

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 in the SWPPP, shall be held responsible for ensuring that all necessary storm water management controls to assure compliance with the NPDES General 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 techniques. 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 NOTS 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 permanent seeding, mulching, geotextiles, bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unworked 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.

- A. Sign and return to Clearview a Contractors Certification Form certifying your understanding 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 he understands 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 Plan as developed 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: permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees and preservation of native vegetation. Structural erosion and sediment control BMP's that may be used include: straw bales, silt fences, silt ditches, 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 of convenient locations and providing regular collection of wastes, including building material wastes. Minimizing silt 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 discharges.

Contractor

- A. Sign and return to Clearview a Contractors Certification Form certifying your understanding 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 he understands 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 Plan as developed 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: permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees and preservation of native vegetation. Structural erosion and sediment control BMP's that may be used include: straw bales, silt fences, silt ditches, 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 of convenient locations and providing regular collection of wastes, including building material wastes. Minimizing silt 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 discharges.

- 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 greater than that 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 general steps to be taken, to the Florida Department of Environmental Protection, NPDES Stormwater Section, Mail Station 2500, 2500 State Street 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 recurrence 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 to the FDEP on behalf of the developer 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 in Part E of the Clearview Land Design section of the SWPPP. Sign and return to Clearview Land Design, P.L. for a submittal to FDEP a Notice of Termination form and certification.
- PER-DEVELOPED SITE INFORMATION:**
 - 1. Total site acreage: 6.33 Ac.±
 - 2. Land use: MASS GRADED OUT PARCEL
 - 3. Vegetation: CLEARED SITE - GRASS
 - 4. Receiving waters or municipal separate storm water system: ANCLOTE RIVER
 - 5. 2 Year/24 Hour rainfall depth: 4.5"
 - 6. Soil types: PINEDA, MYAKKA, SELLERS, EAUGALLIE FINE SANDS

- PROJECT INFORMATION:**
 - 1. Project type: Residential
 - 2. Anticipated construction sequence is as follows:
 - 2.1. Complete erosion control installation
 - 2.2. Clearing and grubbing
 - 2.3. Earthwork activities
 - 2.4. Storm water system construction
 - 2.5. Utility construction
 - 2.6. Base and pavement construction
 - 2.7. 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: 2016
- 4. Anticipated completion date: 2016
- 5. Total acres disturbed: 6.33 Ac.±
- 6. Pre-developed "C" factor: 0.80
- 7. Post-developed "C" factor: 0.80
- 8. The storm water management system, upon completion of construction and appropriate certification and on-site submittal will be operated and maintained by OWNER.
- 9. The potential source of pollution from this project is on-site development and construction activity.

OWNER'S INSTRUCTIONS FOR MAINTENANCE AND INSPECTION OF EROSION CONTROL STRUCTURES

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 well as the area immediately 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 shallowing, 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 sums, 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 elsewhere. If prolonged ponding persists, i.e., in excess of 72 hours, the owner shall note the problem and the cause. 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 silt control rates are required to be sent to any reviewing agencies. Written notes should always be kept which describe maintenance activities undertaken during each inspection.

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

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

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

LEGAL DESCRIPTION:
SEE PRELIMINARY SITE PLAN, SHEET C104

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 agency. The contractor shall obtain all necessary permits and approvals from the agencies requiring such review and approval. Questions concerning appropriate corrective action must be taken immediately to repair or replace any damaged BMP's to ensure the above methods are working properly.
- 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 the release of 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 general steps to be taken, to the Florida Department of Environmental Protection, NPDES Stormwater Section, Mail Station 2500, 2500 State Street Road, Tallahassee, Florida 32399-2400; and
- 4. The Site Subcontractor will be responsible for obtaining any and all necessary permits for such activity; several factors to consider are listed below:
 - 4.1. Clay content in excavated materials and/or permeability rates
 - 4.2. Depth of cut in ponds, trenches, or utility lines
 - 4.3. Ambient ground water levels
 - 4.4. Actual rainfall amounts and time of year relative to normal rainy season
 - 4.5. Proximity to wetlands, water bodies or offsite properties
 - 4.6. Class/destination of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvesting areas, etc.)
 - 4.7. Density, type, and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)
 - 4.8. Fill height relative to natural grade and length and steepness of the proposed slopes
 - 4.9. Existing topography and directions of surface flow
 - 4.10. Type of equipment used
 - 4.11. Project location
 - 4.12. Duration of construction activities
 - 4.13. Seasonal variations in soil moisture and soil strength
 - 4.14. Ambient quality of surface and groundwater
 - 4.15. Temporary stockpile locations and heights

- 5. At the onset of construction, the Site Subcontractor, as the party responsible for implementation of the erosion and sediment control plan, shall assess the above described conditions and factors with respect to relative cost effectiveness and select the appropriate method of protection. A fairly extensive list of techniques are presented below but it must be stressed that any or all of the following may be necessary to maintain water quality and quantity standards.
 - 6. The construction sequencing should be thought out in advance of initiation to provide adequate protection of water quality.
 - 7. Any offsite disturbance shall be restored to the Pre or better condition. If applicable, the contractor shall be responsible for any damage wetlands are also prohibited by regulating agencies.
 - 7.2. Discharges which occur from the background levels are in violation of state water quality standards.
 - 8. The erosion and turbidity control measures shown here are the minimum required for agency approval. Additional control and measures may be required due to the Site Subcontractor's construction or other water bodies. If it may be necessary to employ a combination of barriers, ditches, and other erosion/turbidity control measures if conditions warrant.
 - 9. Hay bales or silt screens shall be installed prior to land clearing to protect water quality and to identify areas to be protected from clearing activities and maintained for the duration of the project until all soil is stabilized.
 - 10. Floating turbidity barriers shall be in place in flowing systems or in open water areas prior to initiation of earthwork and maintenance for the duration of the project until all soil is stabilized.
 - 11. No clay material shall be left exposed in any stormwater storage facility.
 - 11.1. If clay or sandy-clay are encountered during stormwater storage excavation, the Site Subcontractor shall notify the Engineer immediately before proceeding with further excavation.
 - 11.2. Earthwork activities shall be discontinued if the soil is non-confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written authorization from the appropriate governing agency.
 - 11.3. If solid soils are left exposed at the permitted and designed depth, the Site Subcontractor shall excavate the pond's bottom and side slopes by a minimum of twenty-four (24") inches and backfill with clean sands to help prevent suspension of fine particles in the water column.
 - 12. The installation of temporary erosion control barriers shall be coordinated with the Site Subcontractor shall notify the Engineer immediately before proceeding to assure effective and continuous control of erosion and water pollution throughout the life of the construction phase.
 - 13. The type of erosion control barriers used shall be governed by the nature of the site and the nature of the soil. Clayey and silty soils may require solid sediment barriers to prevent turbid water discharge. Permanent stormwater ponds or else retained in temporary sedimentation basins until the clarity is suitable 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 rises too high.
 - 14. Where pumps are to be used to remove turbid waters from construction areas, the contractor shall be responsible for the design of the treatment methods include, for example, turbid water being pumped into grassed swales or appropriate upland vegetated areas (other than upland preservation areas and buffers), sediment basins, or confined by an approved enclosure such as turbidity barriers or low berms, and kept confined until turbidity levels meet permit requirements.
 - 15. The Permittee shall schedule his operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operation, and the duration of exposed, unprotected earth to the elements shall be as short as practicable. Clearing and grubbing shall be so scheduled and performed such that grading operations shall be scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the project permit.
 - 16. Water derived from various dewatering methods should be passed through sufficiently wide areas of existing upland vegetation to filter out excess turbidity. If this is not sufficient, the water shall be retained in previously constructed permanent stormwater ponds or else retained in temporary sedimentation basins until the clarity is suitable 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 rises too high.
 - 17. Water can be transported around the site by the use of internal swales or by pumps and pipes.
 - 18. Sheet flow of newly filled or scraped areas may be controlled or contained by the use of brush barriers, diversion swales, interceptor ditches or low berms. Flow should be directed toward areas where sediments can sufficiently settle out.
 - 19. Exposed soils shall be stabilized as soon as possible, especially slopes leading to wetlands. Stabilization methods include solid sod, seeding and mulching blankets, filter fabrics, etc., can be employed to provide vegetative cover.
 - 20. Energy dissipaters (such as rip rap, a gravel bed, hay bales, etc.) shall be installed at the discharge point of pipes or swales if scouring is observed.
 - 21. Attempt to install roadway curb and gutters as soon as possible to reduce the surface area for erosion to occur.
 - 22. Implement storm drain inlet protection (hay bales or gravel) to limit sedimentation within the stormwater system. Perform inspections and periodic cleaning of sediments which wash out into the streets until all soil is stabilized.
 - 23. Water discharge velocities from impounded areas and temporary sedimentation basins shall be restricted to avoid scouring in receiving areas.
 - 24. If water clarity does not reduce to state standards rapidly enough in holding ponds, it may be possible to use chemical agents such as slum to flocculate or coagulate the sediment particles.
 - 25. Hay bales, silt screens, or gravel beds can be added around the pipe or swale discharge points to help clarify discharges. Spreader swales may help dissipate cloudy water prior to contact with wetlands.
 - 26. All fuel storage areas or other hazardous storage areas shall conform to accepted state or federal criteria for such containment areas.
 - 27. Vehicle or equipment washdown areas will be sufficiently removed from wetlands or offsite areas.
 - 28. Fugitive dust controls (primarily by using water spray trucks) shall be employed as needed to control windborn emissions.

- 29. If the above controls remain ineffective in precluding evidence 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 turbid water from the pond and the Florida water quality standards (State Historic Preservation Office) and Pasco County shall be notified within two working days of the resources found on the site.
- 30. Ongoing inspections and periodic maintenance by the Site Subcontractor shall occur daily (at a minimum) to insure the above methods are working suitably. Corrective action must be taken immediately to repair or replace any damaged BMP's to ensure the above methods are working properly.
- 31. Site Subcontractors are required to bound and thoroughly review The Florida Department of Environmental Protection's "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 details. A copy of this document is available for review at Clearview Land Design, P.L.

GENERAL CONSTRUCTION NOTES:

- 1. Prior to construction, the Contractor shall obtain from the Engineer or Owner a copy of all permit 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. The 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, sodding or seeding of 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 should 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. The 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 to the excavation with the Master Drainage and Grading Plan as directed by the Engineer.
- 6. Sod/Seed & Mulch shall be placed in accordance with applicable City/County standards as well as in accordance with standard and specific conditions in the SWFWMD permit if applicable. At a minimum this shall include sodding of all pond embankments of a slope 4:1 or greater to the NW (SHWL) line, as well as seeding and mulching of the balance of the pond tracts (including pond berms, excluding the area below NW (SHWL)), sodding a minimum of 16" from the back of curb, and stabilizing all other areas within the project using sod or seed & mulch per County standards. On slopes 4:1 and flatter, seed & mulch may be used. On slopes steeper than 4:1, sod shall be used. Sod slopes steeper than 4:1 shall be installed with sod pegs per County standards.
- 7. Site clearing shall be performed per the approved construction plans and in accordance with Pasco County Land Development Code. Installation and maintenance of the required backfilling 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 the Contractor prior to use or disposal of materials. If acceptable to the governing environmental agency, then all such "burned" or "mucked" site clearing/grubbing debris, if approved in writing first by the Geotechnical Consultant/Engineer, could be:
 - 2.1.1. placed as "muck" material surface dressing in future landscape areas, stockpiling of such "mucked" materials (amounts/locations),
 - 2.1.2. placed in temporarily excavated littoral shelf areas in selected stormwater ponds, or in temporarily excavated selected wetland mitigation ponds, in either case not in side banks and not below the permitted design depth of the pond, or such topsoil/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 adequate soil mixing (mix soil with the muck) and then refilling (with compaction) to the permitted design depth.
- 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 drip-line 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 activities to the site and coordinate with the Contractor to assure effective 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 areas.
- 15. Should any noticeable soil slumping or sinkhole formation become evident, the applicant/developer shall immediately notify the County, Tampa Bay Water (TBW), and SWFWMD, and adopt one or more of the following procedures as determined to be appropriate by the County and SWFWMD:
 - 15.1. If the slumping or sinkhole formation becomes evident before or during construction activities, stop all work (except for mitigation activities) in the affected area and remain stopped until the County and SWFWMD approve resuming construction activities.
 - 15.2. Immediate measures to ensure no surface water drains into the affected areas.
 - 15.3. Visually inspect the affected area.
 - 15.4. Excavate and backfill as required to fill the affected area and prevent further subsidence.
 - 15.5. Use soil reinforcement materials in the backfilling operation, when appropriate.
 - 15.6. If the affected area is in the vicinity of a water-retention area, maintain a minimum distance of ten feet from the bottom of the retention pond to the surface of the lime-rock or crest construction.
 - 15.7. If the affected area is in the vicinity of a water-retention area and the above methods do not stabilize the collapse, relocate the retention area.
 - 15.8. Discharge of storm-water into depressions with direct or demonstrated hydrologic connection to the Floridan Aquifer shall be prohibited.
- 16. The site shall be graded to within 12 inches of the final grade. Where fill is proposed it shall be placed in compliance with the geotechnical/geological engineering report recommendations (including any lift depths recommended) and compacted to a minimum density of 95% of the modified Proctor maximum dry density. Density tests to confirm compaction shall be required within the building pad area, before the next lift is placed. Upon completion of the land development construction, a professional engineer shall provide a certification to Pasco County that the project, including each pad area, complies with the recommendations of the geotechnical/geological engineering report.
- 17. The engineer responsible for the project shall certify to the County Engineering Services Director (try DC Engineering Subsidiary) 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 the Engineering Services Department: A Procedural Guide for the Preparation of Assurance 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.

