Use: Vacant/Agricultural
7. Future Land Use Classification: RES–3
8. Water service to be provided by Pasco County Utilities.
9. Sewage disposal service to be provided by Pasco County Utilities.
10. Electrical power to be provided by WREC.
11. Telephone service to be provided by Verizon.
12. Street lighting to be provided by WREC.
13. Fire protection to be provided by the existing Pasco County Fire Station No. 26. Station No. 26 located on Arronwood Boulevard approximately 5.0 miles from the project entrance. Fire Hydrants will be provided on–site.
14. The uplands are palmetto & scattered pines. The wetlands are cypress heads and grass marshes.
15. Predominant soil types on–site consist of Pamona, Sellers, Zephyr and Palmetto.
16. Minimum square footage of dwelling units is 1,000 s.f.
17. Recreation areas, conservation areas, and detention ponds will be owned and maintained by the CDD.
18. Detention ponds to be within tracts dedicated to the Community Development District for maintenance.
19. Contours shown are based on National Geodetic Vertical Datum of 1929.
20. Proposed rights–of–way for local streets shall be a minimum of fifty (50) feet.
21. All roadway standards to comply with the Manual of Uniform Minimum Standards, State of Florida.
22. All water and wastewater facilities to be installed in compliance with Pasco County Standards for design and construction of water and wastewater facilities.
23. All utility lines shall be installed underground.
24. Entire project lies within Flood Zone "X" according to Federal Emergency Management Agency (FEMA) – Flood Insurance Rate Map (FIRM) Community Panel No. 12030 0450E, revised September 30, 1992.
25. A minimum of 16" of sod strip will be provided along all roadways per Pasco County requirements.
26. Corner lots will be a minimum of ten (10) feet greater in width than standard lots.
27. Setbacks from post–developed wetlands shall be as follows: 25–foot minimum around all Category I Wetlands; Buffers around Category II and Category III Wetlands shall be as required by SWFWMD. Allowable uses and restrictions for buffers shall be in accordance with Section 805 of the Pasco County Land Development Code.
28. All non–collector roadways within parcels to be privately owned and maintained with a security gate.
29. 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 compacted non–yielding subgrade, and 6" in thickness is required where sidewalk is crossed by a driveway.
30. Buffering for all retention/detention areas along road right–of–ways to have trees selected from tree list at the rate of one tree per 50 L.F.
31. All landscape and sodded areas along collector road will be irrigated.
32. This project will comply with the Pasco County Tree Protection and Restoration Ordinance.
33. 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.
34. All residential lots shall have a minimum access width of 25 feet along street.
35. Oldwoods Avenue is public right–of–way. Beyond the entries, internal streets are proposed to be privately owned and maintained as private streets. The minimum throat distance for private streets as measured from any proposed gates to the adjacent public right–of–way line shall be 90 feet.
36. 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.
37. 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.
38. All proposed signs must be applied for, approved, and permitted on an individual basis apart from any ultimately–approved site plan. Approval of this site plan does not constitute approval of any signage.
39. All clear–site areas shall be kept free of any signage plantings, trees, etc. in excess of three–and–a–half (3–1/2) feet in height.
40. No irrigation system or landscaping shall be installed in any County or State right–of–way without issuance of appropriate Right–of–way Use Permit.
41. Fugitive dust emissions shall be controlled by sprinkling as necessary.
42. On–site burning shall not be employed without approval from the Fire Marshall.
43. The soil erosion and sediment control devices shall be installed prior to construction, maintained throughout construction and until the site is permanently stabilized.
44. All driveway cuts shall be installed to local streets.
45. The CDD will be responsible for maintenance of the underdrain system.
46. 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.
47. Drainage tracts/easements shall be conveyed to the CDD before the CO/ or by plat. The easements will be required to be given to Pasco County, for the right but not the obligation to maintain. Maintenance responsibility will be that of the Association.
48. In consideration of Pasco County's agreement to provide potable water and/or reclaimed water to the subject property, Developer/Owner, and its successors and assigns, agree to the following:
    (a) In the event of Production Failure or Shortfall by Tampa Bay Water, as set forth in section 3.19 of the Interlocal Agreement creating Tampa Bay Water, Developer/Owner shall transfer to Pasco County any and all water use permits or water use rights the Developer/Owner may have to use or consume surface or ground water within Pasco County.
    (b) Prior to Developer/Owner selling water or water use permits or water use rights, Developer/Owner shall notify Pasco County, and Pasco County shall have a right of first refusal to purchase such water or water use permits or water use rights.
49. 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/areas 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/areas 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/area for the purpose of performing maintenance to ensure the free flow of water.
50. Standard Fire Protection Notes:
    a. All projects must comply with Pasco County Fire Hydrant Ordinance No. 46–51.
    b. Fire hydrants shall be installed and in service prior to the accumulation of combustibles.
    c. Per the National Fire Protection Association, NFPA–1, 16.4.3.1.3: Where underground water mains and hydrants are to be provided, they shall be installed, completed, and in service prior to construction work.
    d. Per NFPA–1, 18.3.4.1: Clearances of 7 1/2 feet in front of and to the sides of the fire hydrant with a 4–foot clearance to the rear must be maintained at all times.
    e. Gated entris require a Sire Operating System or a 3M Opticom system for emergency access.

RESIDENT & VISITOR PARKING REQUIREMENTS:

1. *REQUIRED:*
   1.1. Resident: 3 spaces x 125 units = 375 Spaces
   1.2. Visitor: 0.25 spaces X 125 units = 32 Spaces
   1.3. Total Required = 407 Required
2. *PROVIDED:*
   2.1. (2–car garage plus 2–car driveway) x 125 units = 500 Provided

**These calculations represent a conservative scenario where all houses are 4 bedroom or greater with only a 2–car garage. However, 2 and 3 bedroom houses will be offered in this community. All houses in this community will have at least a 2–car garage.

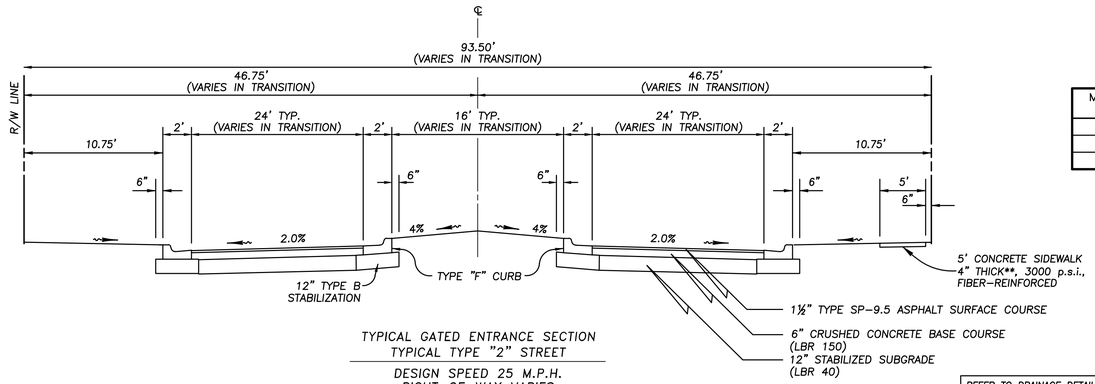
DATE	DESCRIPTION	BY
	REVISIONS	

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

PRELIMINARY DEVELOPMENT PLAN

JOB NO. SPH–MP–016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = –0.84 Feet
FILE PDP	SHEET 5 OF 40 SHEETS



TYPICAL GATED ENTRANCE SECTION
TYPICAL TYPE "2" STREET

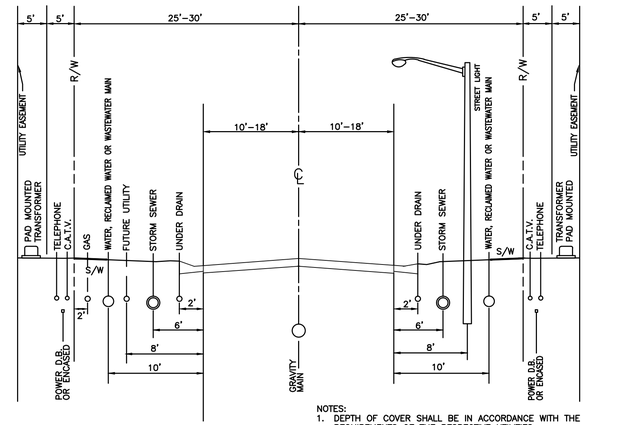
DESIGN SPEED 25 M.P.H.
RIGHT-OF-WAY VARIES
N.T.S.

REFER TO DRAINAGE DETAILS PLAN FOR UNDERDRAIN DETAILS

PASCO COUNTY
PAVEMENT DESIGN CRITERIA

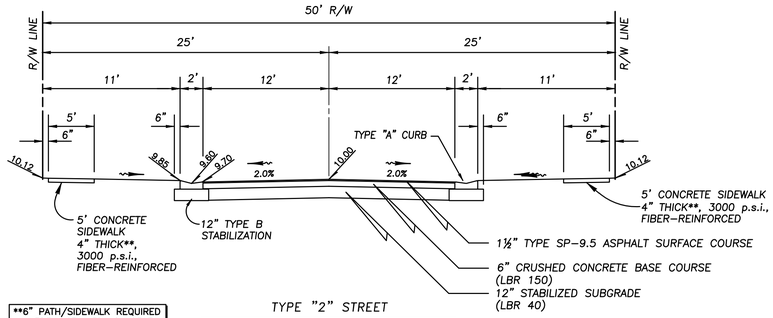
MINIMUM SN*	ROADWAY CLASSIFICATION
2.34	LOCAL
3.50	TYPE 1
3.50	SUBDIVISION COLLECTOR

* FROM PASCO COUNTY LDC SECTION 901



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.

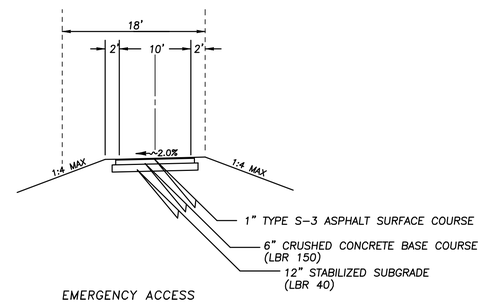
RECOMMENDED UTILITY LOCATIONS
SCALE: N.T.S.



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

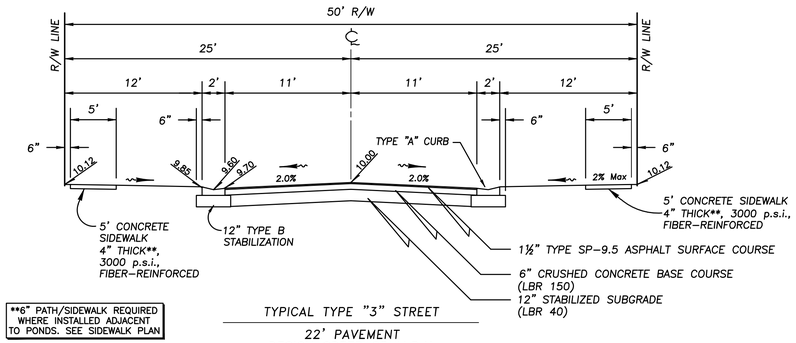
TYPE "2" STREET

24' PAVEMENT
DESIGN SPEED 25 M.P.H.
N.T.S.



EMERGENCY ACCESS

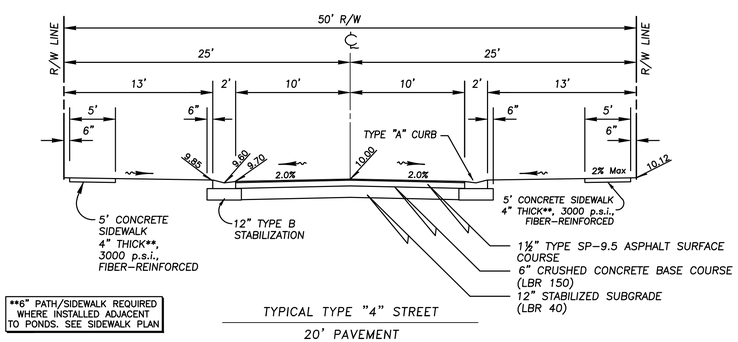
10' PAVEMENT
N.T.S.



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

TYPICAL TYPE "3" STREET

22' PAVEMENT
DESIGN SPEED 25 M.P.H.
N.T.S.



**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.

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:*
   a. *Conform with the gradation chart from Section 204 of the FDOT Standard Specifications for Road and Bridge Construction: Graded Aggregate Base.*
   b. *Should have a minimum Limerock Bearing Ratio (LBR) of 150.*
   c. *Single course lifts should not exceed 6-inches (loose).*
   d. *Should be of uniform quality, free of all organics, steel rebar, asphalt debris, and any other deleterious material.*
   e. *Should be compacted to a minimum of one hundred percent (100%) of the maximum dry density as determined by AASHTO T-180.*
   f. *Type "B" subgrade stabilization is required in accordance with Section 160 of the FDOT Standard Specifications for Road and Bridge Construction: Stabilizing.*
   g. *A minimum Limerock Bearing Ration (LBR) of 40 or greater is required. Subgrade shall be compacted to ninety-eight percent (98%) of the maximum dry density as determined by AASHTO T-180 to the minimum thickness shown.*
   h. *All testing referenced above shall be conducted at a frequency required by the jurisdictional governing agency or according to FDOT standards in the absence of local testing requirements.*
5. *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.*
6. *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.*
7. *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.*
8. *The subgrade shall be inspected and approved by the Engineer prior to placement of any base material.*
9. *The base course shall be inspected and approved by the Engineer prior to placement of any asphalt material.*
10. *Crushed concrete surface shall be inspected and approved by the Engineer prior to any paving operation.*
11. *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.*
12. *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.*
13. *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.*
14. *All Portland Cement Concrete shall have a minimum compressive strength of 3,000 p.s.i. unless otherwise specified.*

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 min.)	12"

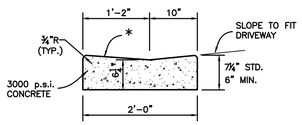
SN = (0.44) (1.75) + (0.15) (8) + (0.04) (12)
= 2.45

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

ALTERNATE PAVEMENT CONSTRUCTION NOTES (SOIL CEMENT)

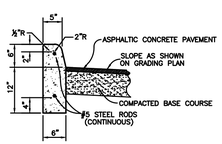
1. *Subgrade under a soil-cement base shall be proof-rolled to grade, as directed by the Engineer and approved by the Engineer with suitable compaction equipment to achieve a density of ninety-eight (98%) percent Modified Proctor for a depth of twelve (12) inches prior to placing soil-cement base.*
2. *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.*

Contractor may propose alternate pavement designs. Contractor shall submit any pavement alternatives to Engineer for approval prior to final subgrade preparations.

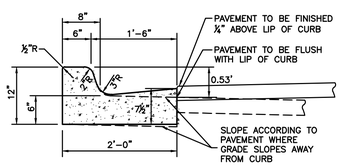


* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN.

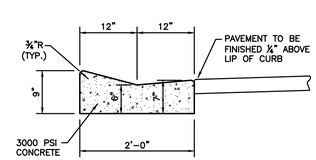
DROP CURB



6" UPRIGHT CURB



TYPE "F"
CURB AND GUTTER



TYPE "A"
CURB AND GUTTER

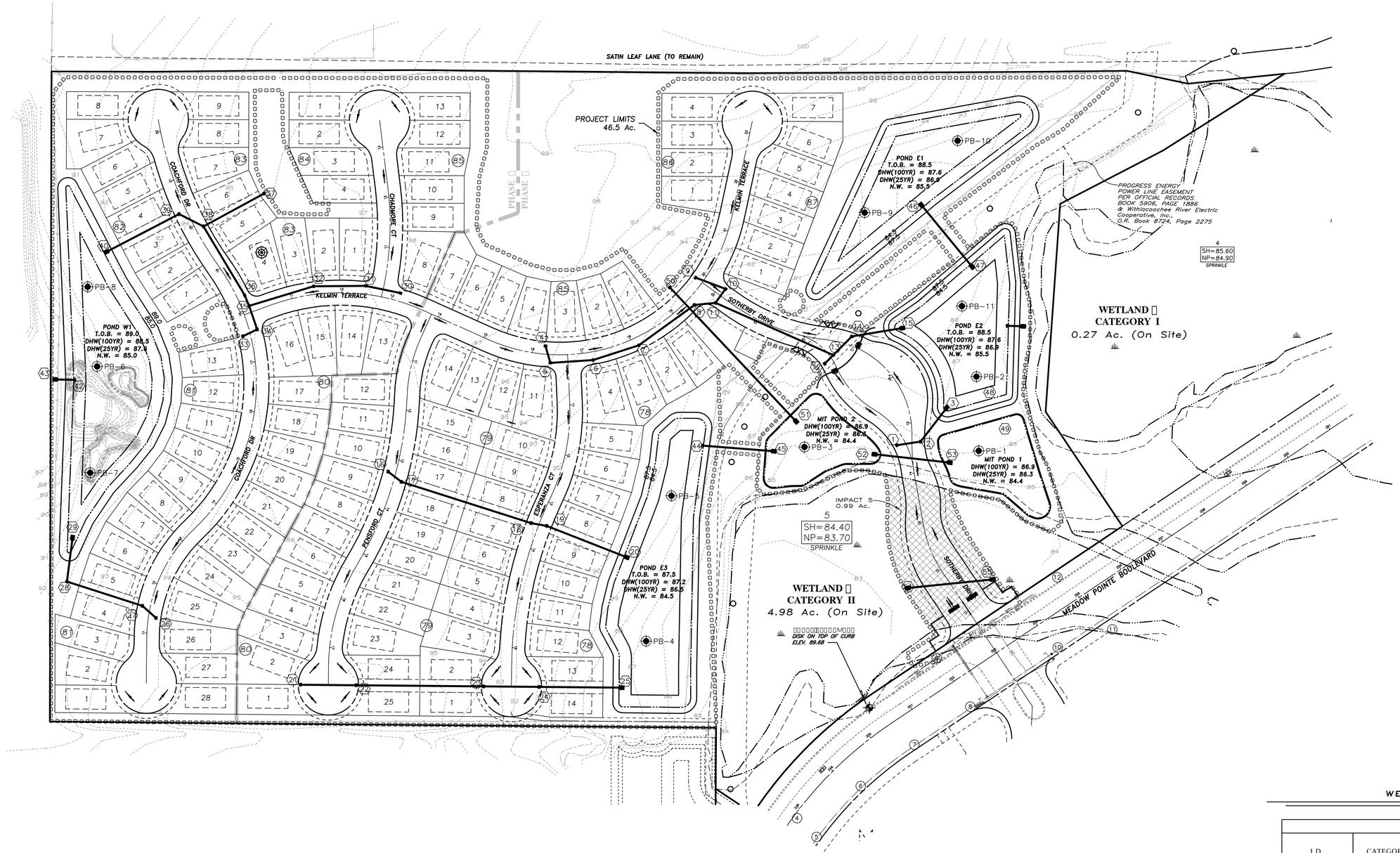
DATE	DESCRIPTION	BY
	REVISIONS	

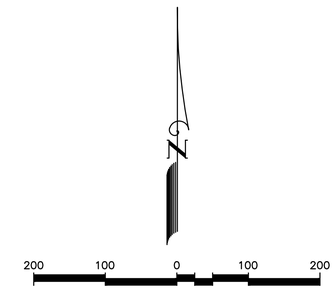
CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

TYPICAL ROADWAY SECTIONS

JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 =-0.84 Feet
FILE RS	SHEET 6 OF 40 SHEETS





LEGEND

- STORM DRAINAGE STRUCTURE
- STRUCTURE NO.
- SPOT ELEVATION
- CONTOUR
- DIRECTION OF SURFACE FLOW
- STAKED EROSION CONTROL (PROJECT LIMITS)
- PB# — POND BORING LOCATION
- SWFWMD — SWFWMD WETLAND LINE
- 25' O.S. — 25' OFFSET TO SWFWMD WETLAND LINE
- WETLAND "III" — WETLAND ID*
- CATEGORY I — PASCO WETLAND CATEGORY
- III A — TOTAL ON-SITE ACREAGE
- SH=69.98 NP= N/A — SEASONAL HIGH WATER ELEVATION*
- *TAKEN FROM CURRENT PROJECT APPROVALS
- PROPOSED WETLAND IMPACTS
- PHASE LINE

WETLAND SUMMARY TABLE

WETLAND SUMMARY TABLE				
I.D.	CATEGORY	SIZE ONSITE (Ac.)	IMPACT I.D.	IMPACT SIZE (Ac.)
4	I	0.27		
5	I	4.98	5	0.99
TOTALS		5.25		0.99

EXISTING DRAINAGE STRUCTURE DATA

(4) Storm Manhole
Top=87.81

(5) (Pipes Under Water)
Grate Top Inlet
Top=86.07
NW Inv.=77.18
SE Inv.=77.5±
NE Inv.=?

(6) (Pipes Under Water)
Grate Top Inlet
Top=86.89
NE Inv.=81.9
NW Inv.=81.9
SW Inv.=81.9

(7) (Pipes Under Water)
Grate Top Inlet
Top=86.95
NW Inv.=82.30
SW Inv.=82.20
NE Inv.=82.40

(8) (Pipes Under Water)
Grate Top Inlet
Top=87.05
NW Inv.=82.62
SW Inv.=82.60

(9) Curb Inlet
Top=88.92

(10) Storm Manhole
Top=88.18
Full of water

(11) Mitered End Section
Inv.(N)=83.35
Inv.(Mid)=83.28
Inv.(S)=83.22

(12) Curb Inlet
Top=88.56
Flowline=87.75

NOTES:

1. Elevations Refer to the National Geodetic Vertical Datum of 1929 (NGVD29)
2. The site appears to lie within Flood Zone "X" according to Federal Emergency Management Agency (FEMA) – Flood Insurance Rate Map (FIRM) Community–Panel No. 120230 0450E, revised September 30, 1992.
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.

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

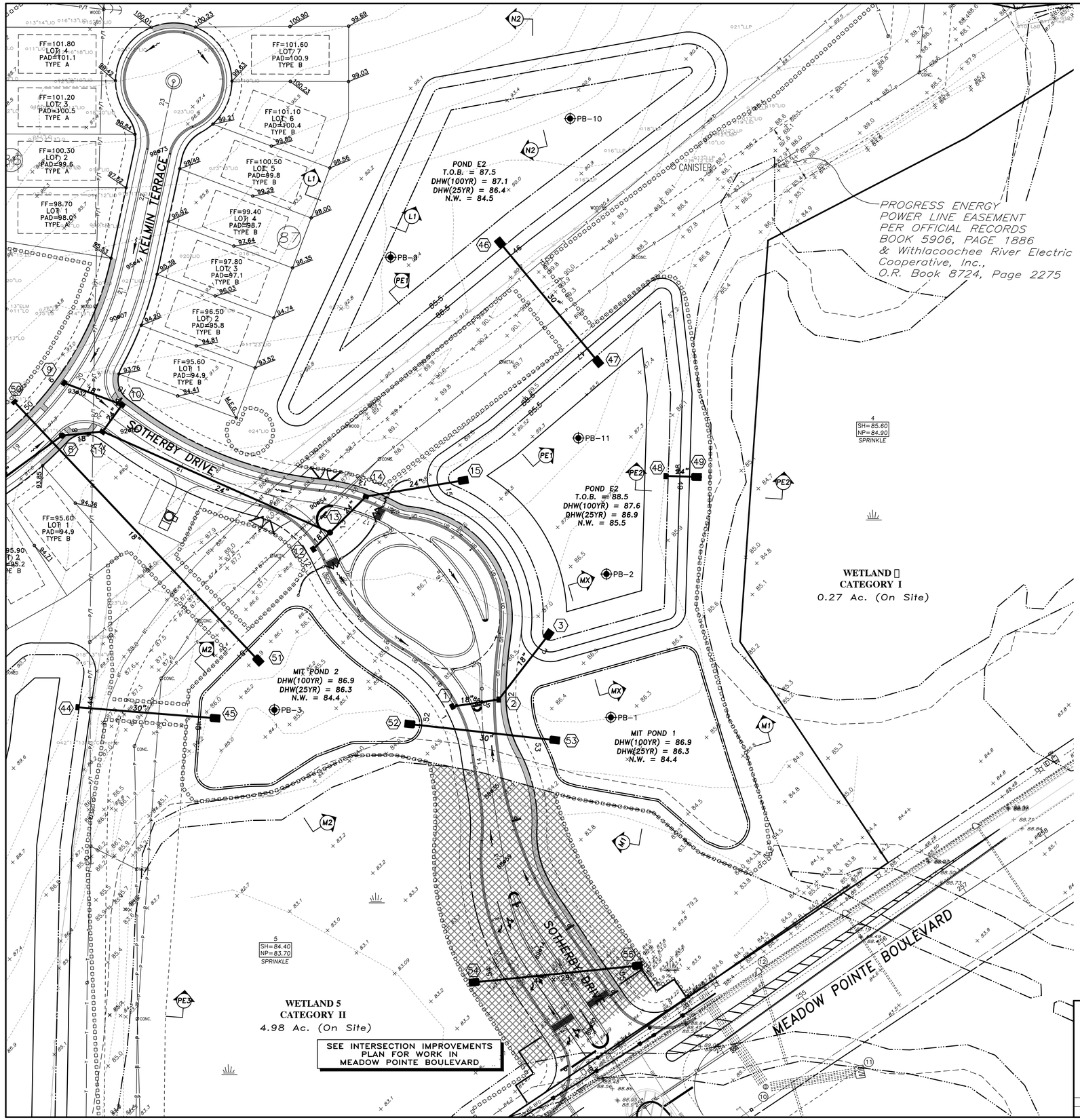
MASTER DRAINAGE PLAN

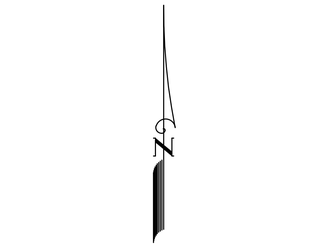
MEADOW POINTE IV PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

JOB NO.	SPH–MP–016
DESIGN	FERREIRA
DRAWN	GAM
DATE	12/18/2013
FILE	MD

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = –0.84 Feet



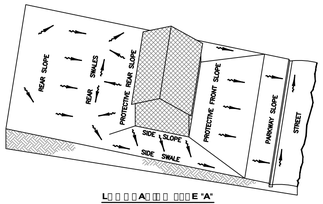


100 50 0 50 100

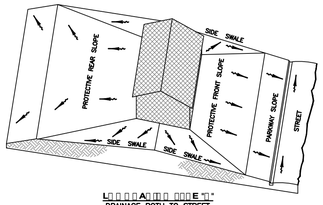
SCALE: 1" = 0'

LEGEND

- STORM DRAINAGE STRUCTURE
- STRUCTURE NO.
- SPOT ELEVATION
- CONTOUR
- DIRECTION OF SURFACE FLOW
- STAKED EROSION CONTROL
- UNDERDRAIN WITH CLEANOUT
- PB–# (–14) — POND BORING LOCATION (MAX DEPTH OF EXCAVATION FROM EXISTING GRADE)
- LB–# — LOT BORING LOCATION
- RA–# — ROAD AUGER LOCATION
- SWFWMD — SWFWMD WETLAND LINE
- 25' O.S. — 25' OFFSET FROM WETLAND LINE (SHOWN FOR INFORMATIONAL PURPOSES)
- ZONE A — 1992 FEMA FLOOD ZONE BOUNDARY
- WETLAND "1" — WETLAND ID*
- CATEGORY I — PASCO WETLAND CATEGORY
- 1.2 A — TOTAL ON–SITE ACREAGE
- 98A SH=69.98 NP=N/A — SEASONAL HIGH WATER ELEVATION*
- *TAKEN FROM CURRENT PROJECT APPROVALS
- FF=67.50 LOT 4 PAD=66.80 TYPE A — FINISH FLOOR ELEVATION; LOT NUMBER; PAD ELEVATION; LOT GRADING TYPE
- PROPOSED SWFWMD WETLAND IMPACTS



LOT TYPE A
ALL DRAINAGE TO STREET



LOT 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%.
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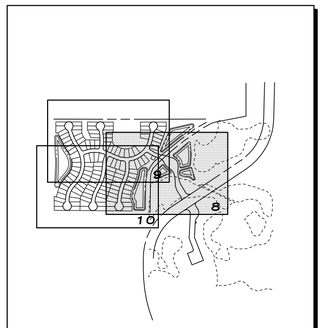


INDEX TO MAP COVERAGE
NOT TO SCALE

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

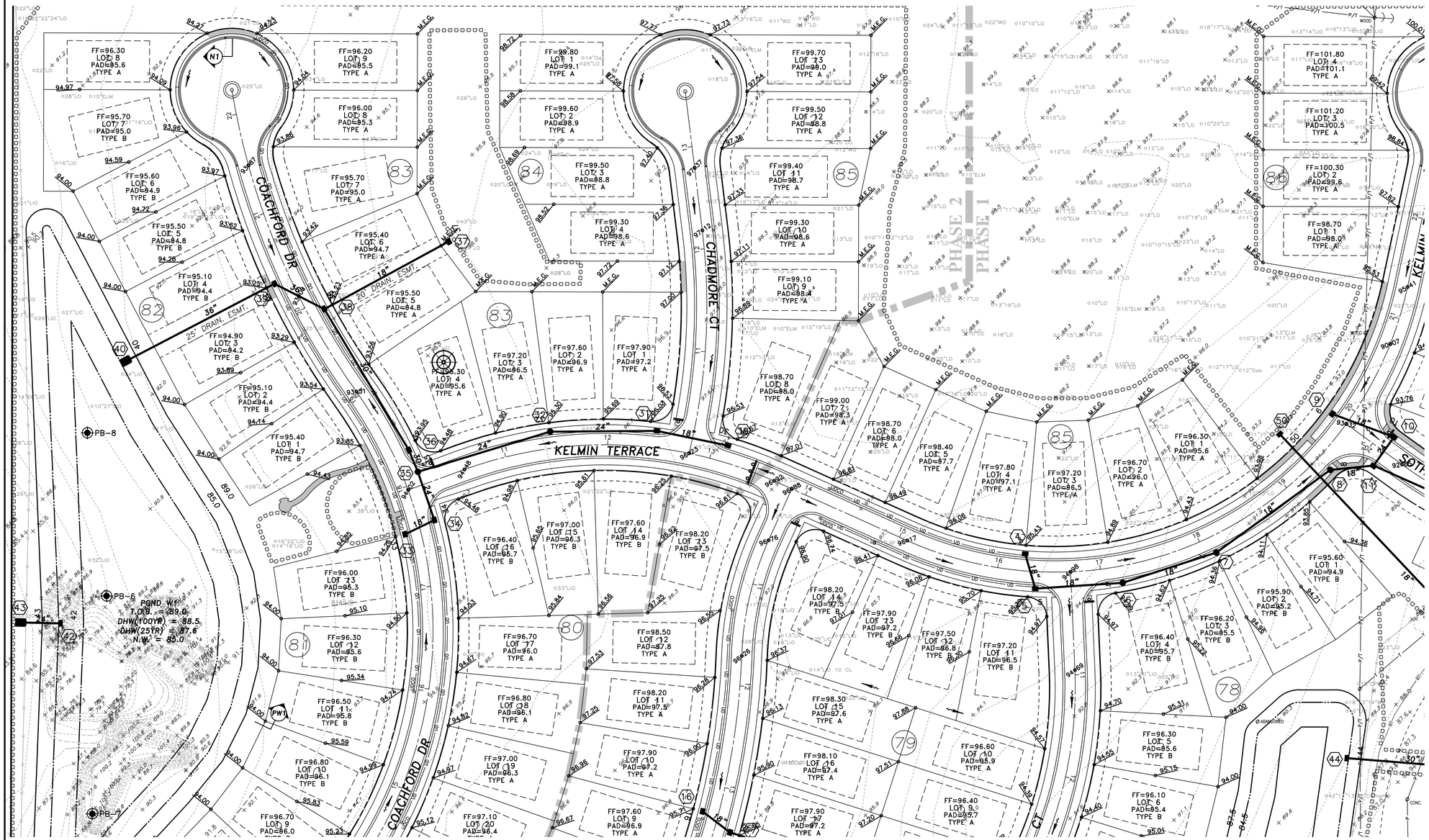
NEIGHBORHOOD GRADING PLAN

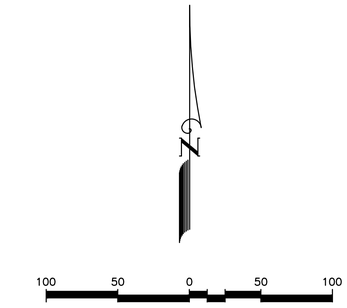
MEADOW POINTE IV PARCEL EF "PROVENCE"

PREPARED FOR: **STANDARD PACIFIC OF FLORIDA**
A FLORIDA GENERAL PARTNERSHIP

JOB NO.	SPH–MP–016
DESIGN	FERREIRA
DRAWN	GAM
DATE	12/18/2013
FILE	NG1

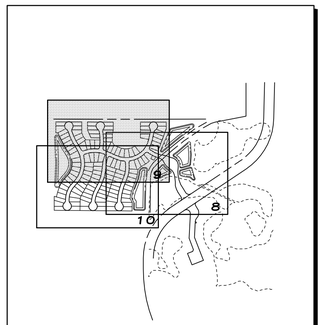
Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = –0.84 Feet





LEGEND

	STORM DRAINAGE STRUCTURE
10	STRUCTURE NO.
+15.00 / 15.00 OR 15.00	SPOT ELEVATION
15 / 15.00	CONTOUR
	DIRECTION OF SURFACE FLOW
	STAKED EROSION CONTROL
UD / UDCO	UNDERDRAIN WITH CLEANOUT
PB-# (-14)	POND BORING LOCATION (MAX DEPTH OF EXCAVATION FROM EXISTING GRADE)
LB-#	LOT BORING LOCATION
RA-#	ROAD AUGER LOCATION
SWFWMD	SWFWMD WETLAND LINE
25' O.S.	25' OFFSET FROM WETLAND LINE (SHOWN FOR INFORMATIONAL PURPOSES)
ZONE A	1992 FEMA FLOOD ZONE BOUNDARY
WETLAND "1"	WETLAND ID*
CATEGORY I	PASCO WETLAND CATEGORY
1.2 A	TOTAL ON-SITE ACREAGE
98A SH=69.98 NP= N/A	SEASONAL HIGH WATER ELEVATION* *TAKEN FROM CURRENT PROJECT APPROVALS
FF=67.50 LOT 4 PAD=66.80 TYPE A	FINISH FLOOR ELEVATION; LOT NUMBER; PAD ELEVATION; LOT GRADING TYPE
	PHASE LINE



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NOT TO SCALE

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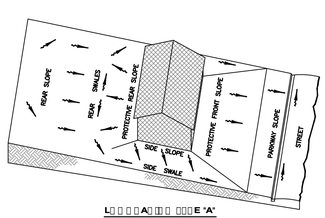
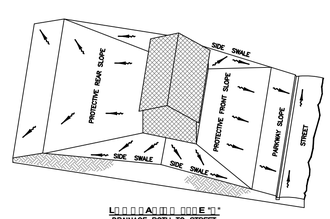


LOT GRADING TYPE "A"
ALL DRAINAGE TO STREET



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

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

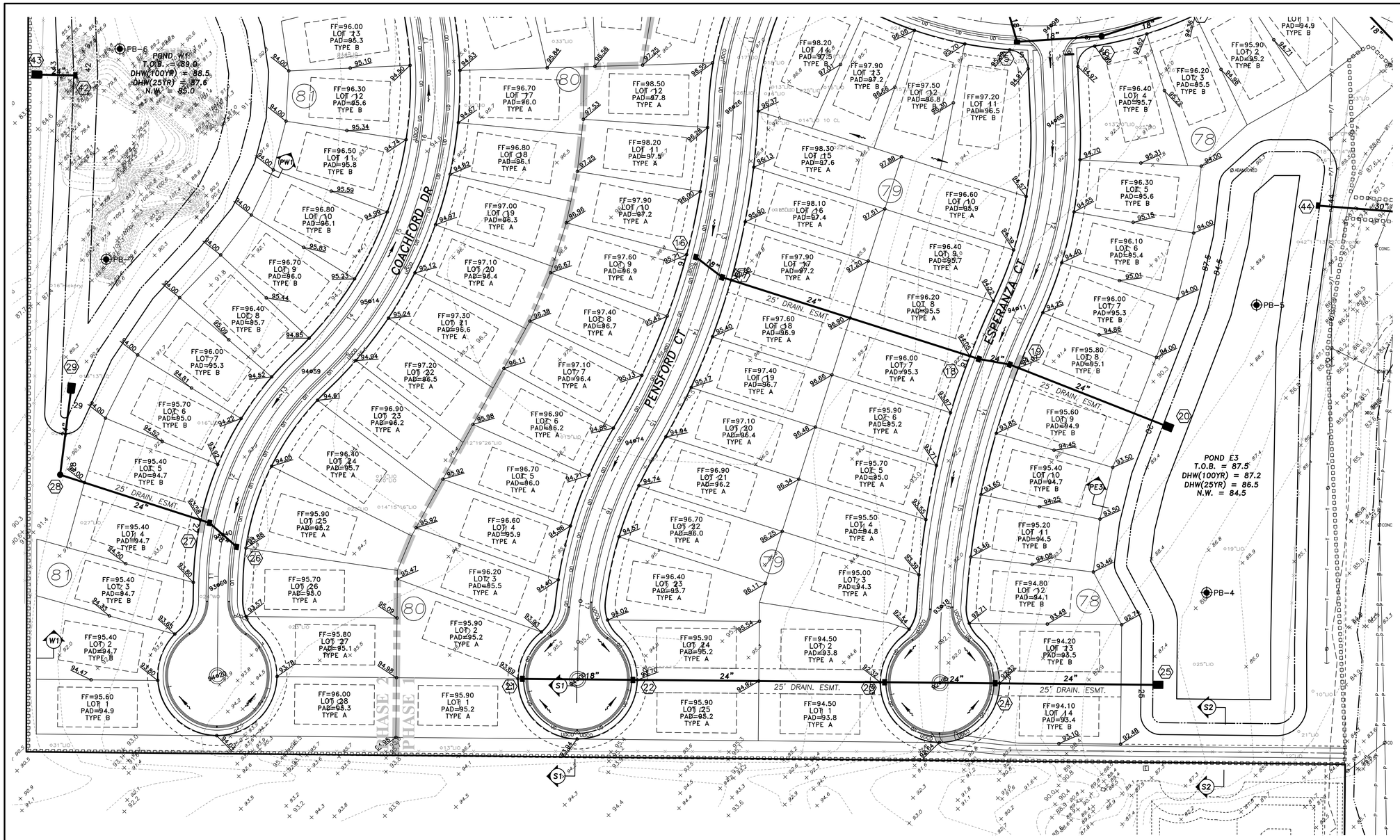
DATE:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

NEIGHBORHOOD GRADING PLAN

MEADOW POINTE IV PARCEL EF "PROVENCE"

JOB NO.	SPH-MP-016
DESIGN	FERREIRA
DRAWN	GAM
DATE	12/18/2013
FILE	NG2
PREPARED FOR:	STANDARD PACIFIC OF FLORIDA, A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet



100 50 0 50 100

SCALE: 1" = 50'

LEGEND

- STORM DRAINAGE STRUCTURE
- STRUCTURE NO.
- SPOT ELEVATION
- CONTOUR
- DIRECTION OF SURFACE FLOW
- STAKED EROSION CONTROL
- UNDERDRAIN WITH CLEANOUT
- PB-# (-14) — POND BORING LOCATION (MAX DEPTH OF EXCAVATION FROM EXISTING GRADE)
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- 1.2 A — TOTAL ON-SITE ACREAGE
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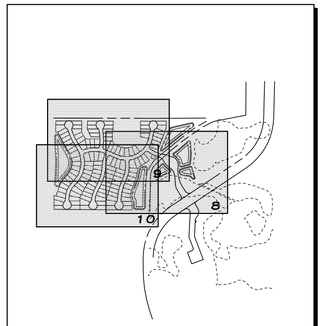
- FF=67.50 LOT 4 PAD=66.80 TYPE A — FINISH FLOOR ELEVATION; LOT NUMBER; PAD ELEVATION; LOT GRADING TYPE
- PHASE LINE



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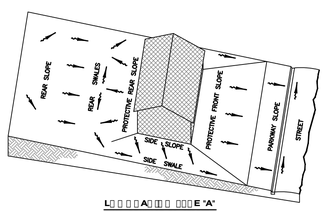
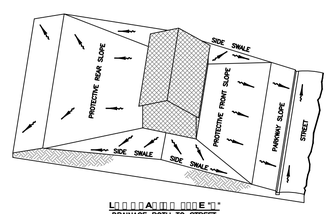


LOT GRADING TYPE "A"
ALL DRAINAGE TO STREET



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

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

NEIGHBORHOOD GRADING PLAN

MEADOW POINTE IV PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

JOB NO.	SPH-MP-016
DESIGN	FERREIRA
DRAWN	GAM
DATE	12/18/2013
FILE	NG3

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 10 OF 40 SHEETS

S□□ □M S□□□C□□□E □A□A

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	I CURB INLET	87.95	RCP	18	48	0.20	83.35	83.25	0.10	
2	I CURB INLET	87.95	RCP	18	79	0.40	81.50	81.19	0.32	
3	MES									
4	I CURB INLET	95.19	RCP	18	35	0.30	90.59	90.49	0.11	
5	I CURB INLET	95.10	RCP	18	85	0.40	89.99	89.65	0.34	
6	MANHOLE	94.66	RCP	18	95	0.40	89.65	89.27	0.38	
7	MANHOLE	94.17	RCP	18	136	0.40	89.27	88.72	0.54	
8	MANHOLE	93.48	RCP	18	42	0.30	86.52	86.40	0.13	
11	MES									
9	I CURB INLET	93.20	RCP	18	63	0.50	87.20	86.89	0.32	
10	I CURB INLET	92.75	RCP	24	34	0.30	86.39	86.28	0.10	
11	I CURB INLET	92.75	RCP	24	256	0.40	85.84	84.82	1.02	
13	MES									
12	I CURB INLET	90.05	RCP	18	24	0.20	85.45	85.40	0.05	
13	MANHOLE	90.80	RCP	24	52	0.40	84.90	84.69	0.21	
14	I CURB INLET	90.05	RCP	24	96	0.40	83.09	82.71	0.38	
15	MES									
16	I CURB INLET	95.47	RCP	18	35	0.20	90.87	90.80	0.07	
17	I CURB INLET	95.41	RCP	24	270	0.40	87.05	85.97	1.08	
18	I CURB INLET	93.81	RCP	24	32	0.40	82.72	82.59	0.13	
19	I CURB INLET	93.82	RCP	24	165	0.20	82.59	82.26	0.33	
20	MES									
21	I CURB INLET	93.65	RCP	18	110	0.40	87.15	86.71	0.44	
22	I CURB INLET	93.66	RCP	24	253	0.40	86.21	85.20	1.01	
23	I CURB INLET	92.28	RCP	24	110	0.50	85.20	84.65	0.55	
24	I CURB INLET	92.28	RCP	30	158	0.30	83.55	83.07	0.47	
25	MES									
26	I CURB INLET	93.34	RCP	18	33	0.30	85.34	85.24	0.10	
27	I CURB INLET	93.34	RCP	24	102	0.20	84.74	84.54	0.20	
28	MANHOLE	91.00	RCP	24	185	0.40	83.84	83.10	0.74	
29	MES									
30	I CURB INLET	96.38	RCP	18	70	0.40	89.88	89.60	0.28	
31	I CURB INLET	95.84	RCP	24	103	0.20	89.10	88.89	0.21	
32	MANHOLE	95.11	RCP	24	134	0.20	87.39	87.13	0.27	
35	MES									
33	I CURB INLET	94.02	RCP	18	31	0.20	89.42	89.36	0.06	
34	I CURB INLET	94.00	RCP	24	49	0.20	87.24	87.14	0.10	

S□□ □M S□□□C□□□E □A□A

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35	MANHOLE	93.84	RCP	30	22	0.20	86.64	86.60	0.04	
36	I CURB INLET	93.74	RCP	30	159	0.20	86.60	86.28	0.32	
38	MES									
37	I CURB INLET	95.00	RCP	18	137	0.50	89.00	88.32	0.69	
38	I CURB INLET	92.99	RCP	36	54	0.20	82.97	82.86	0.11	TYPE 'J' STRUCTURE BOTTOM
39	I CURB INLET	93.01	RCP	36	158	0.20	82.36	82.04	0.32	TYPE 'J' STRUCTURE BOTTOM
40	MES									
42	MANHOLE	88.00	RCP	24	40	1.25	82.00	81.50	0.50	POND W1 OUTFALL
43	MES									
44	MANHOLE	86.50	RCP	24	140	1.07	81.50	80.00	1.50	POND E3 OUTFALL
45	MES									
46	MANHOLE			30	154		81.50	81.50		POND E1-E2 INTERCONNECT
47	MES									
48	MANHOLE	86.50	RCP	24	50	2.00	81.50	80.50	1.00	POND E1 OUTFALL
49	MES									
50	MANHOLE	92.50	RCP	18	360	1.61	86.80	81.00	5.80	PARK AREA BYPASS
51	MES									
52	MANHOLE			30	160		80.00	80.00		MIT PONDS INTERCONNECT
53	MES									
54	MANHOLE			29	154		81.50	81.50		ENTRANCE CROSS PIPE
55	MES									

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

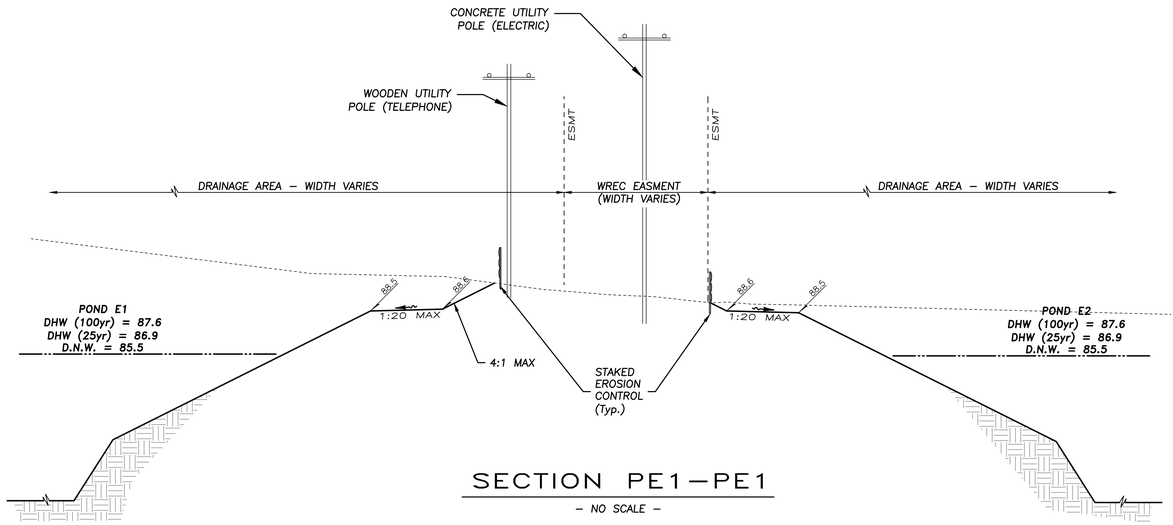
STORM STRUCTURE DATA

JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN FERREIRA
DATE 12/18/2013
FILE ST

MEADOW POINTE IV PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet



SECTION PE1–PE1

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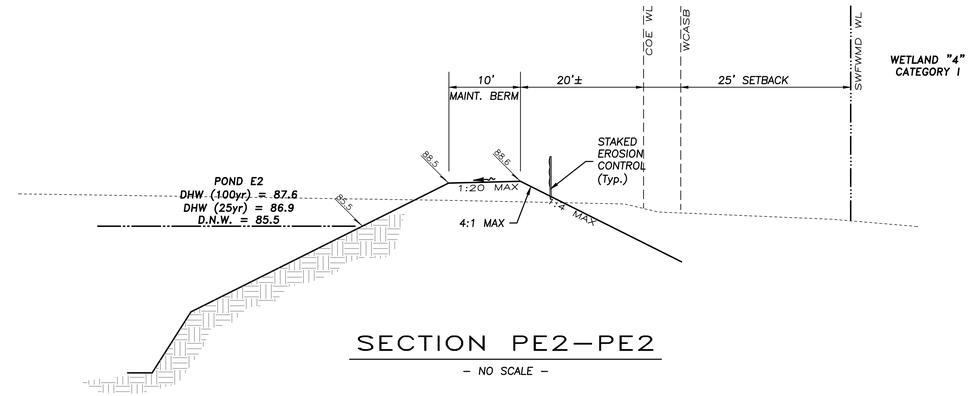

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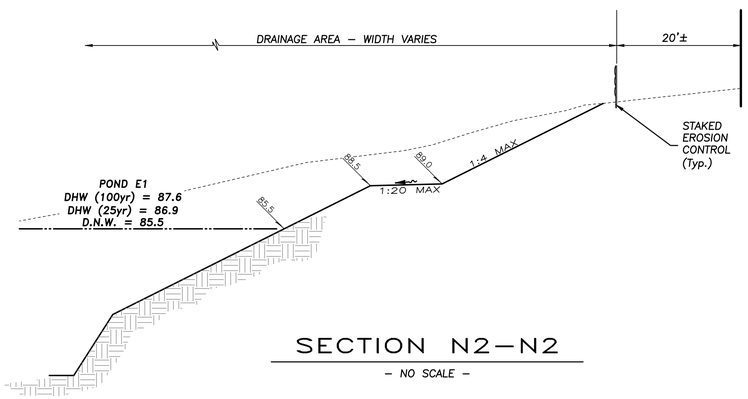