- 1. Site Demolition Debris (Site demolition debris, not generally considered an environmental/containment hazard, includes such items as wood pieces, concrete pieces, plastic pipe pieces, ceramic tiles, steel pieces, or similar. If any such debris or other demolition debris is considered an environmental/containment 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. If any materials shall not be hauled off site, the Contractor shall be responsible for remedy and repair at his cost. If, by any means, any such materials are buried on site, the Contractor shall be responsible for remedy and repair at his cost. If any materials shall be buried on site, the Contractor shall be responsible for remedy and repair at his cost. If any materials shall be buried on site, the Contractor shall be responsible for remedy and repair at his cost.
- 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 "mucked" by the Contractor prior to use or disposal of materials. If acceptable to the governing environmental agency, then all such "burned" or "mucked" site clearing/grubbing debris, if approved in writing first by the Geotechnical Consultant/Engineer, could be:
 - 2.1.1. placed as "muck" material surface dressing in future landscape areas, stockpiling of such "mucked" materials (amounts/locations),
 - 2.1.2. placed in temporarily excavated littoral shelf areas in selected stormwater ponds, or in temporarily excavated selected wetland mitigation ponds, in either case not in side banks and not below the permitted design depth of the pond, or such topsoil/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 adequate soil mixing (mix soil with the muck) and then refilling (with compaction) to the permitted design depth.
- 2.2. In all instances, the minimum pond depth (including floodplain and wetland mitigation areas) shall be no less than required by the Engineer.
- 2.3. All organic debris burial areas in stormwater pond areas and floodplain mitigation pond areas will require adequate soil cover of 18 - 24 inches (with compaction) by the Contractor, meaning at least 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:
 - 2.3.1. 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.
 - 2.3.2. Immediate measures to ensure no surface water drains into the affected areas.
 - 2.3.3. Visually inspect the affected area.
 - 2.3.4. Excavate and backfill as required to fill the affected area and prevent further subsidence.
 - 2.3.5. Use soil reinforcement materials in the backfilling operation, when appropriate.
 - 2.3.6. If the affected area is in the vicinity of a water-retention area, maintain a minimum distance of ten feet from the bottom of the retention pond to the surface of the lime-rock or crest construction.
 - 2.3.7. 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.
 - 2.3.8. Discharge of storm-water into depressions with direct or demonstrated hydrologic connection to the Floridan Aquifer shall be prohibited.

- 3. Muck/Pest 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 silt materials, and mucky or organic sand materials, designated either PI 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 Geotechnical Consultant/Engineer, could be:
 - 3.0.1. placed as "peat/muck/organic material" surface layer in new or created wetland mitigation areas, stockpiling of such "significant organic" materials (amounts/locations),
 - 3.0.2. placed in temporarily excavated littoral shelf areas in selected stormwater ponds, or in temporarily excavated selected wetland mitigation ponds, in either case not in side banks and not below the permitted design depth of the pond, or such topsoil/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 adequate soil mixing (mix soil with the organic materials) and then refilling (with compaction) to the required design grades.
- 3.0.3. placed along the bottom of selected floodplain mitigation ponds (not in side banks), not below the permitted excavation depth of the pond, but will require adequate soil cover.
- 3.0.4. placed along the bottom of selected deep stormwater ponds (not in side banks), not below the permitted design depth, but will require adequate soil cover.

- 4. Structural Sand Fill Materials (Typically generated from pond/lake excavations, cut from higher elevation areas, or from utility pipeline/mantle 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; 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 (not in lift for acceptance by the Geotechnical Consultant, upon Contractor request, prior to the next lift fill being placed.

- 5. 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 (not in lift for acceptance by the Geotechnical Consultant, upon Contractor request, prior to the next lift fill being placed.

- 6. Structural Sand Fill Materials (Typically generated from pond/lake excavations, cut from higher elevation areas, or from utility pipeline/mantle 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; 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 (not in lift for acceptance by the Geotechnical Consultant, upon Contractor request, prior to the next lift fill being placed.

- 7. 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 (not in lift for acceptance by the Geotechnical Consultant, upon Contractor request, prior to the next lift fill being placed.

- 8. Structural Sand Fill Materials (Typically generated from pond/lake excavations, cut from higher elevation areas, or from utility pipeline/mantle 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; 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 (not in lift for acceptance by the Geotechnical Consultant, upon Contractor request, prior to the next lift fill being placed.

- 9. 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 (not in lift for acceptance by the Geotechnical Consultant, upon Contractor request, prior to the next lift fill being placed.

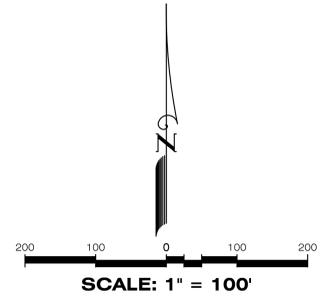
- 10. Structural Sand Fill Materials (Typically generated from pond/lake excavations, cut from higher elevation areas, or from utility pipeline/mantle excavations; such sand materials, with typically 35% fines or less passing the No. 200 sieve, designated either SP, SP-SM, SM or A-2-4, A-2-6 or A-3, 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; 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 (not in lift for acceptance by the Geotechnical Consultant, upon Contractor request, prior to the next lift fill being placed.

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- 12. Structural Sand Fill Materials (Typically generated from pond/lake excavations, cut from higher elevation areas, or from utility pipeline/mantle 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; 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 (not in lift for acceptance by the Geotechnical Consultant, upon Contractor request, prior to the next lift fill being placed.

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- 14. Structural Sand Fill Materials (Typically generated from pond/lake excavations, cut from higher elevation areas, or from utility pipeline/mantle 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; 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



DISCLAIMER:
 THIS EXHIBIT IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY NOT
 ACCURATELY DEPICT CURRENT SITE CONDITIONS.
 DATE OF PHOTOGRAPHY: 2016

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


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

SEAL


FLORIDA HOSPITAL
 Wesley Chapel

FL HOSPITAL FREE-STANDING E.R.


Hunton Brady
 ARCHITECTS

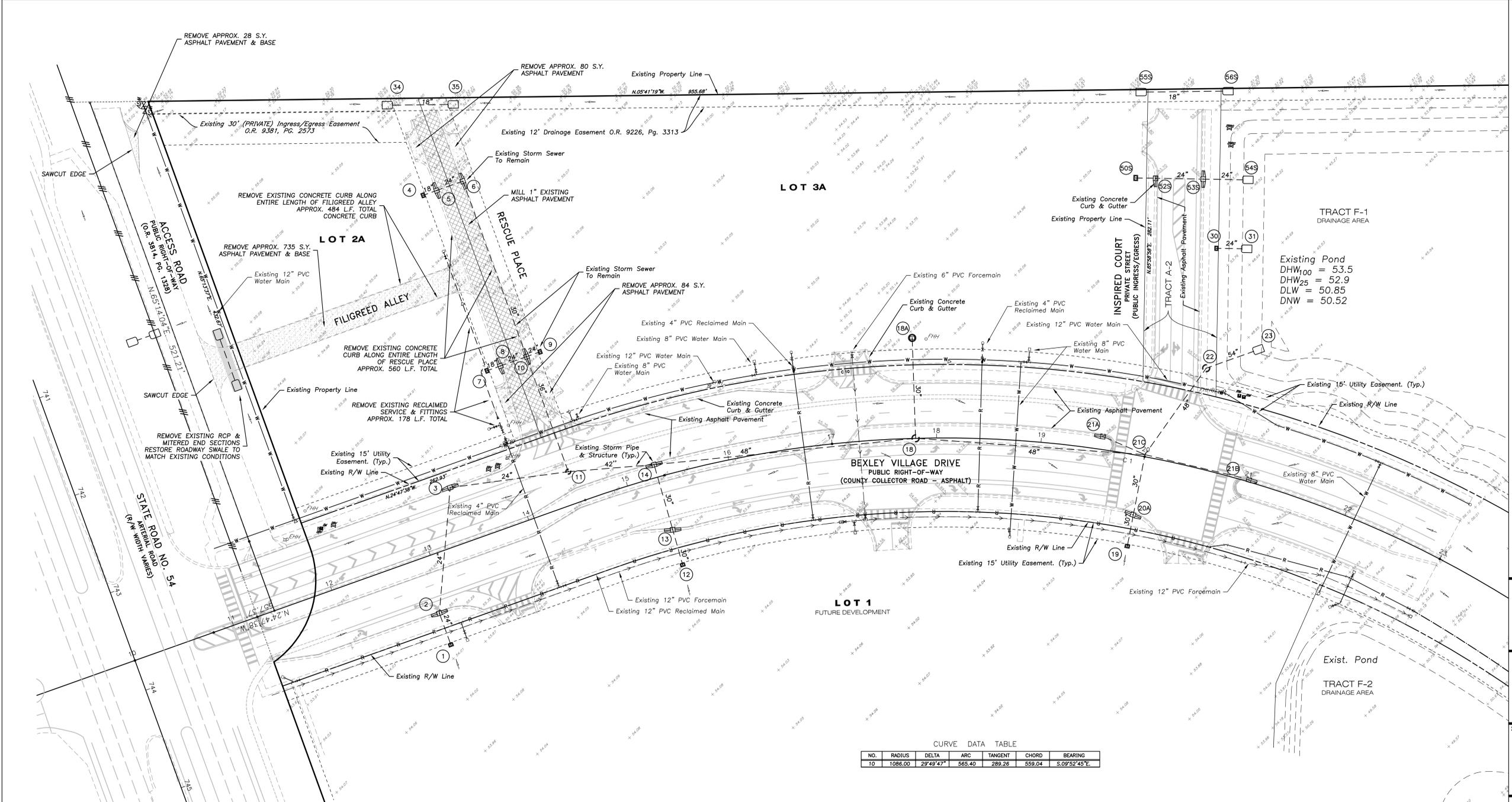
DATE	SUBMISSION	NO.
08-25-16	CONSTRUCTION DOCUMENTS	

AERIAL SITE PLAN

PROJ. NO. HBA-FH-001 SHEET
 DRAWN MED

C102

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Existing Pond
 DHW₁₀₀ = 53.5
 DHW₂₅ = 52.9
 DLW = 50.85
 DNW = 50.52

CURVE DATA TABLE

NO.	RADIUS	DELTA	ARC	TANGENT	CHORD	BEARING
10	1086.00	29°49'47"	565.40	289.26	559.04	S.09°52'45"E.

Existing Storm Structures

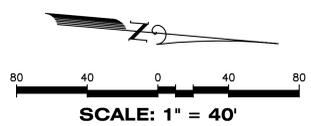
- | | |
|--|---|
| <p>4 Existing Grate Inlet
Top = 53.70
I.E. (18" E) = 48.73</p> <p>5 Existing Curb Inlet
Top = 54.27
I.E. (18" W) = 48.38
I.E. (24" E) = 47.96</p> <p>6 Existing Curb Inlet
Top = 55.06
I.E. (24" W) = 47.85
I.E. (30" S) = 47.63</p> <p>7 Existing Grate Inlet
Top = 53.47
I.E. (18" E) = 48.90</p> <p>8 Existing Curb Inlet
Top = 55.31
I.E. (18" W) = 48.71
I.E. (24" E) = 48.51</p> <p>9 Existing Grate Inlet
Top = 53.40
I.E. (24" W) = 48.31</p> <p>10 Existing Curb Inlet
Top = 55.42
I.E. (24" W) = 48.28
I.E. (24" E) = 48.12
I.E. (36" S) = 46.63</p> | <p>11 Existing Manhole
Top = 55.54
I.E. (24" W) = 46.50
I.E. (36" N) = 46.39
I.E. (42" E) = 45.86</p> <p>18A Existing Manhole
Top (Temporary)</p> <p>18 Existing Manhole
Top = 55.06
I.E. (30" N) = 44.65
I.E. (48" W) = 44.56
I.E. (48" E) = 45.01</p> <p>50S Existing Grate Inlet
Top = 53.50
I.E. (18" E) = 47.50</p> <p>52S Existing Curb Inlet
Top = 54.10
I.E. (18" W) = 47.47
I.E. (18" E) = 47.47</p> <p>55S Existing MES
I.E. 18" = 50.80</p> <p>56S Existing MES
I.E. 18" = 50.70</p> |
|--|---|

PHASING NOTES:

- THE EXISTING CONDITION SHOWN IN THESE PLANS REPRESENT THE PROPOSED CONDITION BY MASTER DEVELOPER AS SHOWN ON THE "SUNCOAST COMMERCIAL CENTER - WEST REPLAT," PREPARED BY CLEARVIEW LAND DESIGN.
- FILIGREED ALLEY SHALL REMAIN IN PLACE UNTIL A DRIVEABLE ACCESS IS CONSTRUCTED CONNECTING THE ACCESS ROAD IN S.R. 54 RIGHT-OF-WAY TO RESCUE PLACE.
- THE REMOVAL OF FILIGREED ALLEY IS TO BE BID UNDER A SEPARATE CONTRACT.
- THE PROJECT SITE SHALL BE MASS GRADED TO DESIGN GRADES BY OTHERS UNDER A SEPARATE CONTRACT.

LEGAL DESCRIPTION:

DESCRIPTION: ALL OF LOTS 2A AND 3A, according to the plat of SUNCOAST COMMERCIAL CENTER - WEST REPLAT, as recorded in Plat Book XX, Pages through, inclusive, of the Public Records of Pasco County, Florida, lying in Section 30, Township 26 South, Range 18 East, Pasco County, Florida.