SECTION N2–N2

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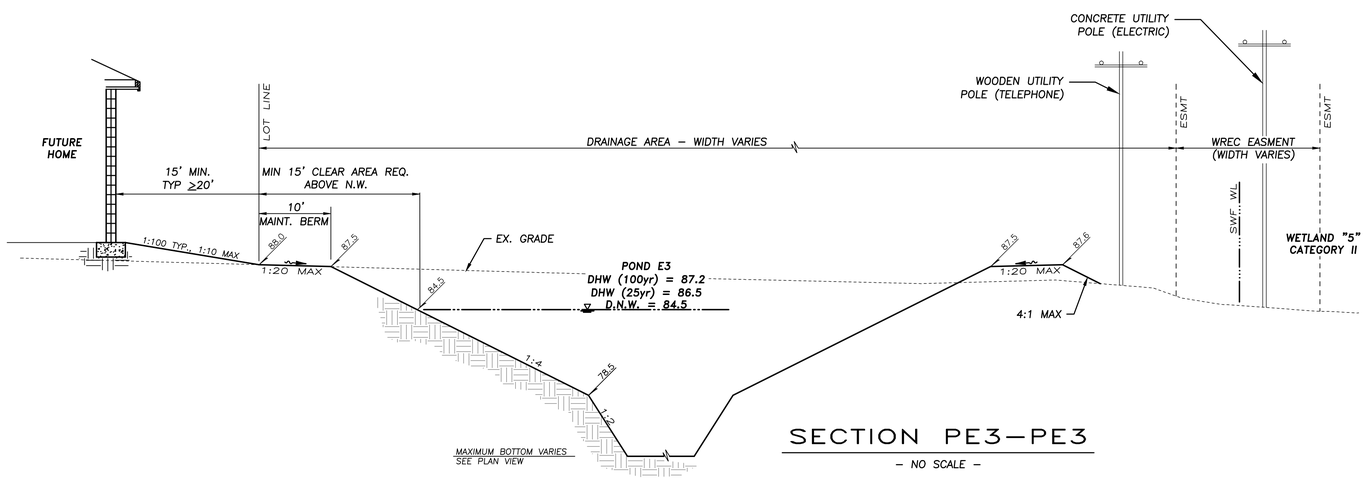

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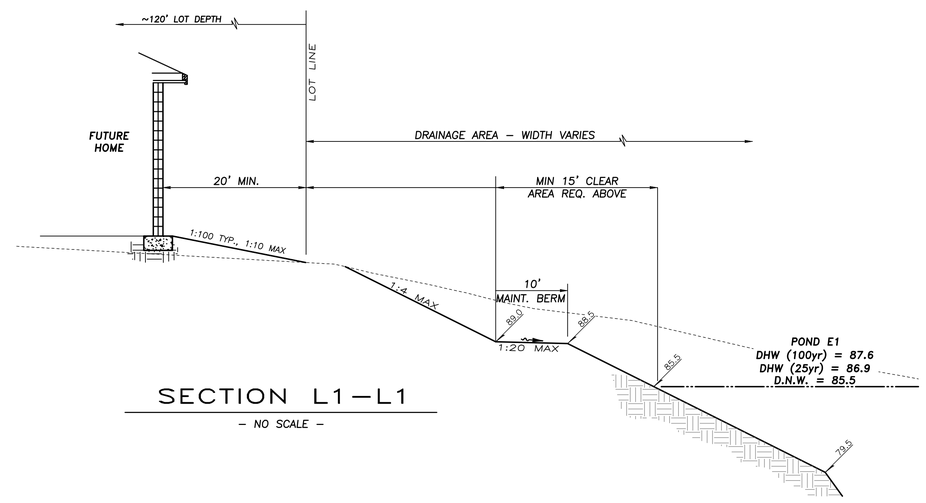

SECTION L1–L1

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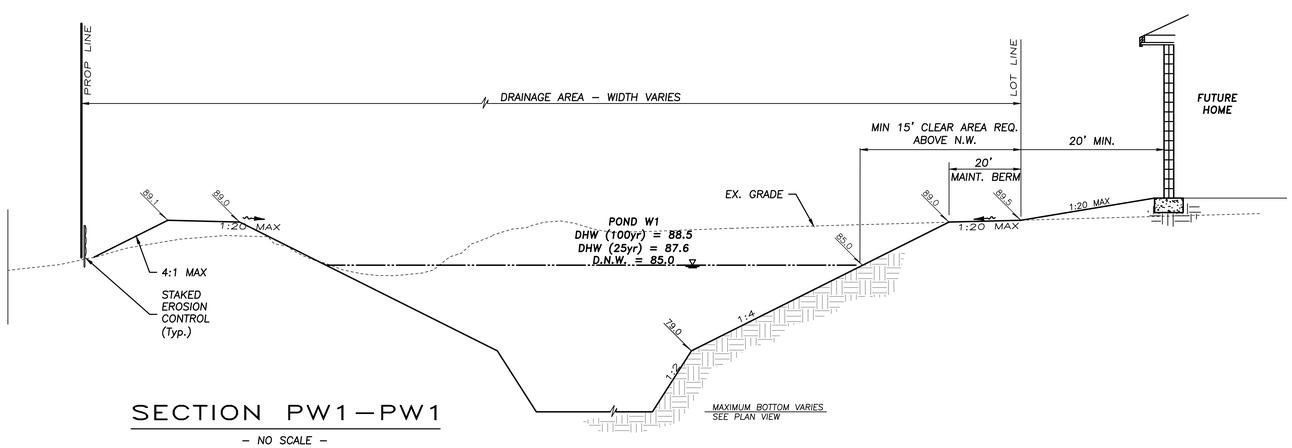


SECTION PW1–PW1

– NO SCALE –

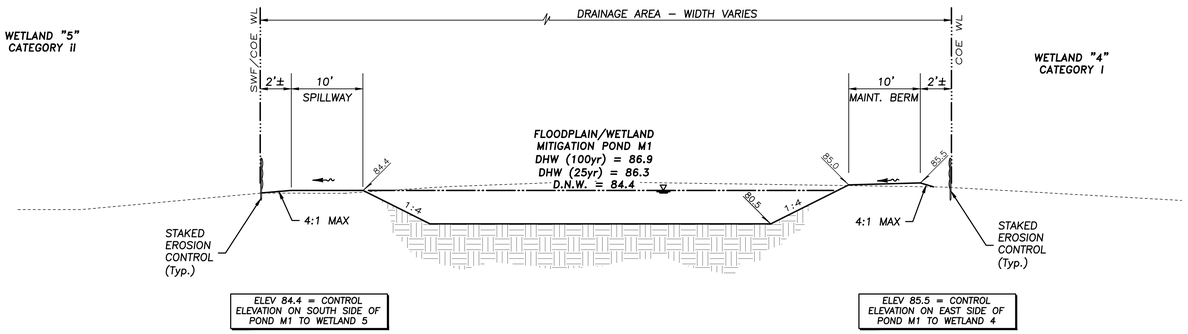
DATE	DESCRIPTION	BY
	REVISIONS	

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

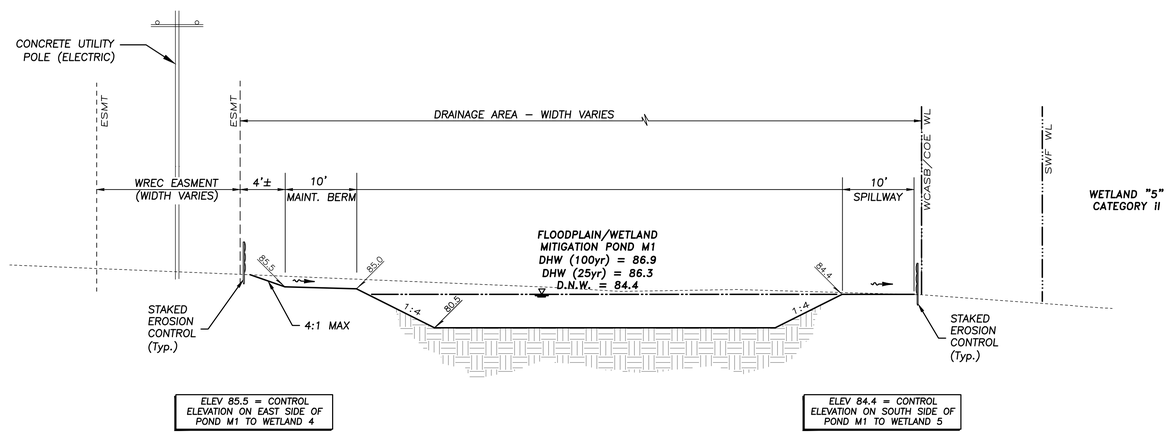
CROSS SECTIONS

JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = −0.84 Feet
FILE SEC	SHEET 12 OF 40 SHEETS



SECTION M1–M1

– NO SCALE –



SECTION M2–M2

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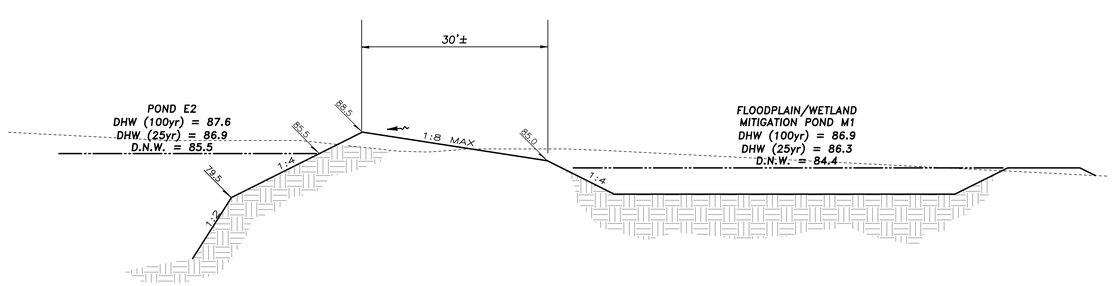

SECTION MX–MX

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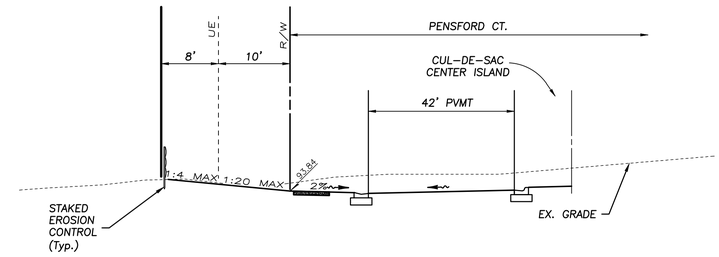

SECTION S1–S1

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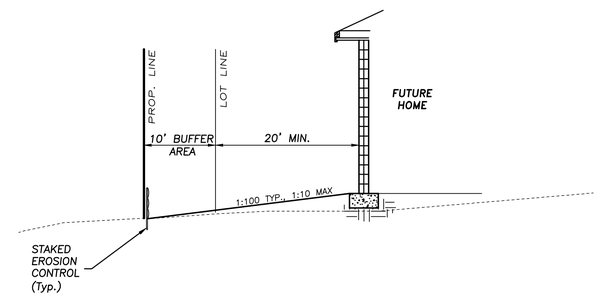

SECTION W1–W1

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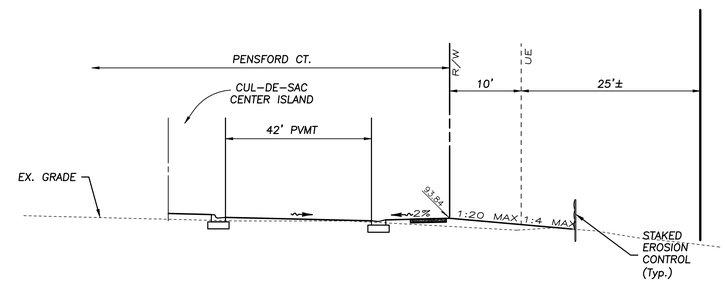

SECTION N1–N1

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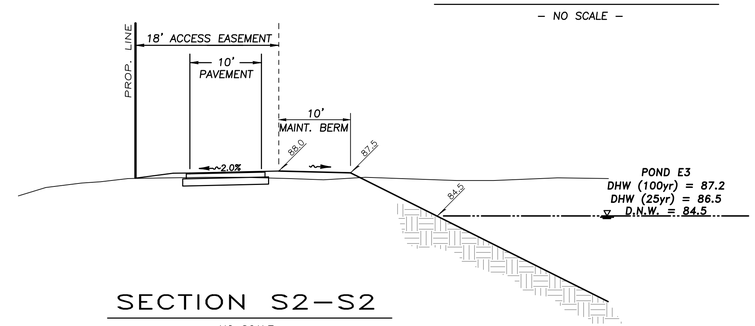


SECTION S2–S2

– NO SCALE –

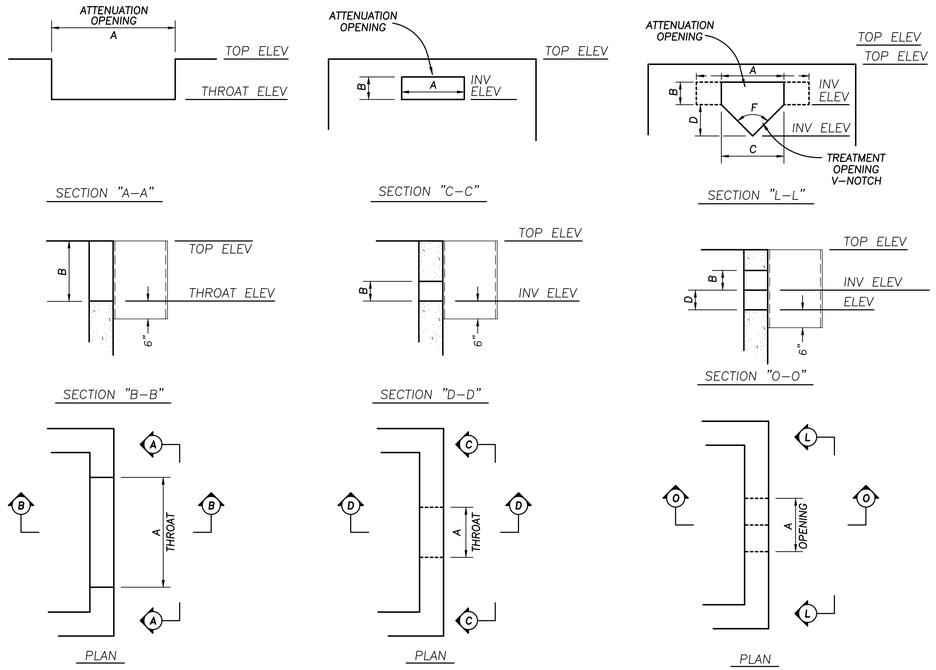
DATE	DESCRIPTION	BY
	REVISIONS	

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

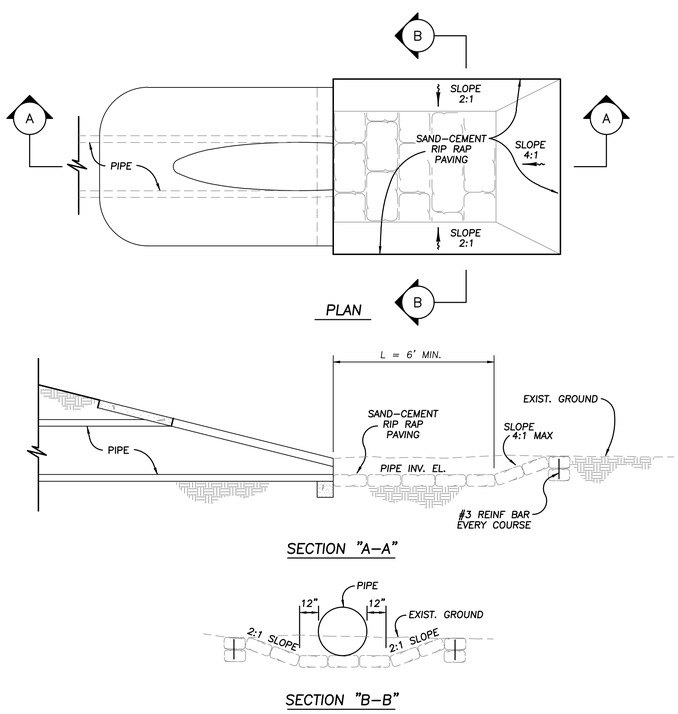
CROSS SECTIONS

JOB NO. SPH–MP–016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = –0.84 Feet
FILE SEC	SHEET 13 OF 40 SHEETS

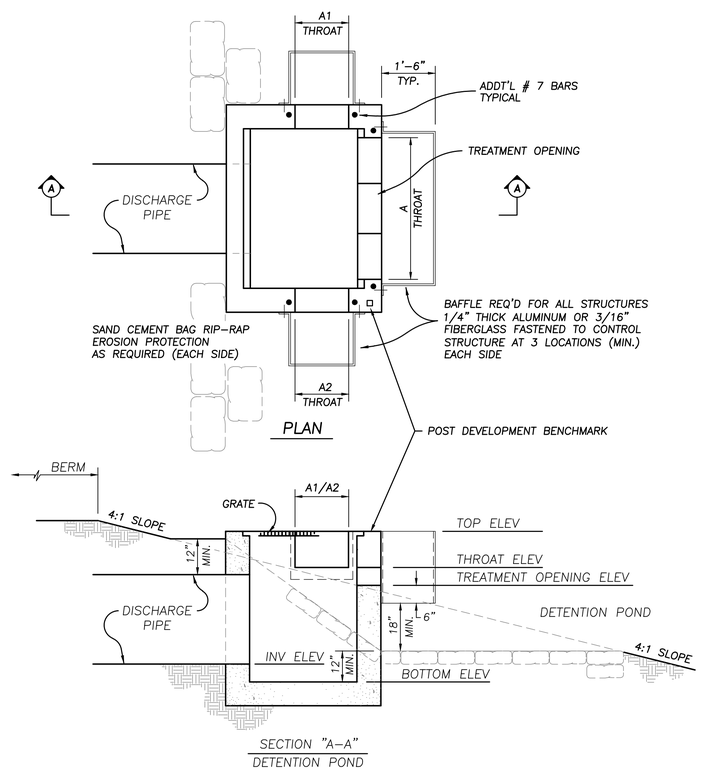


CONTROL STRUCTURE DATA

STR. NO.	FDOT BOX TYPE	TOP EL. (FT.)	BOTT. EL. (FT.)	DISCHARGE PIPE TYPE	DISCHARGE PIPE SIZE (IN.)	DISCHARGE PIPE INV. EL. (FT.)	ATTENUATION AND TREATMENT CONTROLS STR. TYPE	ATTENUATION OPENING A	ATTENUATION OPENING B	EL. (FT.)	TREATMENT OPENING C	TREATMENT OPENING D	TREATMENT OPENING F*	EL. (FT.)	REMARKS
48	D	87.50	–	RCP	24	82.50	CS–8	48"	9"	85.73	6"	3"	90	85.5	POND E1/E2
							CS–2	48" (A1)	9"	85.73					
44	D	86.50	–	RCP	36	81.50	CS–8	42"	14"	84.83	8"	4"	90	84.5	POND E3
							CS–2	42" (A1)	14"	84.83					
42	D	88.00	–	RCP	24	82.00	CS–8	36"	9"	85.38	9–1/8"	4–9/16"	90	85.0	POND W1



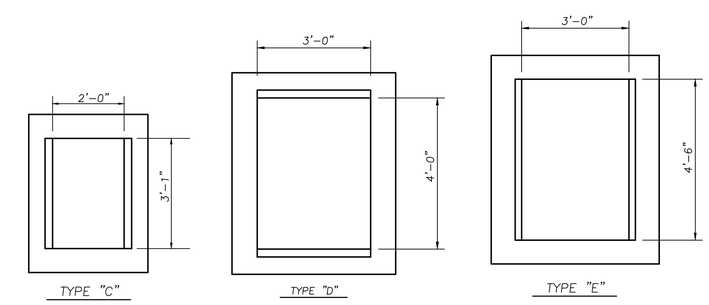
TYPICAL OUTFALL SUMP DETAIL
SAND–CEMENT BAG



TYPICAL CONTROL STRUCTURE

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

NOTE:
DRAWING NOT TO SCALE



DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
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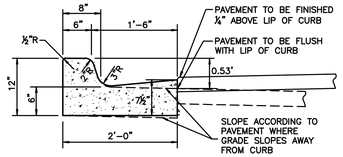
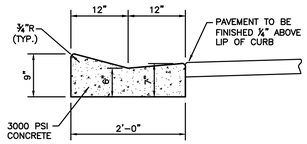
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

CONTROL STRUCTURE DATA

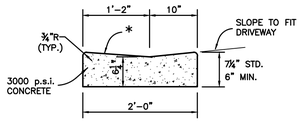
JOB NO. SPH–MP–016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN FERREIRA	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = –0.84 Feet
FILE CSTR	SHEET 14 OF 40 SHEETS



TYPE "F" CURB AND GUTTER

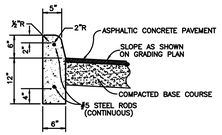


TYPE "A" CURB AND GUTTER

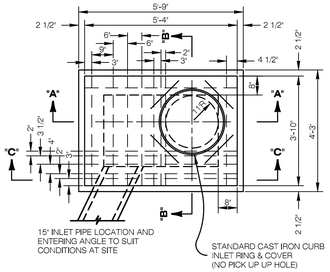


* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN.

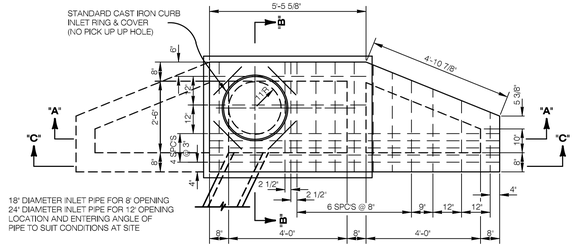
DROP CURB



6" UPRIGHT CURB



PLAN



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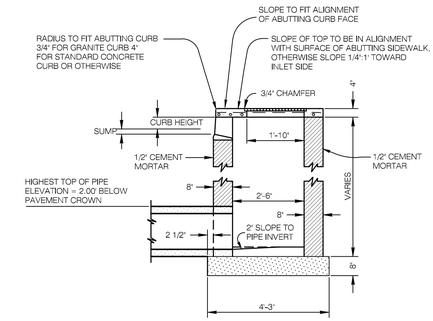
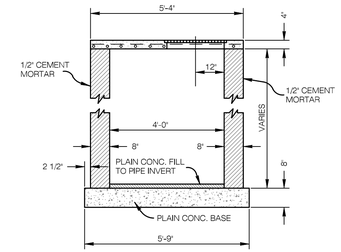
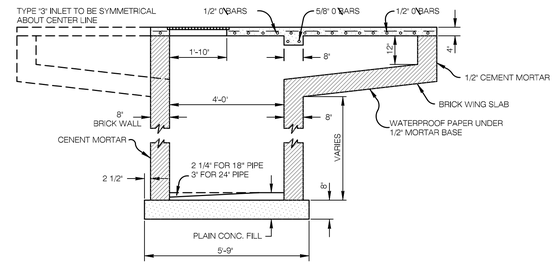


SECTION "B-B"

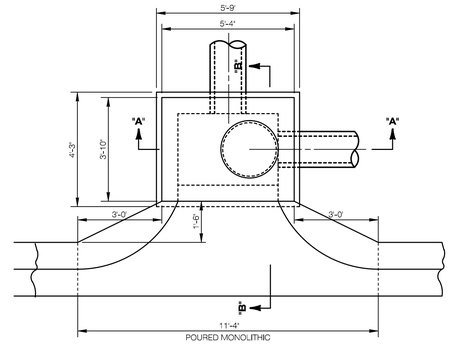
TYPE "F" CURB ONLY



SECTION "A-A"



SECTION "A-A"



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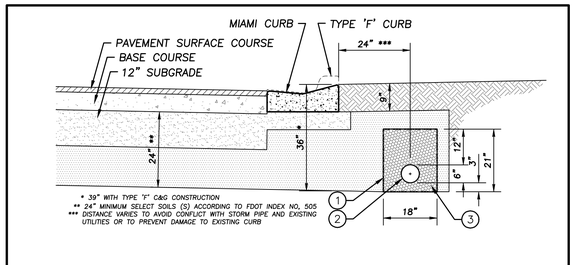
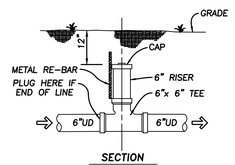


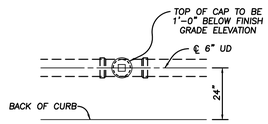
1. TYPE D-3 FILTER FABRIC ENVELOPE – FDOT INDEX NO. 199
2. 6" ø MINIMUM CORRUGATED HDPE OR PVC PIPE WITH FILTER FABRIC SOCK – SEE NOTES 3 & 4
3. FINE AGGREGATE FDOT STANDARD SPECS SECTION 902-4 – SEE NOTE 6

1. Underdrain shalll meet the requirements of FDOT Standard Specifications for Road and Bridge Construction, Section 440.
2. Minimum grade on underdrain pipe shall be 0.2%
3. All pipe shall meet the requirements of FDOT Standard Specifications for Road and Bridge Construction, Section 948-1.5 (PVC Pipe) and FDOT 948-2 (Corrugated Polyethylene Pipe).
4. A filter fabric sock meeting the requirements of FDOT Standard Specifications for Road and Bridge Construction, Section 948-3 is required for all perforated underdrain pipe.
5. Non-perforated pipe shall be used for all roadway crossings. Perforated pipe shall not be placed under street pavement.
6. Fine aggregate shall be quartz sand meeting the requirements of FDOT Standard Specifications for Road and Bridge Construction, Section 902-4.
7. Filter material shall be completely wrapped in filter fabric with a 12-inch minimum overlap.
8. Filter fabric shall meet the requirements of FDOT Index 199, Type D-3.
9. Embankment material shall consist of Select Soil (S) according to FDOT Index 505 and shall extend a minimum of 36-inches (3 feet) behind back of curb except as noted above.
10. FDOT and local governing agencies may have minimum standards which may exceed those referenced above. Contractor shall install underdrain in accordance with FDOT and local governing districts' minimum standards and regulations.
11. No irrigation pipelines, plant materials, tree materials or plantings, conduits, etc. should be designed or installed within 3 feet (±) of the back of curb.

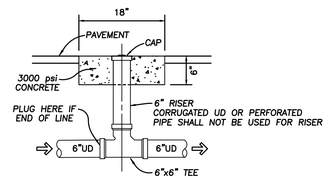
FINE AGGREGATE UNDERDRAIN DETAIL



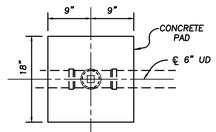
SECTION



PLAN



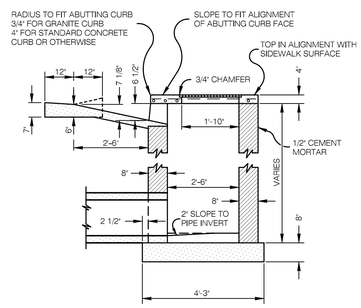
SECTION



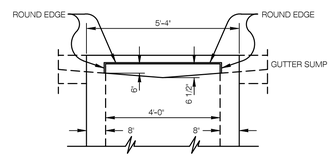
PLAN

UNDERDRAIN CLEANOUT DETAIL

NOTE:
LOCATION OF CLEANOUT TO BE MARKED ON CURB.



SECTION "B-B"



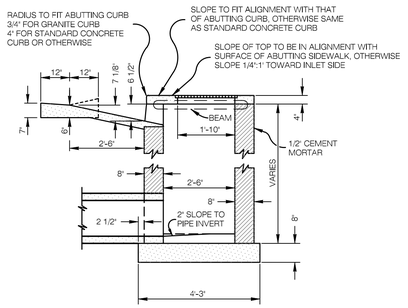
SECTION "C-C"

STANDARD STORM WATER CURB INLET TYPE 1

NOTES:
1) STRUCTURES LARGER THAN 4'x6' (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

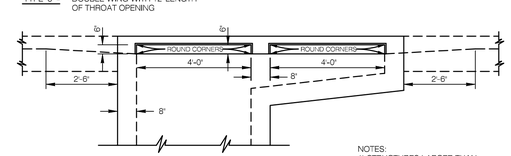
NO.	SIZE	LOCATION	LENGTH
8	1/2" Ø	TRANSVERSE BARS	3'-6"
6	1/2" Ø	LONGITUDINAL BARS	5'-1"
1	1/2" Ø	LONGITUDINAL BARS	2'-8"
5	5/8" Ø	TRAFFIC BEARING ONLY	2'-4"



SECTION "B-B"

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

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



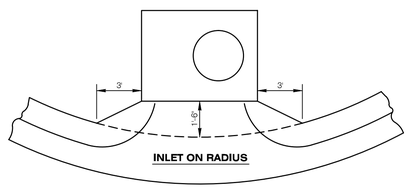
SECTION "C-C"

STANDARD STORM WATER CURB INLET TYPE 2 & 3

NOTES:
1) STRUCTURES LARGER THAN 4'x6' (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" Ø	TRANSVERSE BARS - STRAIGHT	3'-6"
1	1/2" Ø	TRANSVERSE BARS - STRAIGHT	3'-4"
1	1/2" Ø	TRANSVERSE BARS - STRAIGHT	3'-0"
1	1/2" Ø	TRANSVERSE BARS - STRAIGHT	2'-9"
1	1/2" Ø	TRANSVERSE BARS - STRAIGHT	2'-5"
1	1/2" Ø	TRANSVERSE BARS - STRAIGHT	2'-0"
2	5/8" Ø	TRANSVERSE BARS - W/ HOOKED ENDS	3'-6"
5	1/2" Ø	LONGITUDINAL BARS - STRAIGHT	9'-9"
1	1/2" Ø	LONGITUDINAL BARS - STRAIGHT	6'-3"
1	1/2" Ø	LONGITUDINAL BARS - STRAIGHT	5'-9"



INLET ON RADIUS

STANDARD INLET FOR MIAMI GUTTER

DATE	DESCRIPTION	BY
	REVISIONS	

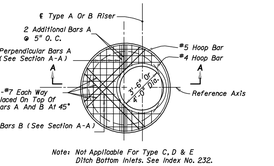
CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975
DATE:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

DRAINAGE DETAILS

MEADOW POINTE IV PARCEL EF "PROVENCE"

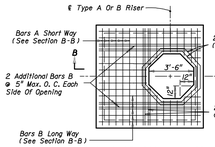
JOB NO.	SPH-MP-016
DESIGN	FERREIRA
DRAWN	GAM
DATE	12/18/2013
FILE	DD
PREPARED FOR:	STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

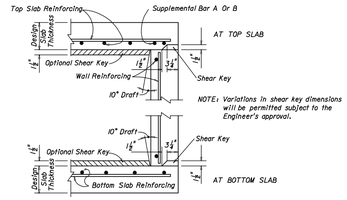


Note: Not Applicable For Type C, D & E Ditch Bottom Inlets. See Index No. 232.

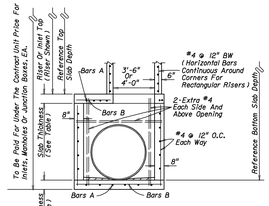
TOP SLAB REINFORCING STEEL DIAGRAM



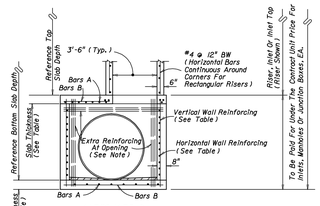
TOP SLAB REINFORCING STEEL DIAGRAM



SLAB TO WALL DETAILS FOR PRECAST ALTERNATE WITH 8" WALLS



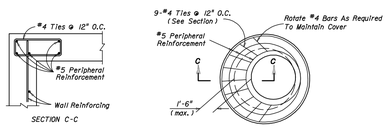
ALTERNATE A
SECTION A-A



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 floatation 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' <16'	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' <39'	D	33' <40'	D
39' <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' <12'	B	4' <15'	B
12' <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' <3'	D	17' <3'	D
3' <40'	G	3' <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' <4'	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' <17'	B
		17' <29'	C
		29' <40'	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.

GENERAL NOTES

1. Size is the inside dimensional 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) in^2/ft
A	0.20
B	0.24
C	0.34
D	0.53
E	0.73
F	1.06
G	1.45

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

STRUCTURE BOTTOMS
TYPE J AND P

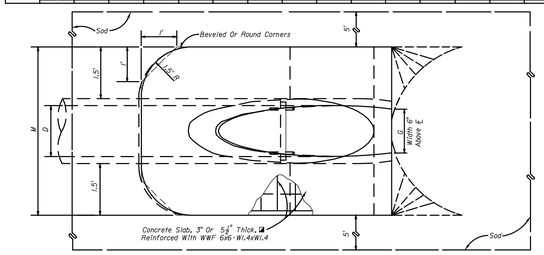
2 of 2

DIMENSIONS AND QUANTITIES

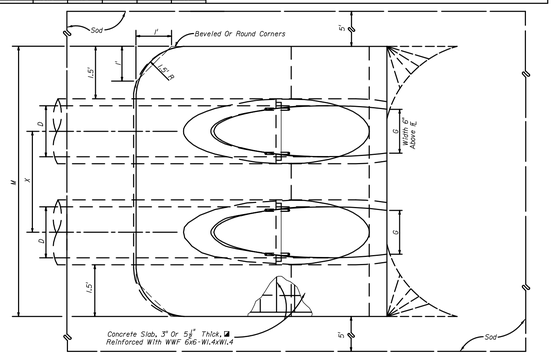
	D	X	A	B	C	E	F	G	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	$5\frac{1}{2}$" CONCRETE SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SQ. YDS.) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
2:1 Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	4.63'	7.21'	9.79'	12.37'	1.19'	0.38	0.58	0.77	0.96	21	24	27	30
	18"	2'-10"	1.97'	2.14'	4.11'	2.56'	6'	1.41'	4.90'	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'	3.82'	5.91'	3.56'	7'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	24	28	32	35
	30"	4'-3"	2.15'	4.93'	7.07'	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"	2.25'	6.08'	8.33'	5.56'	9'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	28	34	39	45
	42"	6'-0"	2.34'	7.27'	9.60'	6.56'	10'	2.45'	7.25'	13.25'	19.25'	25.25'	1.39'	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"	2.52'	9.60'	12.40'	8.56'	12'	2.83'	8.42'	15.58'	22.75'	31.42'	1.46'	1.31	2.44	3.58	4.72	34	42	51	59
	60"	8'-6"	2.62'	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'-2"	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
4:1 Slope	15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.63'	7.21'	9.79'	12.37'	1.19'	0.57	0.87	1.15	1.44	23	26	29	32
	18"	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.90'	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' Δ	9.71'	7.03' Δ	11'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.75	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'	1.13	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'	1.42	2.62'	3.68	4.96	34	40	46	52
	42"	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25'	13.25'	19.25'	25.25'	1.39'	1.68	3.16'	4.91	5.09	38	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	3.53'	4.73	6.17	41	48	56	63
	54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	15.58'	22.75'	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'-2"	3.73'	21.62'	25.50'	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'	23.68'	26.59'	23.03'	27'	3.30'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.67	12.73	52	63	74	85

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

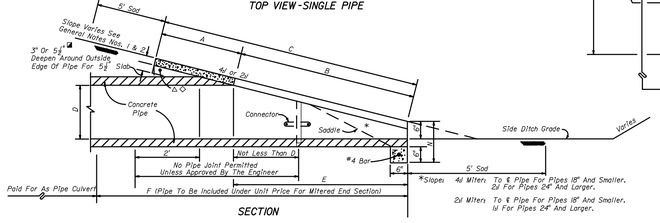
B E
Δ 6.42' Δ 6.25 Dimensions permitted to allow use of 8' standard pipe lengths.
◇ 10.40 ◇10.10' Dimensions permitted to allow use of 12' standard pipe lengths.
ΔΔ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE



*Slopes: 4:1 Miters To 6 Pipe For Pipes 18" And Smaller, 2:1 For Pipes 24" And Larger.
2:1 Miters To 6 Pipe For Pipes 18" And Smaller, 1:1 For Pipes 24" And Larger.

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.

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

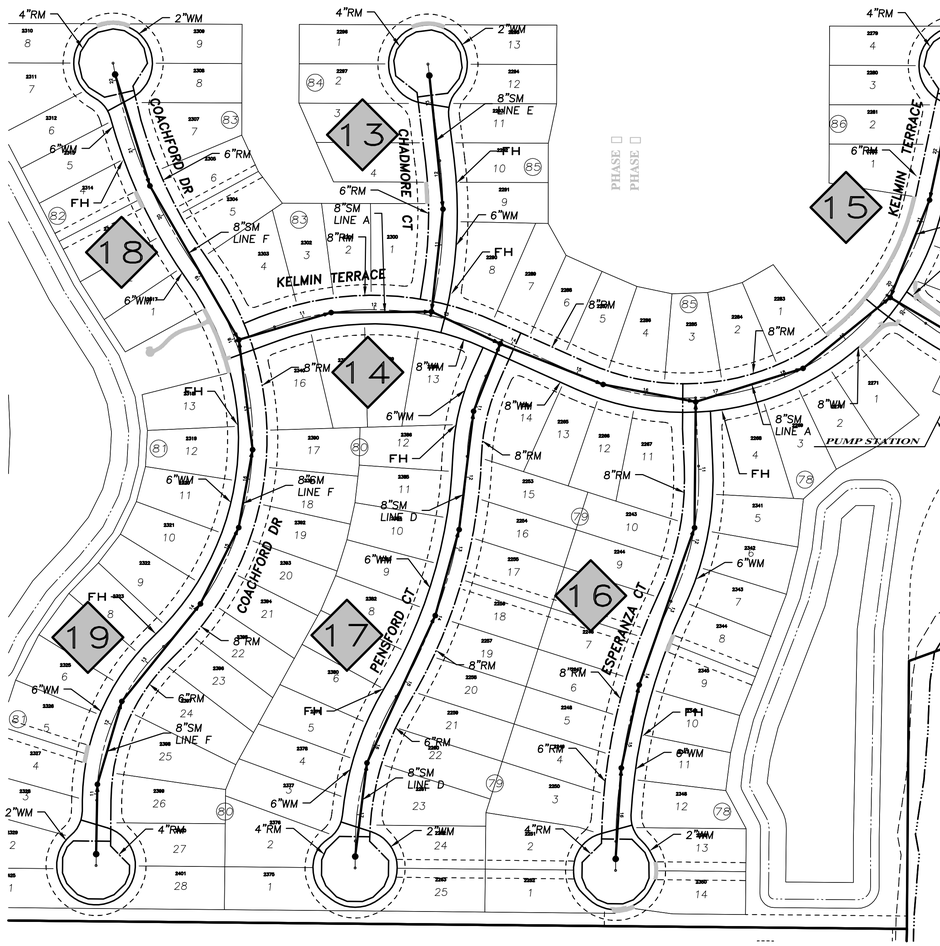
DRAINAGE DETAILS

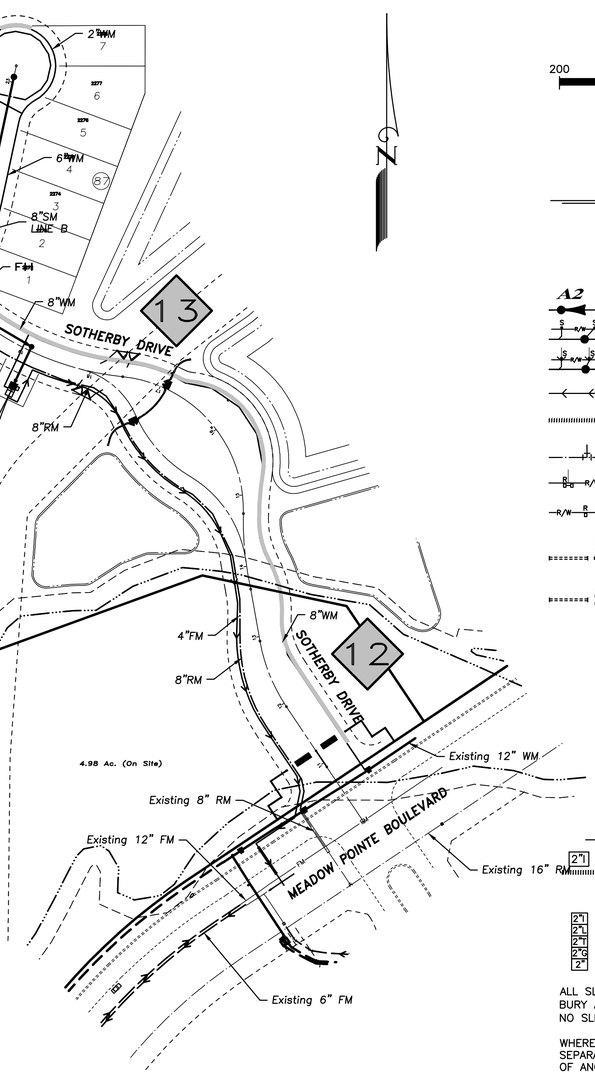
JOB NO.	SPH-MP-016
DESIGN	FERREIRA
DRAWN	GAM
DATE	12/18/2013
FILE	DD

MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet





200 100 0 100 200

SCALE: 1" = 100'

LEGEND

- SWFWMD WETLAND LINE
- 25' OFFSET FROM WETLAND LINE (SHOWN FOR INFORMATIONAL PURPOSES)
- 26 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"| DENOTES SLEEVE SIZE & LOCATION (SLEEVE LOCATIONS DEPICTED ON WATER, REUSE & SANITARY SEWER PLANS)
- 2"I IRRIGATION
- 2"L LIGHTING
- 2"T TELECOMMUNICATION
- 2"G GATE SYSTEM
- 2" 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.

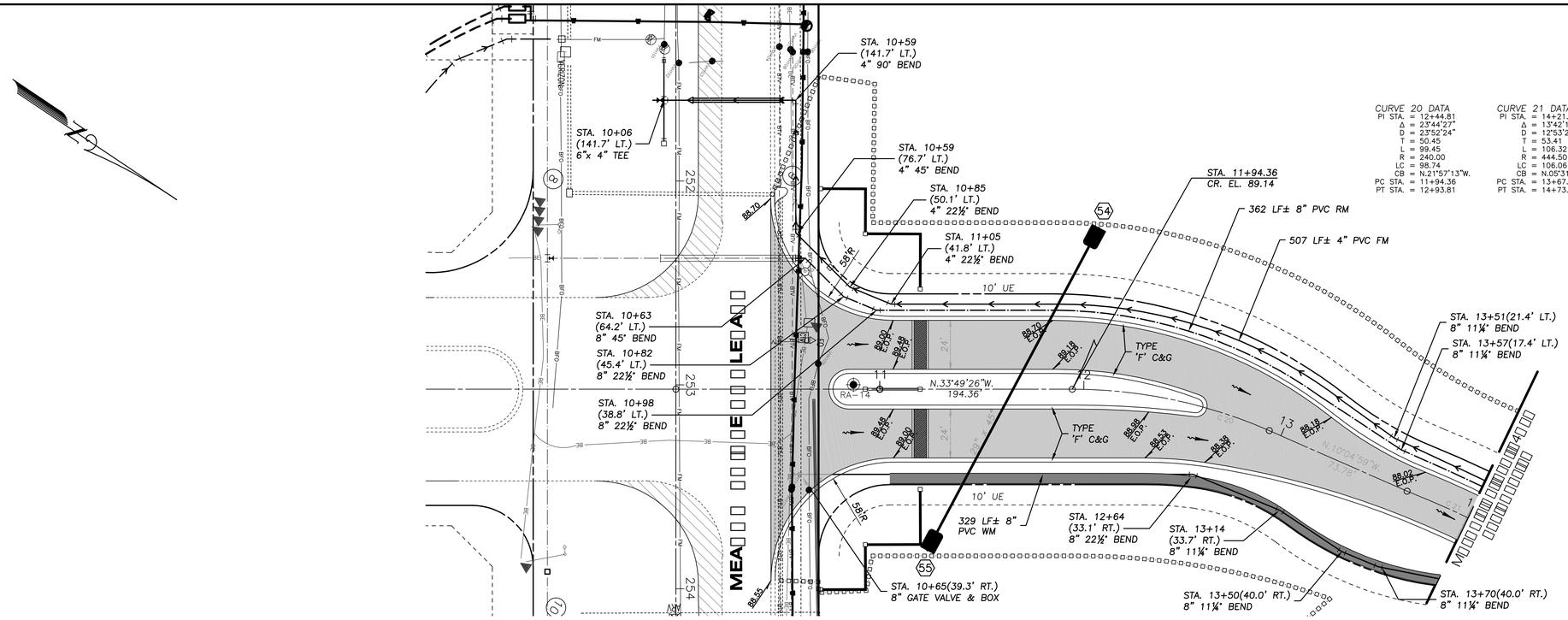
If you have any questions regarding this information, contact Nelson D. Holt, Field Supervisor, Utilities Services Branch, at (727) 847-8145, or e-mail nholt@pascocountyfl.net.

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

WATER & SEWER KEY MAP

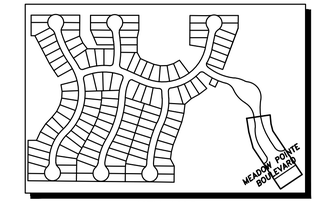
JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE WSKEY	SHEET 17 OF 40 SHEETS



NOTE:
SHADED SIDEWALKS TO BE CONSTRUCTED BY SITE CONTRACTOR.

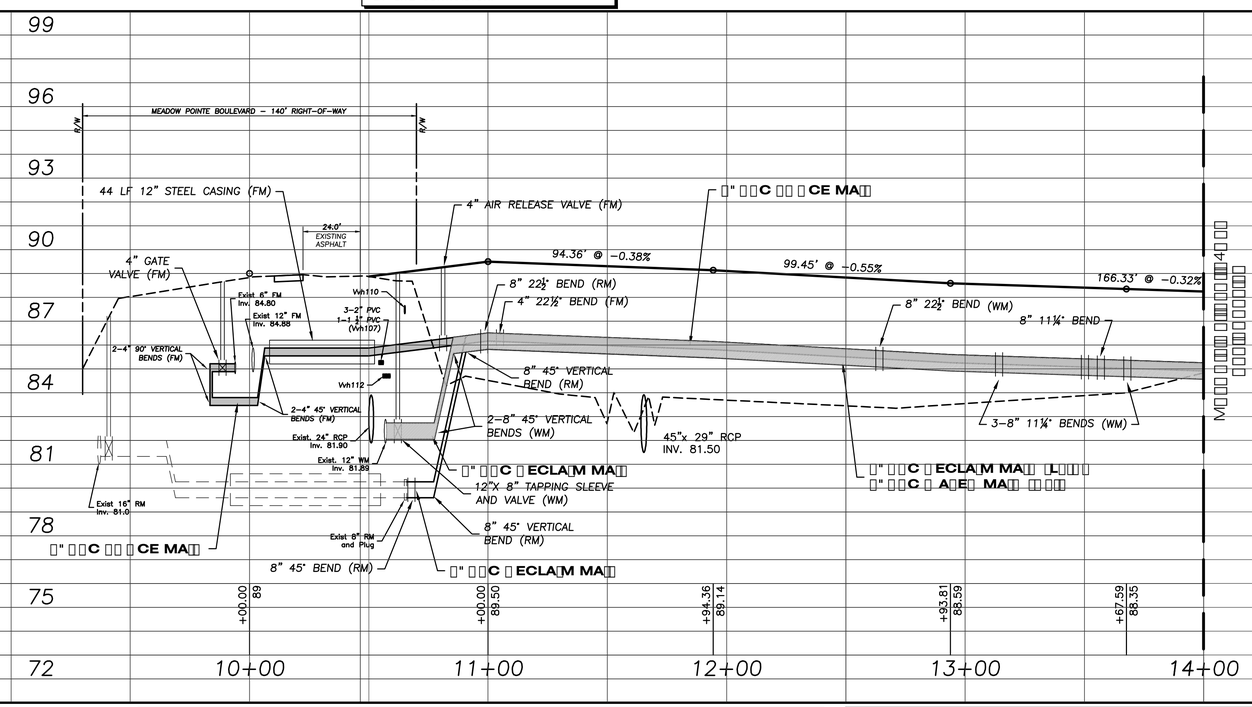
CURVE 20 DATA
PI STA. = 12+44.81
Δ = 23°44'27"
D = 23°52'24"
T = 50.45
L = 99.45
R = 240.00
LC = 98.74
CB = N.21°57'13"W.
PC STA. = 11+94.36
PT STA. = 12+93.81

CURVE 21 DATA
PI STA. = 14+21.00
Δ = 13°42'14"
D = 12°53'24"
T = 53.41
L = 106.32
R = 444.50
LC = 106.06
CB = N.05°31'50"W.
PC STA. = 13+67.59
PT STA. = 14+73.90



KEY MAP
NOT TO SCALE

SCALE: 1" = 3' VERTICAL
1" = 30' HORIZONTAL



Test Hole	Northing	Easting	Surface Elev.	Measure Down	Top of Utility	Description	Owner	Field Date
Vvb101	1413650.43	558765.54	88.27	2.97	85.30	6" PVC Force Main (green)	Pasco County	11/27/2013
Vvb102	1413661.44	558769.11	88.51	2.63	85.88	12" PVC Force Main (green)	Pasco County	11/27/2013
Vvb103	1413674.55	558759.28	88.73	3.95	84.78	4" PVC Unk. + 2" PVC Unk (white)	Unknown	11/27/2013
Vvb104	1413697.97	558735.03	89.43	2.93	86.50	2" PVC Cable TV X 3 (white)	Brighthouse	11/27/2013
Vvb105	1413709.13	558730.64	89.04	6.51	82.53	12" PVC Water Main (blue)	Pasco County	11/27/2013
Vvb106	1413710.92	558729.40	88.76	1.87	86.89	4" PVC Unk (white)	Unknown	11/27/2013
Vvb107	1413703.25	558733.16	89.17	3.19	85.98	2" PVC X 3 + 1 1/2" PVC Electric (grey)	WREC	11/27/2013
Vvb108	1413704.87	558733.66	89.15	4.64	84.51	2" PVC Cable TV X 3 (white)	Brighthouse	11/27/2013
Vvb109	1413800.40	558853.67	88.38	1.43	86.95	4" PVC Unk (white)	Unknown	11/27/2013
Vvb110	1413831.08	558907.60	89.22	1.57	87.65	4" PVC Unk (white)	Unknown	11/27/2013
Vvb111	1413823.27	558911.03	88.72	5.83	82.89	NFV size PVC Water Main (blue)	Pasco County	11/27/2013
Vvb112	1413823.82	558912.19	88.72	3.93	84.79	2" PVC Cable TV X 6 (white)	Brighthouse	11/27/2013

Test Hole Data Obtained from the Subsurface Utility Engineering Report by George F. Young, 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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

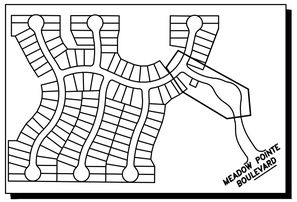
ROADWAY & UTILITY PLAN & PROFILE

JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE RP1-RP1

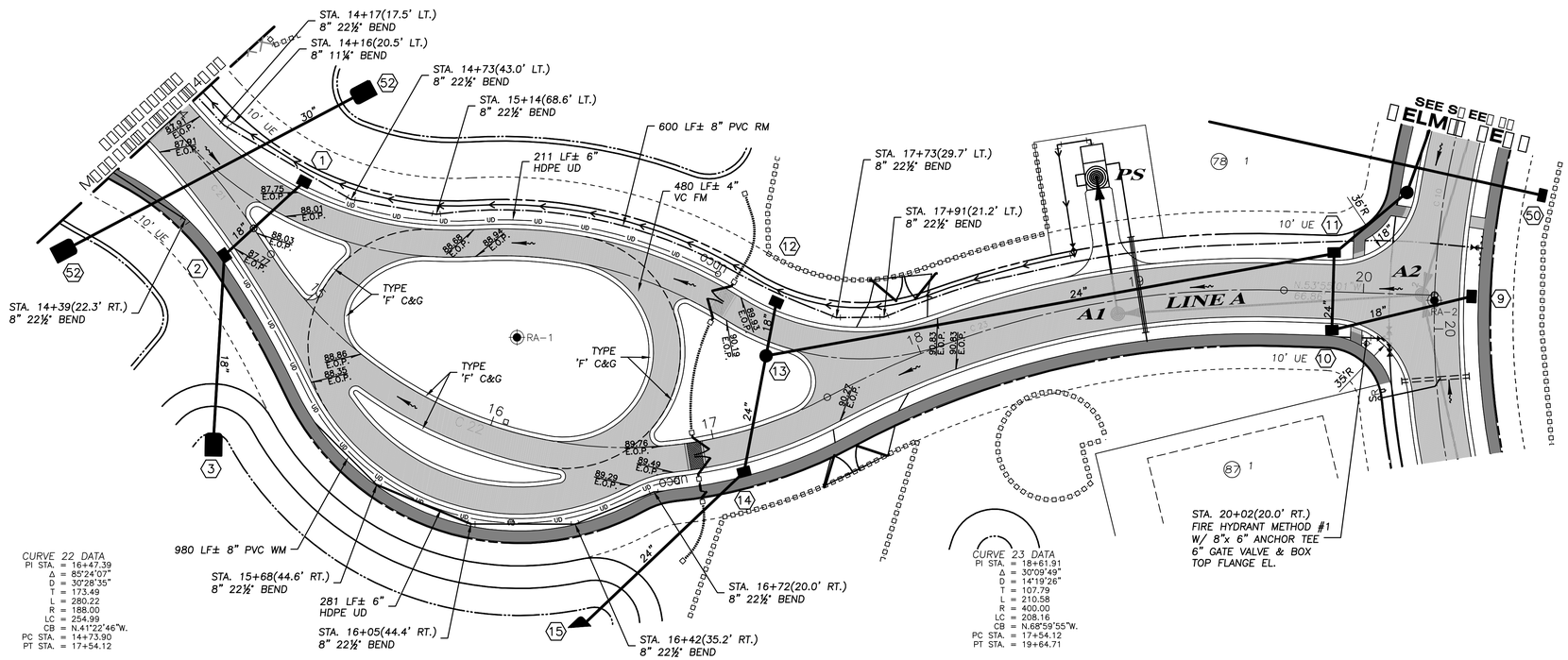
MEADOW POINTE IV PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = –0.84 Feet



SHEET INDEX
NOT TO SCALE



CURVE 21 DATA
PI STA. = 14+21.00
Δ = 13°42'14"
D = 12°53'24"
T = 53.41
L = 106.32
R = 444.50
LC = 106.06
CB = N.05°31'50"W.
PC STA. = 13+67.59
PT STA. = 14+73.90

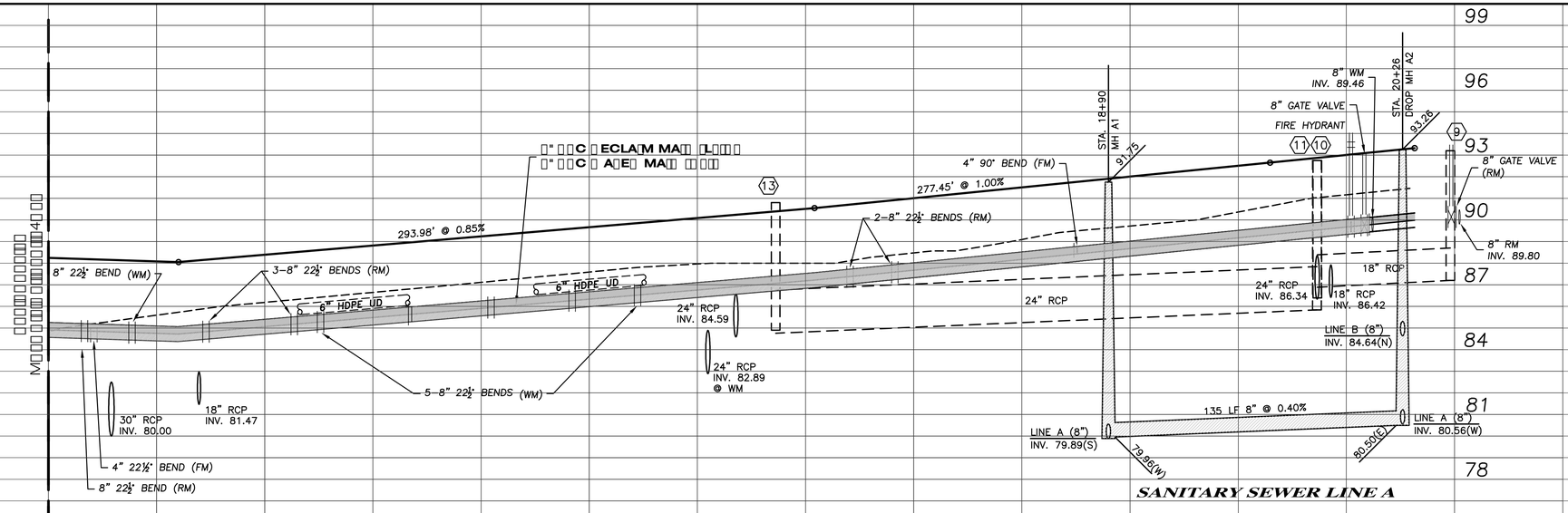
CURVE 22 DATA
PI STA. = 16+47.39
Δ = 85°24'07"
D = 30°28'35"
T = 173.49
L = 280.22
R = 188.00
LC = 254.99
CB = N.41°22'46"W.
PC STA. = 14+73.90
PT STA. = 17+54.12

CURVE 23 DATA
PI STA. = 18+61.91
Δ = 30°09'49"
D = 14°19'26"
T = 107.79
L = 210.58
R = 400.00
LC = 208.16
CB = N.68°59'55"W.
PC STA. = 17+54.12
PT STA. = 19+64.71

NOTE:
SHADED SIDEWALKS TO BE CONSTRUCTED BY SITE CONTRACTOR.

S E

SCALE: 1" = 3' VERTICAL
1" = 30' HORIZONTAL



SANITARY SEWER LINE A

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
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JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

ROADWAY & UTILITY PLAN & PROFILE

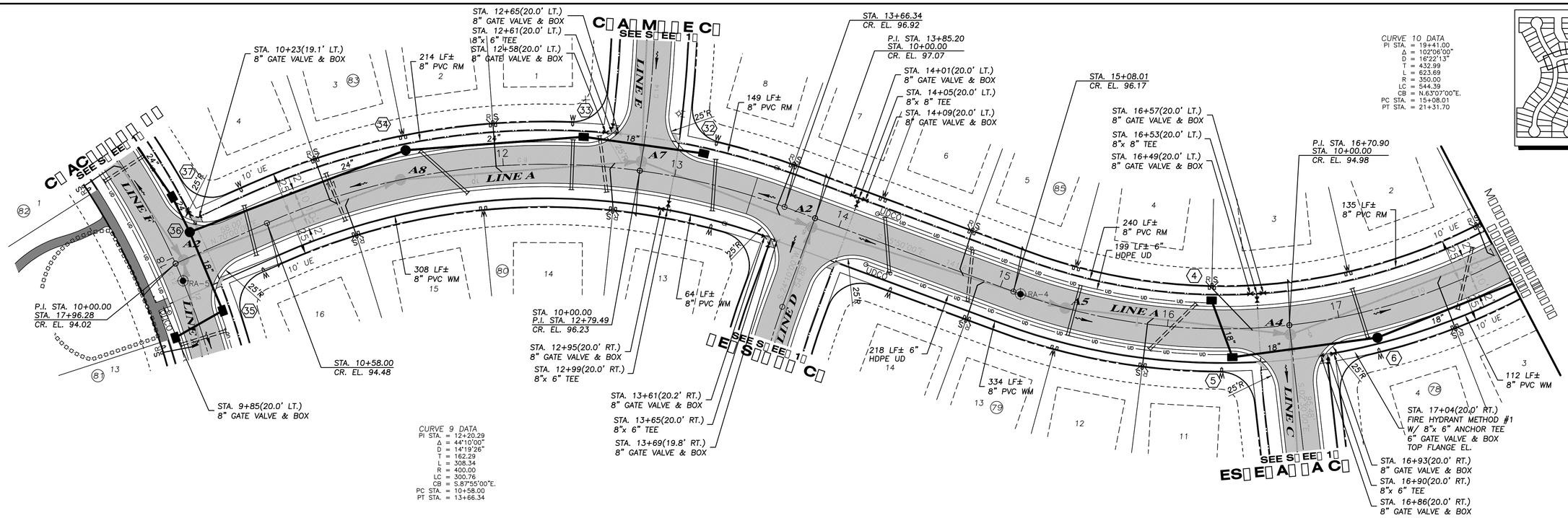
JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE RP2

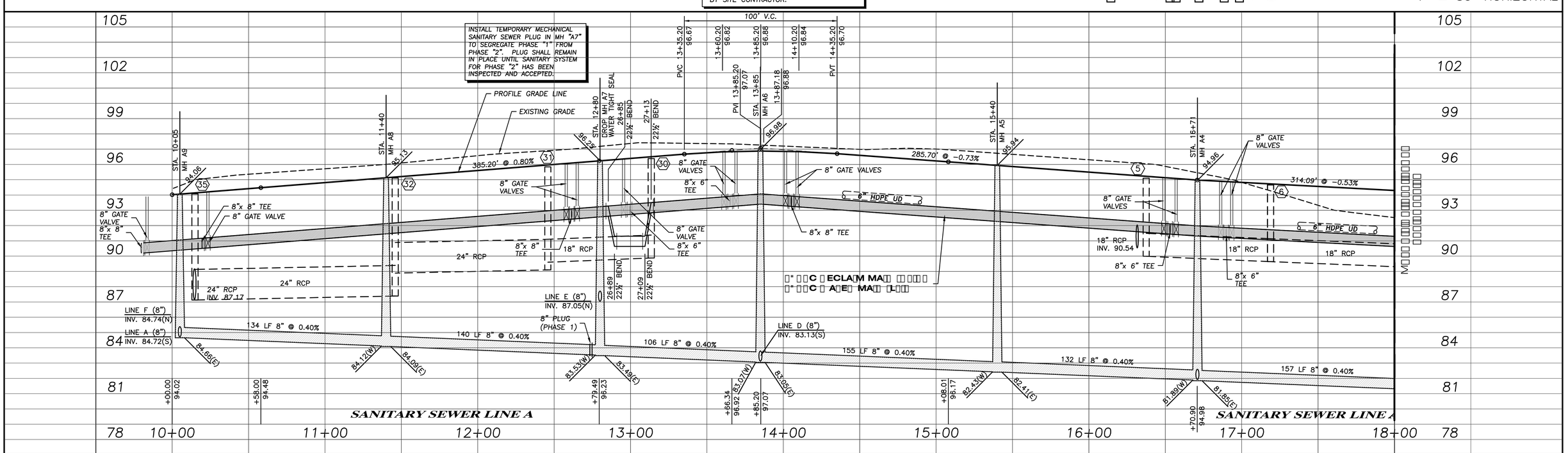
MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 19 OF 40 SHEETS





DATE	DESCRIPTION	BY
	REVISIONS	

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

ROADWAY & UTILITY PLAN & PROFILE

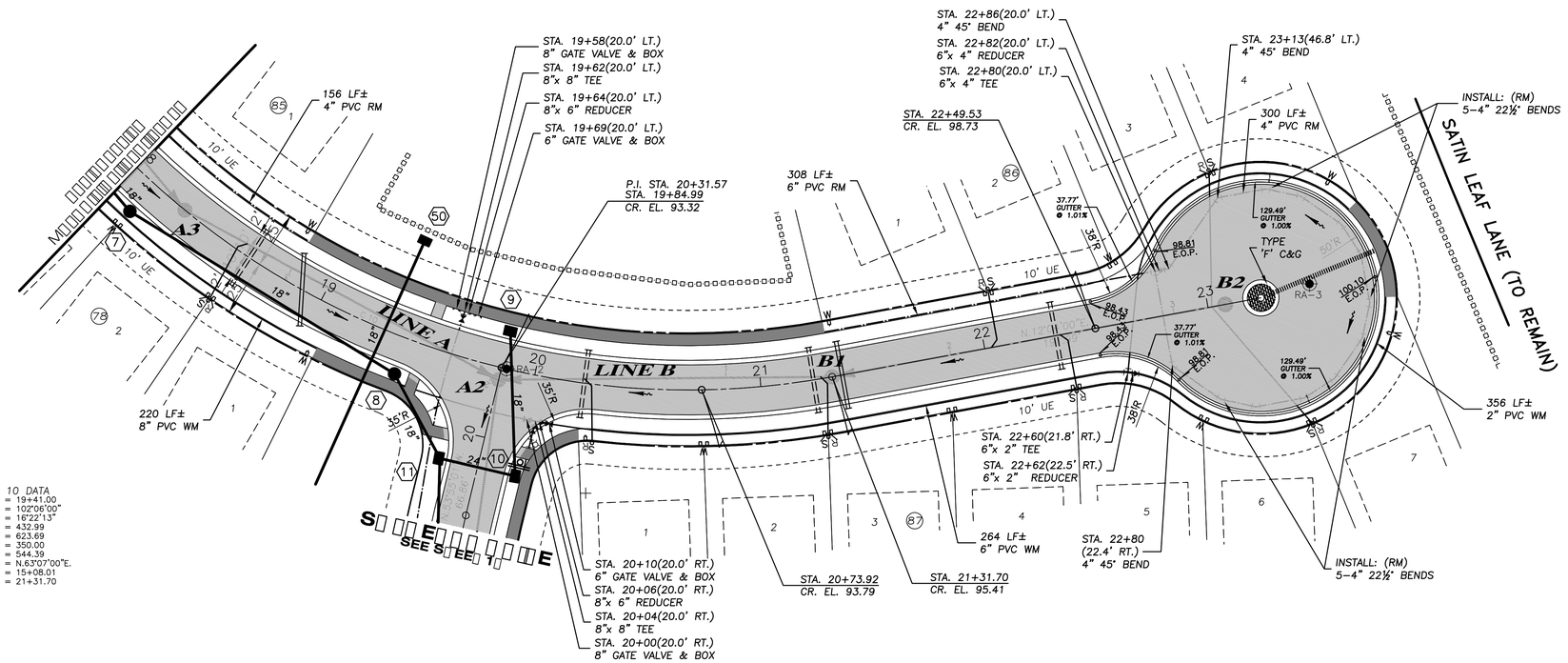
JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE RP3

MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 20 OF 40 SHEETS

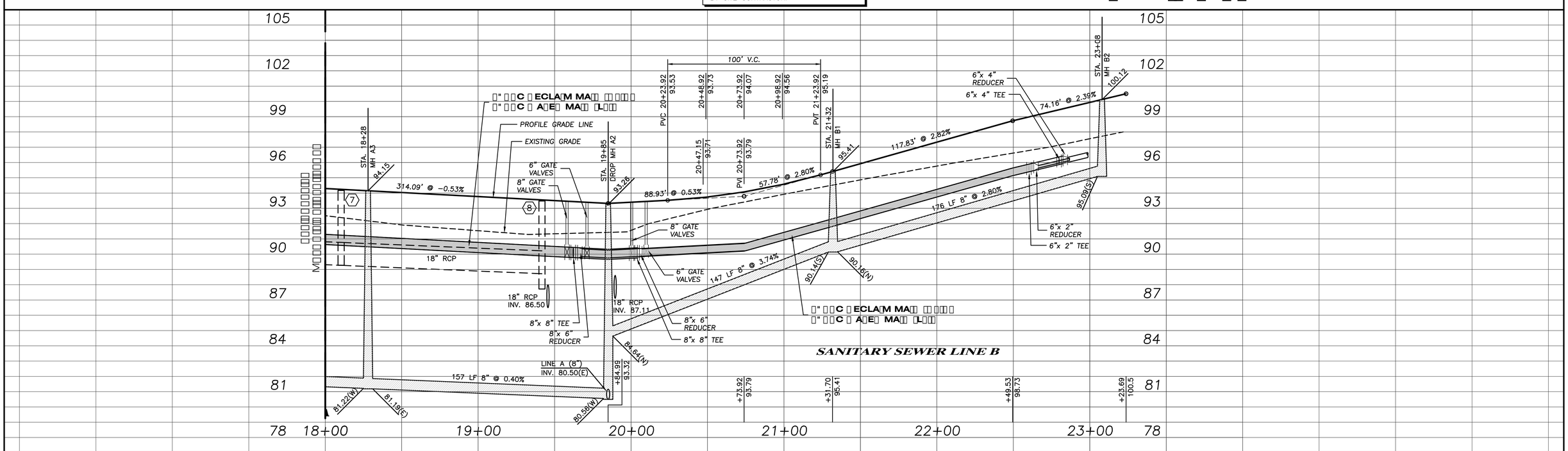


NOTE:
SHADED SIDEWALKS TO BE CONSTRUCTED BY SITE CONTRACTOR.

SHEET INDEX
NOT TO SCALE

ELM[illegible] [illegible]E[illegible]ACE

SCALE: 1" = 3' VERTICAL
1" = 30' HORIZONTAL



DATE	DESCRIPTION	BY
	REVISIONS	

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DATE:
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ROADWAY & UTILITY PLAN & PROFILE

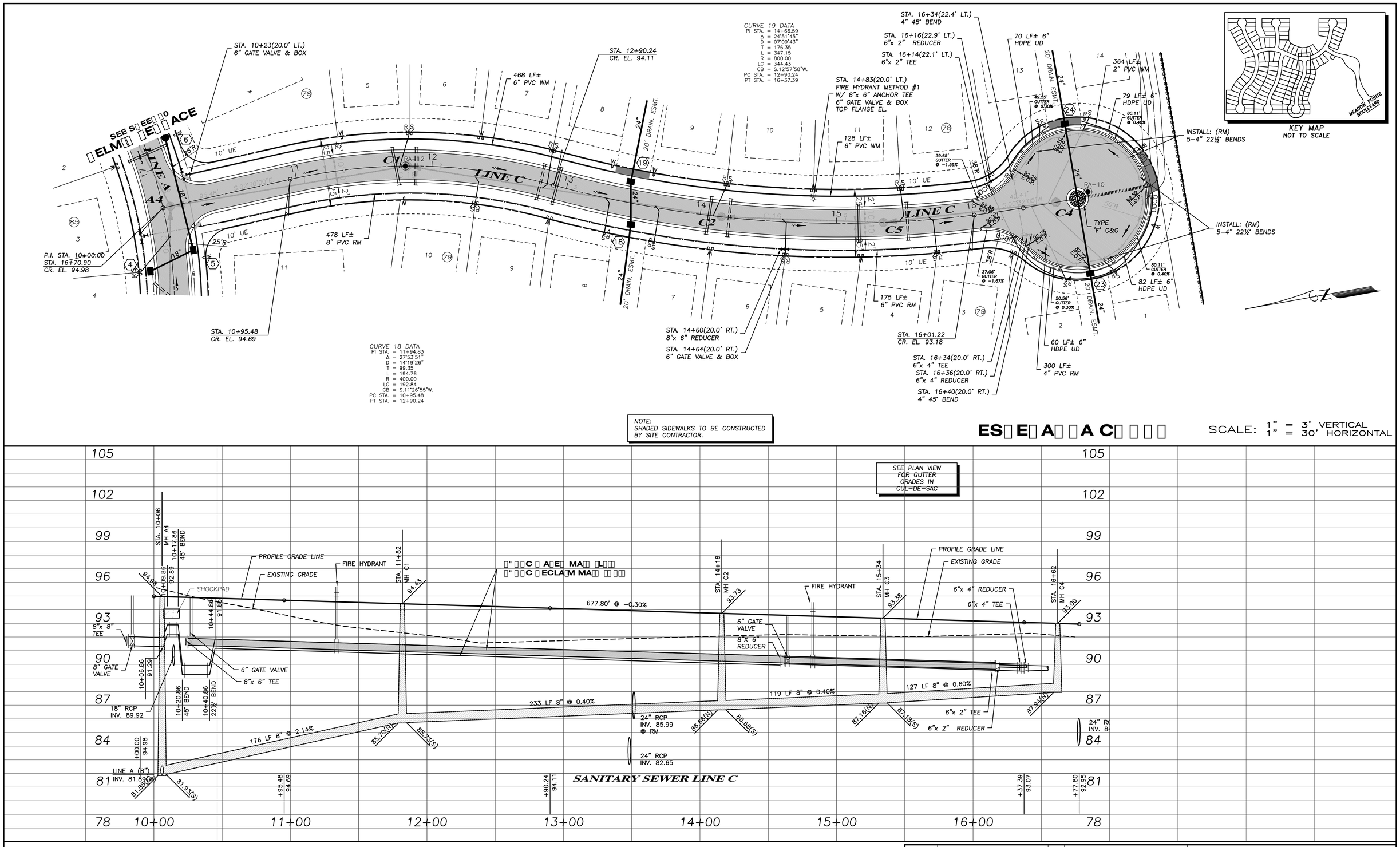
JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE RP4

MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 21 OF 40 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

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Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
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DATE:
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FLORIDA PROFESSIONAL ENGINEER

ROADWAY & UTILITY PLAN & PROFILE

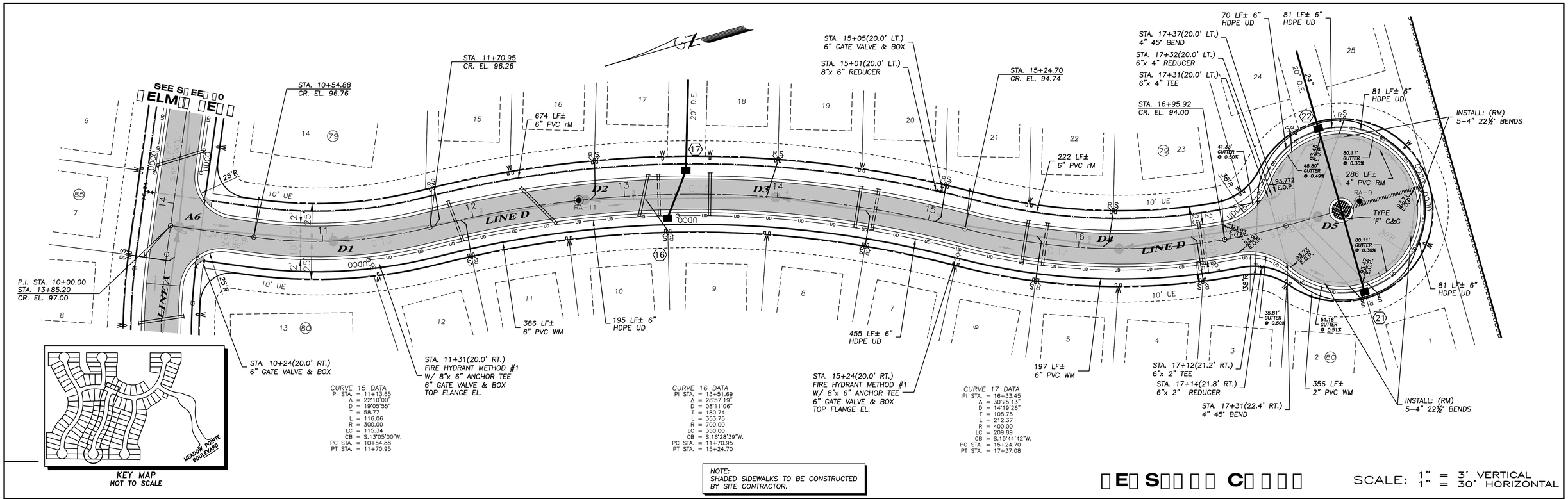
JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE RP5

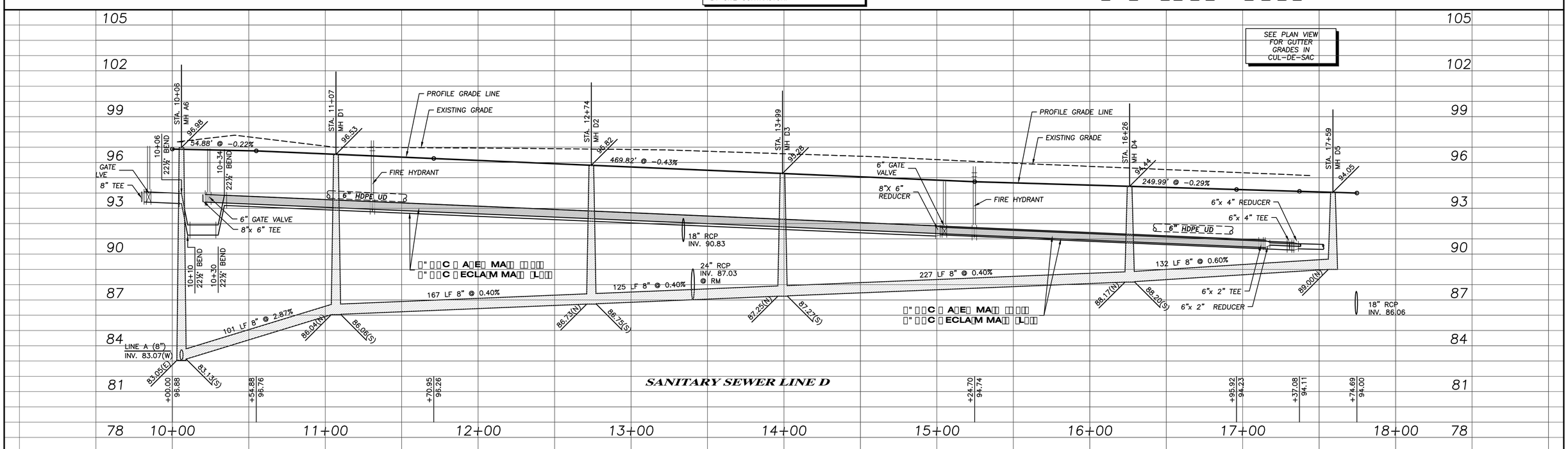
MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 22 OF 40 SHEETS





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CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
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DATE:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

ROADWAY & UTILITY PLAN & PROFILE

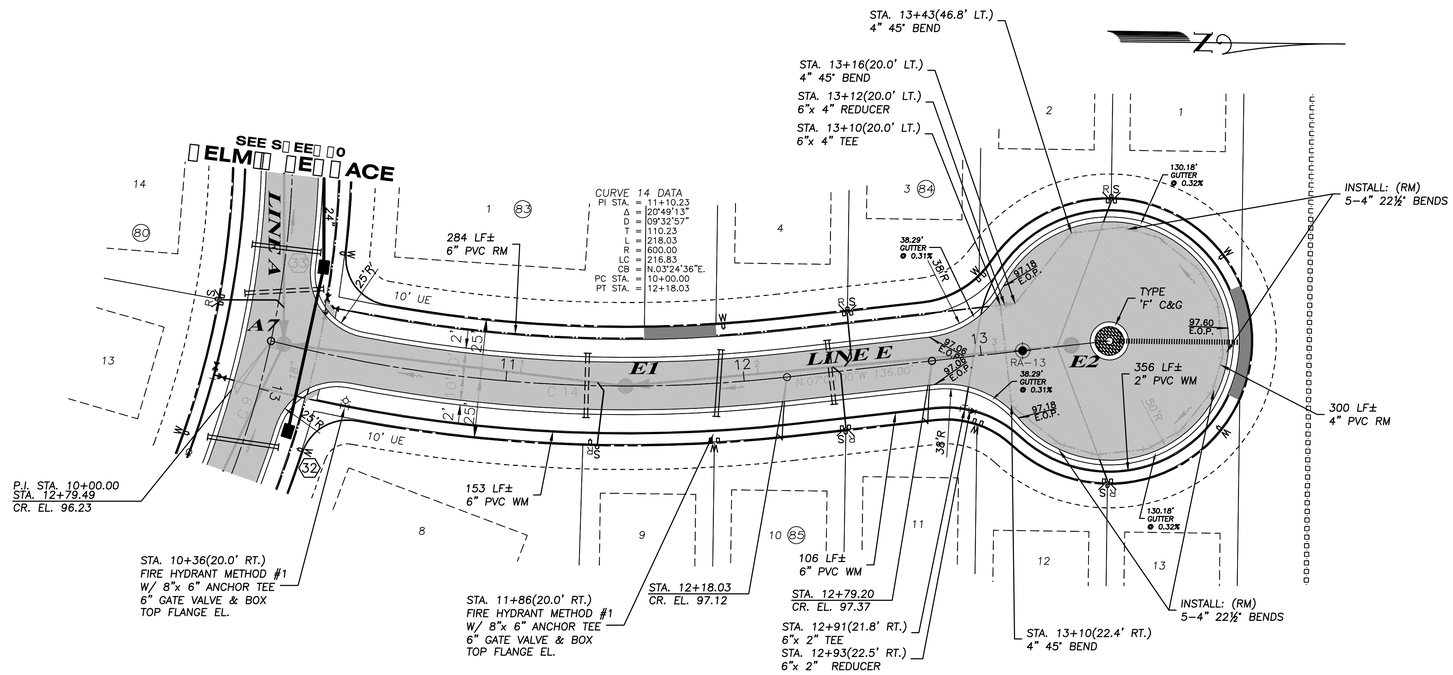
JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE RP6

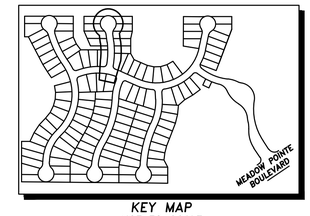
MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 23 OF 40 SHEETS



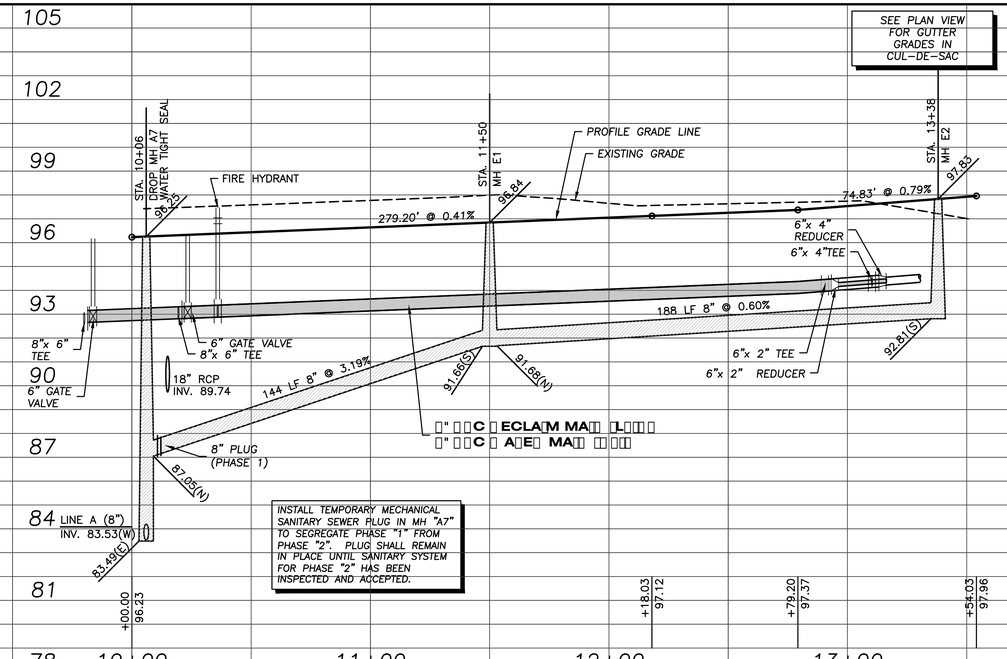


KEY MAP
NOT TO SCALE

NOTE:
SHADED SIDEWALKS TO BE CONSTRUCTED BY SITE CONTRACTOR.

C A M E C

SCALE: 1" = 3' VERTICAL
1" = 30' HORIZONTAL



INSTALL TEMPORARY MECHANICAL SANITARY SEWER PLUG IN MH "A7" TO SEGREGATE PHASE "1" FROM PHASE "2". PLUG SHALL REMAIN IN PLACE UNTIL SANITARY SYSTEM FOR PHASE "2" HAS BEEN INSPECTED AND ACCEPTED.

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
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FLORIDA PROFESSIONAL ENGINEER

ROADWAY & UTILITY PLAN & PROFILE

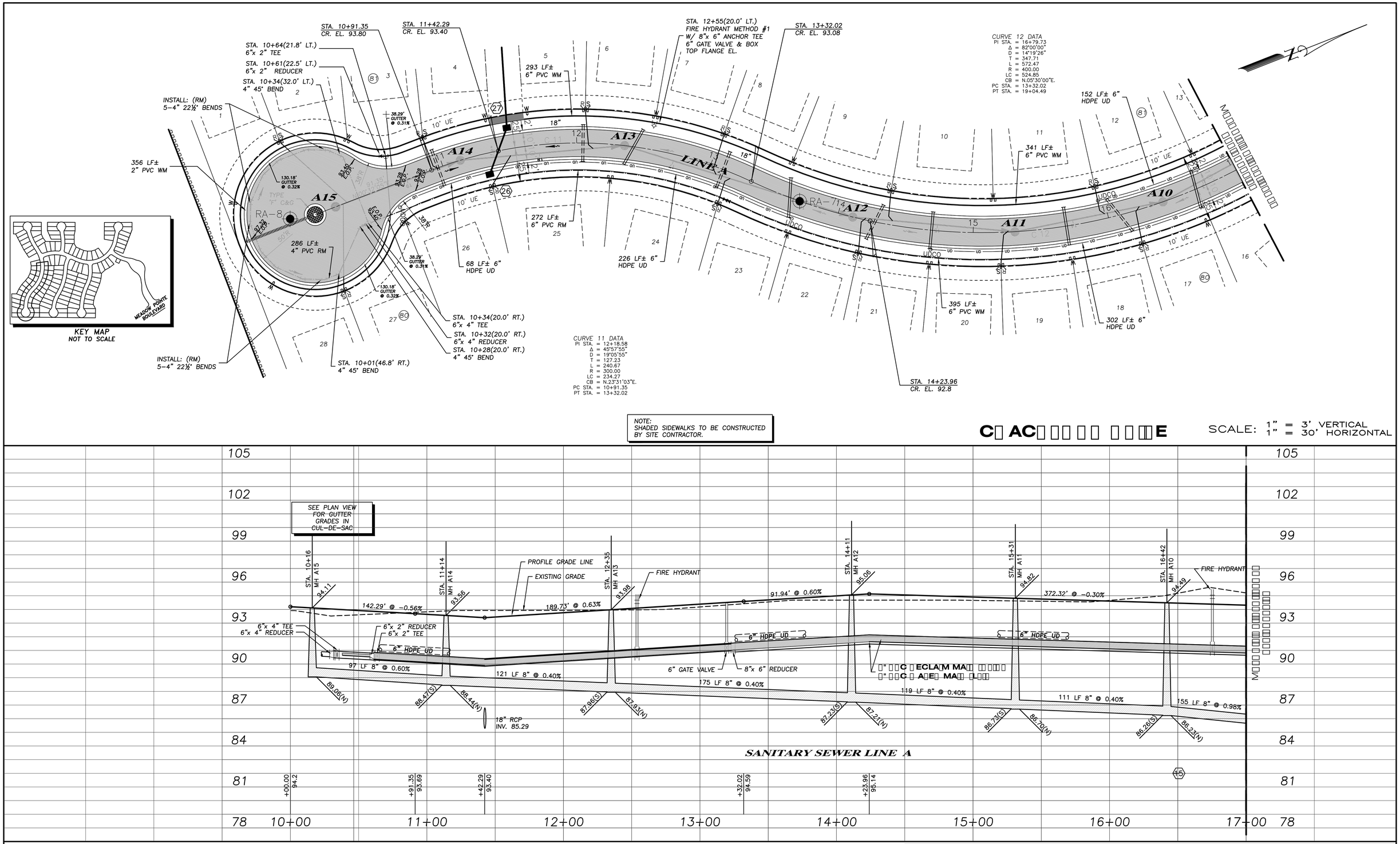
JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE RP7

MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 24 OF 40 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
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DATE:
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FLORIDA PROFESSIONAL ENGINEER

ROADWAY & UTILITY PLAN & PROFILE

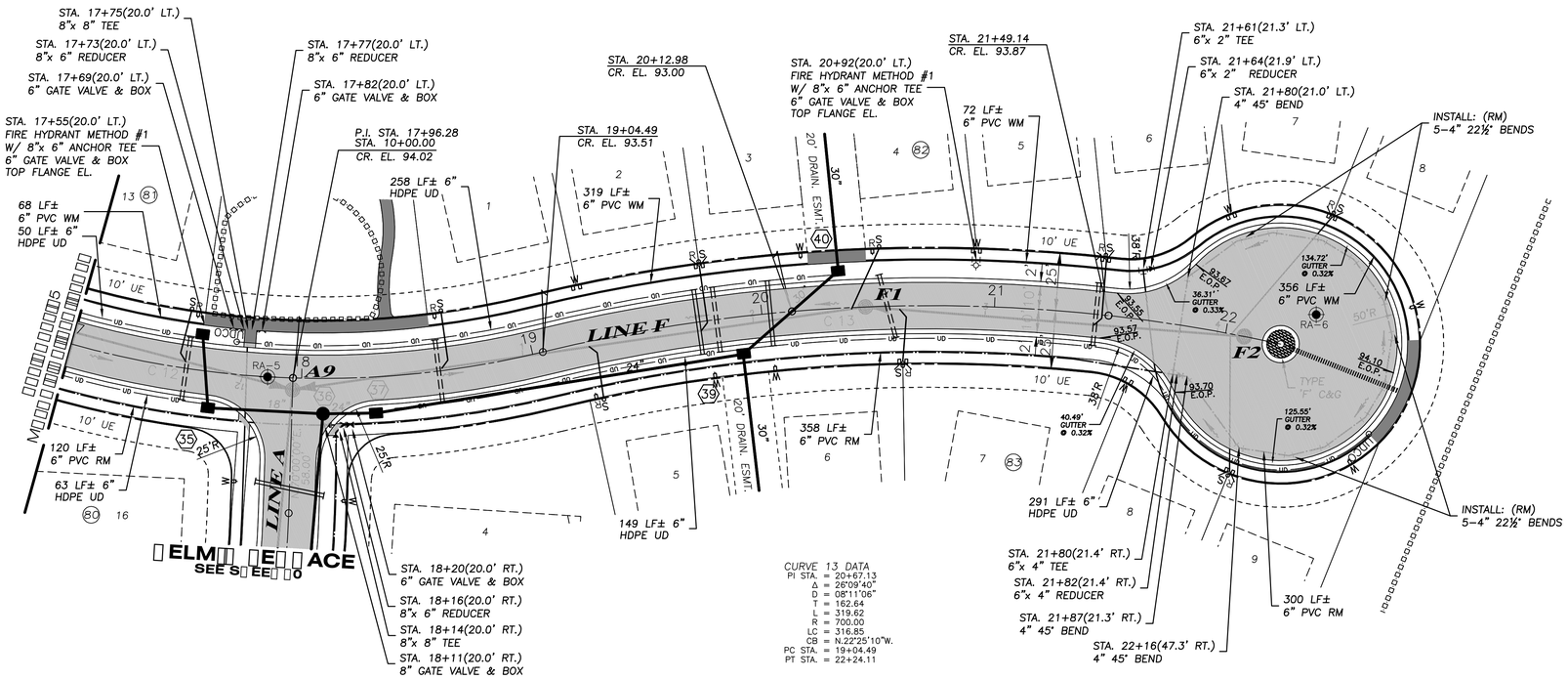
JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE RP8

MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 25 OF 40 SHEETS

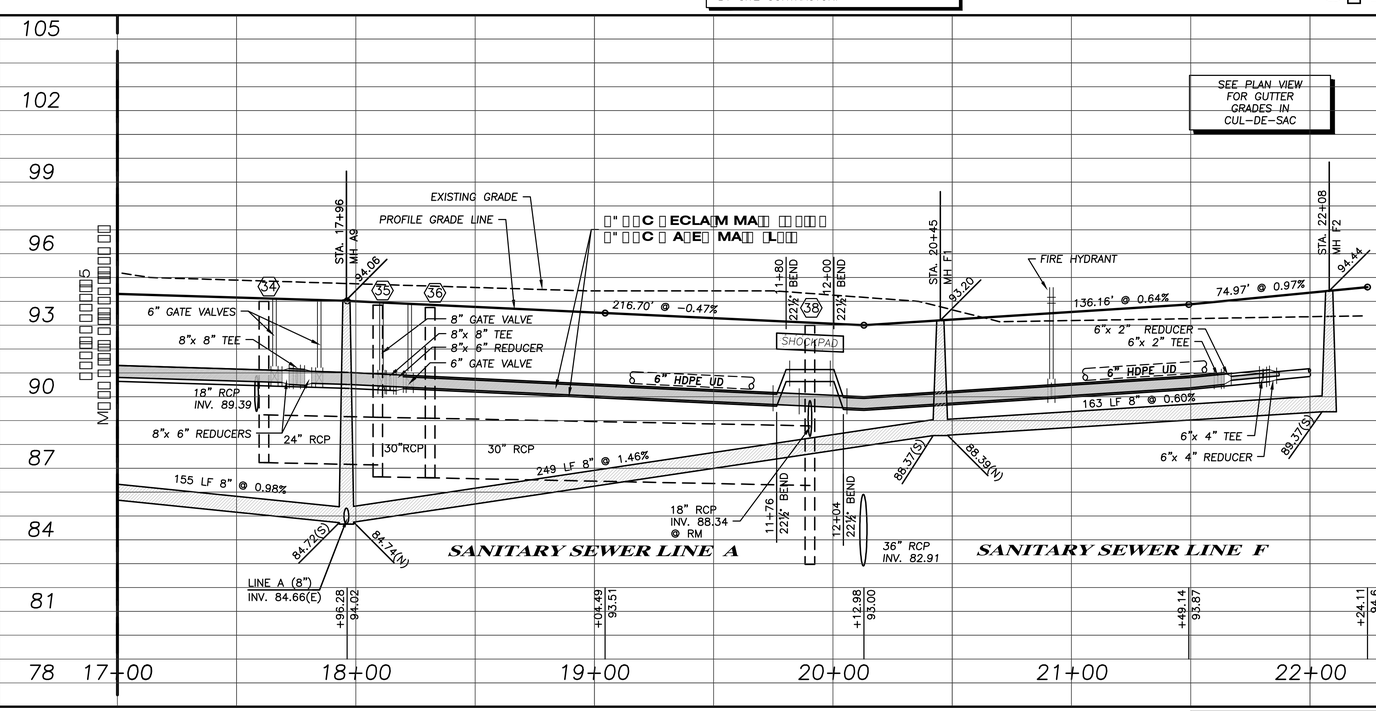


CURVE 12 DATA
PI STA. = 16+79.73
Δ = 82°00'00"
D = 14°19'26"
T = 347.71
L = 572.47
R = 400.00
LC = 524.85
CB = N.05°30'00"E.
PC STA. = 13+32.02
PT STA. = 19+04.49

CURVE 13 DATA
PI STA. = 20+67.13
Δ = 26°09'40"
D = 08°11'06"
T = 162.64
L = 319.62
R = 700.00
LC = 316.85
CB = N.22°25'10"W.
PC STA. = 19+04.49
PT STA. = 22+24.11

NOTE:
SHADED SIDEWALKS TO BE CONSTRUCTED BY SITE CONTRACTOR.

SCALE: 1" = 3' VERTICAL
1" = 30' HORIZONTAL



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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

ROADWAY & UTILITY PLAN & PROFILE

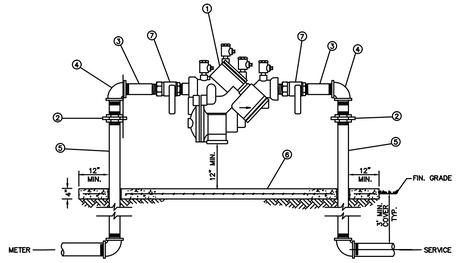
JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE RP9

MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 26 OF 40 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.

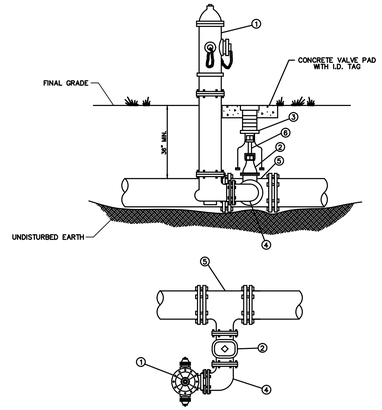
CREATED 02/24/03
REVISED

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)

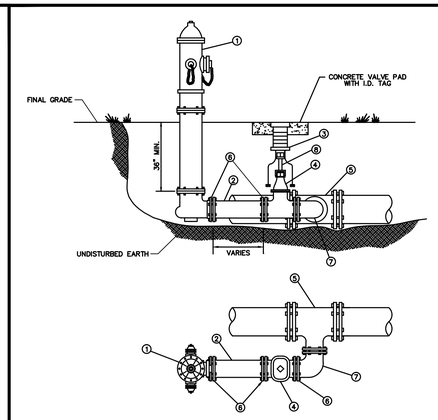
CREATED 02/24/03
REVISED

F E
PARALLEL TO THE MAIN

PASCO COUNTY UTILITIES

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

E 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)

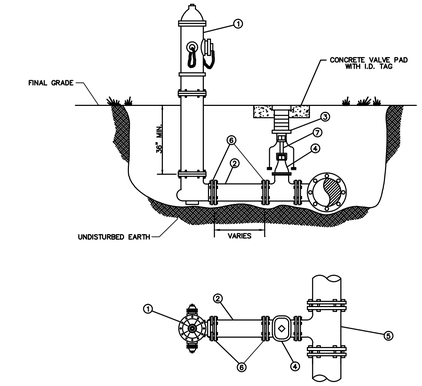
CREATED 02/24/03
REVISED

F E
PARALLEL TO THE MAIN

PASCO COUNTY UTILITIES

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

E 2



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)

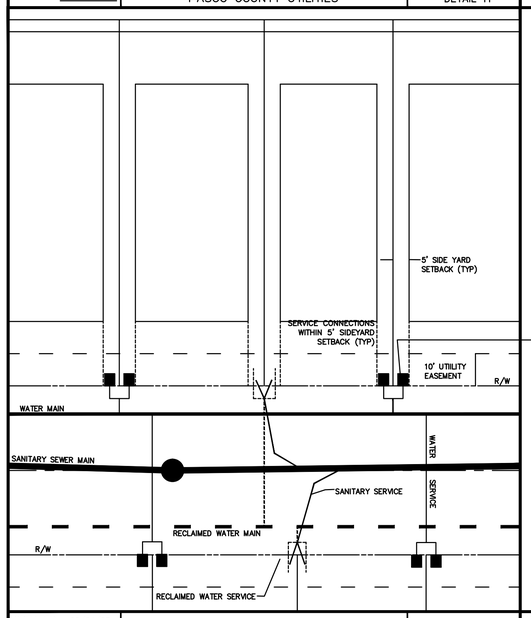
CREATED 02/24/03
REVISED

FIRE HYDRANT PERPENDICULAR TO THE MAIN

PASCO COUNTY UTILITIES

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

DETAIL 24



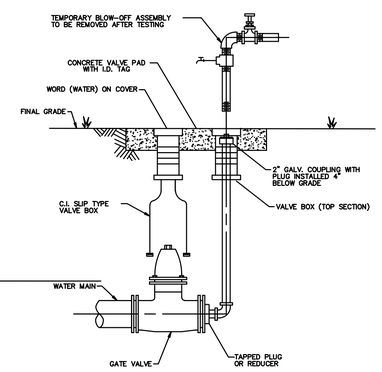
CREATED 02/24/03
REVISED

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.