LEGEND

- STORM DRAINAGE STRUCTURE
- STRUCTURE NO.
- SPOT ELEVATION
- CONTOUR
- FF=000.00
- DIRECTION OF SURFACE FLOW
- FLOOD ZONE LINE
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- EXISTING ASPHALT PAVEMENT TO BE MILLED 1"

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

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

FLORIDA HOSPITAL
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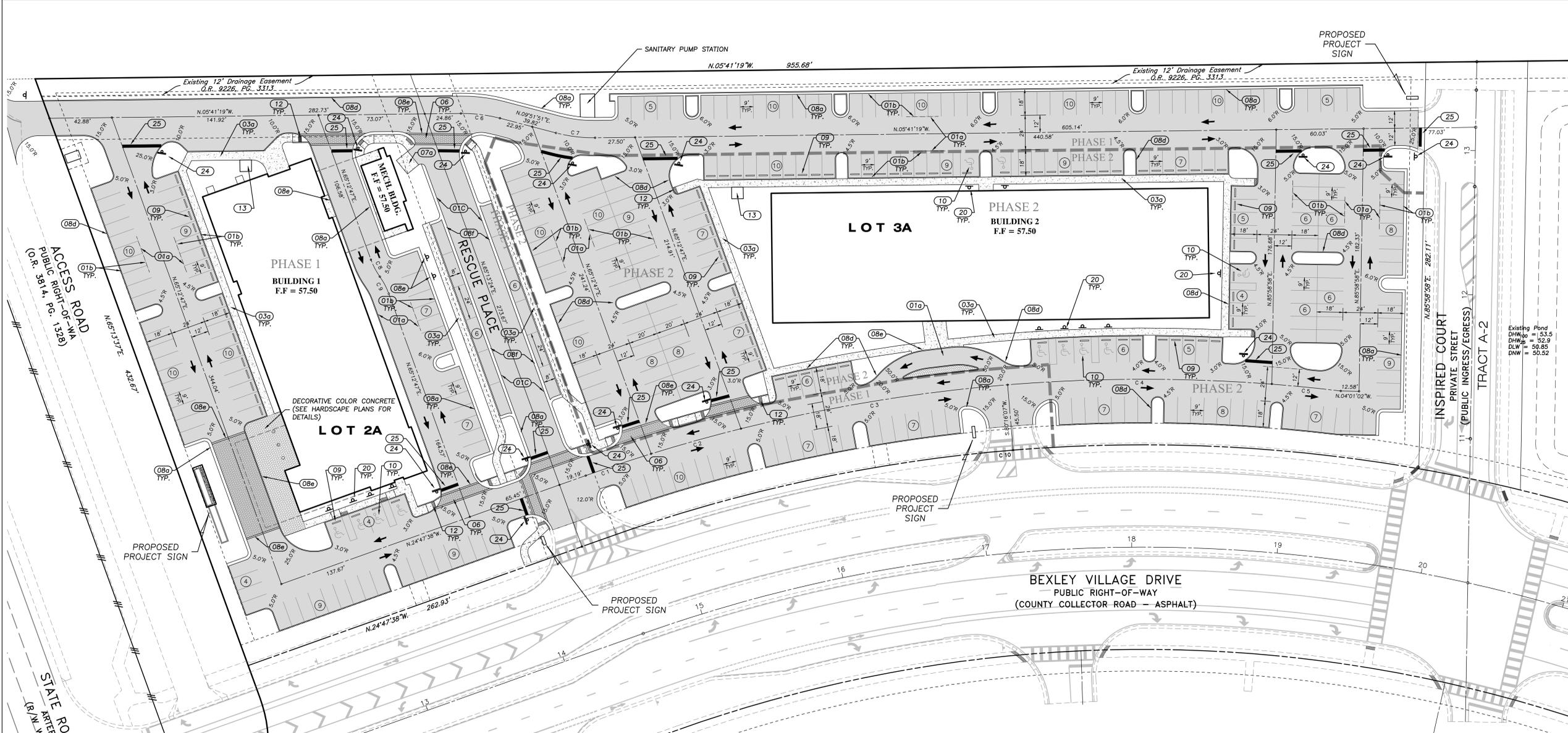
DATE: 08-25-16 SUBMISSION NO. CONSTRUCTION DOCUMENTS

EXISTING SITE CONDITIONS & DEMOLITION PLAN

PROJ. NO. HBA-FH-001 SHEET
 DRAWN MED

C103

P:\BEXLEY_RANCA\FLORIDA_HOSPITAL\DRAWING\CONDO\LEX-SITE.DWG-C103 EXISTING SITE CONDITIONS & DEMOLITION PLAN 2016/08/26 7:59 AM HBA-FH-001



CURVE DATA TABLE

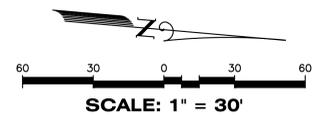
NO.	RADIUS	DELTA	ARC	TANGENT	CHORD	BEARING
1	1015.00	58°51'20"	1042.63	572.57	997.39	N.04°38'02"E
2	1131.50	09°24'52"	185.92	93.17	185.71	N.14°26'19"W
3	1131.50	09°24'52"	185.92	93.17	185.71	N.14°26'19"W
4	1131.50	09°24'52"	185.92	93.17	185.71	N.14°26'19"W
5	1131.50	09°24'52"	185.92	93.17	185.71	N.14°26'19"W
6	1000.00	15°33'10"	27.14	13.66	27.06	N.02°08'16"E
7	1000.00	15°33'10"	27.14	13.66	27.06	N.02°08'16"E
8	50.00	15°19'16"	13.37	6.73	13.33	N.57°11'00"E
9	50.00	15°19'16"	13.37	6.73	13.33	N.57°11'00"E
10	1086.00	29°49'42"	565.40	289.26	559.04	S.09°52'45"E



SITE KEY

CODE	DESCRIPTION	REFERENCE
01a	ASPHALT PAVEMENT LIGHT DUTY	
01b	ASPHALT PAVEMENT HEAVY DUTY	
01c	ASPHALT PAVEMENT RESURFACING	
03a	CONCRETE SIDEWALK 4" THICK	
06	CONCRETE CROSSWALK, SPECIALTY	
07a	CONCRETE DUMPSTER PAD	
07b	CONCRETE BOLLARD	
08a	CONCRETE CURB & GUTTER, TYPE F	FDOT INDEX #300
08d	CONCRETE CURB, TYPE D	FDOT INDEX #300
08e	CONCRETE FLUSH CURB	
08f	CONCRETE DROP CURB	FDOT INDEX #300
09	CONCRETE WHEEL STOP	
10	ACCESSIBLE SYMBOL	FDOT INDEX #17346
12	TACTILE WARNING SURFACE	FDOT SPECIFICATION NO. 537
13	BICYCLE RACK (CONCRETE)	
20	ACCESSIBLE PARKING SIGN	FDOT INDEX #17346 & #17355
21	ACCESSIBLE PASSENGER LOADING/UNLOADING SIGN	
22	"EMERGENCY & SERVICE VEHICLES ONLY" SIGN	
23	"AMBULANCE PARKING" SIGN	
24	"STOP" SIGN	MUTCD R1-1
25	24" PAINTED STOP BAR	
→	DIRECTIONAL ARROW	FDOT INDEX #17346

NOTE: ALL PAVEMENT MARKING AND SIGNS INSIDE THE PROJECT LIMITS ARE PRIVATE. THE ARCHITECTURAL DESIGN OF ALL SIGNS WILL BE PREPARED DURING CONSTRUCTION.



STANDARD NOTES (PRIVATE ROADWAYS):

- ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN CONFORMANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
- 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 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.
- CONTRACTOR MUST CONTACT ENGINEER OF RECORD PRIOR TO ORDERING STREET NAME SIGNS. APPROVED STREET NAMES CAN NOT BE DETERMINED UNTIL RECORDING OF THE PLAT.
- EXISTING STRIPING AND OTHER PAVEMENT MARKINGS TO BE REMOVED SHALL BE DONE AS NECESSARY BY HYDROBLASTING. GRINDING IS NOT PERMITTED.

SIDEWALK NOTES:

- SIDEWALKS SHALL BE CONSTRUCTED OF NATURAL OR COLORED CONCRETE WITH A MINIMUM 3,000 PSI AND 4" MINIMUM THICKNESS. SIDEWALK IN PASCO R/W SHALL BE FIBER-REINFORCED.
- ALL 4" WIDE SIDEWALK SHALL HAVE A 5' X 5' PASSING AREA AT INTERVALS NOT TO EXCEED 200 FEET PER ADA GUIDELINES.
- THE SIDEWALK/MULTI-USE PATH CLEAR ZONE SHALL BE FREE OF OBSTACLES, INCLUDING BUT NOT LIMITED TO SHRUBS, TREES, FENCES, ABOVE GROUND UTILITIES, MAIL BOXES, STREET SIGNS, ETC.
- CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT INDEX 304.
- DETECTABLE WARNING "DOMES" WITHIN HANDICAP RAMPS SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL.

DATE: BRIAN G. SURAK P.E. NO. 59064
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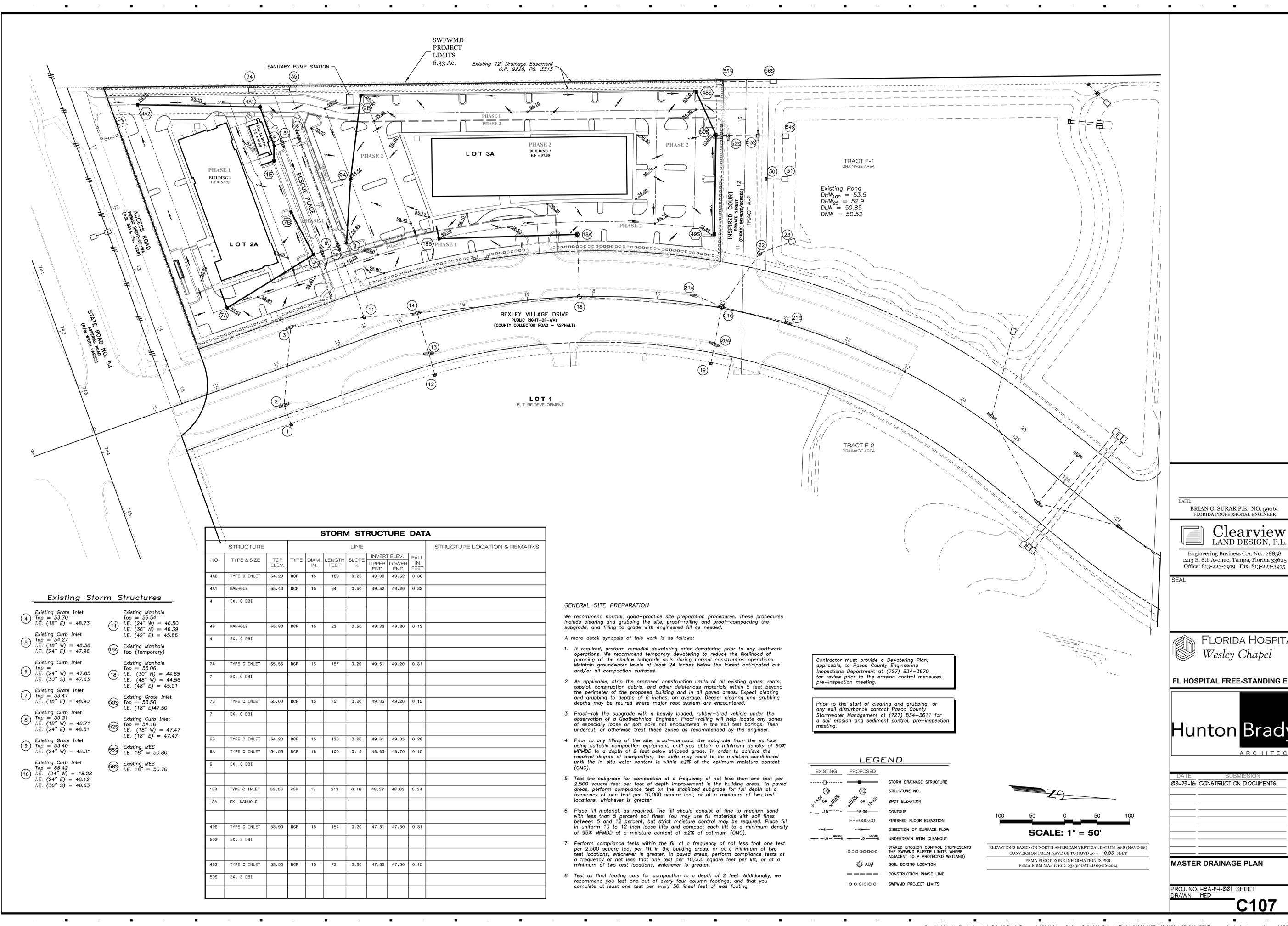
Hunton Brady
ARCHITECTS

DATE: 08-25-16 SUBMISSION NO. 001
CONSTRUCTION DOCUMENTS

SITE PLAN

PROJ. NO. HBA-FH-001 SHEET
DRAWN: MED

C105



Existing Storm Structures

- ④ Existing Grate Inlet
Top = 53.70
I.E. (18" E) = 48.73
- ⑤ Existing Curb Inlet
Top = 54.27
I.E. (18" W) = 48.38
I.E. (24" E) = 47.96
- ⑥ Existing Curb Inlet
Top = 53.47
I.E. (18" E) = 48.90
- ⑧ Existing Curb Inlet
Top = 55.31
I.E. (18" W) = 48.71
I.E. (24" E) = 48.51
- ⑨ Existing Grate Inlet
Top = 53.40
I.E. (24" W) = 48.31
- ⑩ Existing Curb Inlet
Top = 55.42
I.E. (24" W) = 48.28
I.E. (24" E) = 48.12
I.E. (36" S) = 46.63
- ⑪ Existing Manhole
Top = 55.54
I.E. (24" W) = 46.50
I.E. (36" N) = 46.39
I.E. (42" E) = 45.86
- ⑪A Existing Manhole
Top (Temporary)
- ⑪B Existing Manhole
Top = 55.06
I.E. (30" N) = 44.65
I.E. (48" W) = 44.56
I.E. (48" E) = 45.01
- ⑪C Existing Grate Inlet
Top = 53.50
I.E. (18" E) = 47.50
- ⑪D Existing Curb Inlet
Top = 54.10
I.E. (18" W) = 47.47
I.E. (18" E) = 47.47
- ⑪E Existing MES
I.E. 18" = 50.80
- ⑪F Existing MES
I.E. 18" = 50.70

STORM STRUCTURE DATA										
NO.	STRUCTURE	LINE					STRUCTURE LOCATION & REMARKS			
		TYPE & SIZE	TOP ELEV.	TYPE	DIAM. IN.	LENGTH FEET	SLOPE %	INVERT ELEV. UPPER END	LOWER END	FALL IN FEET
4A2	TYPE C INLET	54.20	RCP	15	189	0.20	49.90	49.52	0.38	
4A1	MANHOLE	55.40	RCP	15	64	0.50	49.52	49.20	0.32	
4	EX. C DBI									
4B	MANHOLE	55.80	RCP	15	23	0.50	49.32	49.20	0.12	
4	EX. C DBI									
7A	TYPE C INLET	55.55	RCP	15	157	0.20	49.51	49.20	0.31	
7	EX. C DBI									
7B	TYPE C INLET	55.00	RCP	15	75	0.20	49.35	49.20	0.15	
7	EX. C DBI									
9B	TYPE C INLET	54.20	RCP	15	130	0.20	49.61	49.35	0.26	
9A	TYPE C INLET	54.55	RCP	18	100	0.15	48.85	48.70	0.15	
9	EX. C DBI									
18B	TYPE C INLET	55.00	RCP	18	213	0.16	48.37	48.03	0.34	
18A	EX. MANHOLE									
49S	TYPE C INLET	53.90	RCP	15	154	0.20	47.81	47.50	0.31	
50S	EX. E DBI									
48S	TYPE C INLET	53.50	RCP	15	73	0.20	47.65	47.50	0.15	
50S	EX. E DBI									