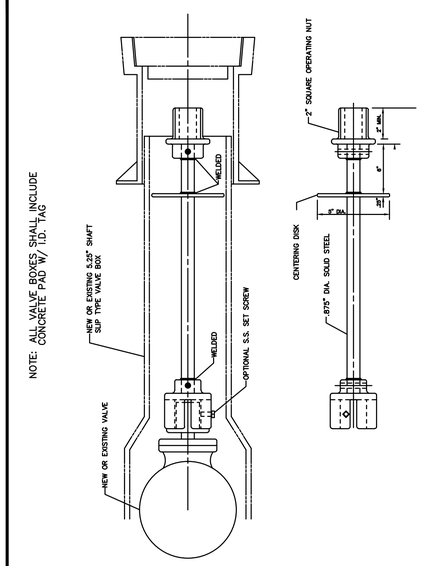
CREATED 02/24/03
REVISED

PERMANENT BLOW-OFF DETAIL

PASCO COUNTY UTILITIES

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

DETAIL 25



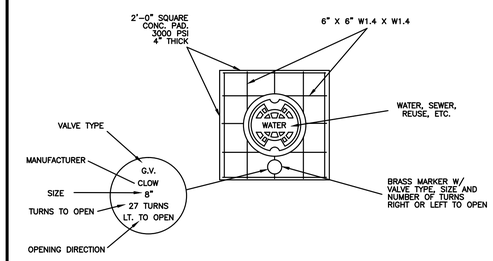
CREATED 02/24/03
REVISED

VALVE EXTENSION RODS

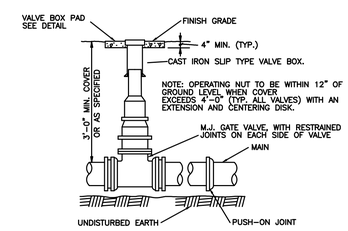
PASCO COUNTY UTILITIES

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.
Engineering Business C.A. No.: 28858
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Office: 813-223-3919 Fax: 813-223-3975

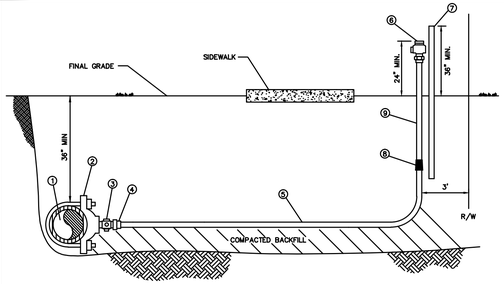
DATE:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

WATER & REUSE SYSTEM DETAILS

MEADOW POINTE IV
PARCEL EF "PROVENCE"

JOB NO.	SPH-MP-016
DESIGN	FERREIRA
DRAWN	GAM
DATE	12/18/2013
FILE	WD
PREPARED FOR:	STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP

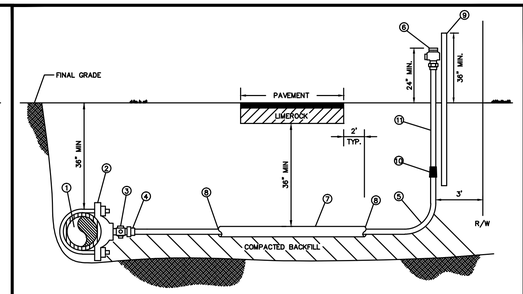
Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet



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 (M.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 (WTHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

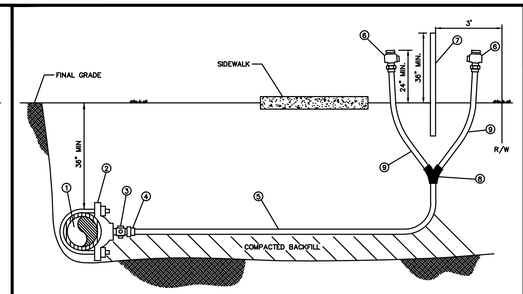
CREATED 02/24/03 REVISED	SINGLE NEAR SIDE WATER SERVICE – 3/4" SINGLE NEAR SIDE REUSE SERVICE – 1" POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 16



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 (M.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 (WTHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

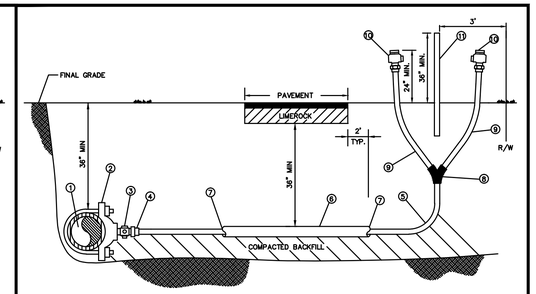
CREATED 02/24/03 REVISED	SINGLE FAR SIDE WATER SERVICE – 3/4" SINGLE FAR SIDE REUSE SERVICE – 1" POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 17



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 (M.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 (WTHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

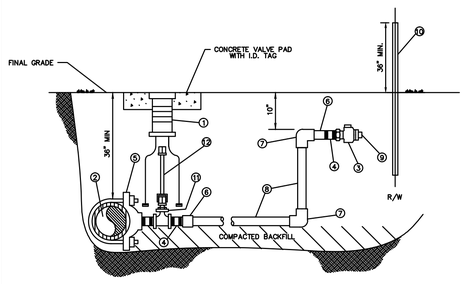
CREATED 02/24/03 REVISED	DOUBLE NEAR SIDE WATER SERVICE – 3/4" DOUBLE NEAR SIDE REUSE SERVICE – 1" POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 18



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 (M.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 (WTHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

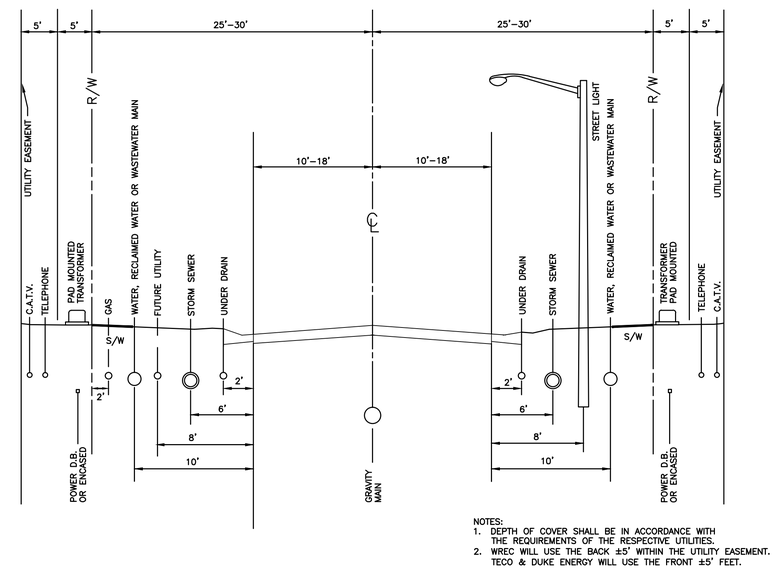
CREATED 02/24/03 REVISED	WATER AND REUSE LATERAL SERVICE 3/4" (DOUBLE – FAR SIDE) POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 19



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 (3406) – 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 MEDGE 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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

WATER & REUSE SYSTEM DETAILS

JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE WD	SHEET 28 OF 40 SHEETS

PIPE RESTRAINT LENGTHS IN FEET
COMMON FITTINGS

PIPE SIZE	WATER MAINS - TEST PRESSURE 150 PSI				
	FITTING TYPE				
	11-1/4°	22-1/2°	45°	90°	DEAD END
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'

PIPE SIZE	FORCE MAINS - TEST PRESSURE 100 PSI				
	FITTING TYPE				
	11-1/4°	22-1/2°	45°	90°	DEAD END
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).

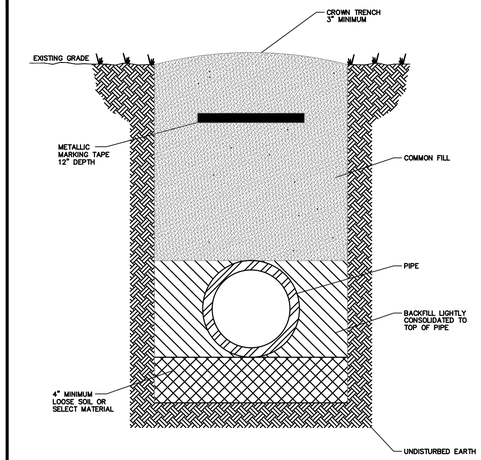
CREATED 02/24/03 REVISED	RESTRAINED JOINT TABLE COMMON FITTINGS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 28	

PIPE RESTRAINT LENGTHS IN FEET
TEES (BRANCH SIDE)

RUN SIZE	WATER MAINS - TEST PRESSURE 150 PSI								
	BRANCH SIZE								
	3"	4"	6"	8"	10"	12"	16"	20"	24"
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.

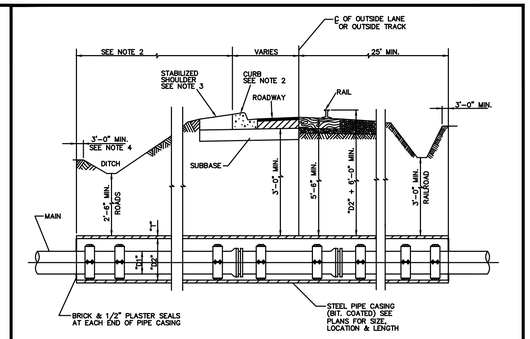
CREATED 02/24/03 REVISED	RESTRAINED JOINT TABLE TEES (BRANCH SIDE)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 29	



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	

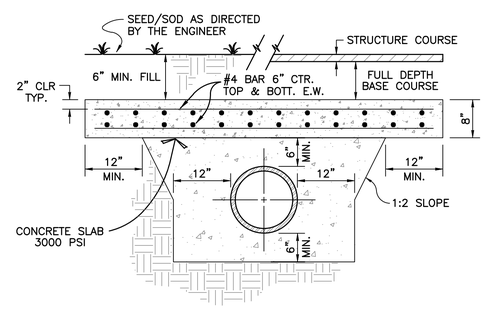


NOTE:
1. VERTICAL DIMENSIONS ARE TYPICAL FOR MAINS.
2. CASINGS SHALL TERMINATE 8' MINIMUM BEYOND EDGE OF PAVEMENT.
3. CASINGS SHALL HAVE 30" MINIMUM COVER UNDER DITCH BOTTOMS AND 36" ELSEWHERE.
4. GRAVITY SEWERS SHALL BE PROPERLY ANCHORED TO PREVENT FLOATATION WITH SPACERS ADJUSTED TO PROVIDE THE SLOPE REQUIRED.
5. SEE SECTION B.2 FOR CASING SIZE.

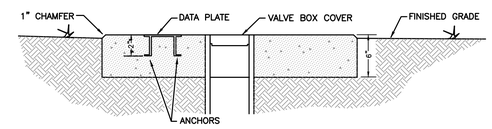
CARRIER PIPE (INCHES)	CASING PIPE (INCHES)	CASING WALL THICKNESS (INCHES)
4	12	1/4
6	16	1/4
8	16	1/4
10	24	5/16
12	24	5/16
16	30	3/8
20	36	3/8
24	42	3/8
30	48	3/8
36	54	1/2
42	60	1/2
48	66	1/2

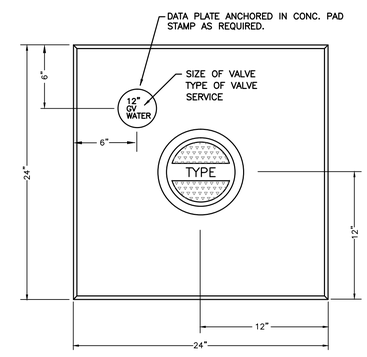
CREATED 02/24/03 REVISED	JACK & BORE DETAIL	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 35	

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





(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

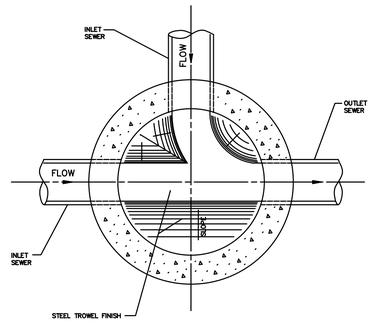
DATE	DESCRIPTION	BY
REVISIONS		

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

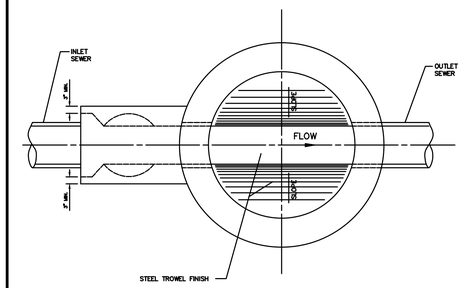
DATE:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

WATER & REUSE SYSTEM DETAILS

JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE WD	SHEET 29 OF 40 SHEETS



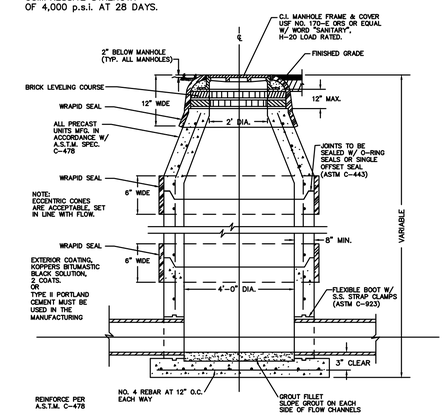
CREATED 02/24/03	STANDARD MANHOLE (BENCH AND INVERTS)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 36



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.



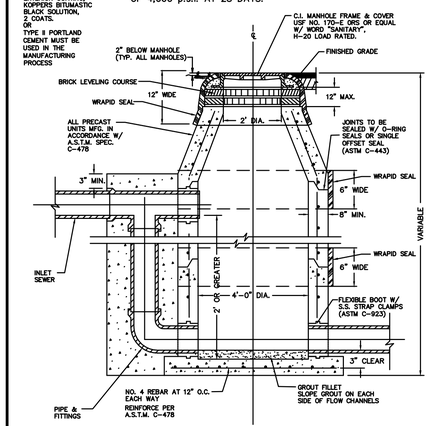
NOTE: 1. WRAPID SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS: ON ALL JOINTS ON AIR RELEASES, MANHOLES, GREASE/WATER, OIL/WATER SEPARATORS, AND WETWELLS.
2. WRAPID SEAL MUST BE USED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
3. PASCO COUNTY SHALL HAVE THE OPTION OF SPECIFYING THE TYPE 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.



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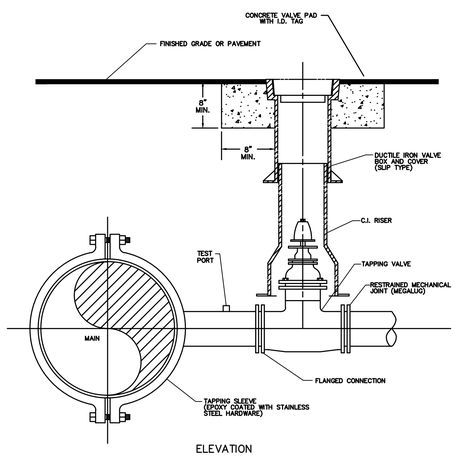
4. PASCO COUNTY SHALL HAVE THE OPTION OF REQUIRING A NEGATIVE PRESSURE TEST PER ASTM C-1244
5. LIFT HOLES MUST NOT PENETRATE THE WALLS

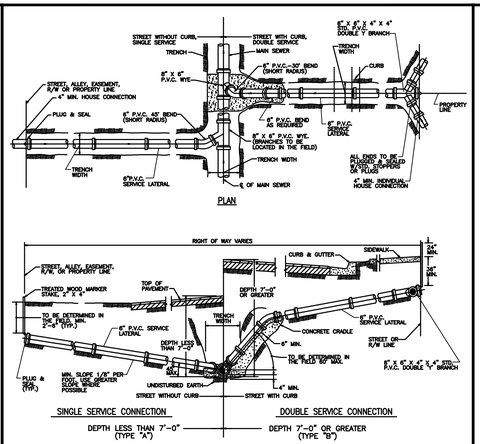
CREATED 02/24/03	DROP MANHOLE (PRE-CAST ONLY)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 39



ELEVATION

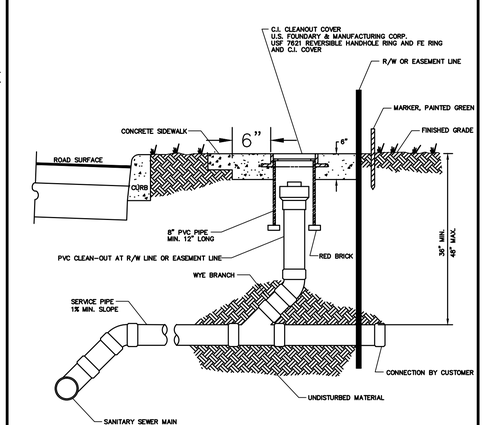
NOTES:
- SADDLE CONNECTION WILL BE TESTED TO 150 PSI PRIOR TO TAPPING MAIN.
- MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED BY COUNTY/ENGINEER.
- VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

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



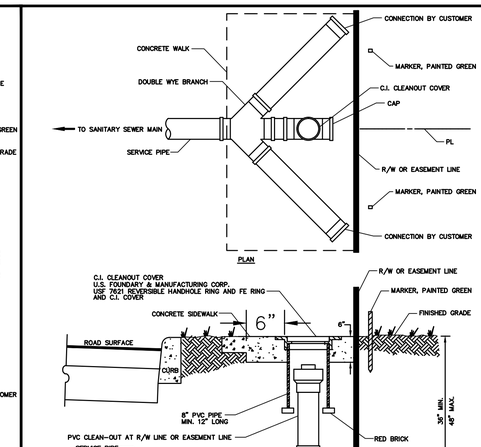
NOTE:
- CONTRACTOR SHALL MAKE, ON A CLEAN SET OF PLANS, THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE OF EACH SERVICE LATERAL AND THEN GIVE TO ENGINEER FOR RECORD PURPOSES.
- PROVIDE 2" x 4" PRESSURE TREATED WOOD MARKER STAKE AT ALL SANITARY SERVICES (INCLUDE IN PIPE PRICE). TOP OF STAKE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



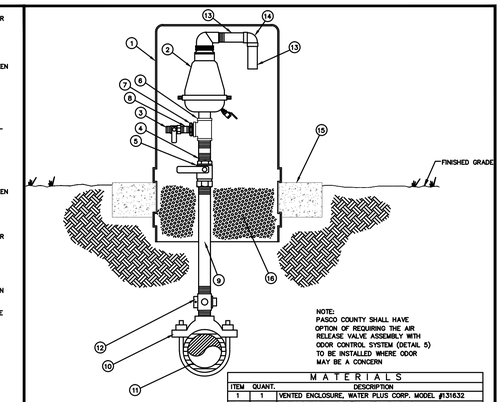
NTS

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

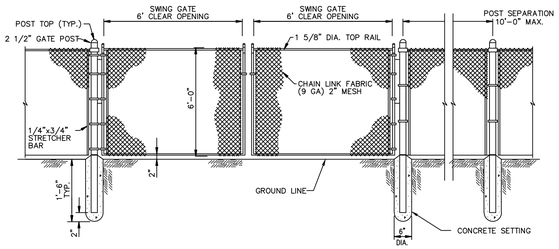
DATE	DESCRIPTION	BY
	REVISIONS	

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

SANITARY SYSTEM DETAILS

JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE SD	SHEET 30 OF 40 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

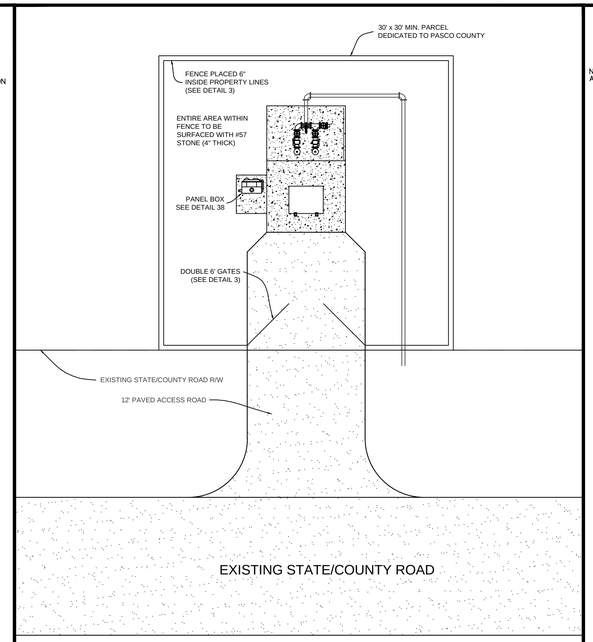
CREATED 02/24/03
REVISED

FENCE SPECIFICATIONS

PASCO COUNTY UTILITIES

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

DETAIL 04



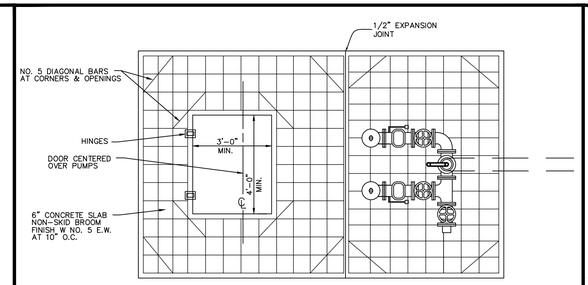
CREATED 02/24/03
REVISED

PUMP STATION (DUPLEX) SITE PLAN & ACCESS

PASCO COUNTY UTILITIES

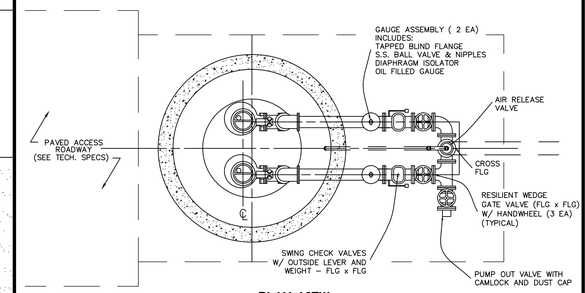
PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

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

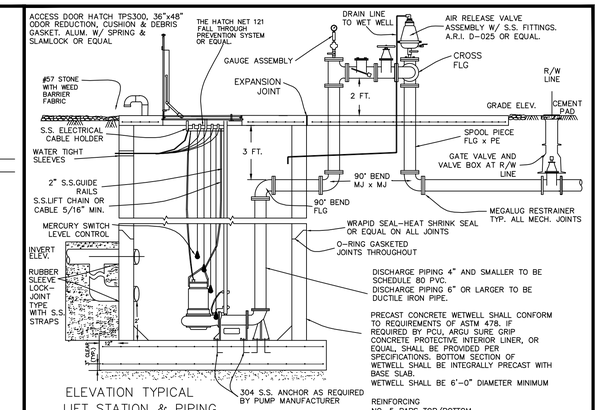
CREATED 02/24/03
REVISED

PUMP STATION SLAB & PIPING PLAN

PASCO COUNTY UTILITIES

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

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.

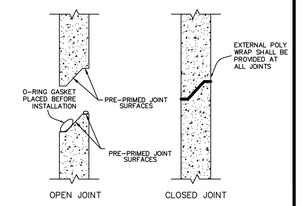
4. IF LIFT CABLES ARE USED, LIFTING RINGS MUST BE PROVIDED EVERY 4 FT.

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

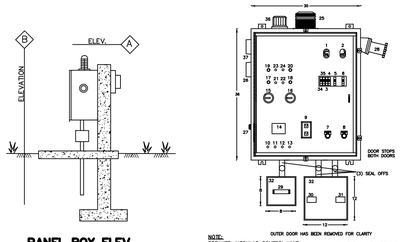
CREATED 02/24/03
REVISED

DUPLEX PUMP STATION ELEVATION & PIPING PROFILE

PASCO COUNTY UTILITIES

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

DETAIL 49



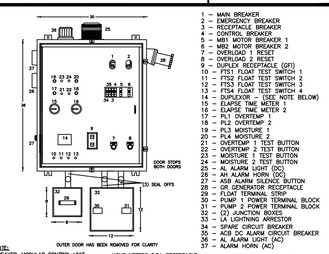
PANEL BOX ELEV.

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



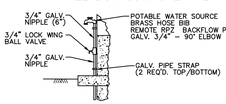
NOTE:
BREAKERS, MODULAR CONTROL UNIT & RECEIVER MOUNTED FOR OPERATION THROUGH INNER SAFETY DOOR

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

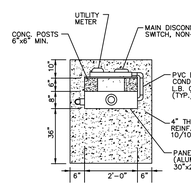
SEE TECHNICAL SPECIFICATION FOR DETAILS

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 – AH ALARM HORN (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 – (2) JUNCTION BOXES
33 – LA LIGHTNING ARRESTOR
34 – SPARE CIRCUIT BREAKER
35 – ACB DC ALARM CIRCUIT BREAKER
36 – AL ALARM LIGHT (AC)
37 – ALARM HORN (AC)

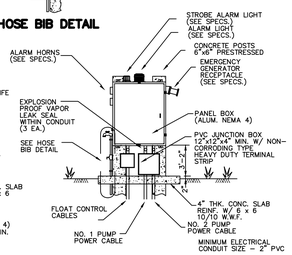
PANEL BOX COMPONENT LAY–OUT



HOSE BIB DETAIL



ELEVATION A



ELEVATION B

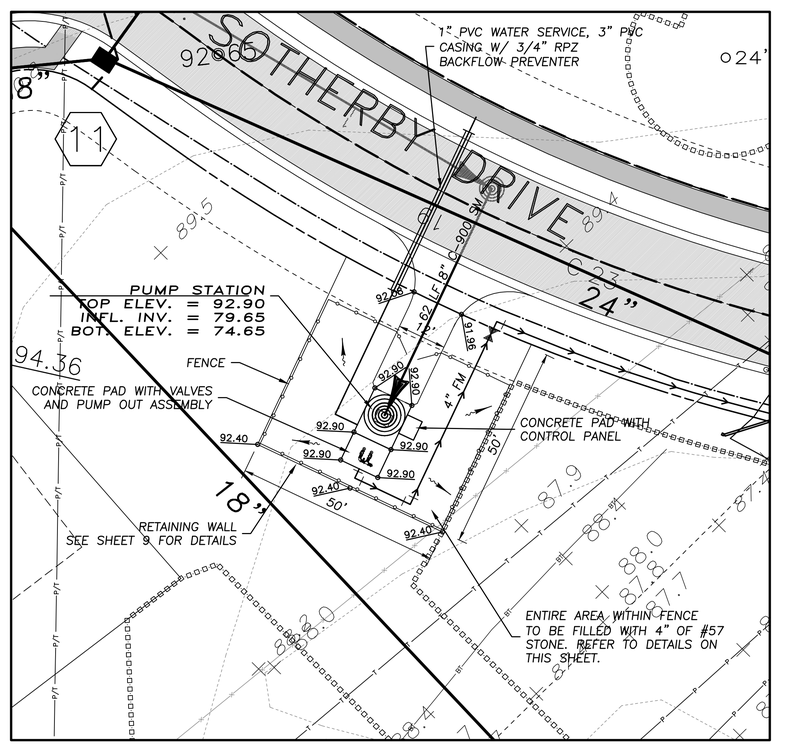
CREATED 02/24/03
REVISED

STANDARD PUMP STATION (DUPLEX) PANEL BOX ELEVATION & COMPONENT LAY–OUT

PASCO COUNTY UTILITIES

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

DETAIL 50



SITE PLAN

40 20 0 20 40

SCALE: 1 " = 0'

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

PUMP STATION DETAILS

JOB NO. SPH–MP–016

MEADOW POINTE IV
PARCEL EF "PROVENCE"

DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE PS1

PREPARED FOR: **STANDARD PACIFIC OF FLORIDA**
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = –0.84 Feet

SHEET 31 OF 40 SHEETS

WASTEWATER PUMP STATION DESIGN PARAMETERS

MEADOW POINTE PARCELS E & F WASTEWATER PUMP STATION

LOCATION: SOTHERBY DRIVE & MEADOW POINTE BLVD. (S/T/R: 15 & 16/26S/20E
NEAREST CROSS STREET

I. DESIGN CAPACITY

A. AVERAGE DAILY FLOW

125 SINGLE-FAMILY UNITS (200 GPD/UNIT) = 25,000 GPD

0 MULTI-FAMILY UNITS (140 GPD/UNIT) = 0 GPD

B. PEAK INFLUENT RATE (PEAK FACTOR = 3.4 (PER STANDARDS FOR DESIGN AND CONSTRUCTION SECTION C.3)

$$\frac{ADF \times PEAK\ FACTOR}{1440} = \frac{25{,}000\ GPD \times 3.4}{1440} = 59\ GPM$$

C. DESIGN MINIMUM FLOW

$$\frac{ADF \times 0.20}{1440} = \frac{25{,}000\ GPD \times 0.20}{1440} = 3.47\ GPM$$

D. DESIGN PUMP CAPACITY (MINIMUM REQUIRED) = 59 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 59 GPM.
2. WETWELL VOLUME REQUIRED BETWEEN LEAD PUMP START AND PUMP SHUT OF LEVEL =

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

$$V = \frac{10\ MIN. \times (1/2)\ (59)\ GPM}{2} = 147.5\ GALLONS$$

3. WETWELL DIAMETER = 6 FEET

$$\frac{\pi\ (D)^2 \times 7.48\ GAL./C.F.}{4} = \frac{7.48\ (\pi)(D)^2}{4} = \frac{7.48\ (\pi)(6)^2}{4} = 212\ GALS./FT.DEPTH$$

4. WETWELL LEVEL CHANGE BETWEEN PUMP STOP AND LEAD PUMP START =
147.5 (II.B.2-GAL.) / 212 (II.B.3-GAL./FT.DEPTH) = 0.70' DESIGN FOR 12 INCHES

5. CONTROL ELEVATIONS

TOP OF SLAB	EL. 92.90
INFLUENT INVERT	EL. 79.65
HIGH WATER ALARM	EL. 79.50
LAG PUMP ON	EL. 79.00
LEAD PUMP ON	EL. 78.00
ALL PUMPS OFF	EL. 77.00
BOTTOM	EL. 74.65

III. SYSTEM CURVE CALCULATIONS

A. FRICTION LOSSES

1. PUMPING STATION PIPING:

	ITEM	SIZE (INCHES)	QUANITY	FRICTION LOSS (ea.)	TOTAL
A	TEE	4	1	21	21
B	90° ELBOW	4	4	11	44
C	CHECK VALVE	4	1	25	25
D	GATE VALVE	4	2	2.5	5
E	SIDE OUTLET CROSS	4	0	0	0
F	WYE	4	0	0	0
G	45° ELBOW	4	0	5	0
H	22 1/2° ELBOW	4	0	2.5	0
I	11 1/4° ELBOW	4	0	1.3	0
				TOTAL =	95
				4" (DIA.) PVC PIPE LENGTH =	26
				TOTAL EQUIVALENT LENGTH =	121

2. FORCE MAIN PIPING:

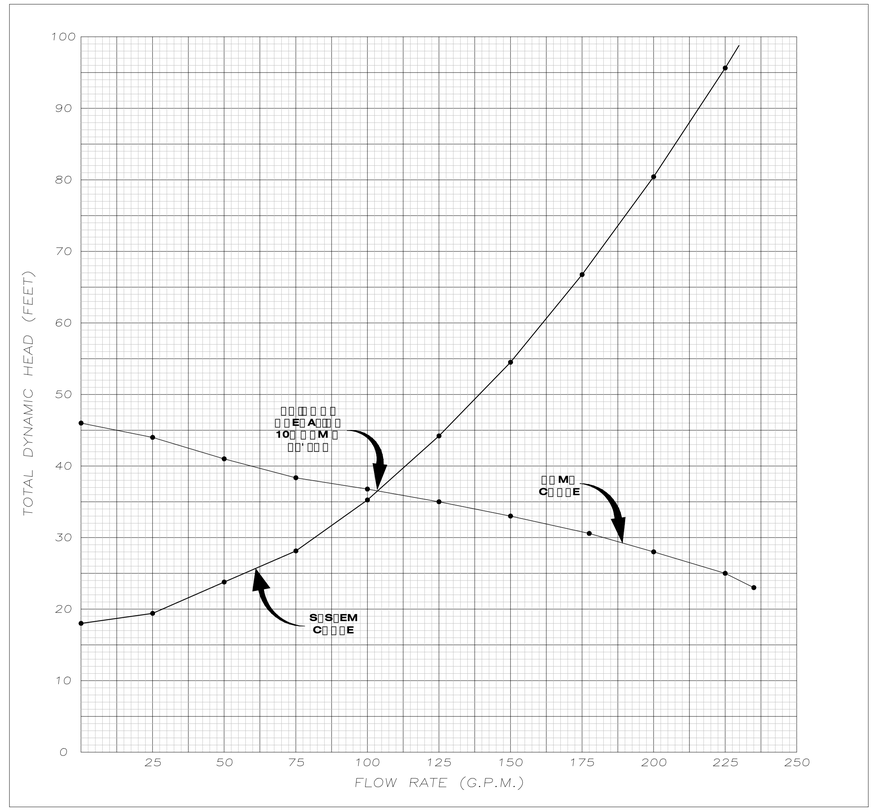
	ITEM	SIZE (INCHES)	QUANITY	FRICTION LOSS (ea.)	TOTAL
A	TEE	4	1	21	21
B	90° ELBOW	4	4	11	44
C	CHECK VALVE	4	0	25	0
D	GATE VALVE	4	4	2.5	10
E	SIDE OUTLET CROSS	4	0	0	0
F	WYE	4	0	0	0
G	45° ELBOW	4	2	5	10
H	22 1/2° ELBOW	4	4	2.5	10
I	11 1/4° ELBOW	4	0	1.3	0
				TOTAL =	95
				4" (DIA.) PVC PIPE LENGTH =	2,053
				TOTAL EQUIVALENT LENGTH =	2,148

B. STATIC HEAD

1. PIPE CENTERLINE AT DISCHARGE POINT = ELEV. 95.0±
2. LOW WATER LEVEL (ALL PUMPS OFF) = ELEV. 77.0±
3. TOTAL STATIC HEAD = 18.0 FT.

C. PRESSURE AT POINT OF CONNECTION:
0 PSI; Point of Connection is a Gravity Line

SYSTEM CURVE vs. PUMP CHARACTERISTIC CURVE



SYSTEMS HEAD COMPUTATIONS – TOTAL FRICTION LOSSES IN FEET

FLOW RATE (G.P.M.)

FLOW RATE (GPM)	0	25	50	75	100	125	150	175	200	225	250	275
ITEM: PUMP STATION PIPING (EQUIVALENT LENGTH) 121 L.F. OF 4" PVC	0.0	0.07	0.26	0.54	0.92	1.40	1.96	2.60	3.33	4.14	5.04	
FORCE MAIN PIPING (EQUIVALENT LENGTH) 2,148 L.F. OF 4" PVC	0.0	1.26	5.54	9.62	16.38	24.77	34.71	46.18	59.14	73.56	89.41	
STATIC HEAD = 18.0'	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	
DESIGN PRESSURE AT POINT OF CONNECTION (BEST/WORST SYSTEM CURVES)	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	
TOTAL LOSSES (BEST/WORST CASE)	0/18.00	0/19.33	0/23.80	0/28.16	0/35.30	0/44.17	0/54.67	0/66.78	0/80.47	0/95.70	0/112.45	

PUMP DATA

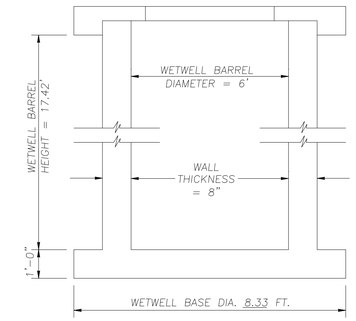
EBARA MODEL 80DVCFU63.7

RPM: 1800, IMPELLER DIAMETER 6.30 in

5.0 HP, 460 V, 3 PHASE

OPERATING POINTS ARE: 103 GPM @ 37' 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 = $[(7.33)^2 - (6)^2]\ (\pi/4)\ (17.42)\ (150)$ = 36,384 LB. ↓

BOTTOM SLAB WEIGHT = $(8.33)^2\ (\pi/4)\ (1)\ (150)$ = 8,175 LB. ↓

SOIL WEIGHT = $[(8.33)^2 - (7.33)^2]\ (\pi/4)\ (17.42)\ (120 - 62.4)$ = 12,341 LB. ↓

TOTAL WEIGHT = 56,900 LB. ↓

WEIGHT OF WATER DISPLACED:

$[(7.33)^2\ (\pi/4)\ (17.42) + (8.33)^2\ (\pi/4)\ (1)]\ (62.4)$ = 49,271 LB. ↑

$\frac{56{,}900\ LB.\downarrow}{49{,}271\ LB.\uparrow}$ = 1.16 SAFETY FACTOR

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FLORIDA PROFESSIONAL ENGINEER

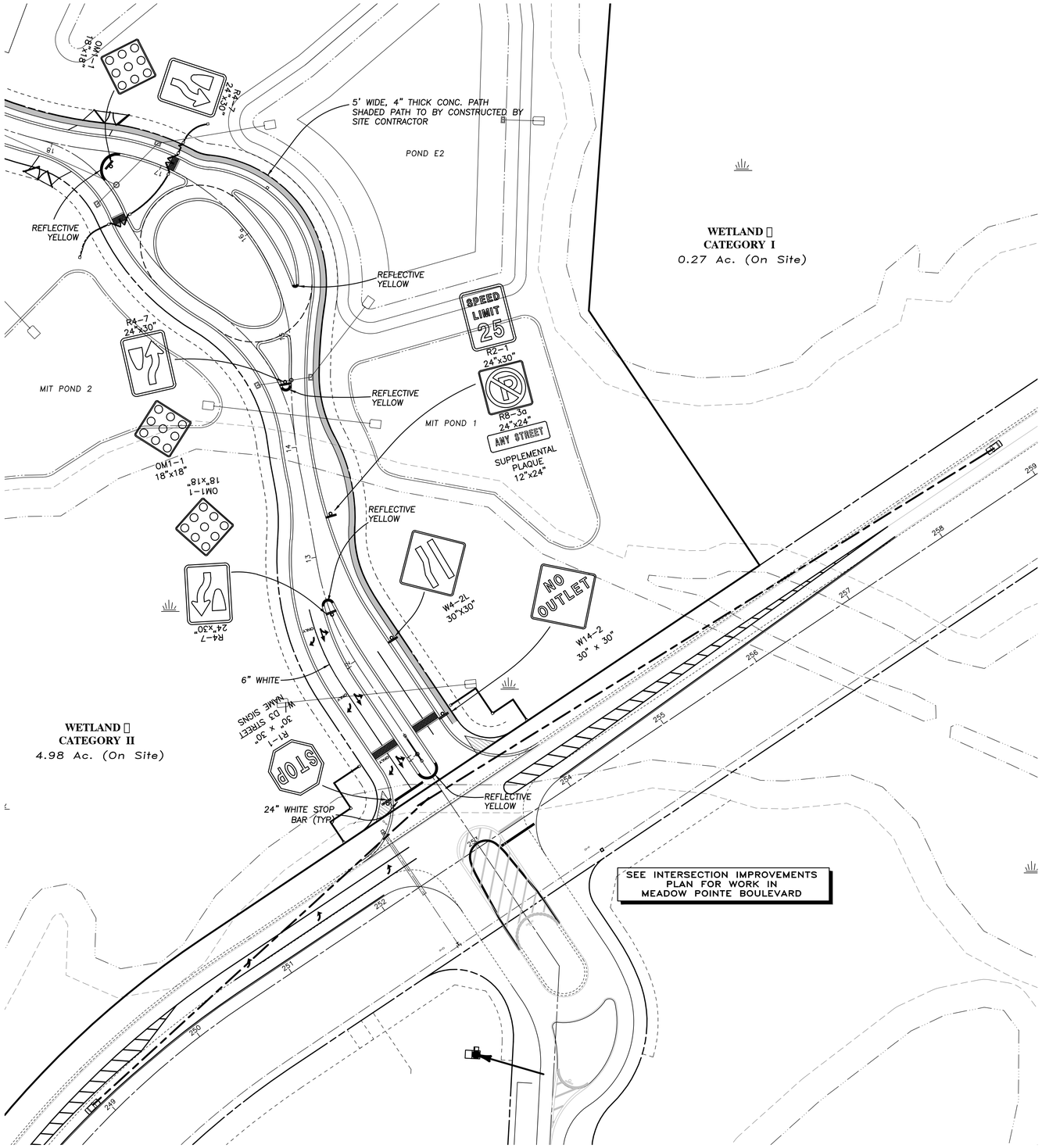
PUMP STATION DETAILS

JOB NO.	SPH-MP-016
DESIGN	FERREIRA
DRAWN	GAM
DATE	12/18/2013
FILE	PS2

MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet



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N

100 50 0 50 100

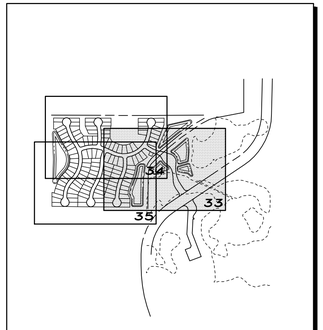
SCALE: 1" = 0'

SIGHT TRIANGLE LEGEND

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

CLEAR SIGHT TRIANGLE PER PASCO COUNTY

SIGN IDENTIFICATION	SIGN SIZE (in.)	SIGN QUANTITY TOTAL (ALL SHEETS)
OM1-1	18x18	6
R1-1	30x30	6
R2-1	24x30	1
R4-7	24x30	3
R8-3a	24x24	1
W4-2L	30x30	1
W14-2	30x30	1
SUPP. PLAQUE	12x24	1



INDEX TO MAP COVERAGE
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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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

SIDEWALK, SIGNING & PAVEMENT MARKING PLAN

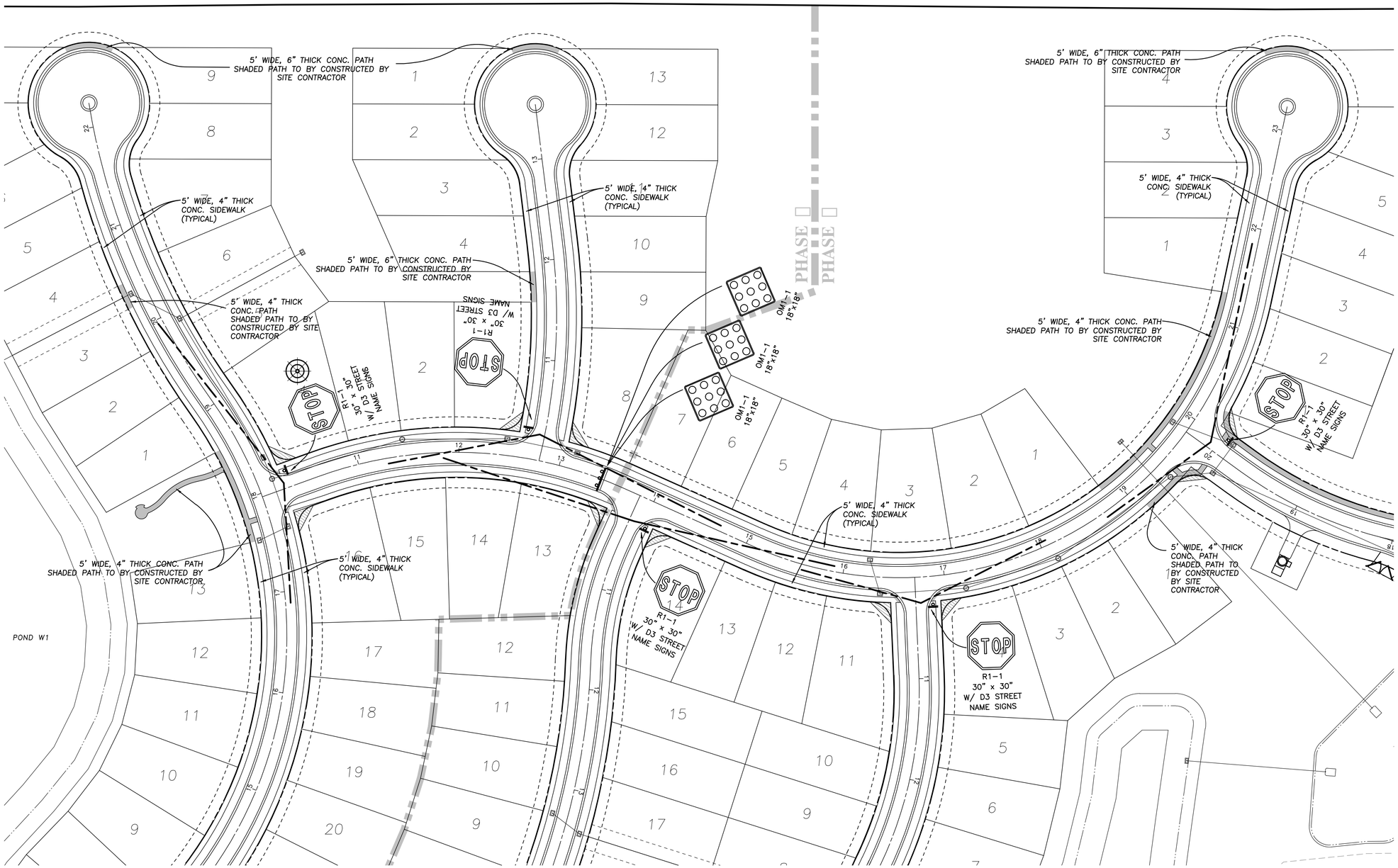
JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN FERREIRA
DATE 12/18/2013
FILE SPM1

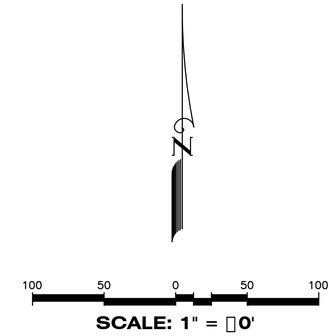
MEADOW POINTE IV
PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 33 OF 40 SHEETS





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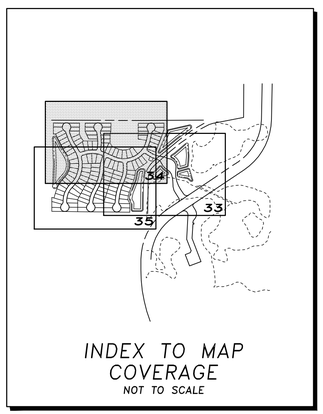

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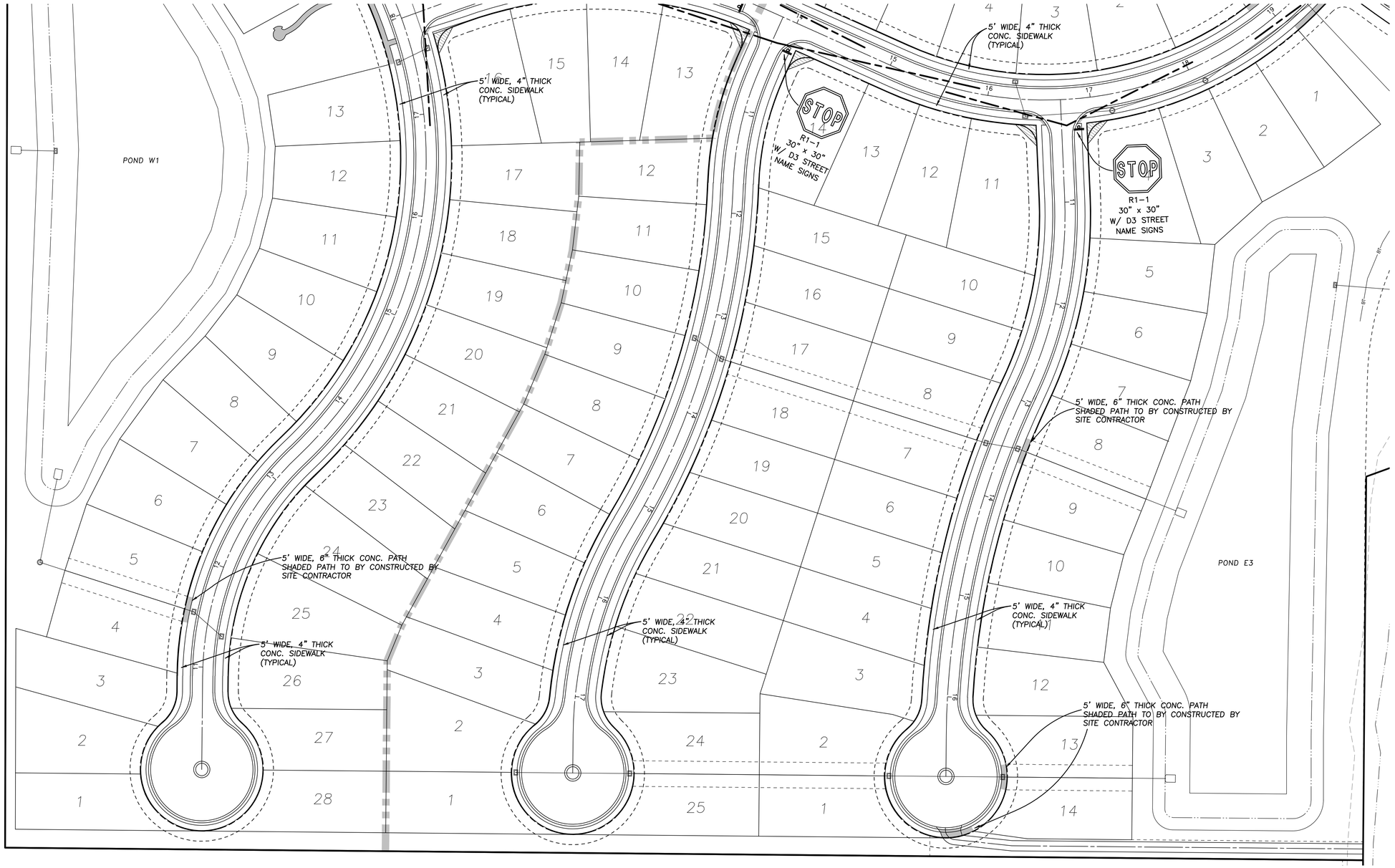