GENERAL SITE PREPARATION

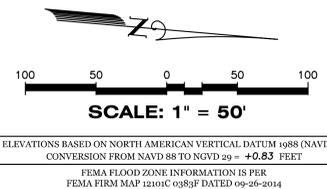
- We recommend normal, good-practice site preparation procedures. These procedures include clearing and grubbing the site, proof-rolling and proof-compacting the subgrade, and filling to grade with engineered fill as needed.
- A more detail synopsis of this work is as follows:
- If required, perform remedial dewatering prior to any earthwork operations. We recommend temporary dewatering to reduce the likelihood of pumping of the shallow subgrade soils during normal construction operations. Maintain groundwater levels at least 24 inches below the lowest anticipated cut and/or all compaction surfaces.
 - As applicable, strip the proposed construction limits of all existing grass, roots, topsoil, construction debris, and other deleterious materials within 5 feet beyond the perimeter of the proposed building and in all paved areas. Expect clearing and grubbing to depths of 6 inches, on average. Deeper clearing and grubbing depths may be required where major root system are encountered.
 - Proof-roll the subgrade with a heavily loaded, rubber-tired vehicle under the observation of a Geotechnical Engineer. Proof-rolling will help locate any zones of especially loose or soft soils not encountered in the soil test borings. Then undercut, or otherwise treat these zones as recommended by the engineer.
 - Prior to any filling of the site, proof-compact the subgrade from the surface using suitable compaction equipment, until you obtain a minimum density of 95% MPMD to a depth of 2 feet below stripped grade. In order to achieve the required degree of compaction, the soils may need to be moisture conditioned until the in-situ water content is within ±2% of the optimum moisture content (OMC).
 - Test the subgrade for compaction at a frequency of not less than one test per 2,500 square feet per foot of depth improvement in the building areas. In paved areas, perform compliance test on the stabilized subgrade for full depth at a frequency of one test per 10,000 square feet, or at a minimum of two test locations, whichever is greater.
 - Place fill material, as required. The fill should consist of fine to medium sand with less than 5 percent soil fines. You may use fill materials with soil fines between 5 and 12 percent, but strict moisture control may be required. Place fill in uniform 10 to 12 inch loose lifts and compact each lift to a minimum density of 95% MPMD at a moisture content of ±2% of optimum (OMC).
 - Perform compliance tests within the fill at a frequency of not less than one test per 2,500 square feet per lift in the building areas, or at a minimum of two test locations, whichever is greater. In paved areas, perform compliance tests at a frequency of not less than one test per 10,000 square feet per lift, or at a minimum of two test locations, whichever is greater.
 - Test all final footing cuts for compaction to a depth of 2 feet. Additionally, we recommend you test one out of every four column footings, and that you complete at least one test per every 50 lined feet of wall footing.

Contractor must provide a Dewatering Plan, applicable, to Pasco County Engineering Inspections Department at (727) 834-3670 for review prior to the erosion control measures pre-inspection meeting.

Prior to the start of clearing and grubbing, or any soil disturbance contact Pasco County Stormwater Management at (727) 834-3611 for a soil erosion and sediment control, pre-inspection meeting.

LEGEND

--- (dashed line)	EXISTING	--- (dashed line)	PROPOSED
⑩ (circle with 10)	SPOT ELEVATION	⑩ (circle with 10)	SPOT ELEVATION
--- (solid line)	CONTOUR	--- (solid line)	CONTOUR
FF=000.00	FINISHED FLOOR ELEVATION	--- (solid line)	FINISHED FLOOR ELEVATION
--- (solid line with arrow)	DIRECTION OF SURFACE FLOW	--- (solid line with arrow)	DIRECTION OF SURFACE FLOW
--- (solid line with arrow)	UNDERDRAIN WITH CLEANOUT	--- (solid line with arrow)	UNDERDRAIN WITH CLEANOUT
--- (dashed line)	STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)	--- (dashed line)	STAKED EROSION CONTROL (REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND)
⊙ (circle with AB#)	SOIL BORING LOCATION	⊙ (circle with AB#)	SOIL BORING LOCATION
--- (dashed line)	CONSTRUCTION PHASE LINE	--- (dashed line)	CONSTRUCTION PHASE LINE
--- (dashed line)	SWFWMD PROJECT LIMITS	--- (dashed line)	SWFWMD PROJECT LIMITS



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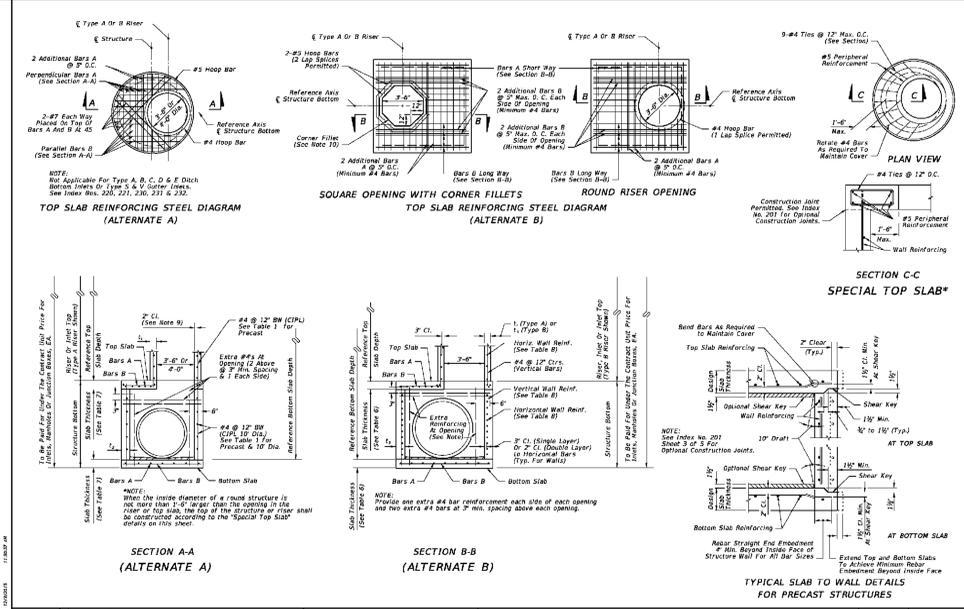
Hunton Brady
ARCHITECTS

DATE	SUBMISSION	NO.
08-25-16	CONSTRUCTION DOCUMENTS	

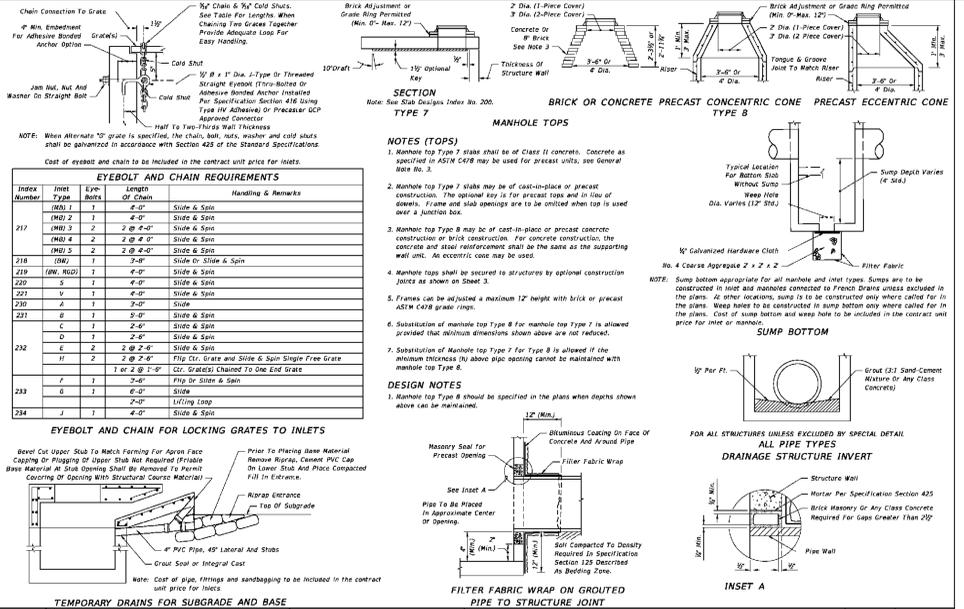
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PROJ. NO. HBA-FH-001 SHEET
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LAST REVISION: 07/01/14	DESCRIPTION: [Blank]	FDOT FY 2016-17 DESIGN STANDARDS	STRUCTURE BOTTOMS TYPE J AND P	INDEX NO. 200	SHEET NO. 1 of 5
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LAST REVISION: 07/01/12	DESCRIPTION: [Blank]	FDOT FY 2016-17 DESIGN STANDARDS	SUPPLEMENTARY DETAILS FOR MANHOLES & INLETS	INDEX NO. 201	SHEET NO. 2 of 5
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GENERAL NOTES

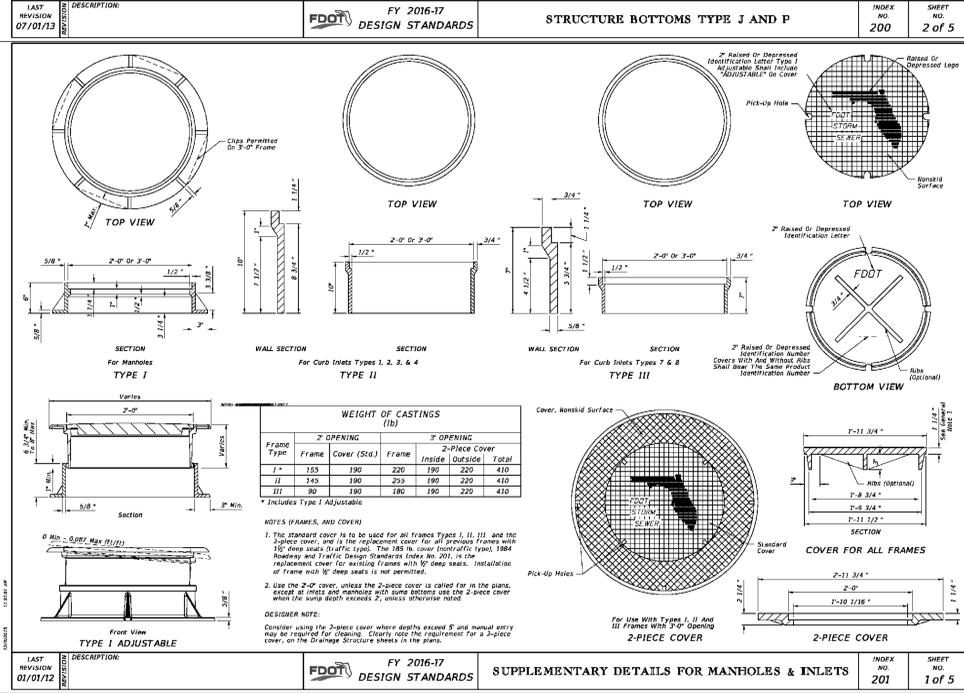
- Standard structure bottoms 4'-0" diameter and smaller (A) and 3'-0" square (B) are designated Type J. Larger standard structure bottoms are designated Type P. Risers are permitted for all structures. Round risers are designated Type A, square risers are designated Type B.
- Walls of circular structures (A) constructed in place may be of brick or reinforced concrete. Precast and rectangular structures (B) shall be constructed of reinforced concrete only.
- 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 ASTM C478 (see modified wall thickness in Table 1).
- Top and bottom slab thickness and reinforcement are for precast and cast-in-place construction. All concrete shall be Class II concrete, except Class I concrete when shown in the Plans, for special applications of structures located in extremely aggressive environments. Concrete as specified in ASTM C1500 shall not be used in the Class II concrete for precast items manufactured in accordance with Specifications Sections 420.
- An reinforcement shall be Grade 60 steel, otherwise bar. Reinforcement area Grade 40 steel or equivalent area smooth or deformed wires reinforcement in accordance with Specification Section 401 may be substituted according to Index No. 201, unless otherwise noted.
- An A or B 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. All B structure bottoms may be used in conjunction with curb inlet Types 1, 2, 3, 4, 5, 6, 9, or 10, or any other curb inlet unless otherwise shown in the plans or other standard drawings.
- Rectangular structures may be retained as directed by the Engineer in order to facilitate connections between the structure walls and store sewer pipes.
- Except when A21 hooks are specifically required, reinforcement in top and bottom slab shall be straight embedded.
- All reinforcement must have 2' minimum cover, except for 3'-4" diameter precast circular units manufactured under ASTM C478, keyed construction otherwise shown. Additional bars used to restrain hole formers for precast structures with grouted pipe connections may be left flush with the hole surface. Cut or bent reinforcement at pipe openings to maintain cover. Exposed ends of reinforcement at precast pipe openings and grouted joints must be removed 1" below the concrete surface and hooked with a 1" x 1" rebar in accordance with Specification Section 508. Horizontal steel in rectangular structures shall be spaced a minimum of 30 bar spacings or by standard hooks at corners.
- The corner fillets shown are necessary for rectangular structures used with circular risers and inlet throats and when used on slope with rectangular risers, inlets and inlet throats. Risers will be required in the top slab of the A or B structure bottoms when used with the A or B risers. Each fillet shall be reinforced with two #4 bars.
- Inlet walls, throats, risers or manhole tops shall be secured to structures as shown on Index No. 201 (Sheet 3 of 3) Optional Construction Joints.
- Structures with depths over 14' below the mean high water table are to be checked for flotation by the designer of the drainage project.
- Units larger than specified standards may be substituted at the contractor's option when these units will not cause or increase the severity of stability conditions. Such larger units shall be furnished at additional cost to the Designer. Larger A1 units cannot replace A1. Units without approval of the Engineer. This note applies to this index only.
- For manhole and junction box tops, for frames and covers, and for supplementary details and notes see Index No. 201.
- Type J structure bottoms must have a minimum 6'-0" wall height when possible, for maintenance access.