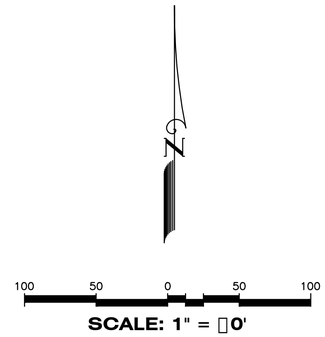

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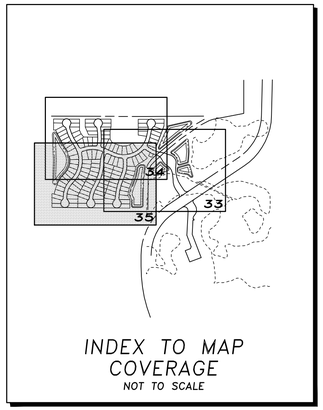
CLEAR SIGHT TRIANGLE PER PASCO COUNTY



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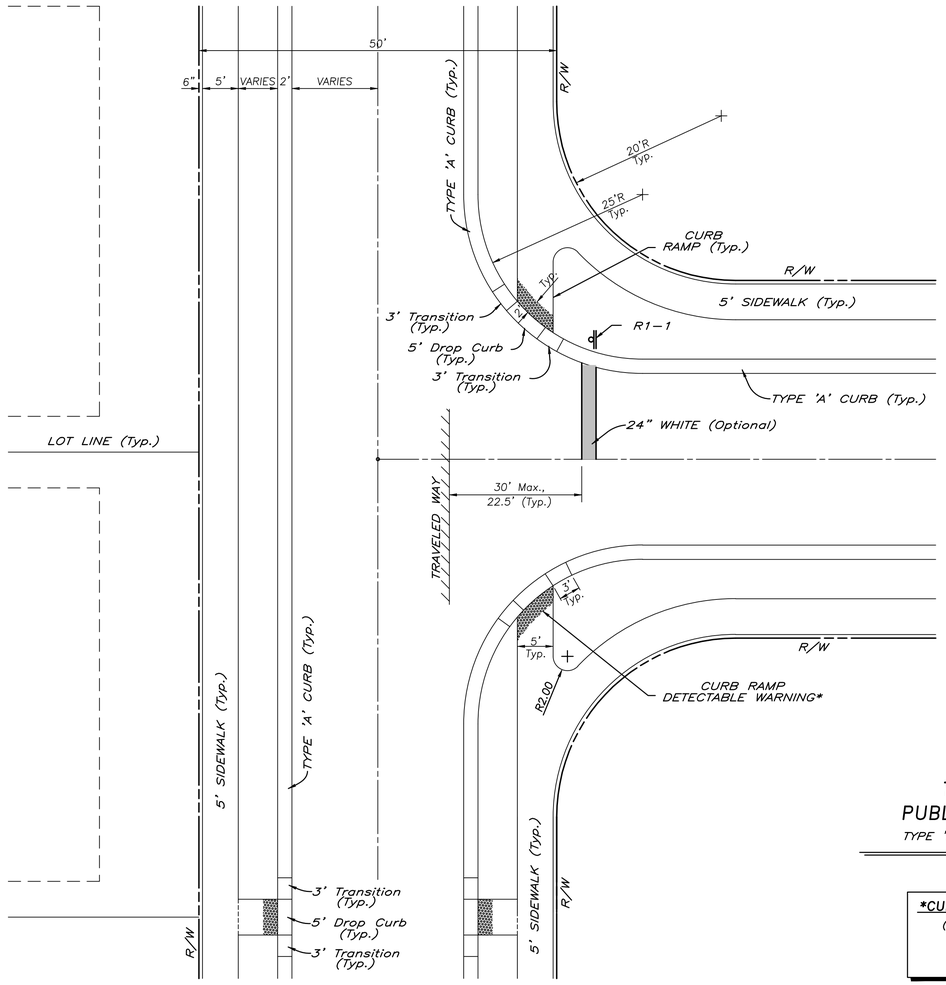
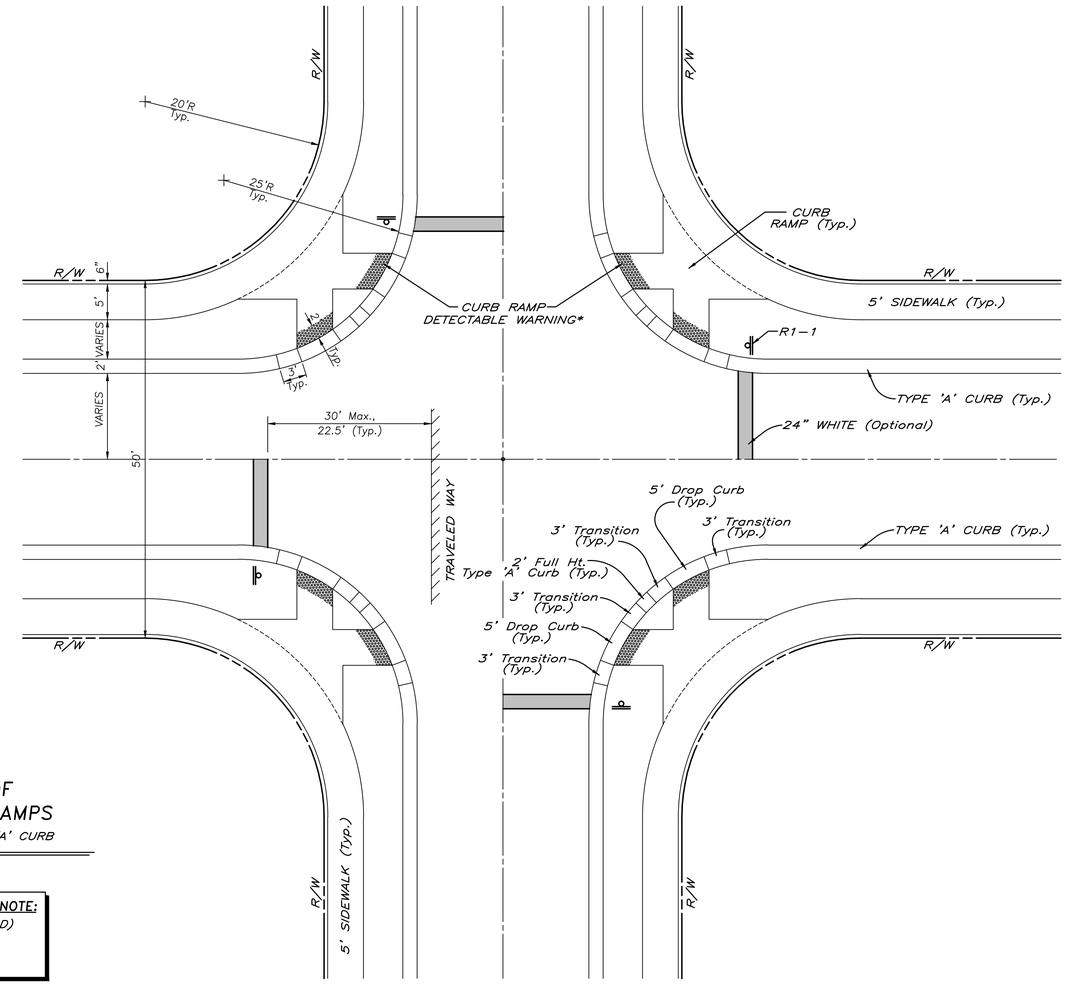
DESIGN FERREIRA	
DRAWN FERREIRA	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE SPM3	SHEET 35 OF 40 SHEETS



"T" INTERSECTION



"CROSS" INTERSECTION

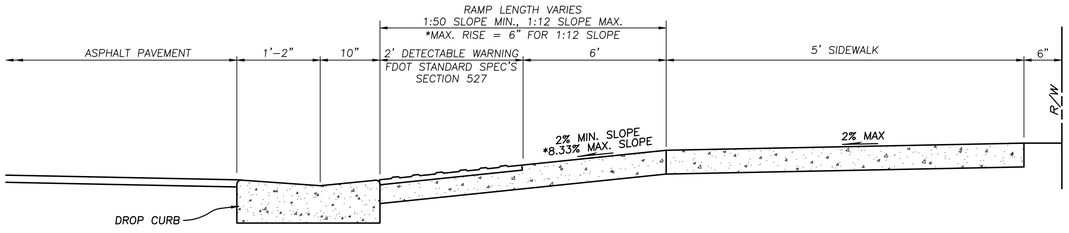
TYPICAL PLACEMENT OF PUBLIC SIDEWALK CURB RAMPS

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



SIDEWALK RAMP PROFILE

NOT TO SCALE

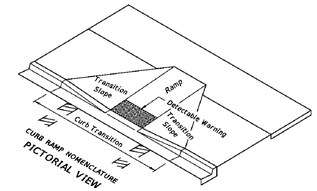
DATE	DESCRIPTION	BY
	REVISIONS	

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

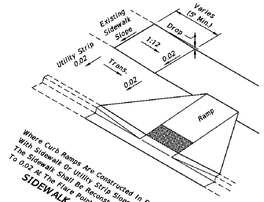
DATE:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

SIDEWALK DETAILS

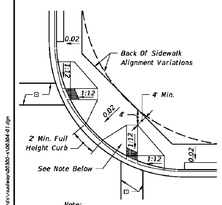
JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE SWD	SHEET 36 OF 40 SHEETS



CURB RAMP NOMENCLATURE
PICTORIAL VIEW

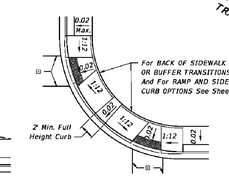


Where Curb Ramps Are Constructed In Existing Sidewalks With Sidewalk Or Utility Strip Slopes Greater Than 0.02, The Sidewalk Shall Be Reconstructed To Reduce The Slopes To 0.02 At The Ramp Points.
SIDEWALK UTILITY STRIP TRANSITION

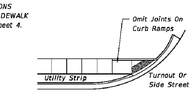


Note:
When crosswalk markings are required, ramp runs must fall within crosswalk limits and where practical, be parallel with the projected crosswalk alignment. The bottom of the ramp beyond the curb line shall have a clear space 48" minimum within the markings of a marked crosswalk. If no crosswalk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

TYPICAL PLACEMENT OF PUBLIC SIDEWALK CURB RAMPS AT CURBED RETURNS

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.

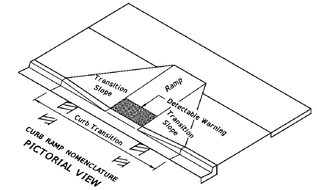
   Ramp running slope is not required to exceed 8' in length, except at sites where the plans specify a greater length.
4. If a curb ramp is located where pedestrians must walk across the ramp, then the walk shall have transition slopes to the ramp; the maximum slope of the transitions shall be 1:12. Ramps 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.

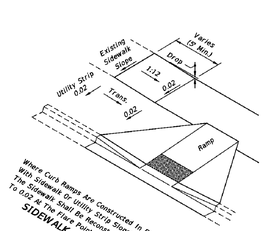
   When a separate pay item for the removal and disposal of existing curb, curb and gutter, and/or sidewalk is not provided in the plans, the cost of removal and disposal of these features shall be included in the contract unit price for new curb, curb and gutter and/or sidewalk respectively.
9. Acceptance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

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



CURB RAMP NOMENCLATURE
PICTORIAL VIEW



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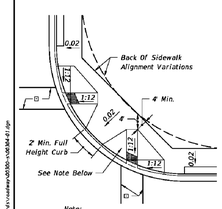

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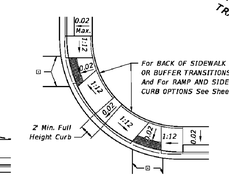
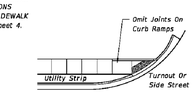


Note: A portion of one or both ramps may extend outside the return.



LINEAR SIDEWALK RAMPS

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GENERAL NOTES

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

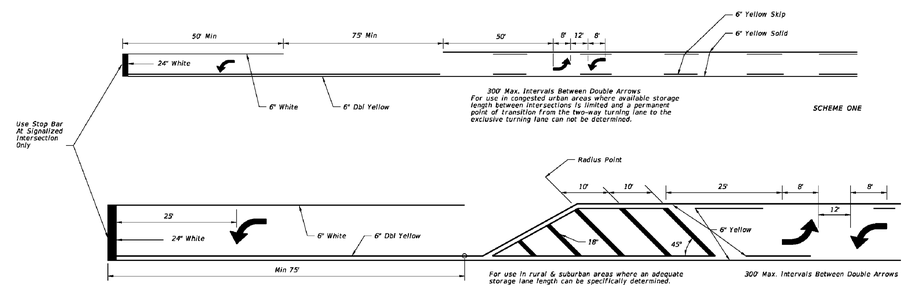
DATE	DESCRIPTION	BY
	REVISIONS	

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

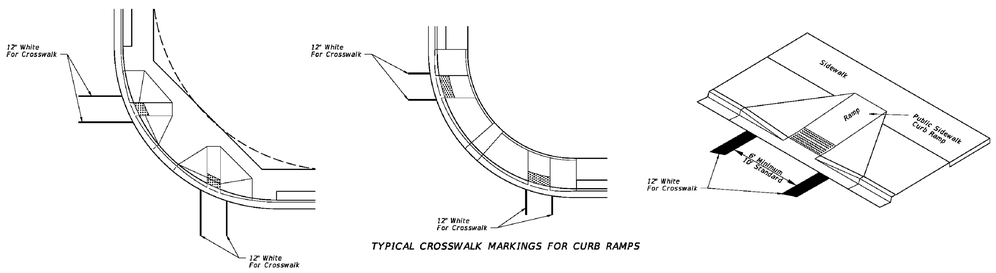
DATE:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

SIDEWALK DETAILS

JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE SWD	SHEET 37 OF 40 SHEETS

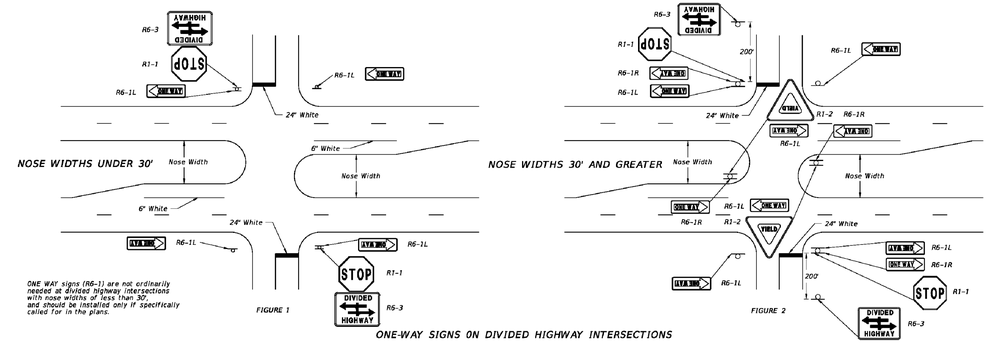


(WITH SINGLE LANE LEFT TURN CHANNELIZATION)
TWO WAY LEFT TURN LANE

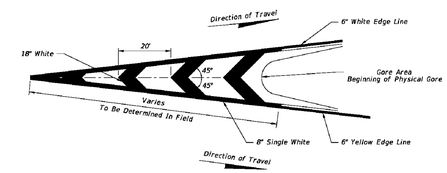


TYPICAL CROSSWALK MARKINGS FOR CURB RAMPS

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/09			FDOT DESIGN STANDARDS FY 2012/2013	SPECIAL MARKING AREAS	17346	3

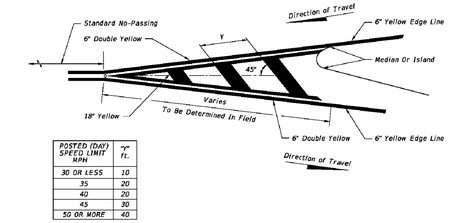


ONE-WAY SIGNS ON DIVIDED HIGHWAY INTERSECTIONS



PAVEMENT MARKINGS FOR TRAFFIC CHANNELIZATION AT GORE

(TRAFFIC FLOWS IN SAME DIRECTION)

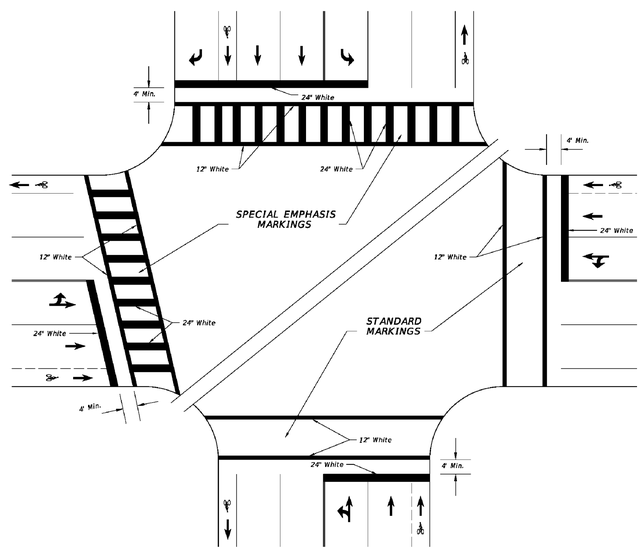


POSTED (DAY) SPEED LIMIT MPH	"Y" Ft.
30 OR LESS	10
35	20
40	20
45	30
50 OR MORE	40

PAVEMENT MARKING FOR TRAFFIC SEPARATION

(TRAFFIC FLOWS IN OPPOSING DIRECTIONS)

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/09			FDOT DESIGN STANDARDS FY 2012/2013	SPECIAL MARKING AREAS	17346	5

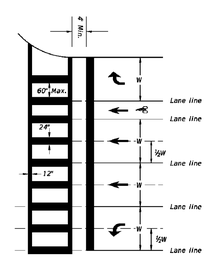


SPECIAL EMPHASIS AND STANDARD CROSSWALKS
SIGNALIZED OR STOP SIGN CONTROLLED INTERSECTION

GENERAL NOTES

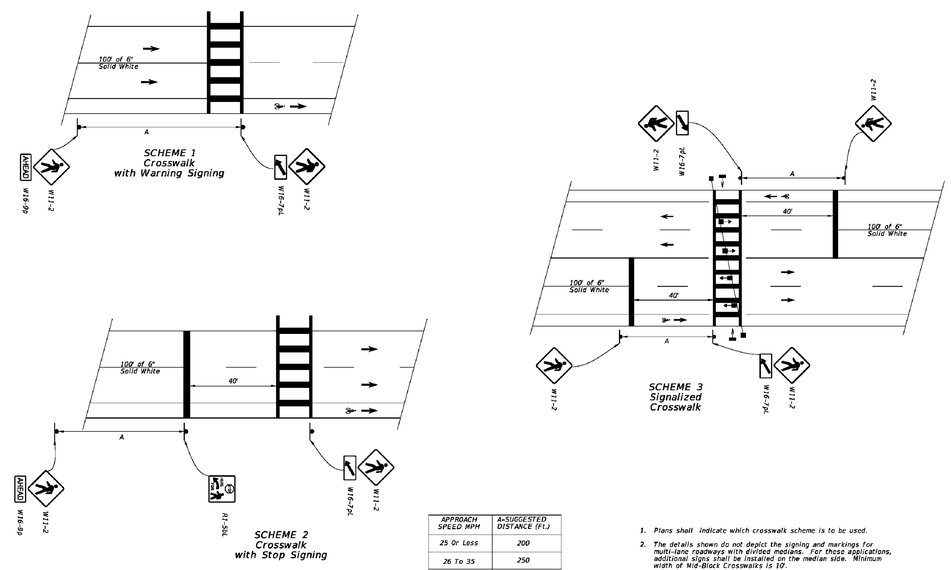
1. For traffic and pedestrian signal installation, refer to Index No. 17721 through 17890.
2. For public sidewalk curb ramps, refer to Index No. 304.
3. For pavement marking and sign installation, refer to Indexes 11200 through 17356.
4. Crosswalk minimum widths: Intersection Crosswalk 6'. Midblock Crosswalk 10'.
5. All crosswalk marking shall be white.
6. Longitudinal lines in Special Emphasis Crosswalk shall be 24" wide and spaced to avoid the wheel path of vehicles as shown in detail. The maximum space between markings shall not exceed 60". A longitudinal marking shall be centered at each lane line. Additional longitudinal markings shall be placed at the center of each lane (1/2W).

   Where the Crosswalk is skewed to the lane lane lines, the Special Emphasis longitudal lines should be parallel to the lane line.



SPECIAL EMPHASIS CROSSWALK MARKING DETAIL

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/09			FDOT DESIGN STANDARDS FY 2012/2013	SPECIAL MARKING AREAS	17346	9



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

DATE	DESCRIPTION	BY
	REVISIONS	

CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
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SIDEWALK DETAILS

JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	
DRAWN GAM	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE SWD	SHEET 38 OF 40 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, 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: 60.47 Ac.±
2. Land use: VACANT PASTURE
3. Vegetation: PALMETTO, SCATTERED PINE
4. Receiving waters or municipal separate storm water system: BASSET BR. (E) 1455 (W)
5. 2 Year/24 Hour rainfall depth: 4.3"
6. Soil types: POMONA, ZEPHYR, PALMETTO, NEWNAN, EAUGALLIE

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: OCT 2014
4. Anticipated completion date: OCT 2019
5. Total acres disturbed: 46.5 Ac.
6. Pre-developed "C" factor: 0.20
7. Post-developed "C" factor: 0.45
8. The storm water management system, upon completion of construction and appropriate certification and as-built submittals will be operated and maintained by MEADOW POINTE PARCELS E & F CDD
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.

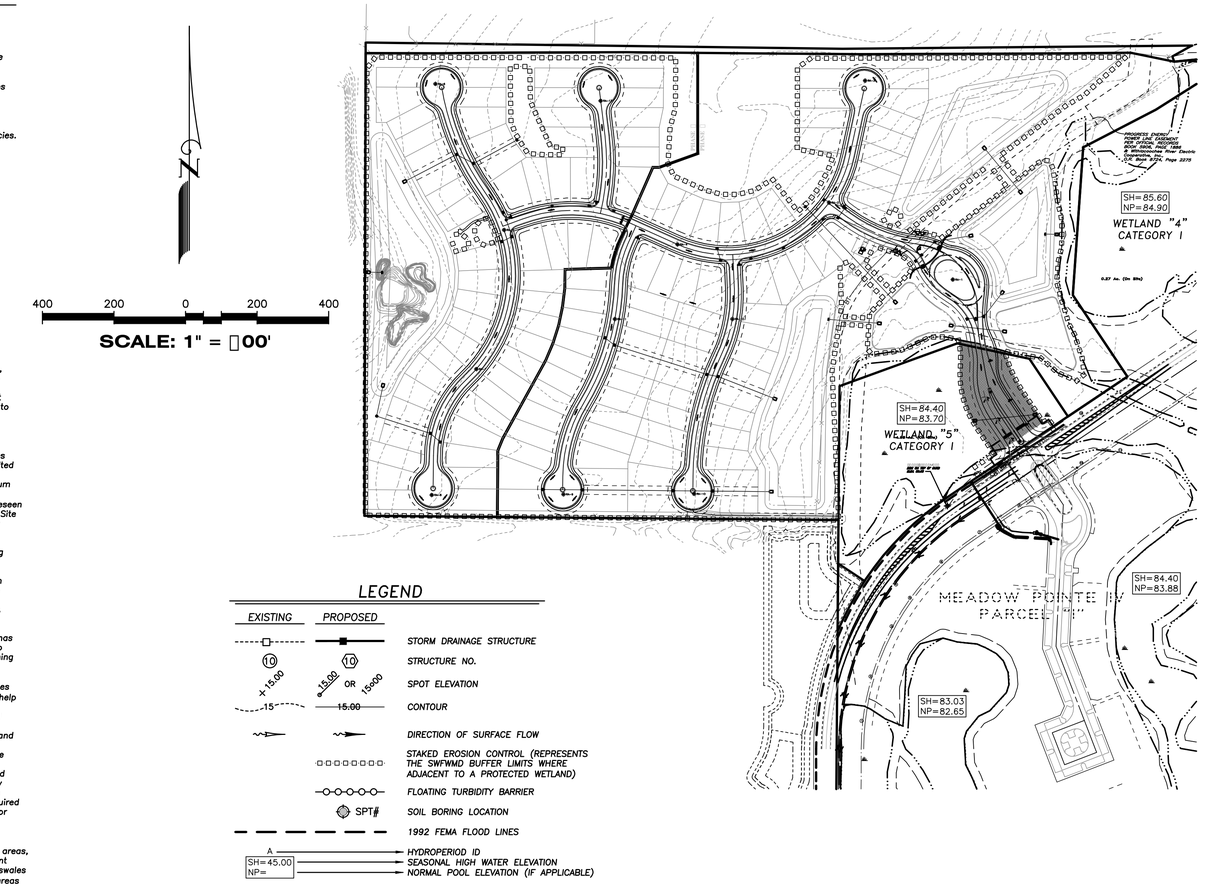
Please check the construction plans to see if written reports on monitoring or plant survival rates are required to be sent to any reviewing agencies. Written notes should always be kept which describe maintenance activities undertaken during each inspection.

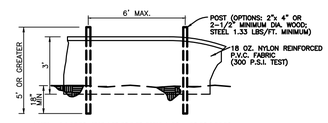
Specific conditions of all permits may require additional maintenance activities above and beyond those outlined above. Please be aware of all permit conditions as issued by regulatory agencies to ensure permit compliance.

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.

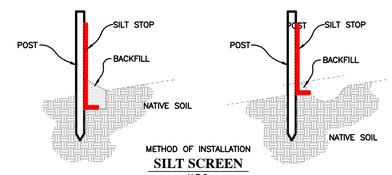
GENERAL EROSION AND TURBIDITY CONTROL NOTES

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 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.
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, interceptor 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.





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.

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.

APPLICANT NAME STANDARD PACIFIC OF FLORIDA

APPLICANT SIGNATURE _____

DATE _____

PLAN

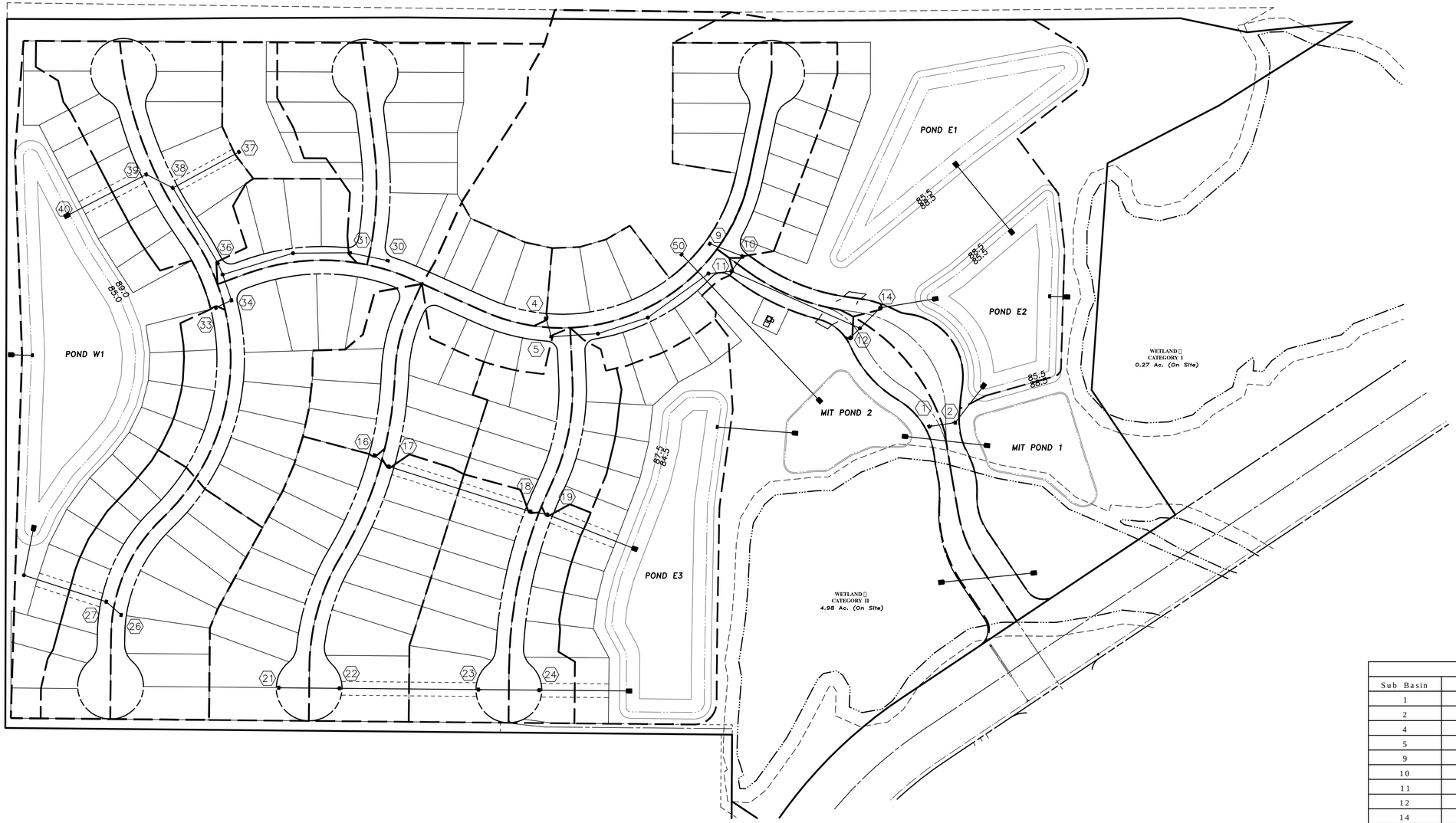
DATE	DESCRIPTION	BY
	REVISIONS	

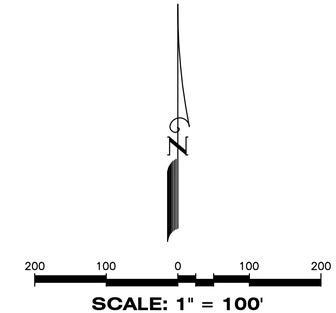
CLEARVIEW LAND DESIGN, P.L.
Engineering Business C.A. No.: 28858
1213 E. 6th Avenue, Tampa, Florida 33605
Office: 813-223-3919 Fax: 813-223-3975

DATE:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

CONSTRUCTION SURFACE WATER MANAGEMENT PLAN

JOB NO. SPH-MP-016	MEADOW POINTE IV PARCEL EF "PROVENCE"
DESIGN FERREIRA	PREPARED FOR: STANDARD PACIFIC OF FLORIDA A FLORIDA GENERAL PARTNERSHIP
DRAWN GAM	
DATE 12/18/2013	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE CSWMP	SHEET 39 OF 40 SHEETS





LEGEND

	STORM DRAINAGE STRUCTURE
10	STRUCTURE NO.
+15.00	SPOT ELEVATION
15	CONTOUR
	DIRECTION OF SURFACE FLOW
	STAKED EROSION CONTROL
PB#	POND BORING LOCATION
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
21.1 Ac.	MAJOR DRAINAGE BASIN

SUB BASIN AREAS			
Sub Basin	Ac.	Sub Basin	Ac.
1	0.61	22	1.90
2	0.71	23	1.66
4	0.71	24	0.88
5	0.47	26	1.72
9	1.70	27	1.27
10	0.94	30	2.10
11	0.51	31	0.97
12	0.17	33	0.55
14	0.18	34	2.00
16	0.81	36	0.75
17	0.85	37	0.67
18	0.91	38	1.34
19	0.59	39	1.10
21	2.00	50	3.00

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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

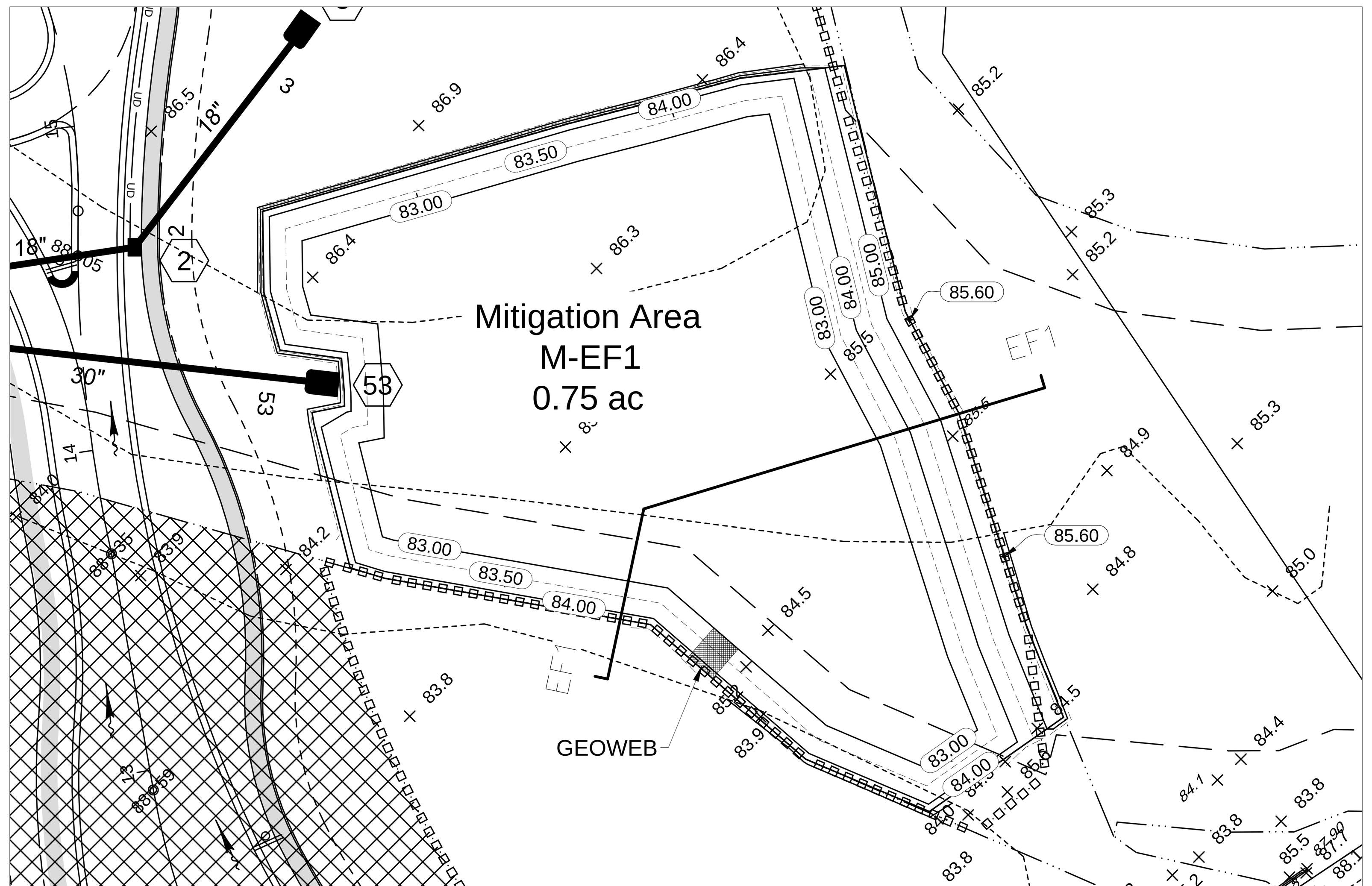
DRAINAGE AREA MAP

JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN GAM
DATE 12/18/2013
FILE DA

MEADOW POINTE IV PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet



EF1 Grading

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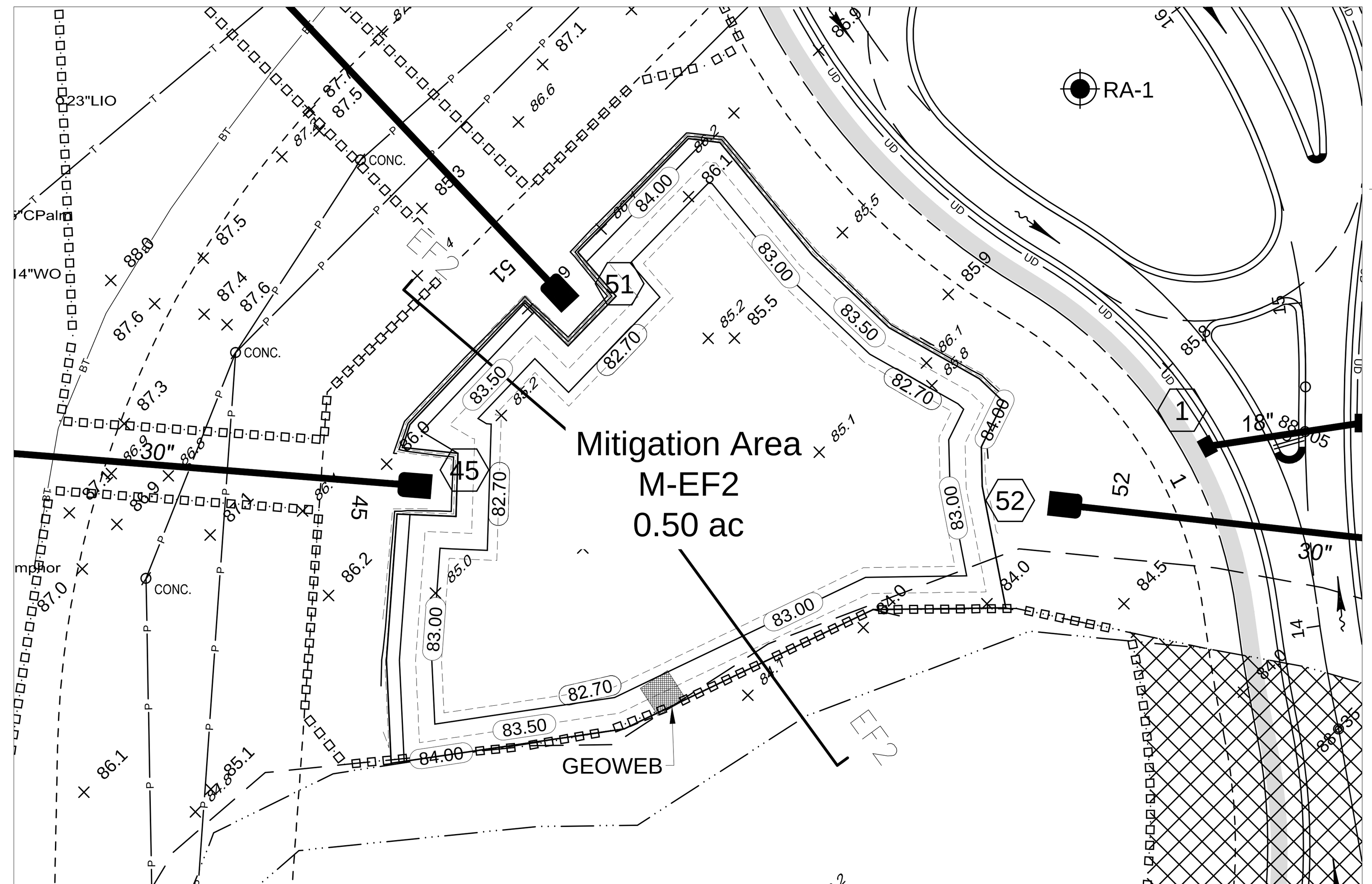

EF2 Grading Plan

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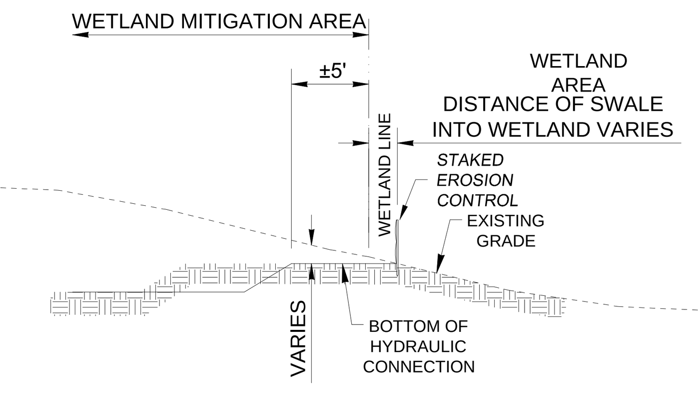
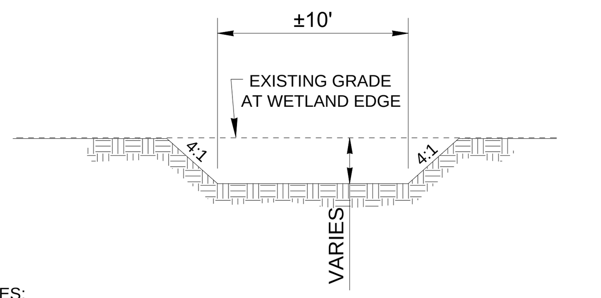


GENERIC 10' HYDRAULIC CONNECTION BETWEEN MITIGATION AREA AND WETLAND



NOTES:

1. DEPTH OF CONNECTIONS WILL VARY (±12") DEPENDING ON EXISTING GRADES, WETLAND HYDROPERIODS AND PROPOSED MITIGATION GRADES.

2. DETERMINATION AS TO WHETHER HYDRAULIC CONNECTIONS ARE NEEDED AND WHERE THEY WILL BE LOCATED WILL BE BASED ON A CASE-BY-CASE ASSESSMENT OF EACH MITIGATION AREA AT THE TIME OF CONSTRUCTION PLANS PREPARATION. THEY WILL BE INSTALLED AT LOCATIONS TO MINIMIZE WETLAND AND TREE DISTURBANCE. ANY DISTURBED AREAS WILL BE PLANTED WITH WETLAND VEGETATION CONCURRENTLY WITH MITIGATION PLANTINGS AND MAINTAINED ACCORDINGLY.

WETLAND MITIGATION MONITORING & MAINTENANCE NOTES

All the following items will be included in the mitigation monitoring and maintenance program:

A. Monitoring and maintenance will be performed for a minimum of 3 years for these herbaceous area . Maintenance will occur eight times per year for years one and two, six times per year for years three and four and four times per year thereafter as needed.
Monitoring will be done semi-annually and reported annually; Events should occur between March 1 and November 30;
Monitoring reports will be submitted to SWFWMD and to COE within 30 days following the monitoring event at the annual anniversary. At a minimum, monitoring reports will address:

1. Percent survival of planted species.
2. Number of plants replanted if necessary to meet 85 they were planted.
3. Water quality
   a) Visual observations
   b) Lab data if necessary, i.e., salinity, conductivity, pH, etc.
4. Total plant cover
5. Plant diversification and natural recruitment (list species present)
6. Depth of water at monitoring event
7. Soil stabilization measures used
8. Permanently marked photo stations
9. Wildlife usage
10. Overall ecological evaluation
11. Problems encountered and corrective actions taken or needed
12. Date planted and number of planted materials used

B. Maintenance shall mean the removal of nuisance or exotic species. Nuisance species coverage must not exceed 10 %. (cattails, willow, primrose willow, water hyacinths, Sesbania spp. dogfennel, Brazilian pepper, etc.). Contactor should avoid use of herbicides if possible. All weed control should cease one year prior to release by SWFWMD.

C. Survival must be guaranteed for each planted species. The area will be replanted annually if species survivorship falls below 85%. 50% plant cover will be achieved at the end of year one, 70% by the end of year two and 85% plant cover of non-nuisance wetland species will be achieved by the end of the third year. Replanting may be needed to achieve these values. No more than 10% of the total area coverage shall be upland or nuisance species.

D. Monitoring and maintenance will continue until SWFWMD permitted success criteria are achieved and the areas are released by SWFWMD. Reconstruction of the site design may be necessary to achieve functioning wetlands.

E. Prior to any wetland impact, SWFWMD must receive appropriate financial surety for the mitigation completion.

MISCELLANEOUS MITIGATION NOTES:

Plants will be installed in random patterns at the contractor's discretion unless otherwise directed by the plans or by the mitigation designer.

The Mitigation areas will be considered as conservation areas. Plants will be installed at elevations most conductive for their development. Planting ranges are depicted on the attached list.

Grades and slopes shown on the mitigation areas may be field altered to insure that water levels will be achieved which result in optimal plant survival and habitat value. However, grade changes must be approved by appropriate agencies.

Minimum plant sizes:
Herbs: 4" potted material or bare root equivalent.
Shrubs: one gallon pots
Trees: one gallon pots in herbaceous areas.

Potted, nursery grown material will be used, unless otherwise approved in advance.
Plants will be as shown on the attached list.

All mitigation areas will receive plants on 3 foot centers. In herbaceous areas, three percent of this total will be shrubs and trees to increase vegetative diversity.

Wetland topsoil from approved impact No.5 will be used if available, in the mitigation areas. The contractor will provide at least 24" of sandy, non-clay material above any present clay layer.

MITIGATION CONSTRUCTION PROCESS NOTES

These uplands will be scraped to elevations depicted. Suitable soils should be provided (see notes on this sheet).

The Permittee shall commence construction of the mitigation area(s) within 30 days of wetland impacts, if wetland impacts occur between February 1 and August 31. If wetland impacts occur between September 1 and January 31, construction of the mitigation area(s) shall commence by March 1. In either case, construction of the mitigation area(s) shall be completed within 120 days of the commencement date unless a time extension is approved in writing by the District.

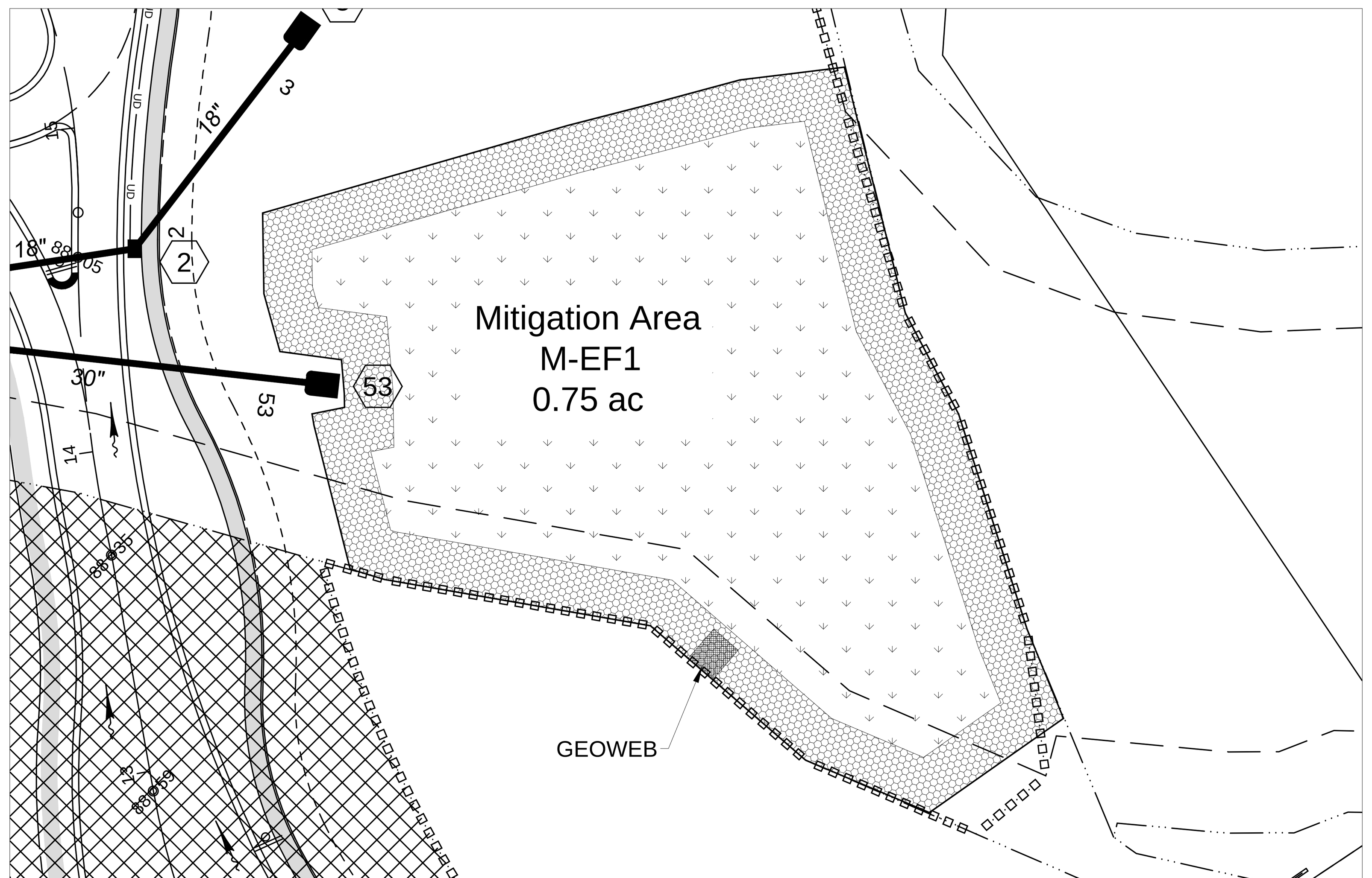
Notification of planting completion should be provided to SWFWMD. A monitoring schedule will be arranged with SWFWMD.