TABLE 1: ROUND STRUCTURE BOTTOMS (ALTERNATE A) & ROUND RISERS - TABLE 1

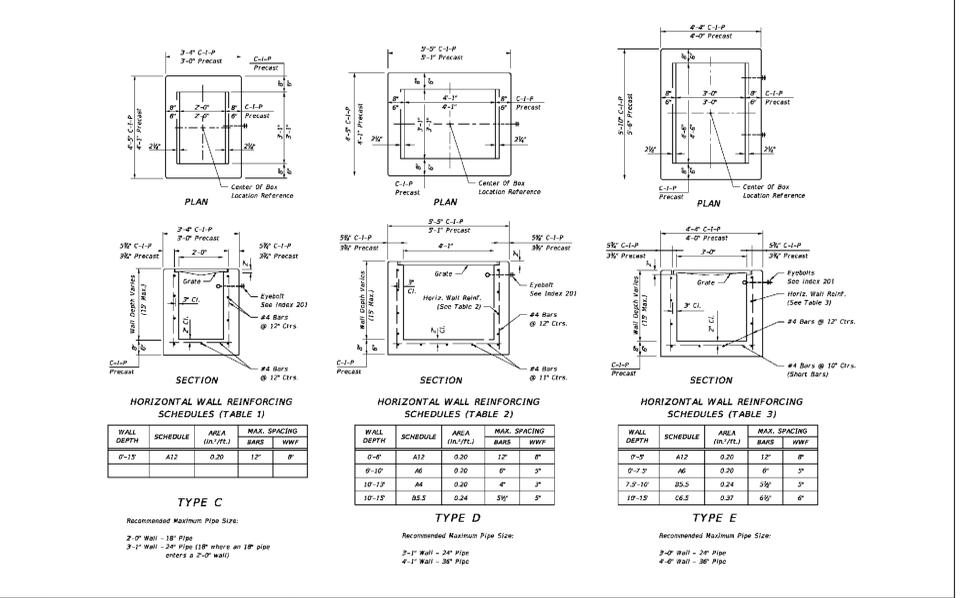
Type	Structure/Riser Diameter (ft)	Cast-In-Place Concrete Class II Concrete		ASTM C478 Precast Items	
		Riser (ft)	Bottom (ft)	Riser (ft)	Bottom (ft)
P	3'-0"	6	8	6	8
J	4'-0"	6	8	6	8
J	5'-0"	6	8	6	8
J	6'-0"	6	8	6	8
J	7'-0"	6	8	6	8
J	8'-0"	6	8	6	8
J	10'-0"	6	8	6	8
J	12'-0"	6	8	6	8

TABLE 2: SQUARE & RECTANGULAR STRUCTURES (ALTERNATE B) - TABLE 2

Type	Wall Length (ft)	Max. Depth (ft)	Wall Thickness (in)	CIP Precast (ft)	Max. Spacing (in)
P	3'-0"	40	6	6	12
J	3'-0"	22	6	6	12
J	4'-0"	40	6	6	12
J	5'-0"	40	6	6	12
J	6'-0"	40	6	6	12
J	7'-0"	40	6	6	12
J	8'-0"	40	6	6	12
J	10'-0"	40	6	6	12
J	12'-0"	40	6	6	12



LAST REVISION: 01/01/12	DESCRIPTION: [Blank]	FDOT FY 2016-17 DESIGN STANDARDS	SUPPLEMENTARY DETAILS FOR MANHOLES & INLETS	INDEX NO. 201	SHEET NO. 1 of 5
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LAST REVISION: 07/01/10	DESCRIPTION: [Blank]	FDOT FY 2016-17 DESIGN STANDARDS	DITCH BOTTOM INLET TYPES C, D, E AND H	INDEX NO. 232	SHEET NO. 3 of 7
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DATE: 08-25-16 SUBMISSION NO. CONSTRUCTION DOCUMENTS

DRAINAGE DETAILS

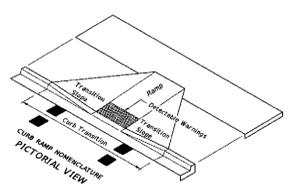
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GENERAL NOTES

- Sidewalk curb ramps shall be constructed at locations that will provide continuous unobstructed pedestrian circulation path to pedestrian areas, elements and facilities within the 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 for all intersections and turnoffs with curbed returns. To accommodate curb ramps, partial curb returns are to extend to the limits prescribed in Index No. 312. Ramps constructed at locations without sidewalks are to have a landing constructed at the top of each ramp, see LANDINGS FOR CURB RAMP WITHOUT SIDEWALKS.
- When altering existing pedestrian facilities, where existing restricted conditions preclude the accommodation of a ramp slope of 1:12, a ramp slope between 1:12 and 1:20 is permitted for a rise of 8' maximum. Where compliance with the requirements for cross slope cannot be fully met, the minimum feasible cross slope shall be provided. Ramp slopes are not required to exceed 1:20 in length.
- If sidewalk curb ramps are located where pedestrian routes must cross the ramp, then provide transition strips to the ramp, otherwise a sidewalk curb may be required.
- All sidewalks, ramps, and landings with a cross slope of 0.02 shown in this index are 0.02 maximum. All ramp slopes shown in this index are 1:12 and 1:20 maximum. Landings shall have slopes less than or equal to 0.02 in any direction.
- Grate breaks at the top and bottom of ramps shall be parallel to each other and perpendicular to the direction of the ramp slope.
- When a sidewalk curb ramp is constructed within existing curb, curb and gutter and/or sidewalk, the existing curb or curb and gutter shall be retained to the nearest joint beyond the curb transition or to the extent that no remaining section of curb or curb and gutter is less than 3' long. Existing sidewalks shall be removed to the nearest joint beyond the transition slope or to the extent that no remaining section of sidewalk is less than 5' long. For CONCRETE SIDEWALK DETAILS refer to Index 310.
- Sidewalk curb ramp alpha-identifications are for reference purposes (plans, permits, etc.). Alpha-identifications CR-I and CR-J were intentionally omitted.
- Detectable warnings shall extend the full width of the ramp and to a depth of 2'. Detectable warnings shall be constructed in accordance with Specification Section 527. For the layout of detectable warnings, refer to the TYPICAL PLACEMENT OF DETECTABLE WARNINGS DETAILS. Detectable warnings shall not be oriented on transition slopes.
- When detectable warnings are placed on a slope greater than 3%, domes shall be aligned with the centerline of the ramp; otherwise domes are not required to be aligned.
- Detectable warnings shall be required on sidewalks and shared use paths at:
 - Intersecting roads.
 - Median crossings greater than or equal to 6' in width.
 - Railroad crossings.
 - Signaling structures.
- Detectable Warnings - Acceptance Criteria:
 - Color and texture shall be complete and uniform.
 - 90% of individual truncated domes shall be in accordance with the Americans with Disabilities Act Standards for Transportation Facilities, Section 705.
 - There shall be no more than 4 non-compliant domes in any one square foot.
 - Non-compliant domes shall not be adjacent to other non-compliant domes.
 - Surfaces shall not deviate more than 0.10" from a true plane.
- Detectable warnings shall be installed no greater than 3' from the back of curb or edge of pavement.
- Detectable warnings shall not be installed over grate breaks.

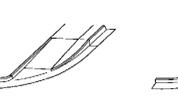
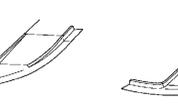
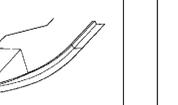
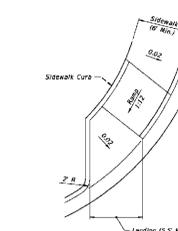
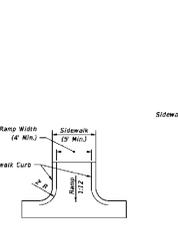
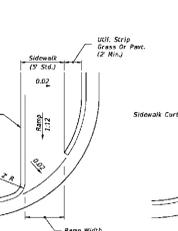
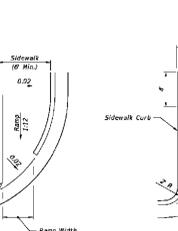
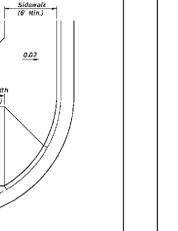


LEGEND

 Detectable Warnings

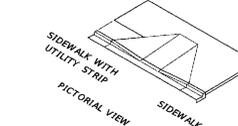
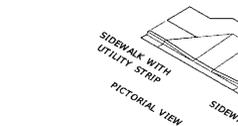
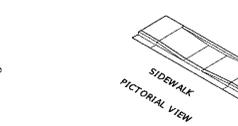
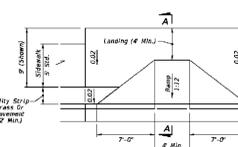
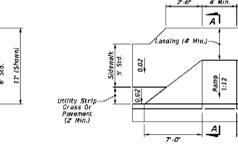
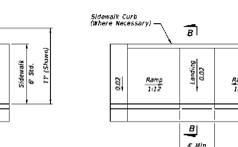
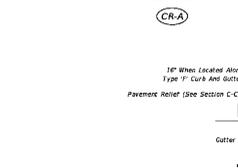
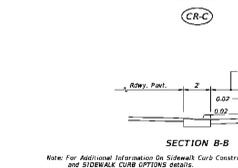
LAST REVISION 07/01/15	DESCRIPTION REVISION		FY 2016-17 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMP	INDEX NO. 304	SHEET NO. 1 of 7
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DIMENSIONAL FEATURES OF SIDEWALK CURB RAMP FOR LINEAR PEDESTRIAN TRAFFIC

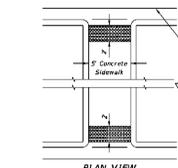
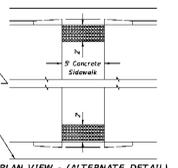
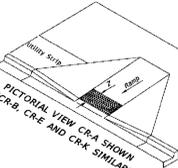
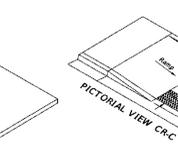
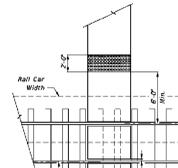
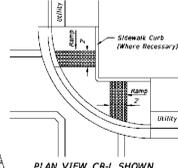
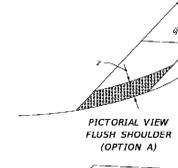
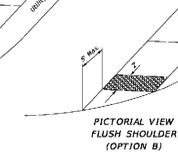
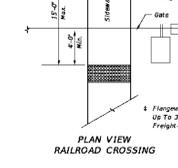
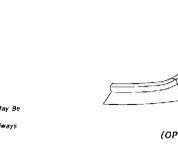
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SIDEWALK CURB RAMP WHERE RAMP AND LANDING DEPTHS ARE NOT RESTRICTED

Note: For Additional Information On Sidewalk Curb Construction See SIDEWALK CURB AND SIDEWALK CURB OPTION DETAILS.

LAST REVISION 07/01/13	DESCRIPTION REVISION		FY 2016-17 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMP	INDEX NO. 304	SHEET NO. 2 of 7
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TYPICAL PLACEMENT OF DETECTABLE WARNINGS

LAST REVISION 07/01/13	DESCRIPTION REVISION		FY 2016-17 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMP	INDEX NO. 304	SHEET NO. 6 of 7
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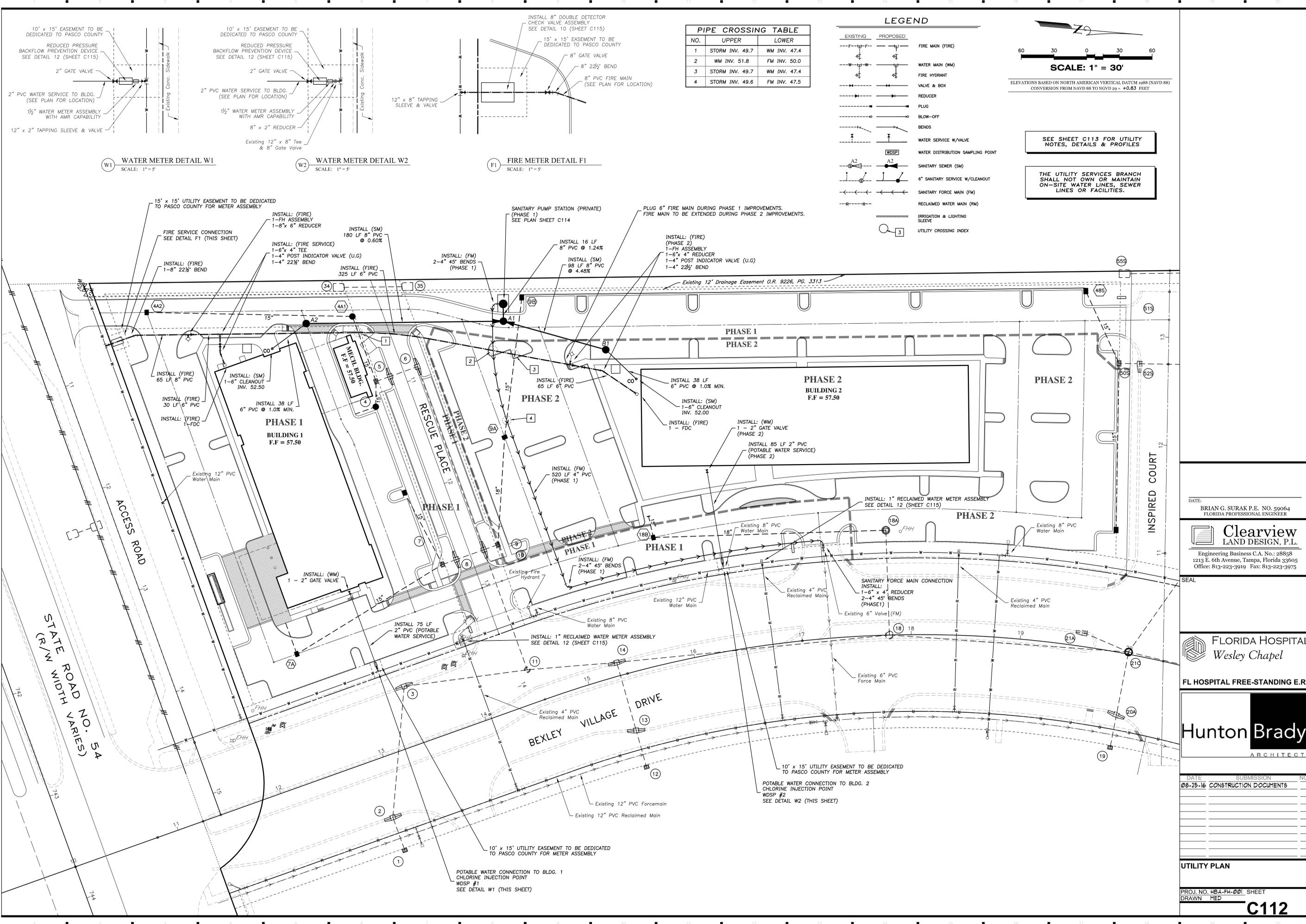
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DATE	SUBMISSION NO.
08-25-16	CONSTRUCTION DOCUMENTS

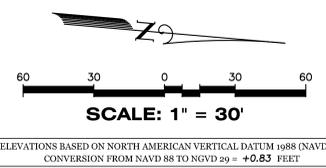
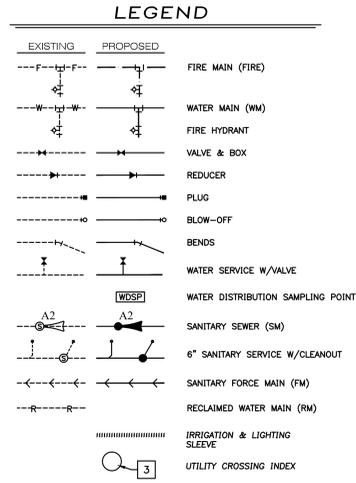
DRAINAGE DETAILS

PROJ. NO. HBA-FH-001 SHEET
DRAWN MED

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PIPE CROSSING TABLE		
NO.	UPPER	LOWER
1	STORM INV. 49.7	WM INV. 47.4
2	WM INV. 51.8	FM INV. 50.0
3	STORM INV. 49.7	WM INV. 47.4
4	STORM INV. 49.6	FM INV. 47.5



SEE SHEET C113 FOR UTILITY NOTES, DETAILS & PROFILES

THE UTILITY SERVICES BRANCH SHALL NOT OWN OR MAINTAIN ON-SITE WATER LINES, SEWER LINES OR FACILITIES.