Topsoil Mulch Utilization Notes

John Goolsby, Cardno ENTRIX
Topsoil mulch from wetland impact 5 (0.99Ac.) will be used as the top layer in the wetland creation areas to the greatest practicable extent.

It is key to avoid mulch sources that are excessively dominated by nuisance plant species. The donor sites will be inspected by the project ecologist prior to the initiation of the mulch transfer process.

The goal will be to transfer about 4" of topsoil and plants to each creation area. The ultimate depth will be partially determined by the depth and quality of material in the donor impacts.



EF1 Planting Plan

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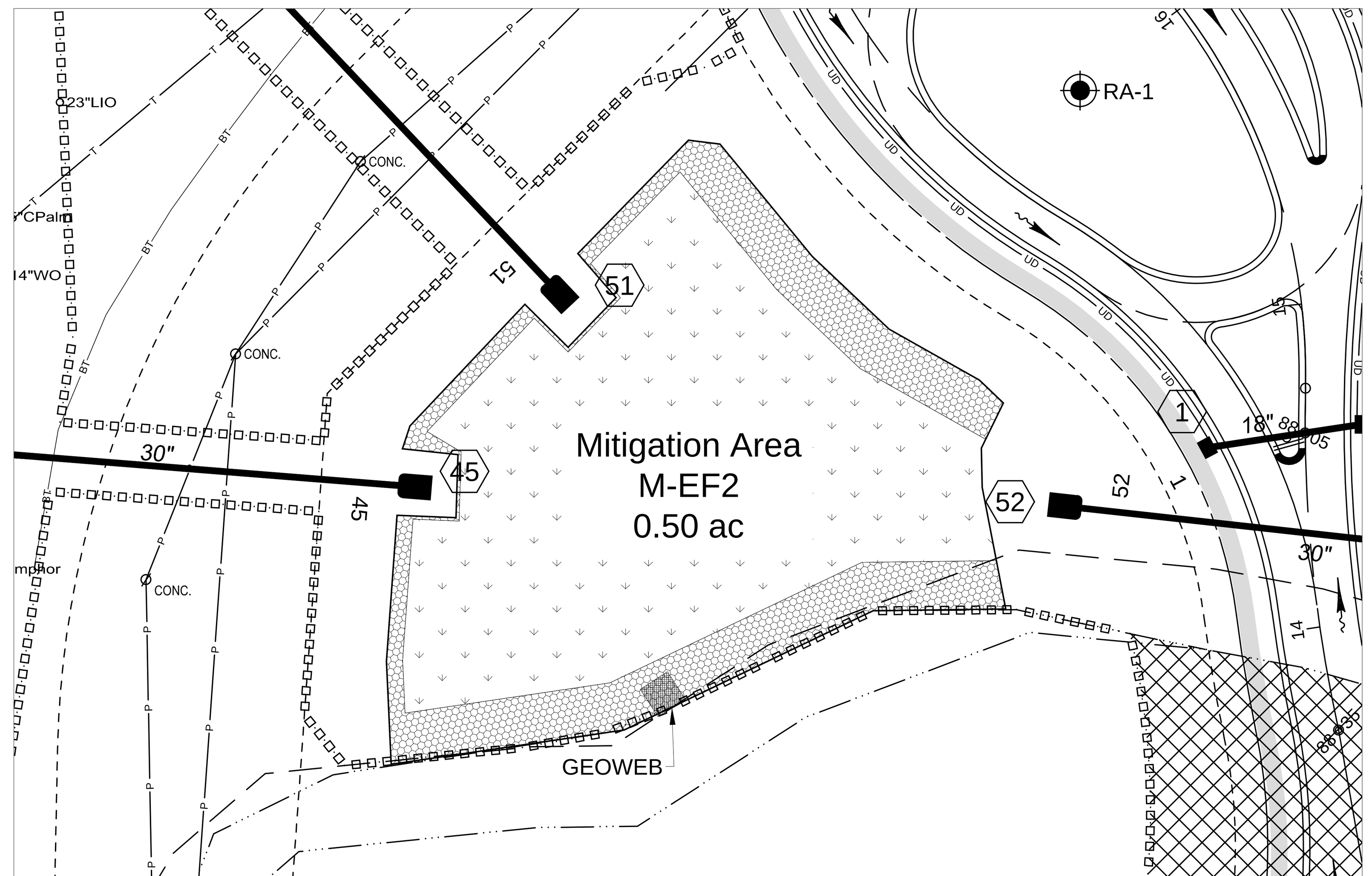

EF2 Planting

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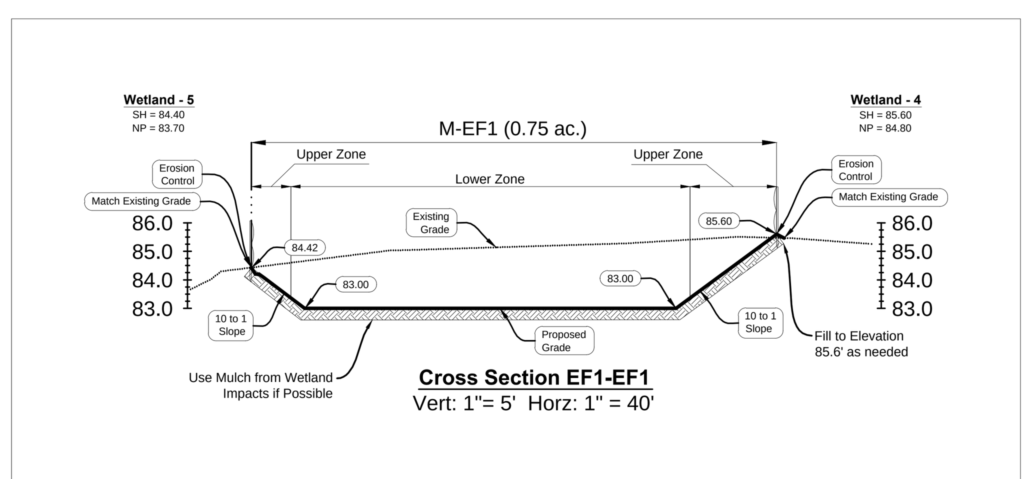

CS EF1

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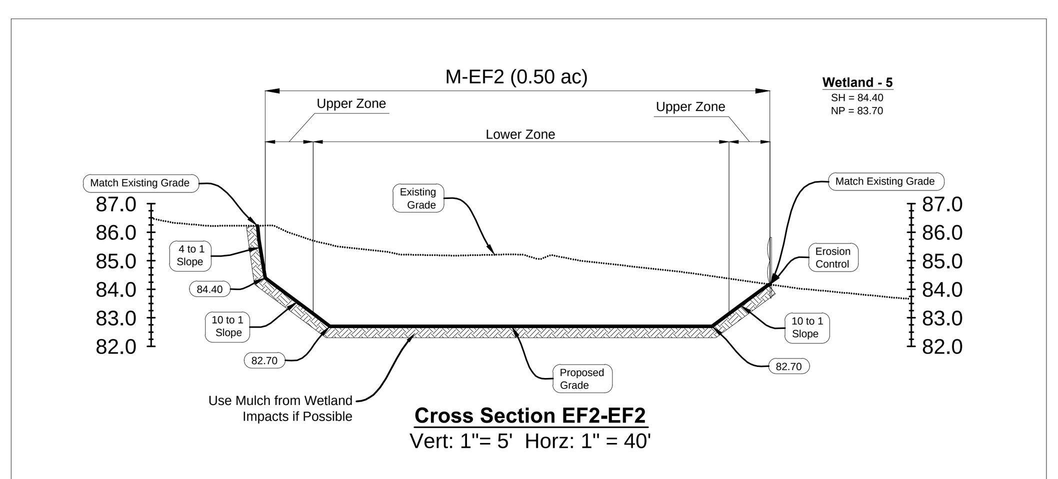


CS EF2

SCALE: 1:40

Mitigation Area M-EF1 (0.75 ac.)

Zone	Elevation	Scientific Name - Common Name	Acres	Quantity	%	Size	Spacing (feet o.c.)
(upper zone hatch)	85.6 to 84.0	Pontederia cordata - pickerelweed	0.25	169	14.0%	4" containerized stock or bare root equivatent	3
		Sagittaria lancifolia - lance-leaved arrowhead		157	13.0%		
		Panicum hemitomon - maidencane		242	20.0%		
		Iris hexagona - prairie iris		24	2.0%		
		Canna flaccida - golden canna		24	2.0%		
		Spartina bakeri - sand cordgrass		557	46.0%		
		Hypericum fasciculatum - sandweed		12	1.0%	1 gal	
		Acer rubrum - red maple		6	0.5%		
		Quercus laurifolia - laurel oak		6	0.5%		
		Ilex cassine - dahoon holly		6	0.5%		
		Ulmus americana - American elm		6	0.5%		
			Sub-Total:	1,210			
(lower zone hatch)	84.0 to 83.0	Pontederia cordata - pickerelweed	0.50	944	39.0%	4" containerized stock or bare root equivatent	3
		Sagittaria lancifolia - lance-leaved arrowhead		823	34.0%		
		Eleocharis interstincta - knotted spikerush		339	14.0%		
		Panicum hemitomon - maidencane		242	10.0%		
		Nymphaea odorata - white water-lily		7	0.3%	1 gal	
		Cephalanthus occidentalis - buttonbush		7	0.3%		
		Taxodium distichum - bald cypress		48	2.0%		
		Fraxinus caroliniana - water ash		7	0.3%		
			Sub-Total:	2,418			
			Total:	3,628			

Mitigation Area M-EF2 (0.50 ac.)

Zone	Elevation	Scientific Name - Common Name	Acres	Quantity	%	Size	Spacing (feet o.c.)
(upper zone hatch)	84.4 to 83.9	Pontederia cordata - pickerelweed	0.20	136	14.0%	4" containerized stock or bare root equivatent	3
		Sagittaria lancifolia - lance-leaved arrowhead		126	13.0%		
		Panicum hemitomon - maidencane		194	20.0%		
		Iris hexagona - prairie iris		19	2.0%		
		Canna flaccida - golden canna		19	2.0%		
		Spartina bakeri - sand cordgrass		445	46.0%		
		Hypericum fasciculatum - sandweed		10	1.0%	1 gal	
		Acer rubrum - red maple		5	0.5%		
		Quercus laurifolia - laurel oak		5	0.5%		
		Ilex cassine - dahoon holly		5	0.5%		
		Ulmus americana - American elm		5	0.5%		
			Sub-Total:	968			
(lower zone hatch)	83.9 to 82.7	Pontederia cordata - pickerelweed	0.30	566	39.0%	4" containerized stock or bare root equivatent	3
		Sagittaria lancifolia - lance-leaved arrowhead		494	34.0%		
		Eleocharis interstincta - knotted spikerush		203	14.0%		
		Panicum hemitomon - maidencane		145	10.0%		
		Nymphaea odorata - white water-lily		4	0.3%	1 gal	
		Cephalanthus occidentalis - buttonbush		4	0.3%		
		Taxodium distichum - bald cypress		29	2.0%		
		Fraxinus caroliniana - water ash		4	0.3%		
			Sub-Total:	1,451			
			Total:	2,419			

NOTE: "The Mitigation elevations will be field verified prior to Pasco County Engineering Inspections Signing off."

Sheet - M1

SWFWMD
Sec 16
Twn 26 S
Rng 20 E

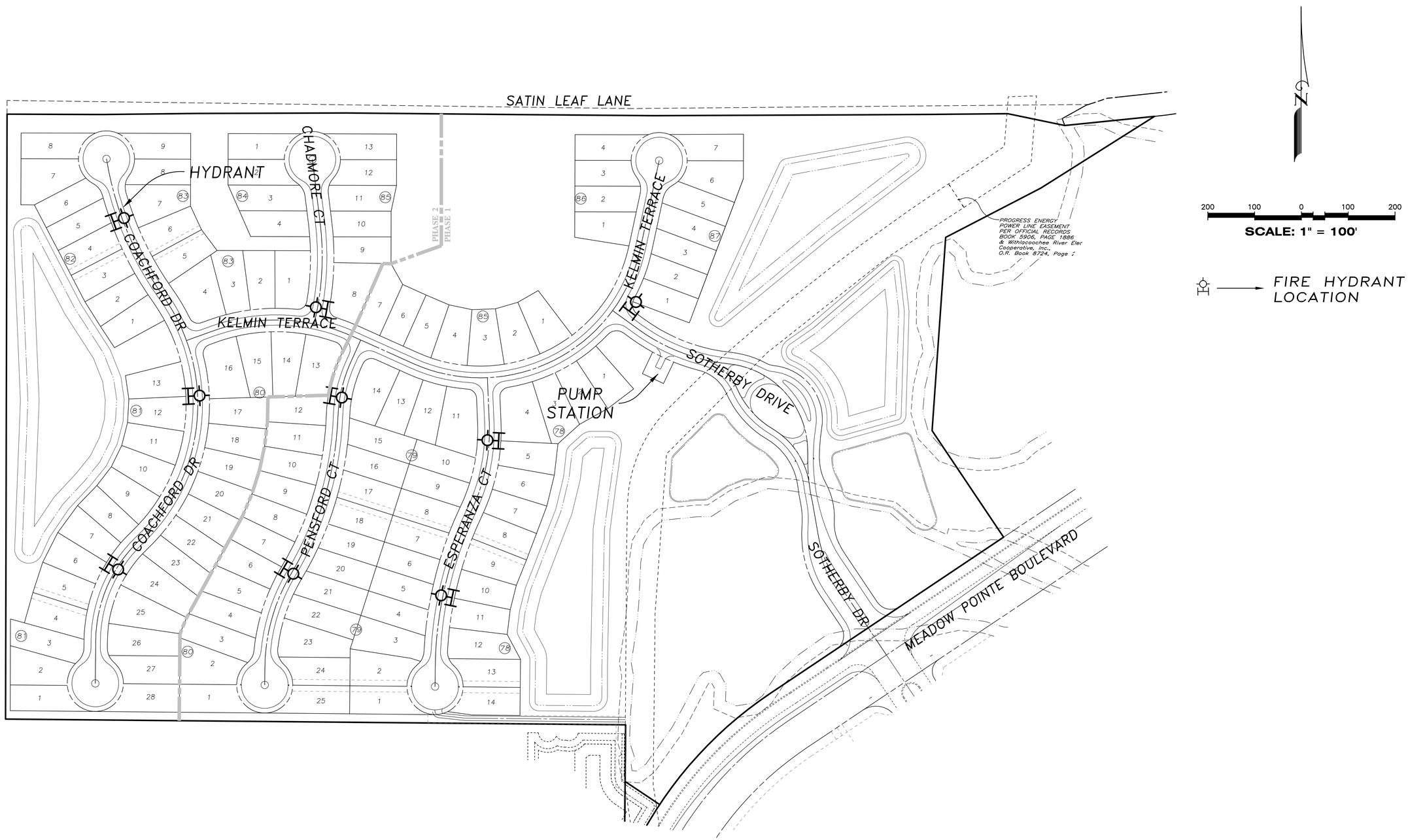
This drawing and all data contained within are supplied as is with no warranty. Cardno ENTRIX, Inc. expressly disclaims responsibility for damages or liability from any claims that may arise out of the use or misuse of this drawing. It is the sole responsibility of the user to determine if the data on this drawing meets the user's needs. This drawing was not created as survey data, nor should it be used as such. It is the user's responsibility to obtain proper survey data, prepared by a licensed surveyor, where required by law.

SWFWMD Mitigation Design Plan

Meadow Pointe E/F
Pasco County, FL

Cardno ENTRIX
3905 Crescent Park Drive Riverview, FL 33578 USA
Phone (+1) 813-664-4500 Fax (+1) 813-664-0440
www.cardnoentrix.com

PM: JAG CAD Operator: JMB Creation Date: 2/28/2013 Rev. Date: 12/19/2013 Revised By: James.bottiger File Location:Q:\unitedstates\Florida\Tampa\clearview land design lp\meadow pointe ef\working\cad\SWFWMD Mitigation Design Plan.dwg



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:
JORDAN A. SCHRADER, P.E. NO. 74798
FLORIDA PROFESSIONAL ENGINEER

ADDRESS PLAN

JOB NO. SPH-MP-016
DESIGN FERREIRA
DRAWN FERREIRA
DATE 12/18/2013
FILE AP

MEADOW POINTE IV PARCEL EF "PROVENCE"

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 1 OF 1 SHEETS

SCALE: 1" = 0'

EXISTING 6" WHITE TO BE REMOVED USING HYDROBLAST METHOD. PAVEMENT GRINDING IS NOT ALLOWED

6" DOUBLE YELLOW

18" YELLOW @ 10' O.C.

183 LF EXISTING TYPE F CURB TO BE REMOVED

Existing 12" Water Main

Existing R/W

EXISTING MARKINGS TO BE REMOVED USING HYDROBLAST METHOD. PAVEMENT GRINDING IS NOT ALLOWED

SOTHERBY DRIVE

Existing Type F Curb

MEET EXISTING PAVEMENT MARKING

Existing Double Yellow

MEADOW POINTE BOULEVARD

+00.80 35.00' LT.

+52.22 23.00' LT.

+50.25 11.00' LT.

+07.10 11.00' LT.

+97.10 11.00' LT.

+65.05 23.00' LT.

6" WHITE

Existing 12" Force Main

Existing 6" Force Main

Existing Edge of Pavement

PROPOSED EDGE OF PAVEMENT

R50

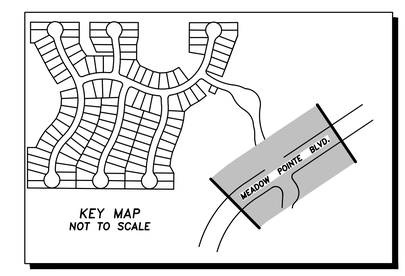
24" WHITE STOP LINE

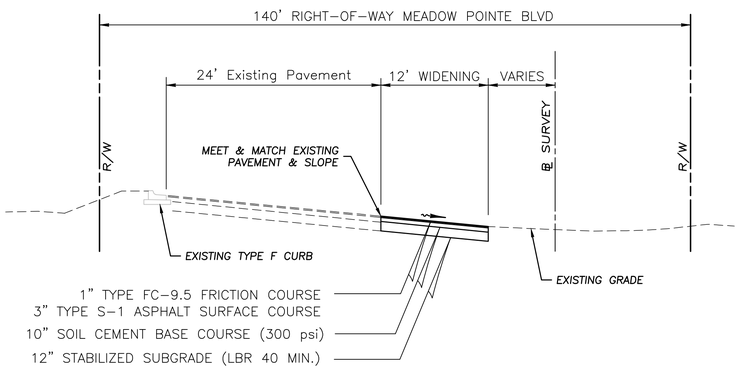
℄ SURVEY

Existing White

Existing 8" Reclaim Main

Existing 16" Reclaim Main





ASPHALT WIDENING SECTION

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

ASPHALT WIDENING

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.

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FLORIDA PROFESSIONAL ENGINEER

INTERSECTION IMPROVEMENTS

MEADOW POINTE IV
PARCEL EF "PROVENCE"

JOB NO. SPH-MP-016
DESIGN FERREIRA
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FILE INT1

PREPARED FOR: STANDARD PACIFIC OF FLORIDA
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Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
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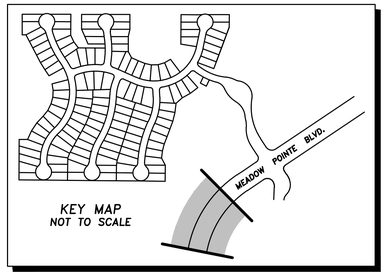
SHEET 1 OF 2 SHEETS



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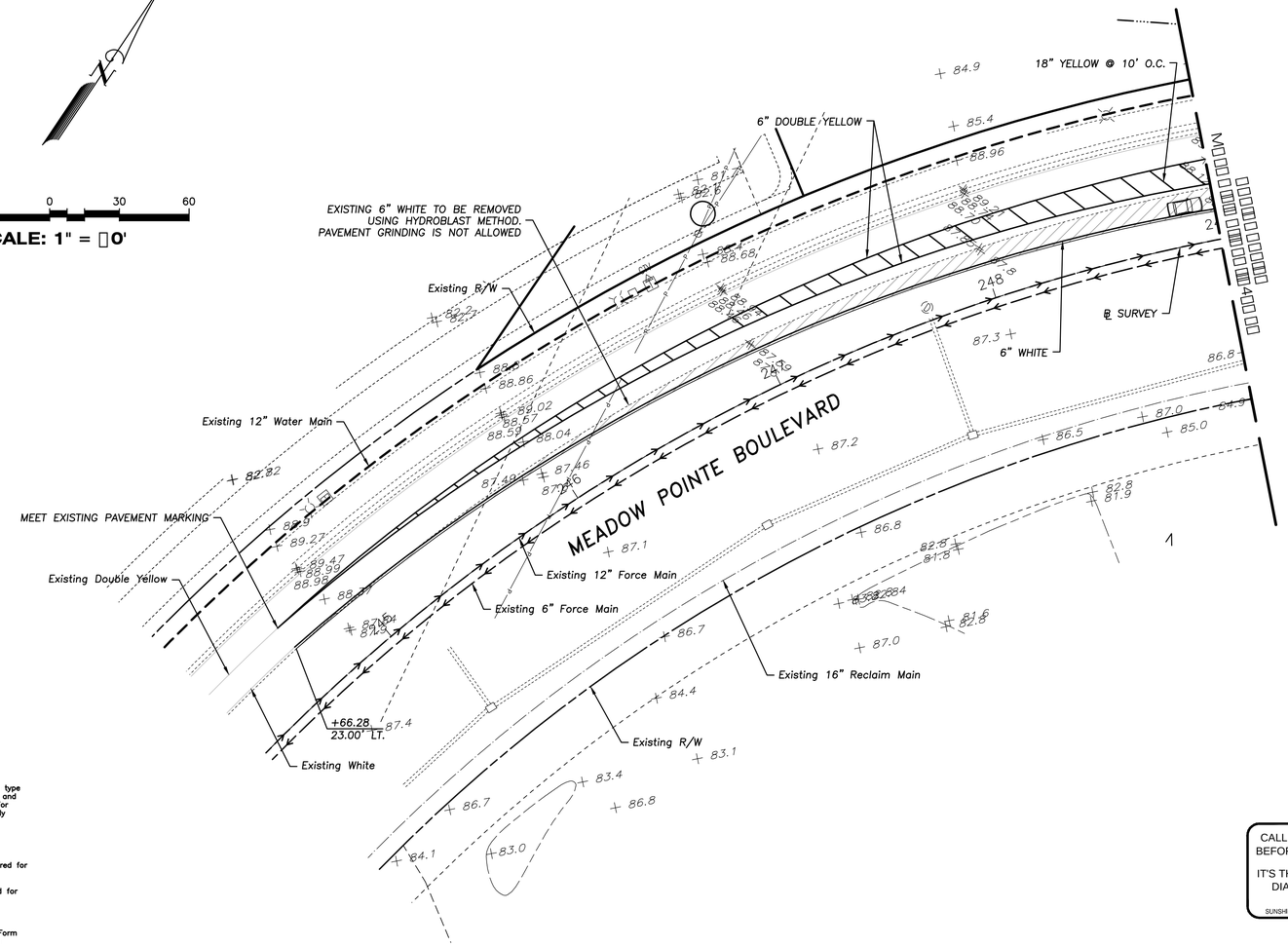
SCALE: 1" = 0'

ASPHALT WIDENING



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.

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.

UTILITIES PROVIDERS LIST

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Withlacoochee River
Electric Cooperative
Corey Littlefield
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rlittlefield@wrec.net

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DRAWN GAM
DATE 12/18/2013
FILE INT2

MEADOW POINTE IV PARCEL EF "PROVENCE"

PREPARED FOR: **STANDARD PACIFIC OF FLORIDA**
A FLORIDA GENERAL PARTNERSHIP

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 2 OF 2 SHEETS

Landscape Notes

A. PLANT MATERIAL STANDARDS

- ALL PLANT MATERIAL USED ON THIS PROJECT SHALL BE "FLORIDA NO. 1" OR BETTER AS DESCRIBED IN THE LATEST EDITION OF "GRADES AND STANDARDS FOR NURSERY PLANTS", PARTS I AND II, BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. REFER TO DETAILS FOR FURTHER QUALITY SPECIFICATIONS. ALL QUESTIONS CONCERNING THIS PLAN SET AND/OR SPECIFICATIONS SHALL BE DIRECTED TO THE LANDSCAPE ARCHITECT.
- SHRUB MATERIAL IS TO BE PLANTED AT THE REQUIRED MINIMUM HEIGHT; CONTAINER SIZE DOES NOT QUALIFY FOR FOR FINAL ACCEPTANCE.
- ALL PLANT MATERIAL IS SUBJECT TO APPROVAL BY LANDSCAPE ARCHITECT AND OWNER, BEFORE, DURING AND AFTER INSTALLATION, AS PER SPECIFICATIONS.
- ALL SOD SHALL BE 100% SOLID SOD, 99% FREE OF NOXIOUS WEEDS, WITH A TWO (2) INCH THICKNESS OF ROOTS CAPABLE OF HOLDING SAND. SOD SHALL BE FRESHLY CUT WITHIN TWENTY-FOUR (24) HOURS OF LAYING, LAID WITH TIGHTLY-BUTTED JOINTS AND ROLLED. HAND RAKING SHALL BE DONE AS NECESSARY TO ENSURE PROPER EVEN GRADES AND CLEAR SURFACES FOR SOD.
- ALL SINGLE-TRUNK TREES SHALL BE STRAIGHT TRUNKED WITH ONE CENTRAL LEADER AND FULLY CROWNED.
- ALL TREES SHALL BE FREE OF OPEN WOUNDS AND WOUND SCARS IN THE CLEAR TRUNK AREA.
- ALL REQUIRED TREES TO BE PLANTED SHALL BE A MINIMUM OF 2" CALIPER OR LARGER. MULTI-TRUNK TREES SHALL BE A MINIMUM OF THREE (3) TRUNKS (1" PER TRUNK). SEE PLANT LIST FOR SIZE SPECIFICATION.
- ANY DEVIATION FROM PLANT QUANTITY, SIZE OR GRADE MAY JEOPARDIZE THE CERTIFICATE OF OCCUPANCY. ADDITIONAL PLANTS MAY BE ADDED, BUT MUST COMPLY WITH PASCO COUNTY REQUIREMENTS.

B. GRADING OF PLANTING BEDS

- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR HOLDING FINE GRADING OF PLANTING AREAS TO INSURE AT LEAST 3% POSITIVE DRAINAGE AWAY FROM BUILDINGS AND INTO TURF AREAS, PONDS, STREETS OR OTHER DRAINAGE WAYS. IN ADDITION, THE FINISH MULCH ELEVATION AT THE BUILDINGS SHALL BE AT LEAST 6" BELOW FINISH FLOOR OF THE ADJACENT BUILDINGS. VERIFY THIS CONDITION WITH GENERAL CONTRACTOR PRIOR TO BEGINNING WORK. PARKING LOT ISLANDS SHALL SLOPE AT 3" FROM CENTER OF ISLAND TO CURB. TURF AND PLANTING BEDS SHALL MEET SIDEWALKS AND FLATWORK AT 2" BELOW THE FLATWORK.
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL FINAL GRADING OF BERMS, BED AREAS AND SOD AREAS UNTIL FINAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT, BOTH BEFORE AND AFTER LANDSCAPE INSTALLATION HAS BEGUN.

C. BED PREPARATION AND PLANTING

- LOOSEN SOIL TO A MINIMUM DEPTH OF FOUR (4) INCHES AND REMOVE ALL DEBRIS. REGRADE THE BED TO ITS PRE-PLANTING SUBGRADE. SPREAD APPROVED FABRIC-TYPE WEED BARRIER OVER ALL SHRUB BEDS - IF REQ. DIG PLANTING PITS AT 2 TIMES THE DIAMETER OF THE POT. FILL PLANT PIT WITH 50% EXISTING SOIL AND 50% TOPSOIL (SEE BELOW) AND COMPACT SO THAT THE TOP OF ROOT BALL WILL SETTLE 1/8 DEPTH OF ROOT BALL ABOVE FINISH GRADE. SET PLANT AND FILL REMAINDER OF HOLE WITH PLANTING MIX. FERTILIZE EACH PLANT AS RECOMMENDED BY SOIL ANALYSIS. THE LANDSCAPE CONTRACTOR SHALL PROVIDE OWNER WITH A YEARLY FERTILIZATION PROGRAM AS DEFINED BY THE SOIL ANALYSIS. WATER IN THOROUGHLY. RESET ANY PLANTS THAT SETTLE TOO DEEP. REMOVE SPOIL DIRT AND RAKE THE BED TO ITS FINISH GRADING. COVER ALL BED AREAS WITH A 3" DEPTH OF MULCH (SEE PLANT LIST). REMOVE ALL DEBRIS FROM MULCH.
- TREES SHALL NOT BE PLANTED CLOSER THAN TWENTY (20) FEET FROM OTHER TREES UNLESS APPROVED BY THE COUNTY ADMINISTRATOR AND/OR LANDSCAPE ARCHITECT.
- PLANT MATERIAL THAT EXCEEDS TWENTY-FIVE (25) FEET IN HEIGHT AT MATURITY SHOULD NOT BE PLANTED CLOSER THAN TWENTY (20) FEET OF THE VERTICAL PLANE OF AN EXISTING POWER LINE, EXCLUDING SERVICE WIRES.
- BALLED AND BURLAPPED STRAPPING WIRE AND ANY SYNTHETIC MATERIAL SHALL BE REMOVED PRIOR TO FINAL INSPECTION. WIRE BASKETS SHOULD BE CUT 8" BELOW THE TOP OF THE ROOTBALL.
- MULCH SHALL BE PROVIDED A MINIMUM OF THREE (3) INCHES IN DEPTH AROUND ALL NEWLY PLANTED LANDSCAPE.
- A MULCH RING FOR ALL NEWLY PLANTED TREES SHALL BE PROVIDED AT LEAST FOUR (4) FEET IN DIAMETER FOR HARDWOOD TREES AND THREE (3) IN DIAMETER FOR CONIFER TREES. DO NOT MULCH WITHIN SIX (6) INCHES FROM THE TREE TRUNK.
- PLANT INSTALLATION SHALL NOT PROCEED PRIOR TO THE INSTALLATION AND OPERATION OF THE PLANNED LANDSCAPE IRRIGATION SYSTEM. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO PLANT MATERIAL CAUSED BY INSUFFICIENT WATER.
- ALL PLANTINGS SHALL BE SET AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

D. TOPSOIL

- TOPSOIL SHALL BE A NATURAL FRIABLE, FERTILE, FINE LOAM SOIL. IT SHALL BE CERTIFIED (BY TESTING) TO BE FREE OF WEED SEEDS AND PATHOGENS. IT SHALL ALSO BE FREE OF LITTER, SOD, CLAY, STONES, ROOTS AND STUMPS. IT SHALL BEAR A PH OF BETWEEN 5.5 AND 7.5.
- SOIL IN TREE ISLANDS SHALL HAVE AT LEAST TWELVE (12) INCHES OF SUITABLE SOIL FOR TREE PLANTINGS AND BE VOID OF ANY CONSTRUCTION DEBRIS OR UNSUITABLE MATERIALS.
- THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL PLANTING ISLANDS, PARKING LOT ISLANDS OR PLANTING AREAS SHALL BE CLEAN OF ALL TRASH, DEBRIS OR OTHER NON-INDIGENOUS MATERIALS TO A DEPTH OF 36" PRIOR TO ANY LANDSCAPE INSTALLATION.
- FILL FOR ALL PARKING LOT ISLANDS SHALL BE A MIN. OF 3" BELOW TOP OF CURBING AND BE CROWNED TO A MIN. OF 6" ABOVE CURBING AT THE CENTER OF EACH ISLAND.

E. EDGING

- ALL EDGING SHALL BE AS DESCRIBED IN THE PLANTING DETAILS.
- MULCHING AND EDGING SHALL BE PER APPROPRIATE NOTES & SPECIFICATIONS.

F. TREE STAKING

- ALL TREES TO BE STAKED AND GUYED AS SHOWN IN THE DETAILS UNLESS OTHERWISE NOTED.
- ALL TREES, INCLUDING PALMS, SHALL BE SET VERTICALLY TO THE GROUND OR IF ON SLOPES OR BERMS, SHALL BE SET VERTICALLY TO THE SURROUNDING FLAT TERRAIN.

G. WARRANTY

- ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE BY THE OWNER AND/OR LANDSCAPE ARCHITECT. UNTIL FINAL ACCEPTANCE BY THE OWNER AND/OR LANDSCAPE ARCHITECT, ALL PLANT MATERIAL MUST BE MAINTAINED IN GOOD, LIVING CONDITION. THIS INCLUDES KEEPING BEDS FREE OF DEBRIS AND WEEDS, ALL MECHANICAL MAINTENANCE, FERTILIZATION, CHEMICAL TREATMENTS FOR DISEASE OR INFESTATION AND WATERING.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ANY AND ALL NECESSARY REPAIRS TO DAMAGE CAUSED BY HIS WORK AT NO ADDITIONAL COST TO THE OWNER OR LANDSCAPE ARCHITECT.
- MEADOW POINTE IS RESPONSIBLE FOR MAINTENANCE OF TREES UNTIL ASSIGNED TO ANOTHER ENTITY.

H. IRRIGATION SYSTEM

- IRRIGATION SHALL BE DESIGNED TO COMPLY WITH THE LDC SECTION 905.4 (IRRIGATION).
- ALONG THE BUFFER ADJACENT TO SATIN LEAF LANE (SEE SHEETS LS-5 AND LS-6) AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED WITH 100% HEAD TO HEAD COVERAGE. SYSTEM SHALL BE DESIGNED PER LDC CHAPTER 905.4 (IRRIGATION) USING BEST MANAGEMENT PRACTICES FOR THE PROTECTION OF WATER RESOURCES IN FLORIDA DEVELOPED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DEPARTMENT OF COMMUNITY AFFAIRS, WATER MANAGEMENT DISTRICTS, THE UNIVERSITY OF FLORIDA.
- AT COMMON AREAS ON THE INTERIOR OF THE SITE, AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED WITH 100% HEAD TO HEAD COVERAGE. SYSTEM SHALL BE DESIGNED PER LDC CHAPTER 905.4 (IRRIGATION) USING BEST MANAGEMENT PRACTICES FOR THE PROTECTION OF WATER RESOURCES IN FLORIDA DEVELOPED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DEPARTMENT OF COMMUNITY AFFAIRS, WATER MANAGEMENT DISTRICTS, THE UNIVERSITY OF FLORIDA.
- THE LANDSCAPE AREA ALONG THE SOUTHERN PROPERTY LINE (SEE SHEET LS-8) MAY INCORPORATE AN AUTOMATIC IRRIGATION SYSTEM OR IT MAY BE IRRIGATED WITH REFILLABLE DRIP BAG TEMPORARY IRRIGATION UNTIL ESTABLISHED.

Contractor Notes

1. THE LANDSCAPE CONTRACTOR SHALL REVIEW ALL LANDSCAPE PLANS AND SPECIFICATION AND PERFORM AN ANALYSIS OF SITE CONDITIONS RELATIVE TO THE PLANS AND SPECIFICATIONS PRIOR TO CONSTRUCTION AS WELL AS BECOMING FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES AND LINE RUNS PRIOR TO CONSTRUCTION.
2. REPORT ALL DISCREPANCIES IN SITE CONDITIONS OR NON-CONFORMANCE TO SPECIFICATIONS (SUCH AS GRADING, BACKFILLING, REMOVAL OF DEBRIS, GRUBBING, ETC) TO LANDSCAPE ARCHITECT PRIOR TO COMMENCING WORK.
3. TO INSURE A TIMELY FLOW OF WORK, THE LANDSCAPE CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES OR PROFESSIONALS ON THE SITE WHOSE WORK MAY OVERLAP OR INTERFERE WITH THE WORK SET FORTH IN THE PLAN SET OR WRITTEN SPECIFICATIONS.
4. THE PLANT QUANTITIES WITHIN THE PLANT LIST ARE PROVIDED FOR CONVENIENCE PURPOSES. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PLANT MATERIAL QUANTITIES AND ALL QUANTITIES FOR SOD, MULCH, ROCK MULCH, FINISH GRADE/BERMING AND PLANTING SOIL, PRIOR TO BIDDING. WHERE CONFLICTS OCCUR BETWEEN PLAN DRAWINGS AND PLANT LIST, THE PLAN DRAWINGS SHALL PREVAIL.
5. DISCREPANCIES IN DOCUMENTS OR SITE CONDITIONS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IN WRITING AT TIME OF BIDDING OR PRIOR TO CONSTRUCTION. NO ACCOUNT SHALL BE MADE AFTER CONTRACT COMPLETION FOR FAILURE TO REPORT SUCH CONDITION OR FOR ERRORS ON THE PART OF THE LANDSCAPE CONTRACTOR AT TIME OF BIDDING (ONLY EXTREMELY PECULIAR AND UNUSUAL CONDITIONS WILL BE CONSIDERED FOR NEGOTIATION).
6. ALL QUESTIONS CONCERNING THIS PLAN SET OR SPECIFICATION SHALL BE DIRECTED TO THE LANDSCAPE ARCHITECT.
7. PLANT MATERIALS ARE TO BE BID AS SPECIFIED UNLESS UNAVAILABLE, AT WHICH TIME THE LANDSCAPE ARCHITECT WILL BE NOTIFIED BY TELEPHONE AND IN WRITING OF THE INTENDED CHANGES. THERE SHALL BE NO ADDITIONS, DELETIONS OR SUBSTITUTIONS WITHOUT THE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
8. IF ISSUED, WRITTEN SPECIFICATIONS SHALL BE AN INTEGRAL PART OF THIS PLAN SET.
9. THE LANDSCAPE CONTRACTOR SHALL FIELD VERIFY PROPERTY LINE LOCATIONS BEFORE INSTALLATION OF ANY PERIMETER PLANT MATERIAL OR IRRIGATION SYSTEM.
10. THE LANDSCAPE CONTRACTOR WILL PROVIDE A SOIL SAMPLE ANALYSIS TO DETERMINE APPROPRIATE SOIL AMENDMENTS (i.e. FERTILIZER, LIME, etc). THE CONTRACTOR WILL PROVIDE COPIES OF THE TEST RESULTS TO THE OWNER AND THE LANDSCAPE ARCHITECT.
11. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY APPLICABLE PERMITS AND LICENSES TO PERFORM THE WORK SET FORTH IN THE PLANT SET OR WRITTEN SPECIFICATIONS.
12. CONTRACTOR SHALL ENSURE THAT ALL FIRE HYDRANTS ARE CLEAR OF TREES AND SHRUBS WITHIN 7.5' IN FRONT AND SIDES OF HYDRANT AND 4' IN REAR OF HYDRANT.
13. NO REFERENCES TO ENGINEERING SHOULD BE MADE FROM THE LANDSCAPE PLANS. FOR LANDSCAPE REFERENCE ONLY.

General Notes

1. CONTRACTOR IS RESPONSIBLE FOR REVIEWING SITE CONDITIONS PRIOR TO BIDDING AND CONSTRUCTION. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER'S ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO FINAL BID AND/OR CONSTRUCTION.

2. CONTRACTOR IS RESPONSIBLE FOR A THOROUGH UNDERSTANDING OF ALL ENGINEERING AND LANDSCAPE DESIGN DRAWINGS. DISCREPANCIES BETWEEN THESE DRAWINGS SHALL BE IMMEDIATELY IDENTIFIED AND BROUGHT TO THE ATTENTION OF THE OWNER'S ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO FINAL BID AND/OR CONSTRUCTION.

3. THE EXTENT OF THE CONTRACTOR'S WORK IS AS INDICATED IN THE PLANS AND DETAILS. THE CONTRACTOR IS RESPONSIBLE TO UNDERSTAND THE EXTENT OF WORK DESCRIBED HEREIN. DISCREPANCIES IN THE DEFINED WORK LIMITS IN THESE DRAWINGS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER OR OWNER'S REPRESENTATIVE. ANY MISUNDERSTANDINGS REGARDING THE EXTENT OF WORK ARE FULLY THE RESPONSIBILITY OF THE CONTRACTOR.

4. IN THESE DRAWINGS WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB. ELM, INC. MUST BE NOTIFIED OF ANY VARIATION FROM THE DIMENSIONS AND CONDITIONS SHOWN IN THESE DRAWINGS.

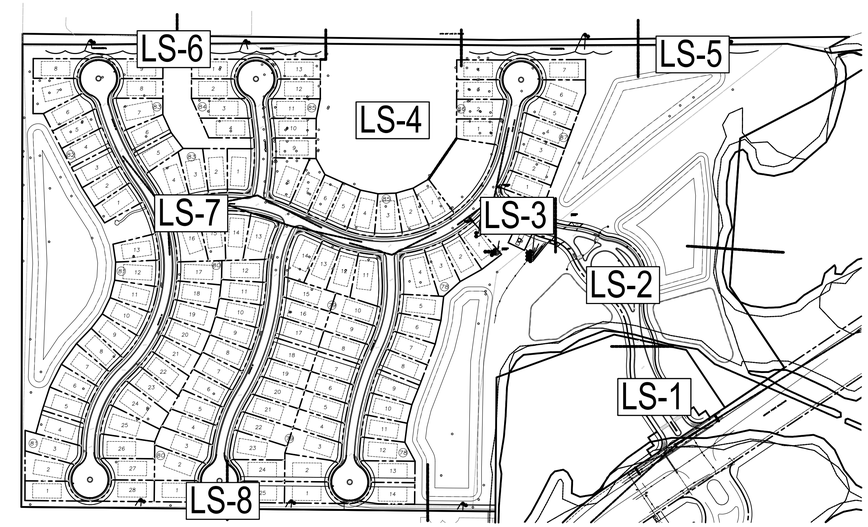
5. BOUNDARY, EASEMENT, AND BUILDING LOCATION INFORMATION SHOWN HEREIN IS TAKEN FROM PLANS BY CLEARVIEW LAND DESIGN, P.L., 1213 EAST 6TH AVENUE, TAMPA, FL 33605. PHONE: (813) 223-3419.

6. NO REFERENCE TO ENGINEERING SHOULD BE MADE FROM THE LANDSCAPE PLANS. FOR LANDSCAPE REFERENCE ONLY.

7. ALL DIMENSIONS SHOWN ARE TO WALL CENTER UNLESS OTHERWISE NOTED. ALL SPOT ELEVATIONS ARE TO FINISHED CONCRETE WORK, UNLESS OTHERWISE NOTED.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING AND VERIFYING FINAL GRADES, SLOPES, AND SWALES WITH CIVIL ENGINEER'S GRADING PLAN AND THE HARDSCAPE PLANS. ANY DISCREPANCIES BETWEEN THESE PLANS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER'S ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO FINAL BID AND/OR CONSTRUCTION. POSITIVE DRAINAGE SHALL BE MAINTAINED IN ALL AREAS. AREA DRAINS MAY NEED TO BE ADDED WHERE POSITIVE DRAINAGE CAN NOT OCCUR.

9. MEADOW POINTE IS RESPONSIBLE FOR MAINTENANCE OF TREES UNTIL ASSIGNED TO ANOTHER ENTITY.



1 Site Plan

0 200 400 600 800

SCALE: 1" = 200'

Existing Tree Care Notes

A. FLAG ALL TREES AND PALMS TO BE SAVED IN PLACE. PROVIDE BARRICADING IN ACCORDANCE WITH LOCAL STANDARDS AROUND TREES TO BE SAVED. BARRICADING SHALL BE IN PLACE PRIOR TO SITE DEMOLITION.

B. ALL EXISTING TREES TO REMAIN SHALL BE BARRICADED (SEE DETAILS). SUCH BARRICADE SHALL BE IN PLACE PRIOR TO LAND CLEARING OR CONSTRUCTION ACTIVITIES.

C. ALL CLEARING, GRUBBING, EXCAVATING AND/OR GRADING UNDER THE DRIP LINE OF TREES TO REMAIN SHALL BE DONE BY HAND. ANY EXCEPTIONS TO THIS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT OR PROJECT ARBORIST.

D. ANY ACTIVITIES (DRIVING, STORAGE, ETC.) TO OCCUR WITHIN DRIPLINE OF THE TREES SHOULD BE OF TEMPORARY NATURE AND SHALL ONLY OCCUR AFTER A TEMPORARY MATERIAL SUCH AS MARINE GRADE PLYWOOD AND PINE BARK MULCH (MIN. 12" DEPTH) HAS BEEN SPREAD IN THE DRIPLINE AREA TO BE AFFECTED.

E. ALL WORK SHALL BE UNDERTAKEN IN THE PRESENCE OF A REGISTERED ARBORIST EMPLOYED BY THE LANDSCAPE CONTRACTOR. ALL TREES AND PALMS TO BE SAVED SHALL BE EXAMINED FOR DAMAGE, DISEASE AND INSECT INFESTATION. PARTS OF THE TREE SHOWING THESE CONDITIONS SHALL BE TREATED OR PRUNED IN ACCORDANCE WITH THE ARBORISTS RECOMMENDATIONS. REMOVE ALL DEAD LIMBS AND VINES.

F. ALL TREES TO REMAIN SHALL HAVE ALL DEAD WOOD AND CONFLICTING WOOD REMOVED. ALL TRUNK AND MAJOR LIMB (OVER TWO [2] INCHES DIAMETER) CUTS SHALL BE COATED. COATING USED SHALL BE APPROVED BY PROJECT ARBORIST.

G. ROOT PRUNE ALL TREES TO BE SAVED PRIOR TO GRADING AROUND TREES. CUT ALONG LINES OFFSET FROM LINES OF DEVELOPMENT SURROUNDING THE TREE (i.e. AT BUILDING FOUNDATIONS, PARKING LOTS, ETC.)

H. TREAT ALL CUTS WITH FUNGICIDAL BARRIER. I. BACKFILL THE TRENCH, WITHIN 4 HOURS OF DIGGING, WITH A 1:1 MIXTURE OF SITE SOIL AND SAWDUST OR OTHER FINE ORGANIC MATERIAL. DO NOT COMPACT.

I. FERTILIZE THE PLANT AS DIRECTED BY THE CONSULTING ARBORIST.

J. AN ARBORIST SHALL VISIT THE SITE PERIODICALLY TO ASSESS THE HEALTH OF THE TREES AND ISSUE REPORTS ON THE RELATIVE HEALTH OF THE TREE AND MAKE RECOMMENDATIONS FOR FURTHER TREATMENT IF NECESSARY.

K. ALL VINES SHALL BE REMOVED FROM CANOPY AND ALL AIR PLANTS HARMFUL TO THE TREES HEALTH SHALL BE REMOVED.

Pasco County Notes

1. TREES AND OTHER LANDSCAPING 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.
2. ALL THE TREES OVERHANG TO THE PUBLIC RIGHT OF WAY/OR TREES WITHIN THE ROW SHALL BE TRIMMED AND PRUNED TO MAINTAIN A MINIMUM VERTICAL CLEAR HEIGHT OF 6' FROM THE FINISHED GROUND SURFACE OF THE SIDEWALK TO THE BOTTOM OF CANOPY/ 16.6' CLEAR HEIGHT ABOVE THE ROADWAY PATHS.
3. SITE TRIANGLE SHALL BE UNOBSTRUCTED AND SHALL BE INSPECTED AND MAINTAINED IN CONFORMANCE WITH FDOT INDEX 546. ALL LANDSCAPE MAINTENANCE WITHIN THE ROW AND OTHER COMMON AREAS SHALL BE THE RESPONSIBILITY OF THE HOA OR CDD.
4. TREES PLANTED SHALL BE PLANTED A MINIMUM OF 4'-0" FROM FACE OF CURB AND TREES PLANTED WITHIN A ROADWAY MEDIAN SHALL BE A MINIMUM OF 6'-0" FROM FACE OF CURB.
5. FOR EVERY FIVE TREES REQUIRED THERE SHALL BE A MINIMUM OF ONE SPECIES PROVIDED, UP TO A MAX. OF EIGHT SPECIES WHEN 40 OR MORE TREES ARE REQUIRED.
6. THE OWNER/DEVELOPER ACKNOWLEDGES THAT THIS APPROVAL DOES NOT INCLUDE ANY WORK IN COUNTY RIGHT-OF-WAY. ALL RIGHT OF WAY WORK SHALL BE A FUNCTION OF AN APPROVED PASCO COUNTY RIGHT-OF-WAY USE PERMIT
7. NO IRRIGATION SYSTEM OR LANDSCAPING SHALL BE INSTALLED IN ANY COUNTY OR STATE RIGHT-OF-WAY WITHOUT ISSUANCE OF APPROPRIATE RIGHT-OF-WAY USE PERMIT.
8. THE OWNER/DEVELOPER ACKNOWLEDGES THAT THE SITE AND ITS SUBSEQUENT BUILDING PERMITS SHALL COMPLY WITH ALL REZONING/MPUD/PUD CONDITIONS. ALL STRUCTURES, INCLUDING BUFFER WALLS, RETAINING WALLS, SIGNAGE, ETC. REQUIRE SEPARATE BUILDING PERMITS.