W1 WATER METER DETAIL W1
SCALE: 1"=5'

W2 WATER METER DETAIL W2
SCALE: 1"=5'

F1 FIRE METER DETAIL F1
SCALE: 1"=5'

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DATE:
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DATE	SUBMISSION	NO.
08-25-16	CONSTRUCTION DOCUMENTS	

UTILITY PLAN

PROJ. NO. HBA-FH-001 SHEET
DRAWN MED

C112

WASTEWATER PUMP STATION DESIGN PARAMETERS

FLORIDA HOSPITAL BEXLEY WASTEWATER PUMP STATION 1
 LOCATION: BEXLEY VILLAGE DRIVE (S/T/R: 19/26S/18E)
 NEAREST CROSS STREET

I. DESIGN CAPACITY

A. AVERAGE DAILY FLOW (SEE BEXLEY SOUTH MPUD WASTEWATER UTILITIES SERVICE PLAN)
 73,000 SF OFFICE (0.15 GPD/SF) = 10,950 GPD

B. PEAK INFLUENT RATE (PEAK FACTOR = 3.8 PER STANDARDS FOR DESIGN AND CONSTRUCTION SECTION C.3)
 ADF x PEAK FACTOR = 10,950 GPD x 3.8 = 41,610 GPM

C. DESIGN MINIMUM FLOW
 ADF x 0.20 = 10,950 GPD x 0.20 = 2,190 GPM

D. DESIGN PUMP CAPACITY (MINIMUM REQUIRED) = 80.0 GPM

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

II. WETWELL DESIGN (DUPEX SYSTEM)

A. DESIGN CRITERIA

1. MAXIMUM PUMP MOTOR CYCLE RATE = 4 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 80.0 GPM.
2. WETWELL VOLUME REQUIRED BETWEEN LEAD PUMP START AND PUMP SHUT OFF LEVEL = $V = \frac{\text{CYCLE PERIOD} \times (1/2) \text{ PUMP RATE}}{2}$
 $V = \frac{15 \text{ MIN.} \times (1/2) (80.0) \text{ GPM}}{2} = 300 \text{ GALLONS}$
3. WETWELL DIAMETER = 6 FEET
 $\pi (D)^2 \times 7.48 \text{ GAL./C.F.} = 7.48 \frac{\pi (D)^2}{4} = \frac{7.48 \pi (6)^2}{4} = 211.5 \text{ GALS./FT.DEPTH}$
4. WETWELL LEVEL CHANGE BETWEEN PUMP STOP AND LEAD PUMP START = $\frac{300}{211.5} = 1.4'$ DESIGN FOR 1.7 INCHES (1.83-GAL./FT.DEPH)
5. CONTROL ELEVATIONS:
 TOP OF SLAB EL. 55.35
 INFLUENT INVERT EL. 45.00
 HIGH WATER ALARM EL. 45.50
 LAG PUMP ON EL. 45.00
 LEAD PUMP ON EL. 44.50
 ALL PUMPS OFF EL. 43.08
 BOTTOM EL. 39.75

III. SYSTEM CURVE CALCULATIONS

A. FRICTION LOSSES

1. PUMPING STATION PIPING:

ITEM	SIZE (INCHES)	QUANTITY	FRICTION LOSS (ea.)	TOTAL
A TEE	4"	2	22	44
B 90° ELBOW	4"	4	11	44
C CHECK VALVE	4"	1	25	25
D GATE VALVE	4"	2	2.3	5
TOTAL =				118
4" (DIA.) DI PIPE LENGTH =				40
TOTAL EQUIVALENT LENGTH =				158

2. FORCE MAIN PIPING:

ITEM	SIZE (INCHES)	QUANTITY	FRICTION LOSS (ea.)	TOTAL
A TEE	12" x 4"	1	67	67
B PLUG VALVE	4"	2	2.5	5
C 45° ELBOW	4"	6	5	30
D 22 1/2" ELBOW	12"	6	7	42
E 45° ELBOW	12"	1	15	15
4" FITTING TOTAL =				35
4" (DIA.) PVC PIPE LENGTH =				682
TOTAL EQUIVALENT 4" LENGTH =				717
12" FITTING TOTAL =				57
12" (DIA.) PVC PIPE LENGTH =				7,053
TOTAL EQUIVALENT 8" LENGTH =				7,110

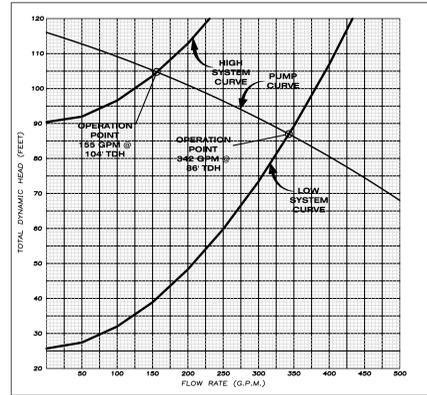
B. STATIC HEAD

1. PIPE CENTERLINE AT DISCHARGE POINT = ELEV. 51.0±
2. AVG PUMP LEVEL IN WET WELL = ELEV. 43.8±
3. TOTAL STATIC HEAD = 7.2 FT.

C. PRESSURE AT POINT OF CONNECTION:

1. 8 psi Low; 26 psi High (per COUNTY 7/13/2015)
- + 10 psi (FS for Future Development to North) = ELEV. 18.5± Low; 83.2± High

SYSTEM CURVE vs. PUMP CHARACTERISTIC CURVE

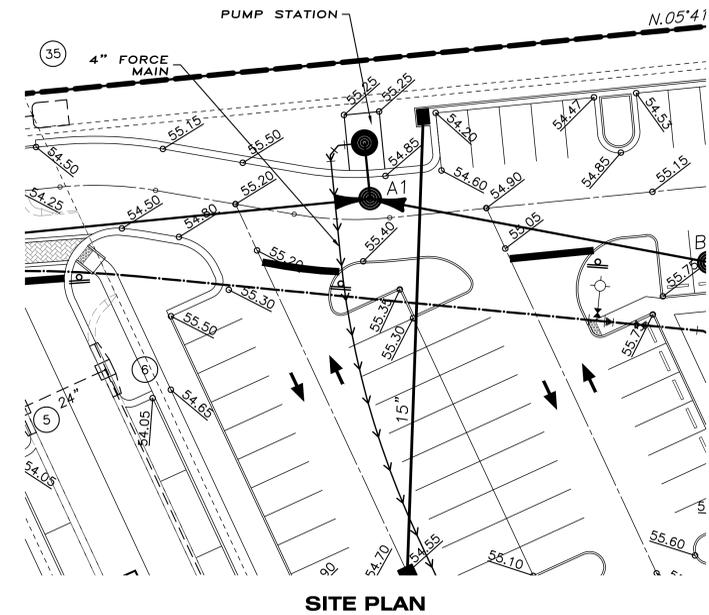


SYSTEMS HEAD COMPUTATIONS - TOTAL FRICTION LOSSES IN FEET

FLOW RATE (GPM)	0	50	100	150	200	250	300	350	400	450	500
ITEM: PUMP STATION PIPING (EQUIVALENT LENGTH) 158 L.F. OF 4" DIP	0.0	0.4	1.4	2.9	5.0	7.5	10.6	14.0	18.0	22.3	27.1
FORCE MAIN PIPING (EQUIVALENT LENGTH) 717 L.F. OF 4" PVC	0.0	1.3	4.8	10.1	17.3	26.1	36.6	48.6	62.2	77.4	94.0
FORCE MAIN PIPING (EQUIVALENT LENGTH) 717 L.F. OF 12" PVC	0.0	0.0	0.1	0.2	0.3	0.5	0.6	0.9	1.1	1.4	1.7
STATIC HEAD = 7.2'	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
DESIGN PRESSURE AT POINT OF CONNECTION (LOW/HIGH)	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
TOTAL LOSSES (LOW/HIGH SYSTEM CURVE)	25.7	27.4	29.0	30.9	33.2	35.8	38.7	41.9	45.3	48.9	52.7

PUMP DATA

EBARA MODEL 80DLCMF611
 RPM: 1800, IMPELLER DIAMETER 11.06 in (281 mm)
 15.0 HP, 230 V, 3 PHASE
 OPERATING POINTS ARE: 155 GPM @ 104' TDH
 342 GPM @ 36' TDH



PUMP STATION DETAILS & FLOTATION CALCULATIONS - FIBERGLASS WETWELL

GENERAL NOTES

FURNISH AND INSTALL EBARA SUBMERSIBLE PUMP:
 MODEL: 80DLCMF611 15.0 HP
 RPM: 1800 IMPELLER DIAMETER 11.06 in (281 mm)
 15.0 HP, 230 V, 3 PHASE

1. PUMP SHALL BE A ONE PHASE UNIT WITH INTERNAL BOTTOM MOUNTED MOTOR AND IMPELLER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER.

2. AIR FILLED MOTOR DESIGNED FOR SERVICE APPLICATION WITH CLASS F INSULATION.

3. LOCKED OUT OF THE PUMPABLE TO PREVENT STARTING OF THE PUMP.

4. 150° TEMPERATURE SHALL REMAINS 15° ABOVE OF 80.00 HOURS.

5. PUMP SHALL BE A ONE PHASE UNIT WITH INTERNAL BOTTOM MOUNTED MOTOR AND IMPELLER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER.

6. SINGLE PHASE MOTOR SHALL BE A ONE PHASE UNIT WITH INTERNAL BOTTOM MOUNTED MOTOR AND IMPELLER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER.

7. ALUMINUM HANGERS SHALL BE A ONE PHASE UNIT WITH INTERNAL BOTTOM MOUNTED MOTOR AND IMPELLER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER.

8. VALVE AND FIBERGLASS COMPOSITE (10-10 TRAFFIC RATED) WITH INTERNAL BOTTOM MOUNTED MOTOR AND IMPELLER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER. THE MOTOR SHALL BE A 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER.

9. ACCESSORIES: 800 LBS - GROUND ANCHORS, LOWER GUIDE RAIL BRACKET, CHAIN HOOKS, ANCHOR BOLTS AND PUMP LIFTING CHAINS.

10. VALVE SHALL BE SERVICE SERVICE DESIGN LOWER AND HEIGHT CHECK VALVES AND RESILIENT SEAT GATE VALVE OPEN 100% WITH 2" SQUARE OPERATING WIT. (200) 1/2" SCHEDULE 40 PVC.

11. FIBERGLASS V.L. LISTED AS ELECTRO MODEL (20 30 INCH).

12. PUMP SUPPLIER SHALL PROVIDE SUBMERSIBLE PUMP, SLIDE RAIL ASSEMBLY, ACCESSORIES TO BEASURE PROPER OPERATION AND ALARMING.

13. THE COMPLETE MANUFACTURER DRAWING SHALL BE SUBMITTED TO THE MANUFACTURER FOR REVIEW AND APPROVAL. THE MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE PUMP AND MOTOR. THE MANUFACTURER OF THE PRE-FAB PUMP SOLUTIONS SHALL BE RESPONSIBLE FOR THE DESIGN OF THE PUMP AND MOTOR.

14. TECHNICAL SALES CORPORATION, 4011 N.W. 11th Ave., Ft. Lauderdale, FL 33309-1000

SINGLE PHASE WIRING DIAGRAM

U-RED V-WHITE Y-BLACK

THREE PHASE WIRING DIAGRAM

U-RED V-WHITE W-BLACK

CONTROL PANEL LAYOUT

ALARM BELL
 STOP
 START
 TEST
 SELECT

LEGEND

1. ALARM BELL
 2. STOP
 3. START
 4. TEST
 5. SELECT

PANEL WIRING DIAGRAM

PANEL SHALL CONFORM TO FLORIDA DEP 64-604.000

1. OPERATOR RECEIVABLE FOR EMERGENCY
 2. POWER CONNECTION WITH INTERLOCK
 3. PROTECTION ON ALL INCOMING LINES
 4. PHASE PROTECTION SHALL BE PROVIDED
 5. SHUNT SEAL FAIL DETECTION
 6. ALTERNATOR W/TEST SWITCH
 7. BATTERY BACK-UP UNIT
 8. PANEL MANUFACTURER SHALL BE A "UL" LISTED SHOP.

TECHNICAL SALES CORPORATION
 TSC PRE-FAB PUMP SOLUTIONS®
 MEMBERSHIP & MEMBER OPERATOR
 4011 N.W. 11th Ave. Ft. Lauderdale, FL 33309-1000
 TSC PRE-FAB PUMP SOLUTIONS®
 MODEL TSC22-72.5 BBU
 15.0 HP, 230 V, 3 PHASE, 1800 RPM, 11.06 in IMPELLER DIAMETER
 REV-2 SCALE: N.T.S.

P:\BEXLEY_BANCA\FLORIDA HOSPITAL\DRAWING\COND\COND\DWG-C114.PUMP STATION PLAN 2016/08/26 7:42 AM HBA-FH-001

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

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

FLORIDA HOSPITAL Wesley Chapel

FL HOSPITAL FREE-STANDING E.R.

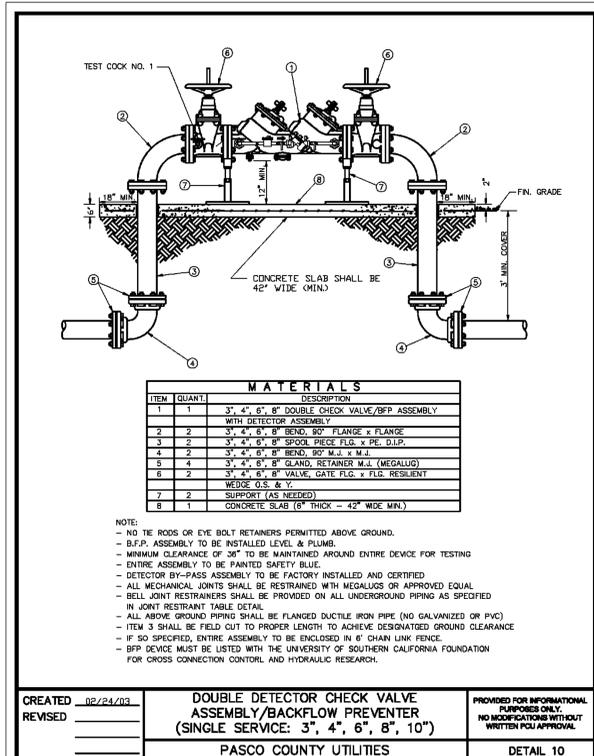
Hunton Brady ARCHITECTS

DATE: 08-25-16 SUBMISSION NO. CONSTRUCTION DOCUMENTS

PUMP STATION PLAN

PROJ. NO. HBA-FH-001 SHEET DRAWN DEU

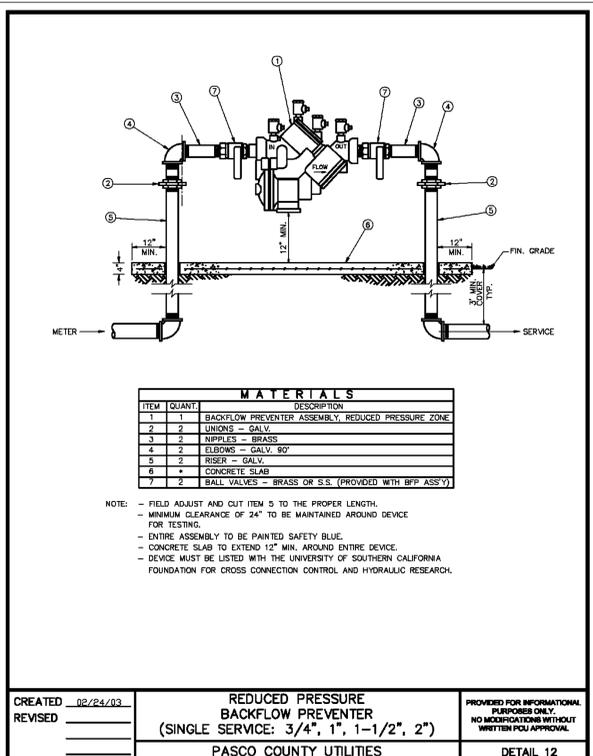
C114



ITEM	QUANT.	DESCRIPTION
1	1	3", 4", 6", 8" DOUBLE CHECK VALVE/BFP ASSEMBLY WITH DETECTOR ASSEMBLY
2	2	3", 4", 6", 8" BEND, 90° FLANGE x FLANGE
3	2	3", 4", 6", 8" SPONGE PIECE F.L.G. x PE. D.I.P.
4	2	3", 4", 6", 8" BEND, 90° M.J. x M.J.
5	4	3", 4", 6", 8" GLAND, RETAINER M.J. (MEGALLO)
6	2	3", 4", 6", 8" VALVE, GATE F.L.G. x F.L.G. RESILIENT
7	2	WEDGE 0.5" x 1"
8	1	SUPPORT (AS NEEDED)
		CONCRETE SLAB (6" THICK - 42" WIDE MIN.)

NOTE:
 - NO TE RODS OR EYE BOLT RETAINERS PERMITTED ABOVE GROUND.
 - B.F.P. ASSEMBLY TO BE INSTALLED LEVEL & PLUMB.
 - MINIMUM CLEARANCE OF 36" TO BE MAINTAINED AROUND ENTIRE DEVICE FOR TESTING.
 - ENTIRE ASSEMBLY TO BE PAINTED SAFETY BLUE.
 - DETECTOR BY-PASS ASSEMBLY TO BE FACTORY INSTALLED AND CERTIFIED.
 - ALL MECHANICAL JOINTS SHALL BE RESTRAINED WITH MEGALLOS OR APPROVED EQUAL.
 - BELL JOINT RESTRAINTS SHALL BE PROVIDED ON ALL UNDERGROUND PIPING AS SPECIFIED IN JOINT RESTRAINT TABLE DETAIL.
 - ALL ABOVE GROUND PIPING SHALL BE FLANGED DUCTILE IRON PIPE (NO GALVANIZED OR PVC).
 - ITEM 3 SHALL BE FIELD CUT TO PROPER LENGTH TO ACHIEVE DESIRED GROUND CLEARANCE.
 - IF SO SPECIFIED, ENTIRE ASSEMBLY TO BE ENCLOSED IN 6" CHAIN LINK FENCE.
 - BFP DEVICE MUST BE LISTED WITH THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH.

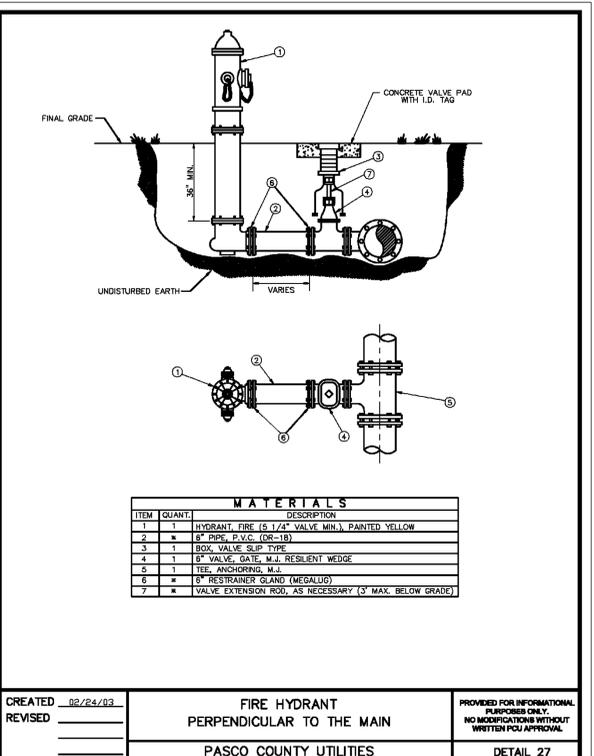
CREATED 02/24/03
 REVISIONS
 PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN POU APPROVAL.
DOUBLE DETECTOR CHECK VALVE ASSEMBLY/BACKFLOW PREVENTER (SINGLE SERVICE: 3", 4", 6", 8", 10")
 PASCO COUNTY UTILITIES
 DETAIL 10



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 ASSY)

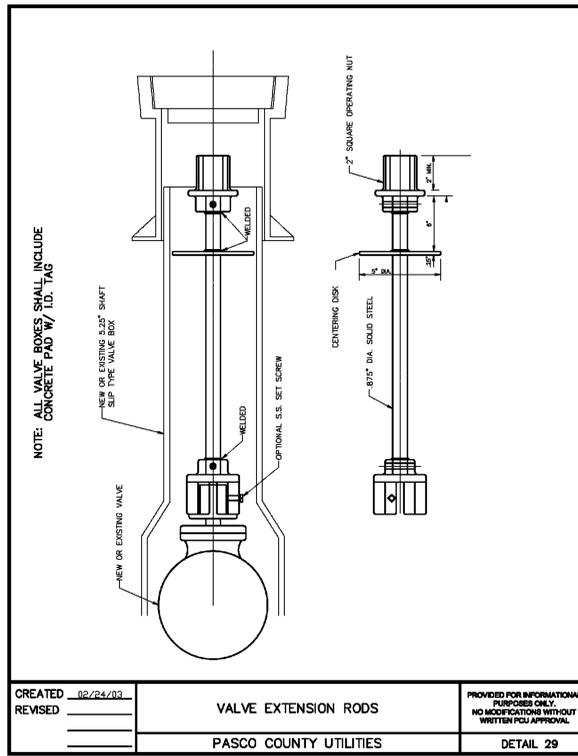
NOTE:
 - FIELD ADJUST AND CUT ITEM 5 TO THE PROPER LENGTH.
 - MINIMUM CLEARANCE OF 24" TO BE MAINTAINED AROUND DEVICE FOR TESTING.
 - ENTIRE ASSEMBLY TO BE PAINTED SAFETY BLUE.
 - CONCRETE SLAB TO EXTEND 12" MIN. AROUND ENTIRE DEVICE.
 - DEVICE MUST BE LISTED WITH THE UNIVERSITY OF SOUTHERN CALIFORNIA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

CREATED 02/24/03
 REVISIONS
 PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN POU APPROVAL.
REDUCED PRESSURE BACKFLOW PREVENTER (SINGLE SERVICE: 3/4", 1", 1-1/2", 2")
 PASCO COUNTY UTILITIES
 DETAIL 12



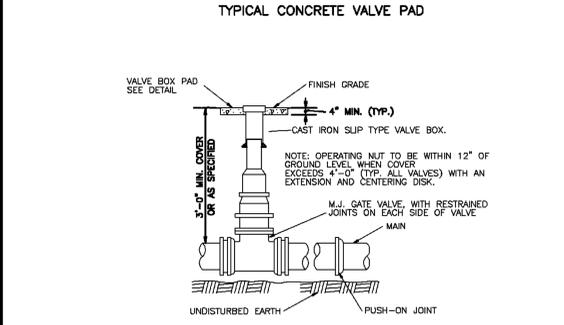
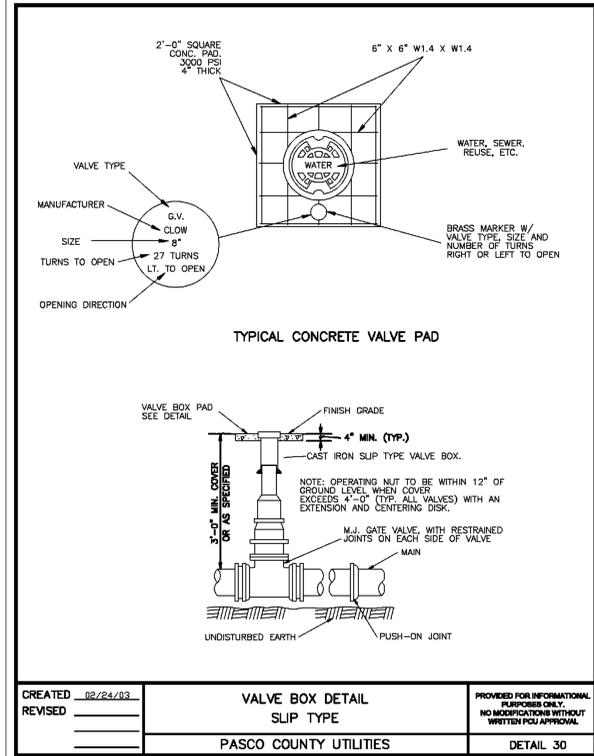
ITEM	QUANT.	DESCRIPTION
1	1	HYDRANT FIRE (5 1/2" VALVE MIN.) PAINTED YELLOW
2	+	8" PIPE, P.V.C. (DR-18)
3	1	BOX VALVE SLIP TYPE
4	1	5" VALVE GATE, M.J. RESILIENT WEDGE
5	1	TEE, ANCHORING, M.J.
6	+	12" RESTRAINER GLAND (MEGALLO)
7	+	VALVE EXTENSION ROD, AS NECESSARY (3" MAX. BELOW GRADE)

CREATED 02/24/03
 REVISIONS
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FIRE HYDRANT PERPENDICULAR TO THE MAIN
 PASCO COUNTY UTILITIES
 DETAIL 27



NOTE: ALL VALVE BOXES SHALL INCLUDE CONCRETE PAD W/ I.D. TAG

CREATED 02/24/03
 REVISIONS
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VALVE EXTENSION RODS
 PASCO COUNTY UTILITIES
 DETAIL 29



CREATED 02/24/03
 REVISIONS
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VALVE BOX DETAIL SLIP TYPE
 PASCO COUNTY UTILITIES
 DETAIL 30

PIPE RESTRAINT LENGTHS IN FEET COMMON FITTINGS

WATER MAINS - TEST PRESSURE 150 PSI

PIPE SIZE	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'

FORCE MAINS - TEST PRESSURE 100 PSI

PIPE SIZE	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
 REVISIONS
 PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN POU APPROVAL.
RESTRAINED JOINT TABLE COMMON FITTINGS
 PASCO COUNTY UTILITIES
 DETAIL 31

PIPE RESTRAINT LENGTHS IN FEET TEES (BRANCH SIDE)

WATER MAINS - TEST PRESSURE 150 PSI

RUN SIZE	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 6 FEET OF RESTRAINED PIPE MUST BE INSTALLED ON BOTH RUNS OF THE TEE. MEGALLOY RESTRAINTS ARE REQUIRED ON ALL JOINTS.

CREATED 02/24/03
 REVISIONS
 PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN POU APPROVAL.
RESTRAINED JOINT TABLE TEES (BRANCH SIDE)
 PASCO COUNTY UTILITIES
 DETAIL 32

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

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FLORIDA HOSPITAL
 Wesley Chapel

FL HOSPITAL FREE-STANDING E.R.