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Meadow Pointe
Provence

Standard Pacific Homes
Pasco County, Florida

ISSUE DATES:

NO.	DESCRIPTION	DATE
	PERMIT ISSUE	12.11.13

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PROJ. #:	12-62.1
DATE:	12.11.13
DRAWN BY:	JMG
CHECKED BY:	JMG
SCALE:	AS SHOWN

LANDSCAPE INDEX

SHEET NUMBER

LS-0

Buffer Calculations

North Buffer Landscaping Requirements - Type A Buffer along Satin Leaf Lane

10' Wide Landscape Buffer	yes	in compliance
Shade trees located 20' away from overhead electric lines	n/a	n/a
Required number of shade trees 1 Tree per 60 LF (2,139 LF/ 60 = 36 Trees - See Sheet LS-4, LS-5, LS-6)	36	36+ includes existing trees
Required number of shrubs Continuous row of evergreen shrubs at 5' o.c.	yes	exceeds requirements

South Buffer Landscaping Requirements

No buffer required when abutting Single Family lots.

East Buffer Landscaping Requirements - Type D Buffer alongMeadow Pointe Boulevard

Buffer at Main Entrance		
20' Wide Landscape Buffer at Entry	yes	in compliance
Shade trees located 20' away from overhead electric lines	yes	in compliance
Required number of shade trees 1 Tree per 30 LF	Wetlands fulfill code requirement	
Required number of shrubs 5 shrubs per required tree (? Trees x 5 = ? Shrubs)	Wetlands fulfill code requirement	

West Buffer Landscaping Requirements

No buffer required when abutting Single Family lots.

Native Shrub & Groundcover Requirement

SHRUBS + G. COVERS	MIN. 30% NATIVE	REQ'D.
8,160	.30	2,448
	TOTAL NATIVE SHRUB + G.C. PROVIDED	3,665
	PERCENTAGE PROVIDED	44%

Drought Tolerant Requirement

SHRUBS + G. COVERS	MIN. 50% DROUGHT TOL.	REQ'D.
8,160	.50	4,080
	TOTAL DROUGHT TOL. SHRUB + G.C. PROVIDED	7,244
	PERCENTAGE PROVIDED	88%

Shrub & Groundcover Coverage Requirement

SHRUBS + G. COVERS COVERAGE	25% MAX COVERAGE ANY PLANT	Max SF Coverage
62,335 S.F.	.25	15,584 S.F.

NOTE: SEE PLANT LIST WHICH SHOWS SF COVERAGES FOR INDIVIDUAL PLANTS.

Existing Tree Note

EXISTING TREES TO BE REMOVED WILL BE HARVESTED IN COMPLIANCE WITH THE AGRICULTURAL EXEMPTION.

General Legend

● 12" LIO	Denotes Tree to be Removed
○ 12" LIO	Denotes Tree to be Preserved

Builder Required / Provided Trees (Based on Lot Size)

Size of Lot (Square Feet)	Minimum Number of Trees
Less than 3,500	1
3,500-6,000	2
6,001-7,500	3
7,501-9,500	4
9,501-16,000	6
Over 16,000 to Under 1 Acre	8
1 Acre to Under 2.5 Acres	8
2.5 Acres to Under 5 Acres	6 per Developable Acre
5 Acres and Larger	4 per Developable Acre

Tree Mix For Lots

SHADE TREES (2" min.)	
LIVE OAK	RED MAPLE
RED OAK	MAGNOLIA
PRINCETON AMERICAN ELM	SLASH PINE
UNDERSTORY TREES (2" min.)	
CASSIA	EAST PALATKA HOLLY
CRAPE MYRTLE - 'NATCHEZ' - 'MUSKOGEE' - 'TUSCARORA'	LIGUSTRUM
DOGWOOD	RED BUD
	WINGED ELM

Tabulation of Existing And Removed Trees > 10"

Type of Tree	Existing Trees	Existing Inches	Trees Removed	Inches Removed	Replace Factor	Required Replacement Inches
LIVE OAK	362	7,664	211	4,868	1.00	4,868
PINE	8	127	5	87	0.33	29
ELM	16	193	7	84	0.33	28
HICKORY	1	16	1	16	0.33	6
PALM	1	15	1	15	0.33	5
H OAK	8	158	7	136	0.33	45
LAUREL OAK	8	101	0	0	0.33	0
TOTAL	404	8,274	232	5,206		4,981

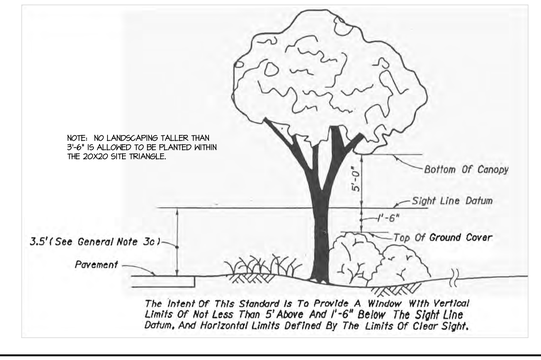
TOTAL REPLACEMENT INCHES
PROVIDED 447" TOTAL REPLACEMENT INCHES FOR COMMON DEVELOPMENT AREA

TOTAL INCHES (SURPLUS/ DEFICIT) DEFICIT 4,534"

Plant List

Quanty	Symbol	Botanical Name	Common Name	Space	Specification	TOTAL CAL. INCHES	Native Fla.	Drought Tol.
TREES/PALMS								
1	AR	ACER RUBRUM 'FLAME'	FLAME RED MAPLE	A.S.	MINIMUM 4" CALIPER, 12' - 16' HEIGHT, 7' SPREAD MINIMUM, 100 GALLON	4"	YES	NO
2	CR	CHIONANTHUS RETUSUS	CHINESE FRINGE TREE	A.S.	MINIMUM 2.5" CALIPER, 12' - 14' HEIGHT, 54" SPREAD MINIMUM, 30 GALLON	5"	NO	YES
3	IC1	ILEX x 'CONAF'	OAKLEAF HOLLY	A.S.	MINIMUM 2.5" CALIPER, 10' - 12' HEIGHT, 42" SPREAD MINIMUM, 30 GALLON	7.5"	YES	YES
6	IC2	ILEX x 'CONAF'	OAKLEAF HOLLY	A.S.	MINIMUM 3.5" CALIPER, 14' HEIGHT, 4.5' SPREAD MINIMUM, 65 GALLON, MATCHING HEIGHT	21"	YES	YES
7	JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	A.S.	7' - 8' HT, 4' SPR. MINIMUM, 2" CALIPER, 25 GAL.	14"	YES	YES
17	LII	LAGERSTROEMIA INDICA 'NATCHEZ'	NATCHEZ CRAPE MYRTLE	A.S.	8'-10' HT. X 4'- 5' SPR., 3-5 STEMS, 1" CAL. MIN. 3 LARGEST CANES, 30 GAL.	51"	NO	YES
2	MG	MAGNOLIA GRANDIFLORA 'BRACKEN'S BR. BTY.'	BRACKENS BROWN MAGNOLIA	A.S.	MINIMUM 3.5" CALIPER, 10' - 12' HEIGHT, 44" SPREAD MINIMUM, 65 GALLON, FULL DENSE FOLIAGE	7"	NO	NO
2	NS	NYSSA SYLVATICA	BLACK TUPELO	A.S.	2" CAL., 8' - 10' HEIGHT, 3'- 4' SPREAD MINIMUM, 30 GAL.	4"	YES	YES
17	PEI	PINUS ELLIOTTI	SLASH PINE	A.S.	2" CAL., 10' - 12' HEIGHT, 3' SPREAD MINIMUM, 30 GAL.	34"	YES	YES
8	PE2	PINUS ELLIOTTI	SLASH PINE	A.S.	3" CAL., 12' - 14' HEIGHT, 4' SPREAD MINIMUM, B&B	24"	YES	YES
9	PE3	PINUS ELLIOTTI	SLASH PINE	A.S.	5" CAL., 16' - 18' HEIGHT, 4'- 5' SPREAD MINIMUM, B&B	45"	YES	YES
3	QL	QUERCUS LAURIFOLIA	LAUREL OAK	A.S.	MINIMUM 3.5" CALIPER, 16' - 18' HEIGHT, 5.5' SPREAD MINIMUM, 65 GALLON	10.5"	YES	YES
43	QV2	QUERCUS VIRGINIANA	LIVE OAK	A.S.	MINIMUM 2" CAL., 10' - 12' HEIGHT, 4' SPREAD MINIMUM, 30 GAL.	86"	YES	YES
10	QV3	QUERCUS VIRGINIANA	LIVE OAK	A.S.	MINIMUM 3" CAL., 14' - 16' HEIGHT, 6'- 8' SPREAD MINIMUM, 100 GAL. OR B&B (ROOTS PLUS GROWER)	30"	YES	YES
14	QV5	QUERCUS VIRGINIANA	LIVE OAK	A.S.	MINIMUM 5" CAL., 24' - 26' HEIGHT, 12'- 14' SPREAD MINIMUM, B&B (ROOTS PLUS GROWER)	70"	YES	YES
1	QV8	QUERCUS VIRGINIANA	LIVE OAK	A.S.	MINIMUM 8" CAL., 30' - 35' HEIGHT, 18'- 24' SPREAD MINIMUM, B&B (ROOTS PLUS GROWER)	8"	YES	YES
3	TD1	TAXODIUM DISTICHUM	BALD CYPRESS	A.S.	MINIMUM 2" CAL., 10' - 12' HEIGHT, 2'- 3' SPREAD MINIMUM, 30 GAL.	6"	YES	YES
4	TD2	TAXODIUM DISTICHUM	BALD CYPRESS	A.S.	MINIMUM 5" CAL., 16' - 18' HEIGHT, 5'- 6' SPREAD MINIMUM, 100 GAL. OR B&B	20"	YES	YES
					TOTAL CAL. INCHES	447"		
SHRUBS						TOTAL SF CALCS.		
27	CHU	CHAMAEROPS HUMILIS	EUROPEAN FAN PALM	A.S.	36" X 36", 7 GAL.	243'	NO	NO
53	CRI	CRINUM AUGUSTUM 'QUEEN EMMA'	QUEEN EMMA CRINUM LILY	A.S.	36" X 36", 7 GAL.	477'	NO	NO
6	DED	DIOON EDULE	MEXICAN FERN PALM	A.S.	28-36" HT, 24"- 36" SPD., 7 GAL.	54'	NO	YES
744	EPU	ELAEAGNUS PUNGENS	SILVERTHORN	48" O.C.	16-18" HT. X 16" SPR., 3 GAL.	11,904	NO	YES
6	FJA	FATSIA JAPONICA	FATSIA	36" O.C.	36" HT. x 36" SPR., ADJUST SPACING AS NEEDED TO AVOID TREE ROOTS	54'	NO	YES
80	IPA	ILLICIUM PARVIFLORUM	FOREST GREEN ANISE	36" O.C.	16-18" HT. X 16" SPR., 3 GAL.	720'	YES	YES
44	IVI	ITEA VIRGINICA	VIRGINIA SWEETSPIRE HENRY'S GARNET	30" O.C.	18"- 20" HT, 14"- 16" SPD., 3 GAL.	588'	YES	YES
1,937	JCB	JUNIPERUS CONFERTA 'BLUE PACIFIC'	BLUE PACIFIC SHORE JUNIPER	30" O.C.	7" HT. X 18"- 20" SPR., 3 GAL., (NOTICE RUNNERS MUST MEET SPREAD SPEC OR WILL BE REJECTED)	12,106'	NO	YES
689	LCH	LOROPETALUM CHINENSE RUBRUM	LOROPETALUM 'BURGUNDY'	36" O.C.	18"-24" HT. x 18" SPR., 3 GAL.	6,201'	YES	YES
53	MCE	MYRICA CERIFERA	WAX MYRTLE	A.S.	48"- 60" HT, 36"- 48" SPD., 15 GAL.	848'	YES	YES
66	NDO	NANDINA DOMESTICA NANA 'FIREPOWER'	FIREPOWER NANDINA	A.S.	24"- 30" HT, 12"- 14" SPD., 3 GAL., ADJUST SPACING AS NEEDED TO AVOID TREE ROOTS	413'	YES	YES
15	PBI	PHILODENDRON BIPINNATIFIDUM SELLOUM	PHILODENDRON	A.S.	20" HT X 18' SPR., 3 GAL. FULL DENSE FOLIAGE, ADJUST SPACING AS NEEDED TO AVOID TREE ROOTS	135'	NO	NO
297	RFO	RHODODENDERON FORMOSA	FORMOSA AZALEA	A.S.	18"-24" HT. x 18" SPR., 3 GAL. (COLORS: WHITE, PINK & RED. DISTRIBUTE EQUALLY IN PLANT MASSINGS) LANDSCAPE CONTRACTOR SHALL SUBMIT A LIST OF SPECIES FOR REVIEW.	2,673'	NO	NO
1,537	VMS	VIBURNUM OBOVATUM 'MISS SCHILLERS DELIGHT'	MISS SCHILLERS DELIGHT VIBURNUM	30" O.C.	18"- 20" HT, 18" SPD., 3 GAL.	7,209'	YES	YES
323	VOD	VIBURNUM ODORATISSIMUM	SWEET VIBURNUM	36" O.C.	24"- 30" HT, 18"- 20" SPD., 3 GAL.	2,907'	NO	YES
3	ZPU	ZAMIA PUMILA	COONTIE	A.S.	28-36" HT, 24"- 36" SPD., 7 GAL.	27'	YES	YES
5,611 (93%)	DROUGHT TOL.	2,544 (43%)	NATIVE		TOTAL SF	46,554'		
342 (7%)	NON-DROUGHT TOL.	3,409 (57%)	NON-NATIVE					
GROUND COVERS/VINES/GRASSES/OTHERS						TOTAL SF CALCS.		
254	AAF	AGAPANTHUS AFRICANUS	LILY OF THE NILE	24" O.C.	1 GAL., FULL IN POT	1,016'	NO	YES
88	AEL	ASPIDISTRA ELATIOR	CAST IRON	24" O.C.	1 GAL. 12" HT., FULL IN POT, ADJUST SPACING AS NECESSARY TO AVOID ROOTS OF EXISTING TREE	352'	YES	NO
424	ANN	ANNUALS	SEASONAL COLOR	8" O.C.	4" POT, VARIETY TO BE SELECTED @ PLANTING	188'	YES	NO
86	CFA	CYRTOMIUM FALCATUM	HOLLY FERN	24" O.C.	1 GAL. 12" HT., FULL IN POT, ADJUST SPACING AS NECESSARY TO AVOID ROOTS OF EXISTING TREE	344'	NO	YES
0	DIR	DIETES IRIDIOIDES	WHITE AFRICAN IRIS	18" O.C.	16-18" HT. X 16" SPR., 3 GAL.	"	NO	YES
0	EEL	ERAGROSTIS ELLIOTTII	SILVER LOVE GRASS	24" O.C.	12" HT., 8"- 10" SPR., 1 GAL., FULL IN POT	"	YES	YES
596	LMU	LIRIOPE MUSCARI	LILY TURF	12" O.C.	1 GAL. 12" HT., FULL IN POT, ADJUST SPACING AS NECESSARY TO AVOID ROOTS OF EXISTING TREE	596'	NO	YES
90	MCA	MUHIENBERGIA CAPILLARIS	MUHLY GRASS	48" O.C.	8"- 10" SPR., 1 GAL., FULL IN POT	1,440'	YES	YES
7	NFM	NEPHROLEPIS FALCATA 'MACHO'	MACHO FERN	36" O.C.	24" HT. X 24" SPR., 3 GAL.	63'	YES	NO
90	PCO	PONTEDERIA CORDATA	PICKEREL WEED	18" O.C.	8"- 10" SPR., 1 GAL., FULL IN POT	203'	YES	YES
164	PQU	PASPALUM QUADRIFARIUM	EVERGREEN PASPALUM	48" O.C.	12" HT., 12" SPR., 1 GAL., FULL IN POT	2,624'	YES	YES
150	RME	ROSA 'MEIDRIFORA' PATENT: PP11,141	CORAL DRIFT ROSE	60" O.C.	8" HT., 12"- 15" SPR., 3 GAL., FULL IN POT	3,750'	NO	YES
208	SBA	SPARTINA BAKERII	SAND CORDGRASS	60" O.C.	12" HT., 8"- 10" SPR., 1 GAL., FULL IN POT	5,200'	YES	YES
1,638 (76%)	DROUGHT TOL.	1,071 (49%)	NATIVE		TOTAL SF	15,716'		
519 (24%)	NON-DROUGHT TOL.	1,086 (51%)	NON-NATIVE					
TURF / MULCH								
FIELD MEASURE	SOD	STENOTAPHRUM SECUNDATUM 'FLORATAM'	ST. AUGUSTINE VAR. - "FLORATAM"		SOD - SEE SPEC'S		NO	NO
FIELD MEASURE	MULCH	PINE STRAW MULCH		3" DEPTH	ALL LANDSCAPE BEDS		N/A	N/A
NOTE:	CONTRACTOR RESPONSIBLE FOR VERIFYING ALL QUANTITIES ON PLAN. CONTRACTOR TO SUBMIT TO LANDSCAPE ARCHITECT PHOTO EXAMPLES OF ALL PLANT MATERIAL FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.							

Window Detail



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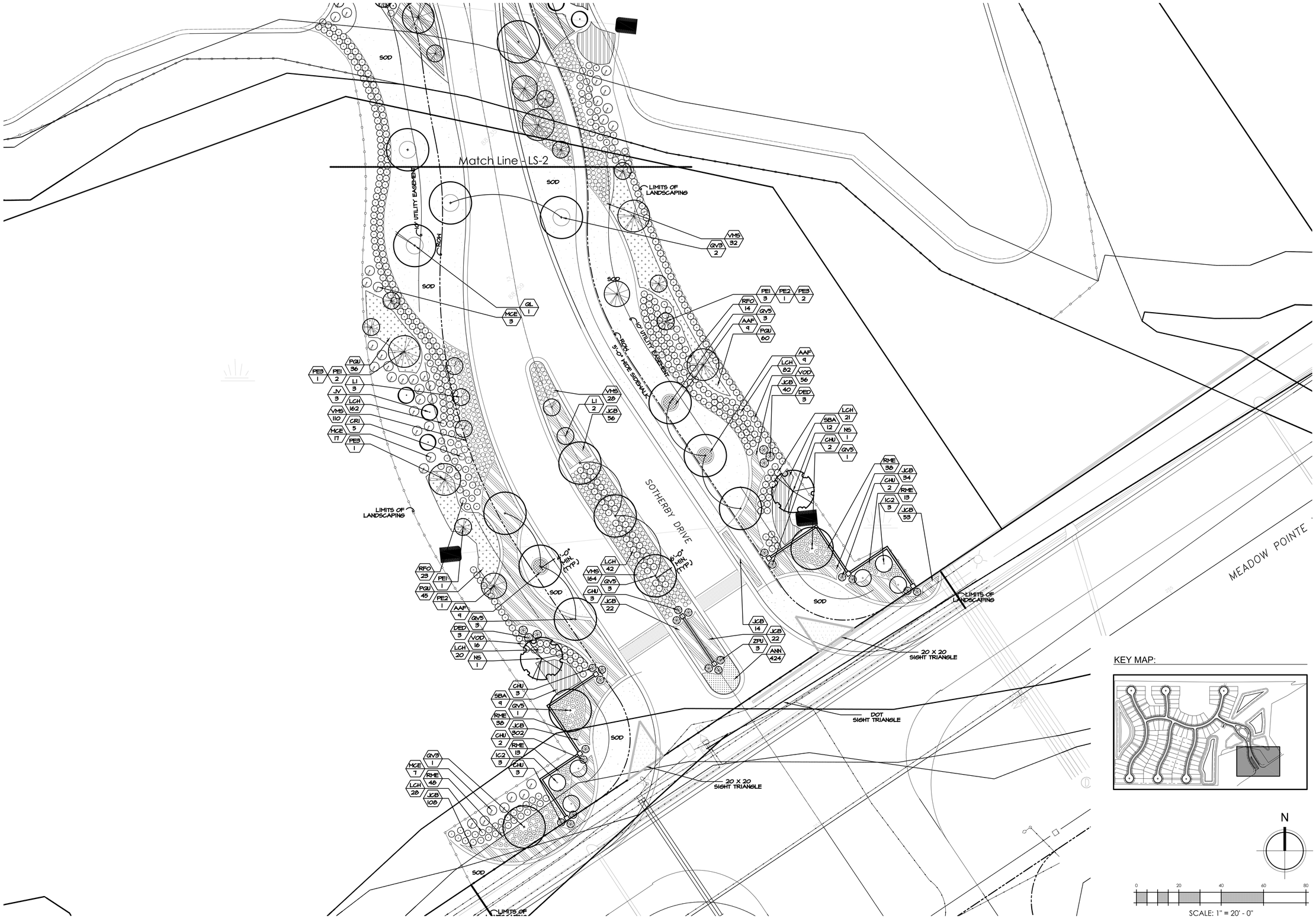
LANDSCAPE INDEX

SHEET NUMBER
LS-0.1



KEY MAP:

N

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SCALE: 1" = 20' - 0"

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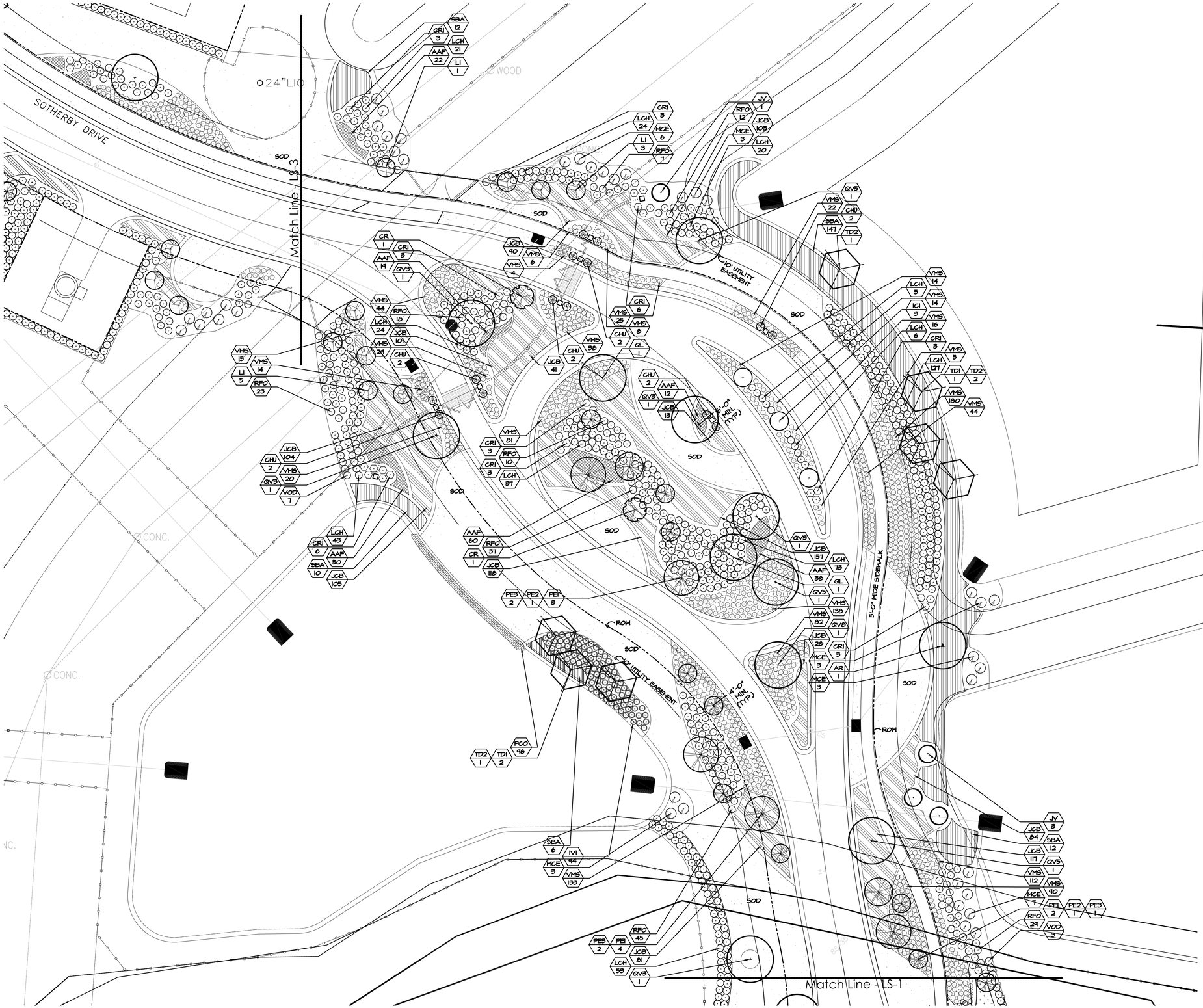
LANDSCAPE PLAN

SHEET NUMBER

LS-1



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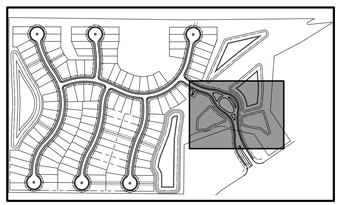

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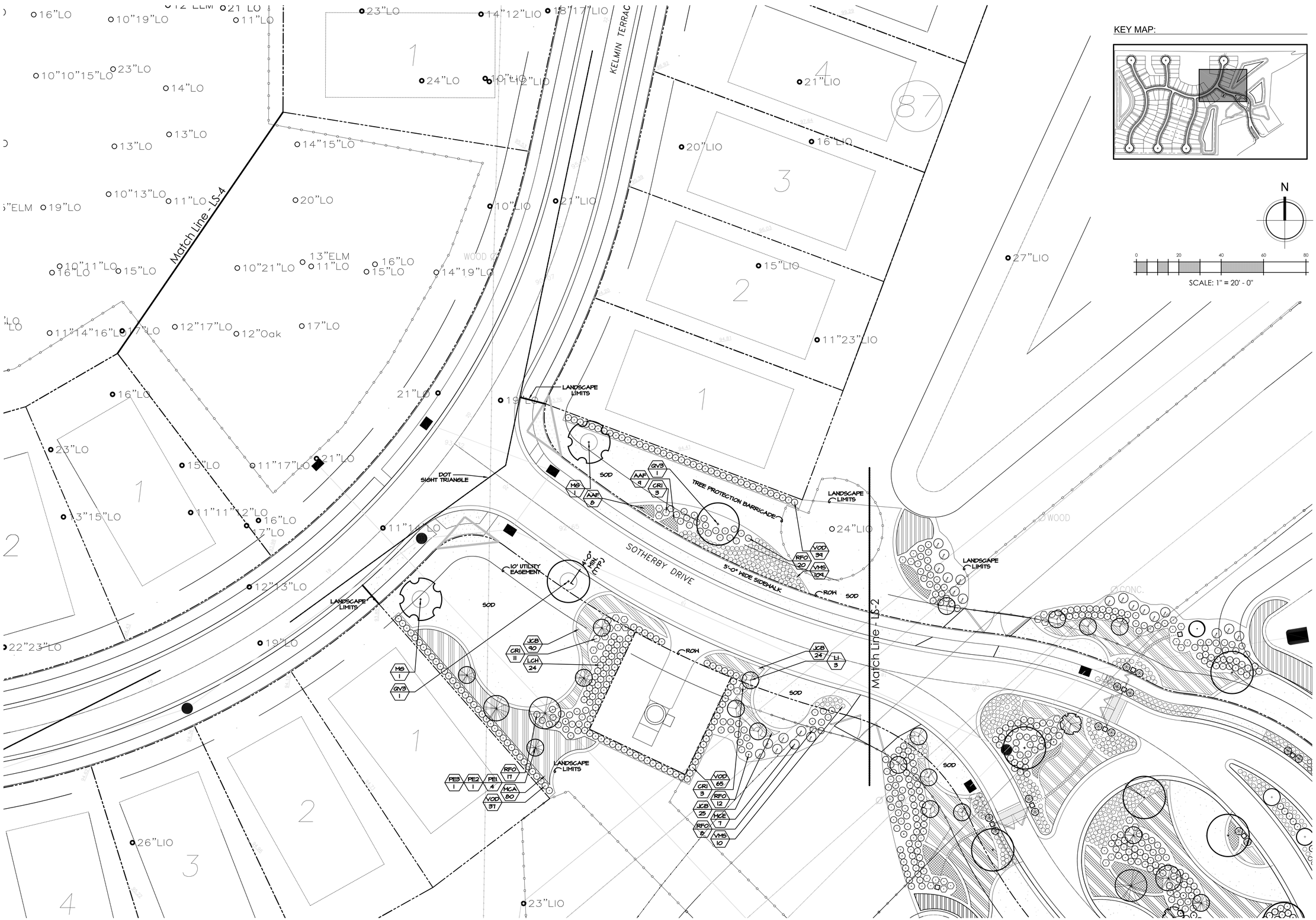
LS-2



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LANDSCAPE PLAN

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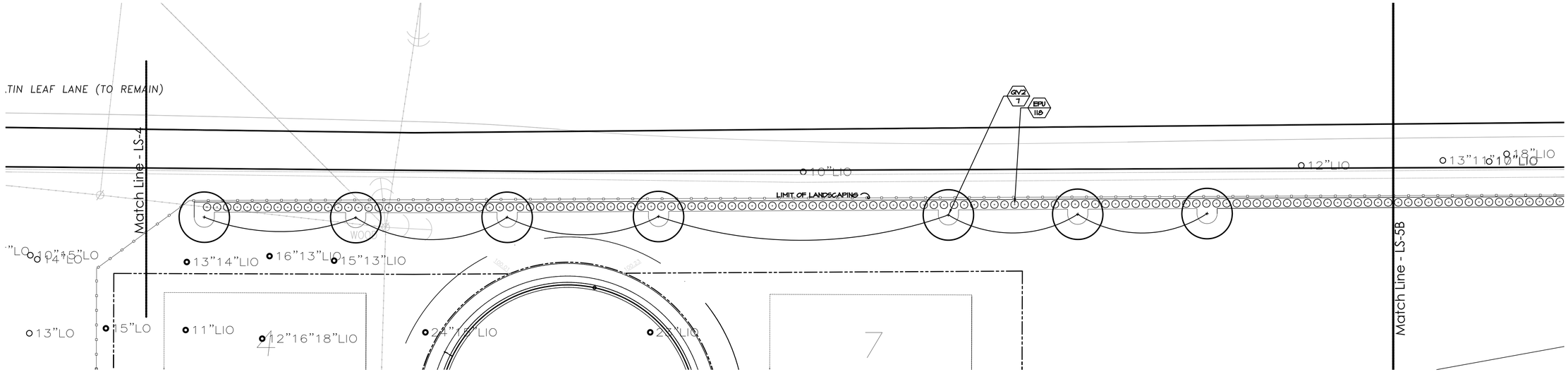
LS-4



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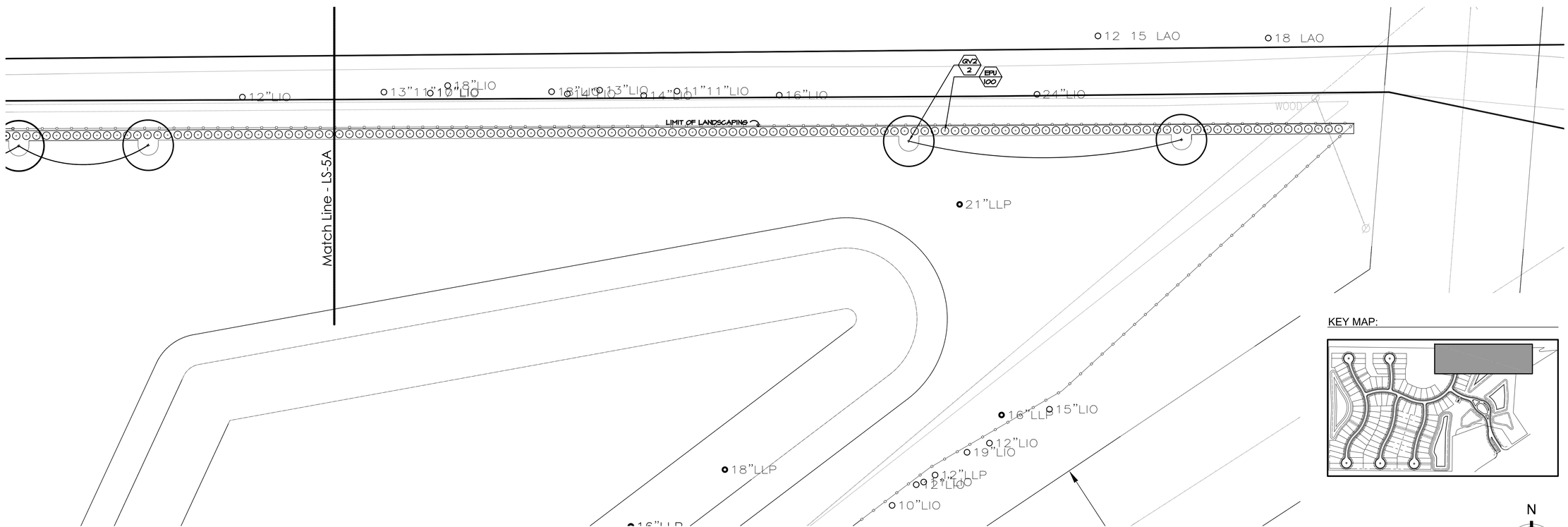

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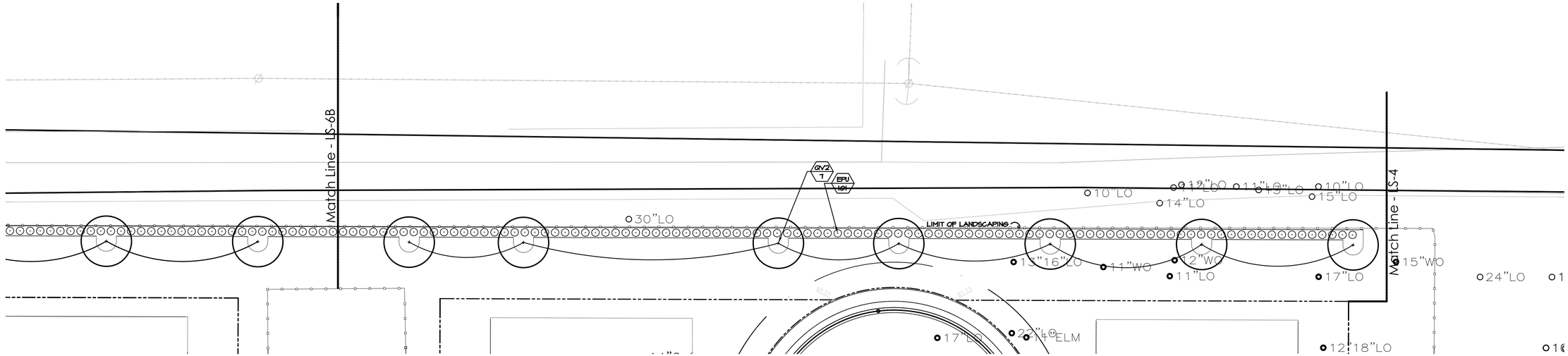
LS-5



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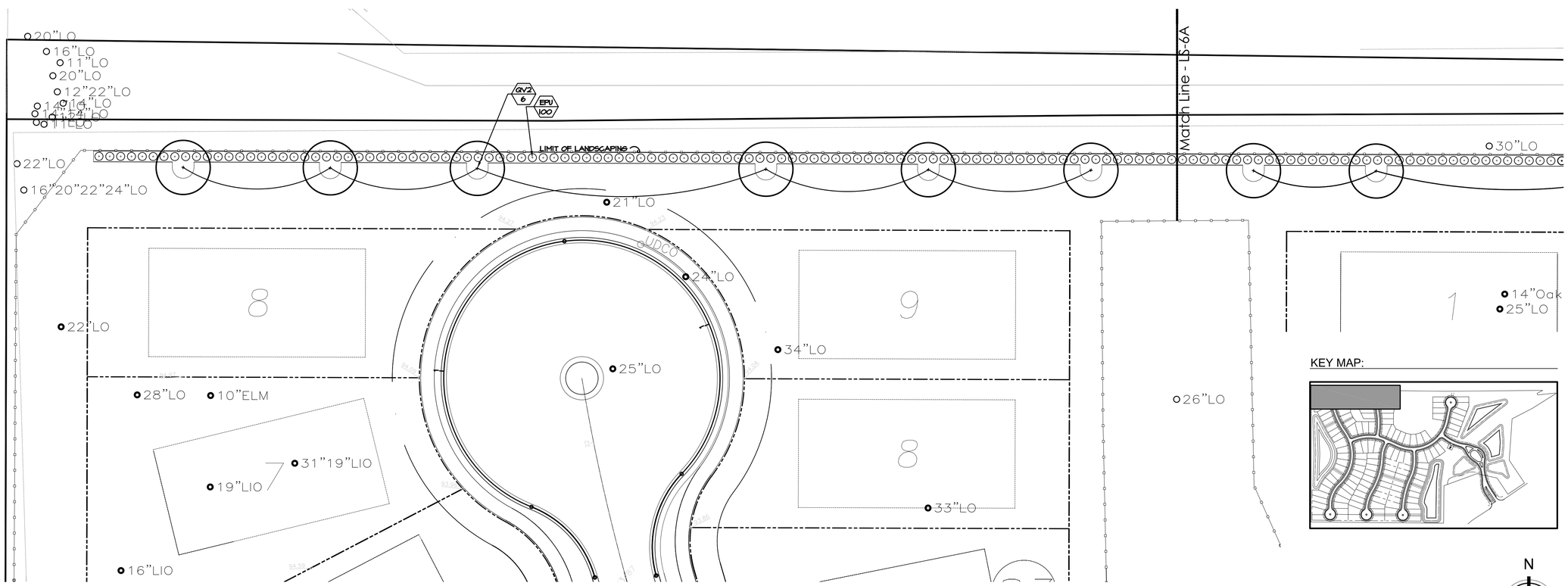

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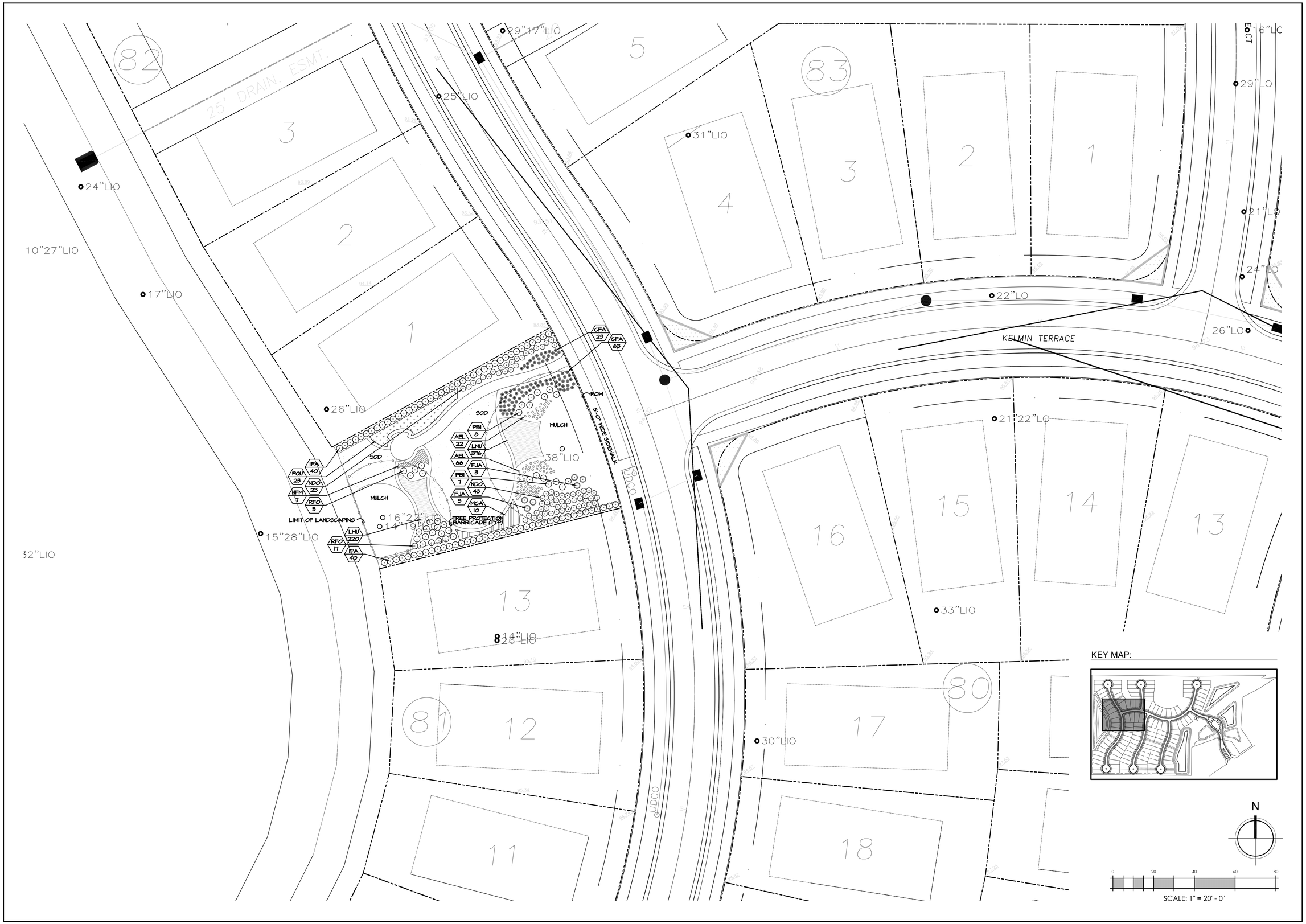
LS-6



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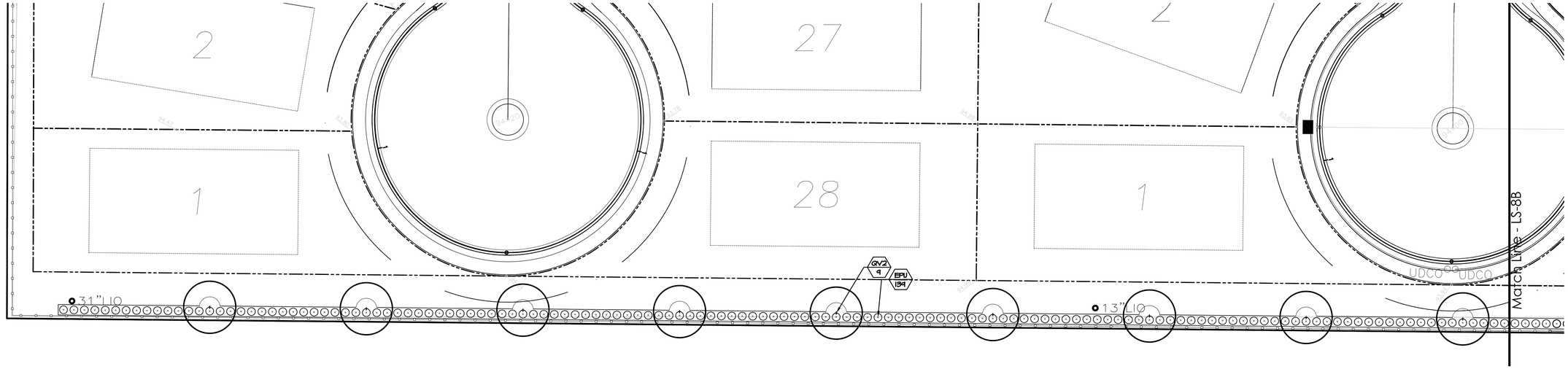
LS-7



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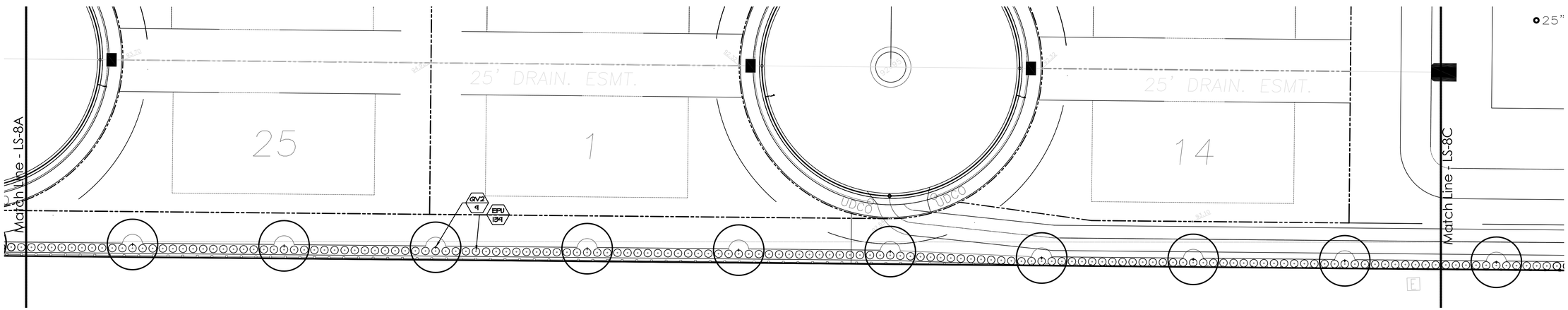

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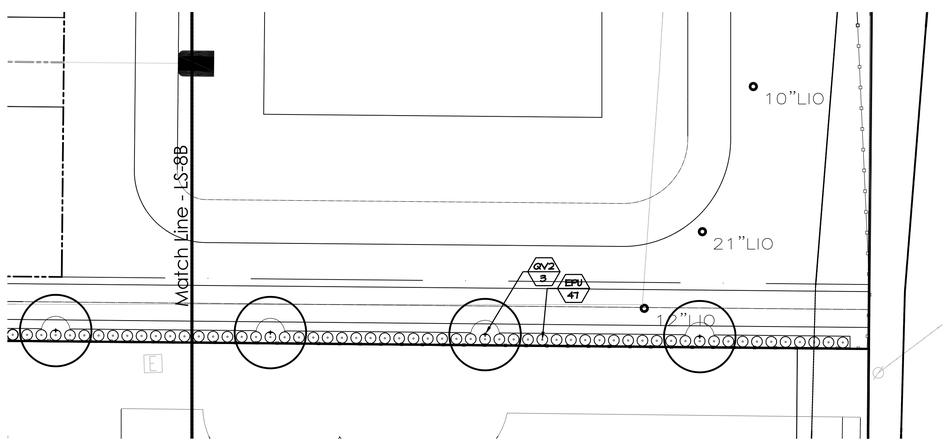

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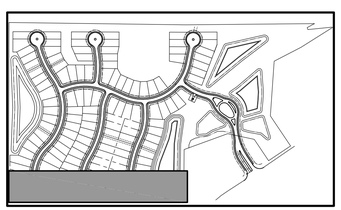
KEY MAP:



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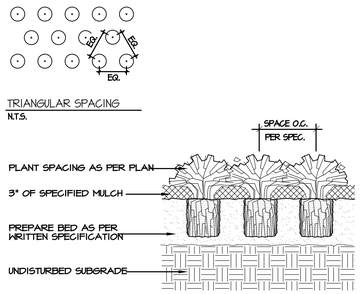
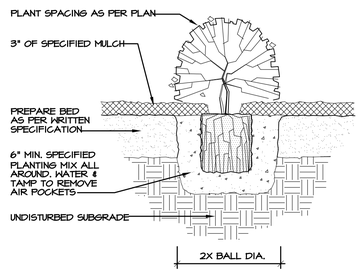


NOTES:

- GROUND COVER PLANTS ARE TO BE SPACED AS INDICATED ON PLANTING PLAN.
- 3" MIN. SPECIFIED PLANTING MIX UNDER AND AROUND - WATER AND TAMP TO AIR POCKETS.

GROUNDCOVER PLANTING

N.T.S.

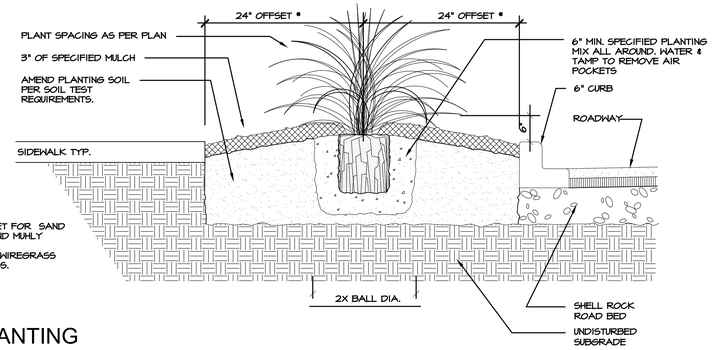


NOTES:

- PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE.
- MIN. 18"HT. AT INSTALL, 24" WITHIN 1 YEAR. DWARF SPECIES MIN. 14"HT. AT INSTALL.

SHRUB PLANTING

N.T.S.



GRASS PLANTING

N.T.S.

NOTES:

1. NO TREE SHALL BE REMOVED UNLESS SPECIFICALLY TAGGED FOR REMOVAL BY THE ENGINEER.
2. THE CONTRACTOR SHALL TAKE SPECIAL CARE NOT TO DAMAGE ANY TREES THAT ARE TO REMAIN.
3. ROOTS GREATER THAN 1" DIAM. SHALL NOT BE CUT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
4. ROOTS OF 1" DIAM. OR LARGER THAT NEED TO BE CUT SHALL BE CUT NEATLY.
5. STOCKPILED MATERIALS OR UNNECESSARY VEHICULAR TRAFFIC SHALL NOT BE ALLOWED OVER ANY TREE ROOT SYSTEM.
6. TYPE 'A' BARRIER OR TYPE 'B' BARRIER SHALL BE CONSTRUCTED WHEN CALLED FOR ON PLANS OR AS DIRECTED BY THE ENGINEER. BARRIERS SHALL BE MAINTAINED IN PLACE UNTIL REMOVAL IS DIRECTED BY THE ENGINEER.
7. COST OF ALL TREE BARRICADES SHALL BE INCLUDED IN PAY ITEM 120-1100 (GRADING).

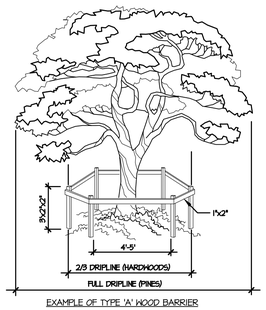
BEFORE PERMIT:

1. BARRIERS ARE TO BE ERECTED AROUND ALL TREES 4" DBH AND GREATER TO REMAIN. THIS MUST BE DONE BEFORE CONSTRUCTION, GRADING, OR BEFORE ANY TREES ARE REMOVED.
2. TREES 4" DBH AND GREATER THAT ARE LOCATED WITHIN 10' OF THE LOT UNDER CONSTRUCTION SHALL ALSO BE PROTECTED BY A BARRICADE.

INSTALLATION SPECIFICATIONS:

* NOTE: EITHER TYPE 'A' BARRICADE (WOOD) OR TYPE 'B' BARRICADE (RIBBON) MAY BE USED.

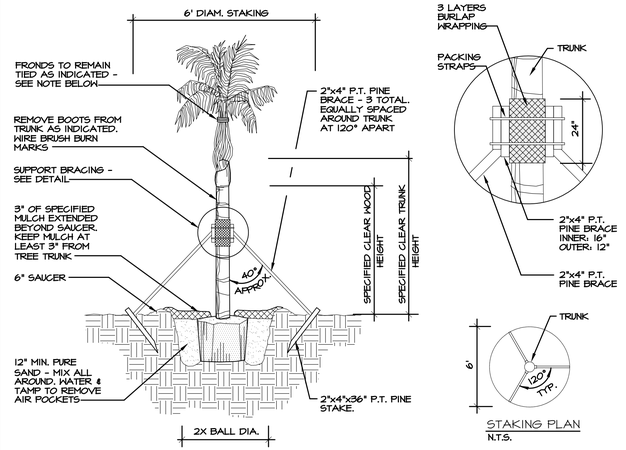
1. MINIMUM RADIUS TO BE PROTECTED:
   PINES:
   DRIPLINE OR 6', WHICHEVER IS GREATER.
   HARDWOODS AND ALL OTHERS:
   2/3 OF THE DRIPLINE OR 6', WHICHEVER IS GREATER.
2. METHOD OF ERECTION: (SEE DIAGRAM)
   A. MINIMUM HEIGHT OF UPRIGHTS SHALL BE 3' AND NO LESS THAN 2"x2" LUMBER.
   B. UPRIGHTS SHALL HAVE HORIZONTAL RIBBONING AT THE TOP AND 12" BELOW THE TOP. (TYPE 'B' BARRIER)
   C. UPRIGHTS SHALL BE SPACED AT NO MORE THAN 4'-5' INTERVALS.
   D. HORIZONTAL MEMBERS SHALL BE OF NO LESS THAN 1"x2" LUMBER. (TYPE 'A' BARRIER)



EXAMPLE OF TYPE 'A' WOOD BARRIER

TREE BARRICADE

REFER TO CIVIL DRAWINGS FOR FINAL LOCATIONS OF TREES TO REMAIN IN PLACE

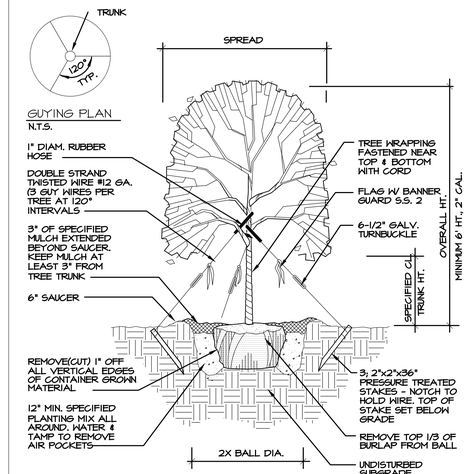


NOTES:

- PALM FRONDS SHALL BE TIED UP UNTIL AFTER PLANTING. TIES SHALL BE REMOVED AS FOLLOWS: DATE PALM - ONE WEEK; WASHINGTON PALM & QUEEN PALM - IMMEDIATELY; SABAL PALMS WHICH ARE NOT 'HURRICANE CUT' SHALL REMAIN TIED FOR SIX MONTHS. REMOVE ALL DEAD AND BROKEN FRONDS. NEVER CUT BUD.
- ALL TRUNKS SHALL BE PREPARED PRIOR TO DELIVERY. DATE PALMS SHALL BE 'CLASSIC CUT'; SABAL AND WASHINGTON PALMS SHALL BE BOOTED OR SHAVED AS SPECIFIED.
- PLANT IN PURE SAND. PLANT SO THAT TOP OF ROOT BALL IS 2" ABOVE FINISHED GRADE; BOTTOM OF ROOT BALL SHALL BE SEATED DIRECTLY ON UNDISTURBED SUBGRADE.
- NEVER NAIL INTO TRUNK.
- PALMS MAY BE SUBSTITUTED FOR UP TO 30% OF SHADE TREES, 3 PALMS FOR 1 SHADE TREE, GROUPED TOGETHER, 10 FT. CLEAR TRUNK

PALM PLANTING

N.T.S.

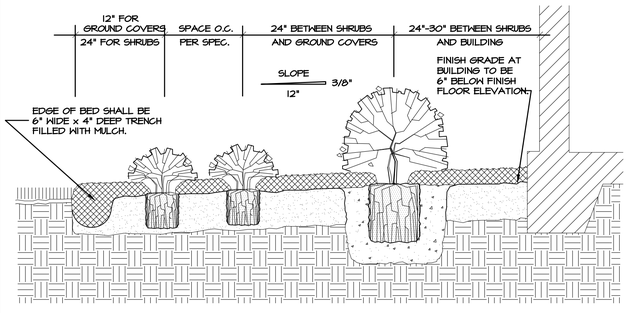


NOTES:

- PLANT SO THAT TOP OF ROOT BALL IS 2-3 INCHES ABOVE THE FINISHED GRADE.
- BOTTOM OF ROOT BALL SHALL BE SEATED DIRECTLY ON UNDISTURBED SUBGRADE.
- STAKE ABOVE FIRST STRONG BRANCHES OR AS NECESSARY FOR FIRM SUPPORT.
- FLAG GUYING WIRES WITH BANNER GUARD S.S. 2 OR APPROVED EQUAL.
- MINIMUM 2" CAL. AND 6' HT. AT INSTALLATION; MATURE SPREAD GREATER THAN 20'

TREE PLANTING - GUY WIRES

N.T.S.

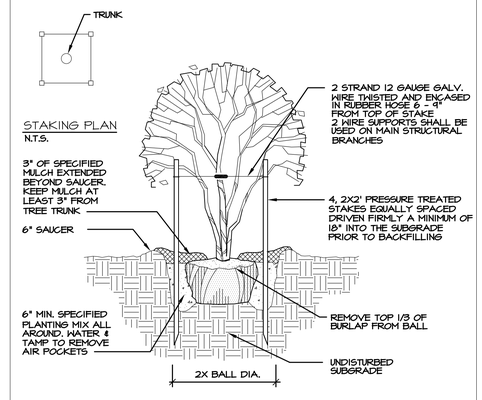


NOTES:

- FINISH GRADE AT BUILDING TO BE 6" BELOW FINISH FLOOR ELEVATION.
- BED GRADE TO SLOPE AT 3/8" PER FOOT AWAY FROM BUILDING.
- SEE DETAILS AND SPECIFICATIONS FOR PLANTING INSTRUCTIONS.

BED PREPARATION

N.T.S.



NOTES:

- STAKE TO FIRST BRANCHES AS NECESSARY FOR FIRM SUPPORT.
- WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES.
- MULTI-TRUNK TREES TO BE A MIN. OF 3 TRUNKS AT 1" EA.; 6' HT. AT INSTALLATION.

MULTI-TRUNK TREE STAKING

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LANDSCAPE DETAILS

SHEET NUMBER

LS-9

Landscape Specification Cont.

To calculate fertilizer rates:

1. Measure the area to be fertilized in square feet.
2. Select fertilizer(s) to be used based on the soil testing laboratory recommendations by matching the ratio of nutrients recommended to the fertilizer grades available.
3. Determine the amount of fertilizer to apply to a given area (1,000 sq. ft.) by dividing the recommended amount of nutrient by the percentage of the nutrient (on a decimal basis) in the fertilizer. Apply no more than 0.25 lbs P205/1000 sf per application prior to planting.
4. Adjust the amount of fertilizer to the project area.

G. Mulch: Mulch shall consist of either pine straw or simulated cypress mulch (Gold Mulch). Pine straw is to be placed in all landscape beds, along all the upland buffer and existing woodland edges, and any other area specified on the plan (refer to plant list). Gold mulch will be placed in all planting beds adjacent to pool areas and as specified on the plans (refer to plan list). All mulch is to be clean, bright and free of weeds, moss, sticks, sapwood, chips or other debris. All mulch is to be installed evenly to a depth as specified in plant list and cover all areas of the planting beds. Rock mulch in pool area planting beds shall consist of lava rock and be placed within the first 2'-0" of each landscape bed. The contractor shall submit lava rock color samples for review and approved by Landscape Architect and Owner.

H. Water: Water used for landscaping is to be reclaimed, open waterbody, and/or potable. Refer to irrigation plans and specifications.

2.02 TOPSOIL MIXTURE

A. All top soil used in tree, shrub and ground cover beds for planting operation as specified and shall be prepared and conditioned as follows (unless noted otherwise in Plant Schedule):

1. Mix one part by volume peat and two parts by volume of existing soil and five pounds of 75% organic 6-4, 5-8-8 fertilizer and five pounds of commercial 50% organic 6-6-6 fertilizer to each cubic yard of the mixture. Add wet-able sulfur and iron sulfate in quantities necessary to bring the soil to Ph rating of 6.0.

2.03 PLANT MATERIAL

A. Quality and Size: Plants shall be in accordance with "Horticultural Standards" (Latest Edition) of the rules and grading adopted by the American Association of Nurserymen and "Grades and Standards for Nursery Plants". All plants shall have a normal habit of growth and shall be of sound health, vigorous and free from insect infestations. Any tree with weak, thin trunks not capable of supporting itself when planted in the open will not be accepted. The minimum acceptable size of all plants, measure before pruning, with branches in normal position, shall conform to dimensions as shown in the Plant Schedule. Larger plants of equal quantity may be accepted at no additional cost to the owner. Specimen trees may be specified to be installed by others at the discretion of the Landscape Architect or Owner.

B. Balled Plants: Plants that are balled and burlapped (B&B) shall be adequately balled with firm natural balls of soil sized as set forth in "Horticultural Standards". Balls shall be firmly wrapped with burlap or equal approved strong cloth. No balled plant shall be planted if the ball is cracked or broken before or during the process of planting.

C. Balled and Wire Plants: Plants that are wire balled and burlapped (WB & B) shall be dug with solid balls or adequate size, the balls securely wrapped with heavy burlap or equal and tightly bound with mesh.

D. Container Grown Plants: Plants that are container grown shall have been grown in pots, cans, tubs or boxes and shall have sufficient roots to hold earth together intact after removal from containers without being rootbound.

E. Options as to Methods: Any plant may be furnished container grown instead of balled if all other requirements are met.

F. Protection Against Drying Out: All plants shall be handled so that roots will be adequately protected at all times from drying out and from other injury. The balls or balled plants which cannot be planted immediately on delivery shall be well protected with soil or other acceptable material.

G. Plant Labels: Durable, legible labels, stating in weather resistant ink or equal, the correct plant name and size, specified on the plant list, shall be securely attached to all plants, bundles and/or containers or plant material delivered at the planting site, for the purpose of inspection and planting identification.

H. Washington Palms shall be full head - not hurricane cut.

2.04 SPECIAL TREATMENT AND HANDLING FOR SPECIMEN PLANTS

Trees and shrubs intended for isolated specimen planting shall be selected for shape and symmetrical branching habit which at maturity will produce a strong, full-foliaged tree, bush or other specimen. Particular care shall be exercised in the digging, binding and wrapping of such specimens to assure safe loading, shipment and handling or the entire operation of transportation from grown locations to the replanting locations shown on the drawings and in Plant Schedule.

2.05 GUYING AND STAKING

A. All trees shall have 3 stakes, unless planting details are part of this set.

1. Hose: Hose shall be suitable garden hose not less than 1/2" inside diameter.
2. Stakes: Stakes for supporting trees and palms shall be of sound wood of uniform size, creosoted or pressure-treated by an approved process. Stakes shall not be less than 2 inches by 4 inches nominal dimensions and not less than 2-1/2 feet in length for guying and not less than 4 feet for staking, and shall be in all cases of sufficient dimensions and length to satisfactorily and firmly guy each tree.
3. Wire: Wire shall be galvanized pliable, zinc-coated iron not less than No. 12 gauge.
4. Turnbuckles: Turnbuckles for guying trees shall be galvanized or cadmium-plated and shall be of adequate size and strength to properly maintain tight guy wires.
5. Option of Contractor: At the option of the Landscape Contractor, the staking and guying of trees may be omitted. The Landscape Contractor assumes all responsibility if he does not stake or guy.

B. All palms shall be adequately braced with 2 x 4 props.

C. Water in trees: All trees, including palms, whether balled, container or spaded, shall be watered in properly, immediately after planting. A water hose is to jet water around the perimeter of the ball at least in three separate places. Watering is to continue until all air pockets have been filled. Additional fill may be needed to bring fill to proper height. Retamp for compaction and grade.

D. Tree Spading Operations:

1. Spades will be of sufficient size comparable to trunk caliper so as not to damage the root system.
2. Trees are to be set so as not to have any part of the root ball side exposed. If this occurs then the tree spade contractor is responsible for adding additional fill and hand grade to match existing slope. Landscape logs may be used by the Landscape Contractor if conditions warrant as directed by the Landscape Architect.
3. Immediately after spading the tree it is to be watered in properly and a water dish built to retain the water around the root ball.

Landscape Specification

SECTION 02800 - LANDSCAPE INSTALLATION

PART I - GENERAL

1.01 EXTENT OF WORK

A. The work under this section shall include all services, tools, apparatus, materials, labor and other means of construction required for the landscaping work in accordance with drawings and these specifications.

1. Lay out beds, tree and palm locations, shrubs and ground cover as shown on the drawings.
2. The work shall include the preparation of the ground, finish grading, planting, fertilizing, mulching, clipping and pruning of plant materials, preparation and applying peat and fertilizers and all other work required by the drawings and specifications.

1.02 APPLICABLE DOCUMENTS

A. The following specifications are standards of the issues listed and referred to form a part of this specification to the extent required by the reference thereto.

1. American Association of Nurserymen, 1944 Edition of Horticultural Standards, (635- 636 Southern Building, Washington, DC).
2. The Standard Encyclopedia of Horticulture, L. H. Bailey, 1953 Edition, 3 Volumes by the MacMillan Company, New York, New York.
3. Grades and Standards for Nursery Plants, Part I and Part II, Department of Agriculture, State of Florida, Division of Plant Industry, Post Office Drawer 1269, Gainesville, Florida 32601.

1.03 GENERAL REQUIREMENTS

A. Approval and Rejection of Material and Work: The selection of all materials and execution of all operations required under the drawings and specifications shall be subject to the approval of the Landscape Architect. The Landscape Architect or his representative shall have the right to reject any and all work which in his opinion does not meet the requirements of the specifications at any stage of the operations. All rejected materials shall be removed from the site.

B. Scientific and Common Names: Attention is called to the fact that the scientific and common names for the plants required under this Contract are generally in conformity with the approved names given in the Standard Plant Names, published by the American Joint Committee on the Horticultural Nomenclature. The names of varieties not included therein are generally in conformity with the name accepted in the nursery trade. Any question regarding plant names shall be brought to the attention of the Landscape Architect prior to installation.

C. All plants shall conform to the varieties specified in the Plant Schedule. No substitution of varieties or colors will be allowed without prior written or verbal approval of the Landscape Architect.

D. All plant materials shall conform to a Florida No. I or better. Those not listed by "Grades and Standards for Nursery Plants" published by the Division of Plant Industry, shall conform to a Florida No. I as to:

1. Health and vitality
2. Condition of foliage
3. Root system
4. Freedom from pest or mechanical damage
5. Heavily branched and densely foliated according to the accepted normal shape of species.

PART II - PRODUCT AND PROCEDURES

2.01 MATERIAL

A. Topsoil: Planting areas shall use existing soil on the site as long as it has been cleared of unsightly underbrush and their roots, limbs, buried construction debris, pockets of clay, rocks and other extraneous matter.

B. Unsuitable Soil Conditions: Absolutely no plastic or clayey soil is to be used in any planting landscape areas. If such a condition is found it is to be removed to a depth of 3 feet and 1 foot outside of said planting bed. This area is to be back-filled with material of suitable sandy gradation which is porous and percolates well with reasonable compaction. If any planting or sod area has a plastic or clayey soil condition which does not allow for proper drainage, then a system of underdraining, turf drain or some other means of releasing underground standing water must be incorporated under the direction of the Landscape Architect and Owner.

C. Planters: All enclosed planters must be free of debris, harmful chemicals such as cement or other construction materials. They are to be filled with a suitable material of sandy gradation which is porous and percolates well. Any certified potting soil mixture is also acceptable for fill. It is the responsibility of the Landscape Contractor to be sure that these planters have been properly sealed before fill is placed.

D. Soil Tests: The Landscape Contractor is to verify all soil conditions of all planting areas as to its Ph and organic stability before planting to be sure all unsuitable material has been removed. Before any soil addenda are added to the soil, a soil test shall be taken. A minimum of three (3) soil samples shall be taken. Label each sample with the date, location keyed to a site plan, visible soil condition, and sampling depth. Split each sample into two, equal parts. Send half to the testing agency and half to Owner for its records. The soil samples shall be tested for the Physical Soil Texture, Chemical Makeup, and Soil-Fertility analysis according to standard laboratory protocol. For each unamended soil type, perform testing on soil samples and furnish soil analysis and a written report containing soil-amendment and fertilizer recommendations by a qualified testing agency performing the testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles. All proposed fill shall be tested prior to being delivered to the site.

E. Peat: It shall be Horticultural Peat, or imported, brown in color and shall be free of all debris and shall be pulverized before use. Peat is not to be used where soil conditions are damp or excessively wet. It is the responsibility of the Landscape Contractor to determine where peat should and should not be introduced and insure the health and welfare of the plants.

F. Fertilizer:
Fertilizers shall comply with the State fertilizer laws.
The numerical designations for fertilizer indicate the minimum percentages (respectively) of (1) total nitrogen, (2) available phosphoric acid, and (3) water-soluble potash, contained in the fertilizer. At least 50% of the nitrogen shall be from a slow-release source.

Certification.
The Contractor shall provide the Engineer a certified test report from the manufacturer of the commercial fertilizer confirming that the requirements of this Section are met. The certified test report shall conform to the requirements of Section 6 and include test results for total nitrogen, available phosphoric acid, water-soluble potash, and sulfur. Each certification shall cover one batch per type for dry type fertilizer.

Fertilizer Rates.
Soil laboratory fertilization recommendations are based on the amount (lbs) of nutrients (N, P205, K20) to apply per given area (usually 1,000 sq. ft.). From this recommendation it is necessary to select an appropriate fertilizer grade and then determine how much of this fertilizer to apply to the area.

If a complete fertilizer (containing all three primary nutrients) is not available in the ratio of N-P-K necessary to match the ratio required in the fertilizer recommendation, mixed-grade or single-nutrient fertilizers should be used to satisfy each nutrient requirement.

Plant Material Notes Cont.

C. BARE-ROOTSTOCK.
(1) ROOTS HEALTHY AND VIGOROUS, CHARACTERIZED BY VERY GOOD COLOR AND SUCCULENCE.
(2) WELL SUPPLIED WITH MAIN LATERAL ROOTS, UNIFORMLY DISTRIBUTED AROUND CROWN OR TAPROOT.
(3) WELL SUPPLIED THROUGHOUT WITH FIBROUS (FEEDER) ROOTS.
(4) INSECT LESIONS AND OTHER MECHANICAL INJURY WELL CALLOUSED AND NOT TO EXCEED IN GREATEST DIMENSION ¼ THE DIAMETER OF THE ROOT BENEATH UNLESS COMPLETELY HEALED.
(5) RAGGED DIGGING CUTS PRUNED CLEAN.
(6) ROOT SYSTEMS SHALL BE KEPT MOIST, OUT OF DIRECT SUNLIGHT AND DRYING BREEZES AT ALL TIMES.
(7) ROOT SYSTEMS SHALL HAVE A SPREAD AND DEPTH EQUAL TO MINIMUM BALL SIZE WHEN ROOT PRUNED PRIOR TO DIGGING, OR 1/3 GREATER THAN MINIMUM BALL SIZE IF NOT ROOT-PRUNED.

WETLAND PLANT MATERIAL

1. SPECIMENS SHALL BE FREE OF OTHER PLANTS CONSIDERED AS NUISANCE OR EXOTIC SPECIES.

2. NON-CONTAINERIZED SPECIMENS SHALL EXHIBIT A HEALTHY, WELL DISTRIBUTED ROOT STRUCTURE WHICH EXTENSIVELY PENETRATES THE SOIL SUCH THAT AT LEAST 75% OF THE SOIL MASS REMAINS INTACT. THEY SHALL ALSO EXHIBIT SUFFICIENT TOP GROWTH TO ENSURE VIABILITY AT THE SPECIFIED WATER DEPTH AND/OR LOCATION BEING PLANTED.

3. CONTAINERIZED SPECIMENS SHALL EXHIBIT A HEALTHY, WELL DISTRIBUTED ROOT STRUCTURE WHICH EXTENSIVELY PENETRATES THE SOIL SUCH THAT AT LEAST 85% OF THE SOIL MASS REMAINS INTACT. THEY SHALL ALSO EXHIBIT VIGOROUS TOP GROWTH WITH A BASE DIAMETER AT LEAST 50% OF THE DIAMETER OF THE CONTAINER.

Plant Material Notes

TREE MATERIAL

TRUNK STRUCTURE
TRUNKS WHICH BRANCH (FORKS) INTO TWO EQUAL TRUNKS IN THE UPPER 1/2 HALF OF THE TREE SHALL HAVE THE SECONDARY LEADER PRUNED (REMOVED) PRIOR TO TREE BEING DELIVERED TO THE JOB SITE. SINGLE TRUNKS TREES SHALL NOT BOW GREATER THEN 10°, IF SO THE TREE WILL NOT BE ACCEPTABLE. THE TIP OF THE LEADER ON THE MAIN TRUNK MUST BE INTACT AND ITS TERMINAL BUD MUST BE THE HIGHEST PART OF THE TREE. ANY TOPPED TREES WILL BE REJECTED. IF THE TRUNK BRANCHES INTO TWO NEARLY EQUAL TRUNKS ALONG THE LOWER 1/2 OF THE TREE OR BRANCHES INTO THREE OR MORE NEARLY EQUAL DIAMETER TRUNKS IN THE UPPER 1/2 OF THE TREE, OR IF THE TRUNK BRANCHES INTO THREE OR MORE NEARLY EQUAL DIAMETER TRUNKS IN THE LOWER 1/2 OF THE TREE, THE TREE WILL NOT BE ACCEPTABLE. NO TRUNK SHALL HAVE NO OPEN WOUNDS OR OTHER BARK INJURIES OR DAMAGE DUE TO HANDLING, IF SO THE TREE WILL NOT BE ACCEPTABLE. ALL PRUNING SCARS SHALL BE AS DESCRIBED IN THE GRADES AND STANDARDS FOR NURSERY PLANTS BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, LATEST EDITION. ANY TREE WITH "FLUSH CUT" PRUNING SCARS OR OTHER IMPROPER PRUNING WILL NOT BE ACCEPTABLE.

BRANCH ARRANGEMENT
ALL BRANCHES SHALL BE MORE OR LESS EQUALLY DOMINANT OR HAVE SEVERAL DOMINANT BRANCHES GREATER THEN 4" APART. ONE BRANCH IN THE UPPER HALF OF THE TREE CAN BE GREATER THAN 2/3 THE DIAMETER OF THE TRUNK MEASURED DIRECTLY ABOVE THE BRANCH. NO BRANCH TIPS CAN BE TALLER THAN THE TRUNK. IF MOST MAJOR BRANCHES ARE ORIENTED VERTICALLY; AND/OR NEARLY EQUAL-DIAMETER MAJOR BRANCHES ARE LOCATED WITHIN 4" OF EACH OTHER AT TWO OR MORE POSITIONS AND/OR ONE OR MORE BRANCHES IN THE LOWER HALF OF THE TREE ARE LARGER THAN 2/3 THE DIAMETER OF THE TRUCK MEASURED DIRECTLY ABOVE THE BRANCH, THE TREE WILL NOT BE ACCEPTABLE. IF BRANCHES ARE VERTICALLY FORMING NARROW ANGLES WITH THE TRUNK, OR MOST MAJOR BRANCHES GROWING FROM THE SAME POINT ON THE TRUNK, THE TREE WILL NOT BE ACCEPTABLE.

STRUCTURAL UNIFORMITY OF THE CROWN
ONE MAJOR BRANCH MAYBE LOCATED DIRECTLY ABOVE ANOTHER BUT THE OTHERS MUST BE EVENLY DISTURBED AROUND THE TRUNK. THE CROWN A TREE CAN HAVE SOME SMALL VOIDS IN THE CANOPY AND MAY NOT BE COMPLETELY FULL OF FOLIAGE. IF BRANCHES ARE NOT EVENLY DISTRIBUTED AROUND THE TRUNK, OR SEVERAL ARE GROWING FROM THE SAME SIDE WITH TWO OR MORE DIRECTLY ABOVE OTHERS, THE TREE WILL NOT BE ACCEPTABLE. IF THE TREE IS ONE-SIDED OR IS FLAT-SIDED, OR MAJOR BRANCHES ARE GROWING FROM ONLY ONE OR TWO SIDES OF THE TRUNK AND LARGE GAPS ARE IN THE CROWN, THE TREE WILL NOT BE ACCEPTABLE.

ROOT STRUCTURE
THE SIZE OF THE ROOT BALL OR CONTAINER SHALL BE PER THE GRADES AND STANDARDS FOR NURSERY PLANTS BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES MATRIX FOR SPECIFIC SPECIES OF TREE. ROOT SYSTEM SHALL BE STURDILY ESTABLISHED IN CONTAINER AND SHALL NOT BE EXCESSIVELY ROOTBOUND. CONTAINER MATERIAL SHALL HAVE NO ROOTS GROWING GREATER THAN 1/5 THE DIAMETER OF THE TRUNK GROWING OUT OF THE CONTAINER. BALL AND BURLAPPED, GROW BAGS, ETC. SHALL HAVE BEEN ROOT PRUNED AND HAVE BEEN CURED PRIOR TO BEING DELIVERED TO THE JOB SITE. TREES WITH GIRDLING ROOTS, 1/10 THE DIAMETER OF THE TRUNK CIRCLING AROUND MORE THAN 1/3 OF THE TRUNK, THE TREE WILL NOT BE ACCEPTABLE.

PALM AND CYCADS MATERIAL

TRUNK SPECIFICATION:
TRUNK CALIPER MUST MEET OR EXCEED THE CALIPER SPECIFICATIONS AS NOTED IN THE PLANS AND/OR AS PER DESCRIBED IN GRADES AND STANDARDS FOR NURSERY PLANTS BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. TRUNK SHALL BE WELL FORMED, WITH NO ABRUPT CHANGES IN CALIPER UNLESS TYPICAL OF NORMAL GROWTH OF THE SPECIES. NO HOLES, CAVITIES, GOUGES, DEPRESSED AREAS OR OLD LEAF-BASES SHALL REMAIN, OR PALM WILL BE REJECTED. PETIOLES SHALL BE CUT CLEAN AND SYMMETRICALLY AT THE TRUNK ON ANY OLD LEAF-BASES REMAINING. NO RAGGED OR TORN BOOTS, OR SCARRING OF TRUNK CAUSED BY TEARING OFF BOOTS PREMATURELY, WILL BE ACCEPTED.

FRONDS AND LEAVES:
ALL PALMS TO BE STRAIGHT TRUNK UNLESS OTHERWISE NOTED, WITH HEAVY, DENSE CANOPY WITH ALL PETIOLES IN ASCENDING POSITION. LEAVES SHALL BE NON-CHLOROTIC WITH AT LEAST 75% OF THE LEAVES IN EXCELLENT CONDITION. THE PALM SHALL HAVE NO LIVE INSECTS OR INSECT DAMAGE, ANY SYMPTOMS OF PLANT DISEASE AND NO EXTREME SUCCULENCE.

ROOT BALL:
PALM ROOT BALLS MUST BE WRAPPED OR SECURED TO PRESERVE THE INTEGRITY OF THE ROOT BALL DURING TRANSPORT. IN CONTAINERIZED PALMS, THE ROOT MASS SHALL FILL THE CONTAINER SIZE SPECIFIED. IF CIRCLING ROOTS HAVE DISPLACED MOST OF THE SOIL IN THE CONTAINER, THEN THE CIRCLING ROOT MASS NEEDS TO BE CUT PER GRADES AND STANDARDS FOR NURSERY PLANTS BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, RECOMMENDS. THE ROOT BALL SHALL MEET OR EXCEED THE SPECIFICATIONS NOTED IN THE PLANS AND/OR AS PER DESCRIBED IN GRADES AND STANDARDS.

SHRUB MATERIAL

THE SELECTED PLANT SHALL BE HEALTHY, VIGOROUS PLANT WHICH IS WELL-SHAPED, WELL-BRANCHED AND WELL-FOLIATED (SUBJECT TO NATURAL GROWTH OF THE VARIETY).

1. CANES OR TRUNK (S) AND BRANCHES:
A. WELL-FORMED AND STURDY.
B. GOOD BRANCHING, UNIFORMLY DISTRIBUTED TO FORM A WELL-BALANCED PLANT.
C. SCARS SHALL BE FREE OF ROT AND NOT EXCEED IN GREATEST DIMENSION THE DIAMETER OF THE WOOD BENEATH UNLESS CLEAN AND HEALED 75 % OR BETTER (EXCEPT PRUNING SCARS).
D. PRUNING SCARS CLEAN CUT LEAVING LITTLE OR NO PROTRUSION FROM TRUCK OR BRANCH.
E. GRAFT UNION HEALED 75% OR BETTER.
F. NO EXTREME SUCCULENCE.

2. FOLIAGE:
A. WELL SUPPLIED WITH LEAVES OF NORMAL SIZE, SHAPE, COLOR AND TEXTURE (EXCEPT SHRUBS MOVED BARE-ROOT OR DECIDUOUS SHRUBS WHEN DORMANT).
B. NO HOLES, CAVITIES OR DEPRESSED AREAS CAUSED BY BROKEN OR DEAD FOLIAGE.
C. MAXIMUM CHLOROSIS VERY SLIGHT AND NOT MORE THAN 10% OF TOTAL FOLIAGE.
D. PEST OR MECHANICAL DAMAGE CONFINED TO NO MORE THAN 10% OF TOTAL FOLIAGE.
E. FROST OR COLD DAMAGE CONFINED TO NO MORE THAN A SLIGHT TIP BURN ON THE LEAVES COVERING 10% OR LESS OF THE SURFACE AREA.

3. ROOT SYSTEM:
A. CONTAIN-GROWN STOCK.
(1) STURDILY ESTABLISHED IN CONTAINER.
(2) SHALL NOT BE EXCESSIVELY ROOTBOUND EXCEPT PLANTS DELIBERATELY GROWN ROOTBOUND TO PRODUCE A DWARF PLANT.
(3) NO LARGE ROOTS GROWING OUT OF CONTAINER.

B. BALLED OR BALLED AND BURLAPPED STOCK (B&B).
(1) STURDILY ESTABLISHED IN BALL THAT HAS BEEN TIGHTLY WRAPPED AND SECURELY TIED WITH TWINE OR WIRE, OR PINNED.
(2) PLANTS MUST HAVE BEEN PREVIOUSLY ROOT PRUNED AND/OR CONTAIN SUFFICIENT ROOTS FOR CONTINUED GROWTH WITHOUT RESULTING SHOCK.
(3) MINIMUM BALL SIZE: SEE CHART, PAGE 7.

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CHECKED BY: JMG
SCALE: AS SHOWN

LANDSCAPE NOTES

SHEET NUMBER
LS-10

Certification.
The Contractor shall provide the Engineer a certified test report from the manufacturer of the commercial fertilizer confirming that the requirements of this Section are met. The certified test report shall conform to the requirements of Section 6 and include test results for total nitrogen, available phosphoric acid, water-soluble potash, and sulfur. Each certification shall cover one batch per type for dry type fertilizer.

Fertilizer Rates.
Soil laboratory fertilization recommendations are based on the amount (lbs) of nutrients (N, P205, K20) to apply per given area (usually 1,000 sq. ft.). From this recommendation it is necessary to select an appropriate fertilizer grade and then determine how much of this fertilizer to apply to the area.

If a complete fertilizer (containing all three primary nutrients) is not available in the ratio of N-P-K necessary to match the ratio required in the fertilizer recommendation, mixed-grade or single-nutrient fertilizers should be used to satisfy each nutrient requirement.

To calculate fertilizer rates:

1. Measure the area to be fertilized in square feet.
2. Select fertilizer(s) to be used based on the soil testing laboratory recommendations by matching the ratio of nutrients recommended to the fertilizer grades available.
3. Determine the amount of fertilizer to apply to a given area (1,000 sq. ft.) by dividing the recommended amount of nutrient by the percentage of the nutrient (on a decimal basis) in the fertilizer. Apply no more than 0.25 lbs P205/1000 sf per application prior to planting.
4. Adjust the amount of fertilizer to the project area.

2.03 MULCH

A. The mulch shall consist of oat, rye or wheat straw or of pangola, peanut coastal Bermuda or Bahia grass hay. Other types of mulch may be used only when approved by the Landscape Architect.

2.04 SODDING MATERIALS

A. Unless otherwise indicated on the plans, sod materials shall be specified on the landscape plant list.

B. The sod shall be taken up in commercial size rectangles, preferable 12 x 24 inches or larger, except where six inch (6") strip sodding is called for. The sod shall be sufficiently thick to secure a dense stand of live grass. The sod shall be live, fresh and uninjured, at the time of planting. It shall have a soil mat of necessary sufficient thickness adhering firmly to the roots to withstand all necessary handling. It shall be reasonably free of weeds and other grasses. It shall be planted as soon as possible after being dug and shall be shaded and kept moist from the time it is dug until it is planted. The source of the sod may be inspected and approved by the Landscape Architect prior to being cut for use in the work. After approval, the area from which the sod is to be harvested shall be closely mowed and raked as necessary to remove excessive top growth and debris.

C. Approved devices, such as sod cutters, shall be used for cutting the sod and due care shall be exercised to retain the native root soil intact.

2.05 WATER

A. The water shall be free of excess and harmful chemicals, acids and alkalis or any substance that might be harmful to plant growth or obnoxious to traffic. Salt water shall not be used. The contractor shall make all arrangements for obtaining and transporting water to the job site.

PART III - EXECUTION

3.01 PREPARATION OF GROUND

A. Final grading and cleaning shall be completed prior to preparation of ground for grassing. The areas to be grassed shall be scarified or loosened to a depth of at least six inches (6"). All areas shall be smooth and free of large clods, roots and other materials that may interfere with the work or future mowing and maintenance operation. No subsequent operations shall be commenced until the Landscape Architect has approved the condition of prepared areas.

3.02 APPLICATION

A. Fertilizer: Fertilize as necessary based on soil testing performed in accordance with Section 2.01 "Soil Testing" and 2.02 "Fertilizer".
For bid purposes, base estimated quantities on an initial application of 265 lbs/acres and one subsequent application of 135 lbs/acre of 16-0-8.

B. Seed Mixture: Seeding shall be done immediately after fertilizing, while the soil is still loose and moist. The seed shall be scattered uniformly over the area to be grassed by a mechanical hand spreader or other approved type of spreader. The rate of spreading shall be five (5) pounds per one thousand (1,000) square feet unless otherwise designated.

C. Mulch: Immediately after completion of seeding, dry mulch shall be uniformly applied over the seeded area approximately two inches (2") loose thickness. The mulch shall then be cut uniformly into the soil so as to produce a loose mulched thickness of three to four inches (3" - 4") and rolled with a cultipacker, traffic roller or other suitable equipment. After seeding and mulching is completed, the entire area shall be watered so as to provide optimum growth conditions for establishment of the grass.

D. Placement of Sod: Sodding shall be incorporated into the project at the earliest practical time in the life of the contract. No sod which has been cut for more than seventy-two (72) hours shall be used unless specifically authorized by the Landscape Architect after his careful inspection thereof. Any sod that is not planted within twenty-four (24) hours after cutting shall be stacked in an approved manner and maintained properly moistened.

1. Sodding shall not be performed when weather and soil conditions are, in the Landscape Architect's opinion, unsuitable for proper results.
2. The sod shall be placed on the prepared surface, with edges in close contact and shall be firmly and smoothly embedded by light tamping with appropriate tools or rolled with approved rollers.
3. Where sodding is used in drainage ditches, the setting of the pieces shall be staggered, such as to avoid a continuous seam along the line of flow. Along the edges of such staggered areas the offsets of individual strips shall not exceed six inches (6"). In order to prevent erosion caused by vertical edges at the outer limits, the outer pieces of sod shall be tamped so as to produce a feather edge effect.
4. On areas where the sod may slide, due to height and slope, the Landscape Architect may direct that the sod be pegged, with pegs driven through the sod blocks into firm earth, at suitable intervals. Any pieces of sod which, after placing, show an appearance of extreme dryness shall be removed from the work.
5. Watering of Grassed Areas: The grassed areas shall be watered for the duration of the contract so as to provide optimum growth conditions for the establishment of the grass. In no case, however, shall the period of maintaining such moisture be less than two (2) weeks after the planting. The water used may be obtained from any approved spring, pond, lake, stream or municipal water system.

3.03 MAINTENANCE OF GRASSED AREAS

A. The Contractor shall, at his expense, Maintain the planted areas in a satisfactory condition until final acceptance of the project. Such maintenance shall include the filling, leveling and repairing of any washed or eroded areas, as may be necessary. The Landscape Architect, at any time, may require replanting of any areas in which the establishment of the grass stand does not appear to be developing satisfactorily. If a planted area must be replanted due to the Landscape Contractor's negligence, carelessness or failure to provide routine maintenance of such area, such replacement shall be at the Landscape contractor's expense. If replanting is necessary due to factors determined to be beyond the control of the Landscape Contractor, payment for replacement will be made under the appropriate contract pay items.

(End of Section)

F. Thickness shall be a uniform as possible, approximately 1-1/2 inches or more, depending on the nature of the sod, so that practically all the dense root system of the grasses will be retained, but exposed in the sod strip, and so that sod can be handled without undue tearing or breaking.

G. Sod shall be watered before lifting and in sufficient quantities to provide a well moistened condition of the sod, full depth to which it is to be cut.

H. The sod shall be live, fresh and uninjured at the time of planting. It shall be planted as soon as possible after being dug and shall be shaded and kept moist from the time it is dug until it is planted. The sod shall be approved by the Landscape Architect before planting.

I. Sod shall be laid with broken joints and fitted together to form a uniform neat blanket effect. All poor grass, light spots and trash shall be cut out of the sod and patched with good sod.

J. Sod shall be rolled with approved lawn roller in two directions to level and smooth sod to a carpet effect. Hand tamp out all high spots that rolling does not remove. Low spots shall be lifted, filled and relayed to give proper effect.

K. Watering: The grassed areas shall be kept in a moist condition for at least two weeks after it is planted and as long as required for a stand of grass.

L. Patching: Weak sodded areas which have to be removed and replaced will be done so by cutting out the effected area - graded to a depth equal to bottom of existing sod adjacent and replaced tightly to form a uniform carpet not noticeable whether the grade is flat or on slope.

2.13 MULCHING

A. After all plants in a group or in a plant bed have been set and approved, the areas between plants shall be cultivated and raked to an even grade to conform to the required remulching finish grades. All plant beds and plant saucers shall then be uniformly covered with three inches (3") layer of approved mulch material.

B. Trees which are not located in plant beds shall be mulched the full width of the tree pit.

PART III - COMPLETION

3.01 CLEAN-UP AND PROTECTION

A. Upon completion of the work, the grounds shall be cleared of all debris, supertfluous materials and equipment due to landscape operations.

B. The Landscape Contractor shall protect all work included under his contract against trespassing and damage of any kind until final inspection and acceptance. If any material is injured it shall be treated, repaired or replaced as required.

3.02 FINAL INSPECTION

A. At the conclusion of the planting, a final inspection of the work will be made to determine the condition of plant materials. All plants not in a healthy growing condition, as determined by the Landscape Architect or his representative, shall be removed from the site and promptly replaced with plants of the like, kind, and size in the same manner as specified for the original planting, at no additional cost to the Owner.

B. At the conclusion of this final inspection, if the Landscape Architect or Owner has reason to believe that the plants are not of the specified grade, he will request a regarding inspection by the Division of Plant Industry, and such evidence will be the basis for requesting replacement of plants and for legal or other action taken by the Division of Plant Industry according to law, should this become necessary.

3.03 HURRICANE DAMAGE OR ACTS OF GOD

A. The Contractor shall not be held responsible for replacement or repairs of plants or planting areas killed or damaged by hurricanes or Acts of God providing he shall have taken all reasonable precautions to minimize their damage.

3.04 GUARANTY

A. All shrub and ground cover materials will be guaranteed for a period of 120 days and trees, palms and accents shall be guaranteed for a period of one (1) year after final inspection and acceptance by the Owner.

3.05 HARM TO PLANT MATERIAL

The General Contractor is responsible for damage to any plant materials or sod which is harmed by foot traffic, ladders in beds, paint brush cleaning, spillage of chemicals in landscape areas, heavy equipment traffic, construction debris lift laying, roofing materials or any other circumstances which is obviously the result of construction work aftermath.

(End of Section)

SECTION 02811 - GRASSING, SEEDING OR SODDING

PART I - GENERAL

1.01 DESCRIPTION

A. The work specified in this section consists of the establishing of a stand of grass within the areas called for and maintaining such areas until completion and final acceptance of project. The methods specified herein are grassing by seeding and grassing by sodding.

1.02 JOB CONDITIONS

A. Sodding: In areas defined as turf on project landscape plans, sodding will be required.

PART II - PRODUCTS

2.01 SOIL TESTS:

The Landscape Contractor is to verify all soil conditions of all planting areas as to its Ph and organic stability before planting to be sure all unsuitable material has been removed. Before any soil addenda are added to the soil, a soil test shall be taken. A minimum of three (3) soil samples shall be taken. Label each sample with the date, location keyed to a site plan, visible soil condition, and sampling depth. Split each sample into two, equal parts. Send half to the testing agency and half to Owner for its records. The soil samples shall be tested for the Physical Soil Texture, Chemical Makeup, and Soil-Fertility analysis according to standard laboratory protocol. For each unamended soil type, perform testing on soil samples and furnish soil analysis and a written report containing soil-amendment and fertilizer recommendations by a qualified testing agency performing the testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles. All proposed fill shall be tested prior to being delivered to the site.

2.02 FERTILIZER:

Fertilizers shall comply with the State fertilizer laws.
The numerical designations for fertilizer indicate the minimum percentages (respectively) of (1) total nitrogen, (2) available phosphoric acid, and (3) water-soluble potash, contained in the fertilizer. At least 50% of the nitrogen shall be from a slow-release source.

Landscape Specification Cont.

2.06 PLANT SCHEDULE

A. The species, size, manner in which to be furnished and the number of plants required to complete the planting as indicated on the Landscape Plan are given in the Plant Schedule.

1. All dimensions given under the Plant Schedule shall be the minimum acceptable sizes.

2.07 INSPECTION OF PLANTS

A. The Landscape Contractor shall be responsible for all certificates of inspection of plant materials that may be required by Federal, State or other authorities to accompany shipment of plants. All plants shall be subject to inspection and approval by the Landscape Architect at any place and at any time. Plants required for the work may be inspected at the place of growth but inspection should not in any way impair the right of rejection at the site. All plants must be inspected and approved before they are planted. All plants that are rejected shall be immediately removed from the site.

2.08 PLANTING SEASON

A. The planting of plant materials may proceed at any time or period or season agreed upon by the Landscape Architect or his representative as being satisfactory.

2.09 GRADING PREPARATION

A. Before the preparations of the planting area begins, all barricades around remaining trees and other protective areas shall be removed by the Landscape Contractor.

B. The finish grade of all planting areas shall be 2-1/2" below the top of abutting curbs, walks, paving and abutments.

2.10 GRADING

A. General Contractor is to verify exact amount of fill needed as shown on civil grading plans and/or hardscape plans and stock pile on job, if feasible.

B. All fill for berming, landscaping areas such as planters, planting beds and in curb islands shall be of suitable construction material. All proposed fill shall be tested as per section 2.01-D prior to being delivered to the site. The General Contractor shall be responsible for coordinating soil testing of offsite fill and shall submit test results to the Landscape Architect or his representative.

C. Absolutely no clay, mulch, gumbo or sandy clay may be used. Suitable material will consist of only clean, sandy, porous gradation.

D. Any unsuitable material found in the above landscaping areas will be removed to a depth of six feet and three feet outside the planting bed perimeter, then will be filled with suitable material to reasonable compaction.

E. Grading: Rough grading and intermediate rough grading will be done by the General Contractor. Fine grading will be done by the Landscape Contractor.

1. Rough grading is the placement of all dirt in designated areas (including planters), balanced to rough grade and shaped to the general intent of the plans as directed by the Landscape Architect.
2. Intermediate rough grading is that work which is needed, by request of the Landscape Architect, to repair all erosion problems on site, including washouts, into the lake, roadway or around building pads.
3. Fine grading is that work which will be done by the Landscape Contractor exclusively. This work consists of hand grading all areas for sodding and final shaping, formation of berms by General Contractor under rough shaping.
4. If fine grading has been completed and severe erosion has taken place before sod or plant material has been installed, then intermediate rough grading will be requested and approved by the Landscape Architect.
5. If severe erosion has taken place after sod or plant material has been installed, then intermediate rough grading will be requested and approved by the Landscape Architect.

2.11 GROUND COVER PLANTING

A. Plants planted at a spacing of less than twenty four (24) inches and plants of smaller size shall be treated as ground cover plants.

B. Preparation of the top six inches (6") of planting soil shall be prepared as follows (unless noted otherwise in Plant Schedule):

1. Fine grade to remove all extraneous matter.
2. Spread three inches (3") of peat moss or humus uniformly over entire ground cover area.
3. Spread organic slow release fertilizer as determined by soil analysis report.
5. Rotor mix or mix by other method to a depth of six inches (6").
6. Regrade to the finished grade before mulching.
7. Plant beds that have a spacing of plants that is twelve inches (12") or less may be mulched before planting.
8. Thorough water and firm the plants into the ground cover mixture.
9. Any soil that may have gotten on the mulch during the planting of the ground covers shall be removed and the area remulched.

C. Plants shall be oriented so that the spread on the plants will uniformly cover the space between them.

2.12 SODDING

A. The finish level of all grass areas after settlement shall be one inch below the top abutting curbs, walks, and paving

B. The sub-grade soil shall be loosened by roto-tiller or other approved method to a minimum of six inches and graded to remove all ridges and depressions so that it will be after settlement everywhere parallel to and at the proper level to provide finished grades specified herein. All stones over two inches in dimensions, stocks, debris and other extraneous matter shall be moved during this operation.

C. Soil Tests: The Landscape Contractor is to verify all soil conditions of all planting areas as to its Ph and organic stability before planting to be sure all unsuitable material has been removed. Before any soil addenda are added to the soil, a soil test shall be taken. A minimum of three (3) soil samples shall be taken. Label each sample with the date, location keyed to a site plan, visible soil condition, and sampling depth. Split each sample into two, equal parts. Send half to the testing agency and half to Owner for its records. The soil samples shall be tested for the Physical Soil Texture, Chemical Makeup, and Soil-Fertility analysis according to standard laboratory protocol. For each unamended soil type, perform testing on soil samples and furnish soil analysis and a written report containing soil-amendment and fertilizer recommendations by a qualified testing agency performing the testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles. All proposed fill shall be tested prior to being delivered to the site.

D. After preparation of sub-soil, a slow release commercial fertilizer shall be applied as recommended by the soil testing agencies report.

E. Solid soil shall be sufficiently thick to secure a dense stand of live grass, and shall be free from weeds or undesirable grasses. At the time the sod is cut, the grass shall not have a length of more than two inches.

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LANDSCAPE SPECIFICATIONS

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