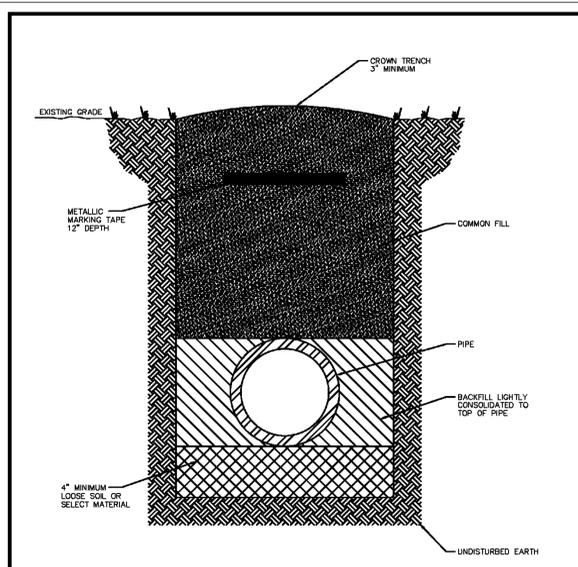
Hunton Brady
 ARCHITECTS

DATE	SUBMISSION	NO.
08-25-16	CONSTRUCTION DOCUMENTS	

UTILITY DETAILS

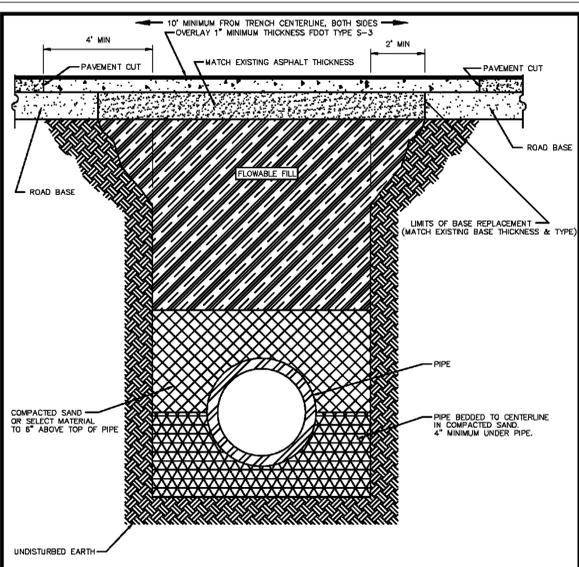
PROJ. NO. HBA-FH-001 SHEET
 DRAWN MED

C115



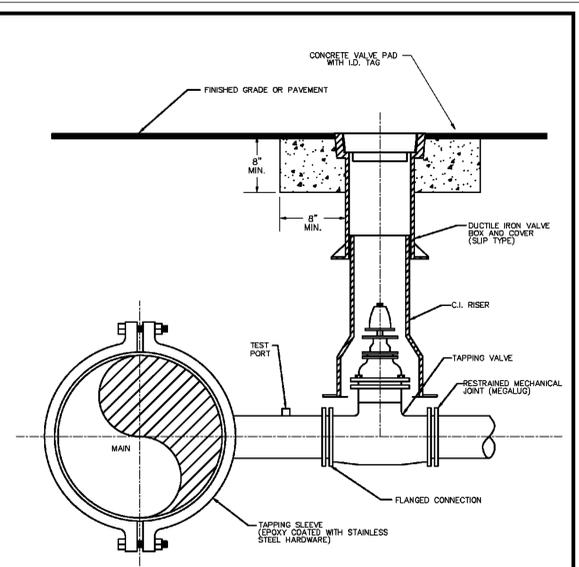
NOTES: -LOOSE SOIL OR SELECT MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS AND FOREIGN MATERIAL.
 -COMMON FILL TO BE PLACED AND COMPACTED IN 12" LAYERS.
 -ROLLING EQUIPMENT SHALL NOT BE USED FOR COMPACTION UNTIL A MINIMUM OF 18" OF COMMON FILL HAS BEEN PLACED AND COMPACTED OVER THE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

CREATED 02/24/03	PIPE LAYING CONDITIONS STANDARD UNPAVED AREAS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED	PASCO COUNTY UTILITIES	DETAIL 35



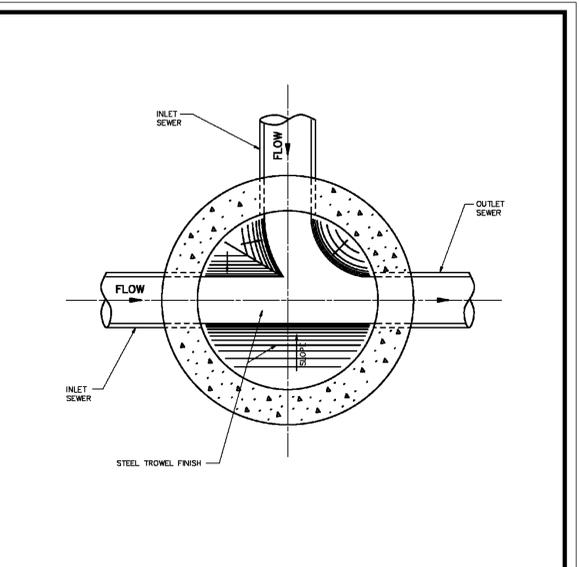
NOTE: -SELECT MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS AND FOREIGN MATERIAL.
 -COMPACTION TO TOP OF PIPE IS TO BE APPROXIMATELY 90% STANDARD PROCTOR, AASH TO T-99.
 -EXISTING CONCRETE/ASPHALT PAVEMENT SURFACE AND BASE TO BE CUT SQUARE WITH CONCRETE SAW.

CREATED 03/26/03	PIPE LAYING CONDITIONS FLOWABLE FILL BACKFILL STANDARD EXISTING PAVED AREAS & ROADWAYS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED	PASCO COUNTY UTILITIES	DETAIL 36



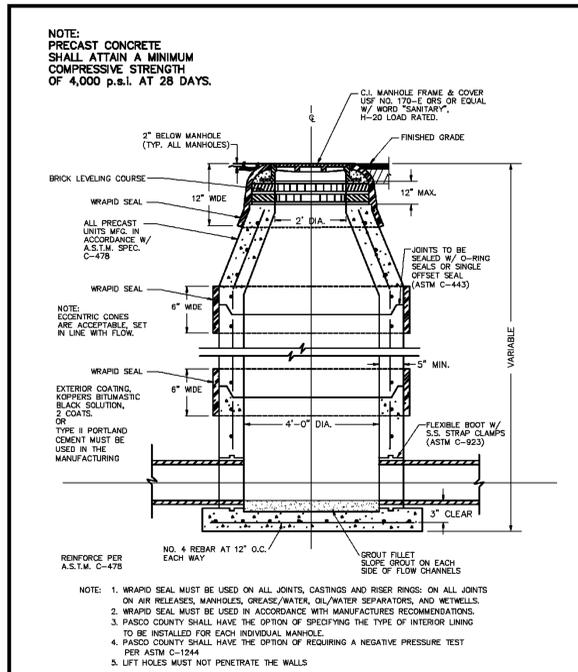
NOTES: - SADDLE CONNECTION WILL BE TESTED TO 150 PSI PRIOR TO TAPPING MAIN.
 - MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED BY COUNTY/ENGINEER.
 - VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

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 37



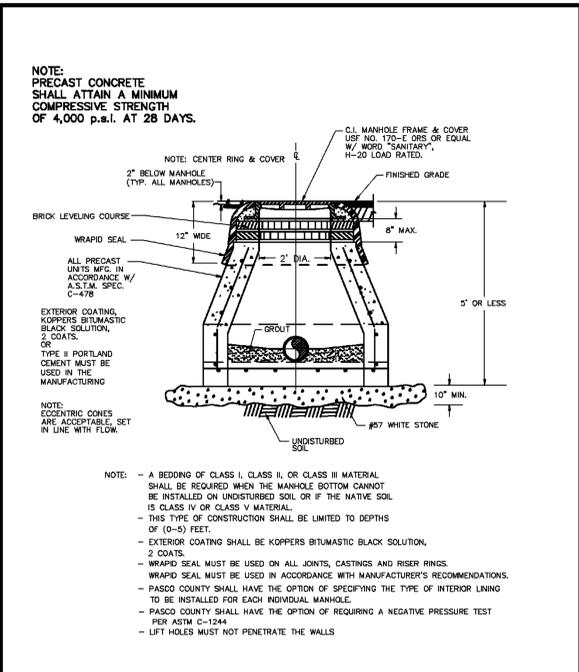
NOTES: - SADDLE CONNECTION WILL BE TESTED TO 150 PSI PRIOR TO TAPPING MAIN.
 - MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED BY COUNTY/ENGINEER.
 - VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

CREATED 02/24/03	STANDARD MANHOLE (BENCH AND INVERTS)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED	PASCO COUNTY UTILITIES	DETAIL 39



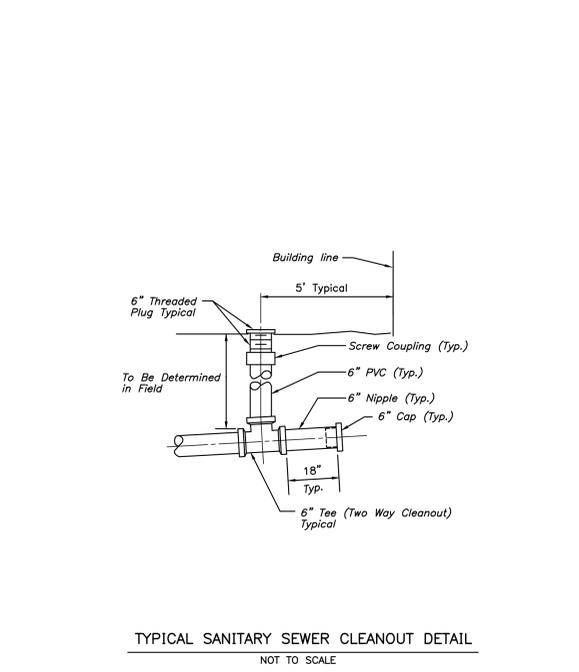
NOTE: 1. WRAPAROUND SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS; ON ALL JOINTS ON AIR RELEASES, MANHOLES, GREASE/WATER, OIL/WATER SEPARATORS, AND WETWELLS.
 2. WRAPAROUND SEAL MUST BE USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 3. PASCO COUNTY SHALL HAVE THE OPTION OF SPECIFYING 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 41



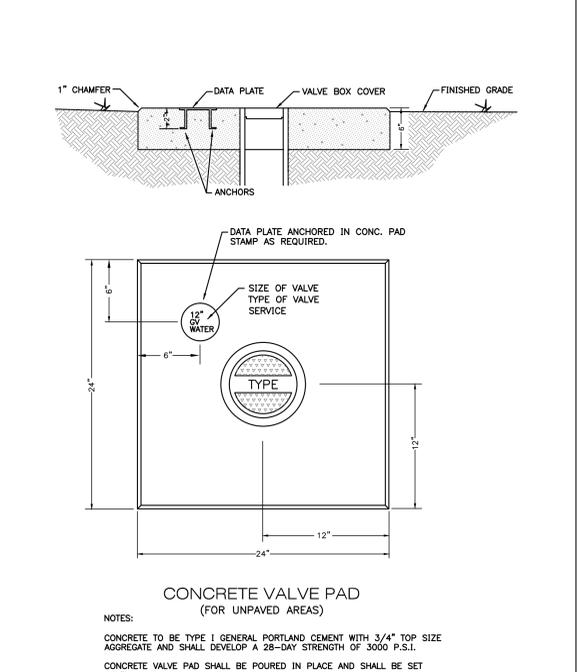
NOTE: - A BEDDING OF CLASS I, CLASS II, OR CLASS III MATERIAL SHALL BE REQUIRED WHEN THE MANHOLE BOTTOM CANNOT BE INSTALLED ON UNDISTURBED SOIL OR IF THE NATIVE SOIL IS CLASS IV OR CLASS V MATERIAL.
 - THIS TYPE OF CONSTRUCTION SHALL BE LIMITED TO DEPTHS OF (0-5) FEET.
 - EXTERIOR COATING SHALL BE KOPPERS BITUMASTIC BLACK SOLUTION, 2 COATS.
 - WRAPAROUND SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS.
 - PASCO COUNTY SHALL HAVE THE OPTION OF SPECIFYING THE TYPE OF INTERIOR LINING TO BE INSTALLED FOR EACH INDIVIDUAL MANHOLE.
 - PASCO COUNTY SHALL HAVE THE OPTION OF REQUIRING A NEGATIVE PRESSURE TEST PER ASTM C-1244.
 - LIFT HOLES MUST NOT PENETRATE THE WALLS.

CREATED 02/24/03	MANHOLE SHALLOW CONSTRUCTION (CLOSED BOTTOM)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED	PASCO COUNTY UTILITIES	DETAIL 43



NOTE: - A BEDDING OF CLASS I, CLASS II, OR CLASS III MATERIAL SHALL BE REQUIRED WHEN THE MANHOLE BOTTOM CANNOT BE INSTALLED ON UNDISTURBED SOIL OR IF THE NATIVE SOIL IS CLASS IV OR CLASS V MATERIAL.
 - THIS TYPE OF CONSTRUCTION SHALL BE LIMITED TO DEPTHS OF (0-5) FEET.
 - EXTERIOR COATING SHALL BE KOPPERS BITUMASTIC BLACK SOLUTION, 2 COATS.
 - WRAPAROUND SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS.
 - PASCO COUNTY SHALL HAVE THE OPTION OF SPECIFYING THE TYPE OF INTERIOR LINING TO BE INSTALLED FOR EACH INDIVIDUAL MANHOLE.
 - PASCO COUNTY SHALL HAVE THE OPTION OF REQUIRING A NEGATIVE PRESSURE TEST PER ASTM C-1244.
 - LIFT HOLES MUST NOT PENETRATE THE WALLS.

CREATED 02/24/03	MANHOLE SHALLOW CONSTRUCTION (CLOSED BOTTOM)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED	PASCO COUNTY UTILITIES	DETAIL 43



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.

CREATED 02/24/03	CONCRETE VALVE PAD (FOR UNPAVED AREAS)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED	PASCO COUNTY UTILITIES	DETAIL 42

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

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

FL HOSPITAL FREE-STANDING E.R.

Hunton Brady
 ARCHITECTS

DATE	SUBMISSION	NO.
08-25-16	CONSTRUCTION DOCUMENTS	

UTILITY DETAILS

PROJ. NO. HBA-FH-001 SHEET
 DRAWN MED

C116

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, P.L. 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 block 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 ensure 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, City of Tampa, 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.**
- 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.
 - 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.
 - 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.
 - Submit to SWPPP and the operator of the municipal separate storm water system, if applicable, a letter of construction commencement.
 - Complete and submit a Notice of Termination and certification for developer. The NOT's shall be submitted no more than 30 days after:
 - completion of the project and final stabilization of the site or
 - 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

- 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.
- 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.
- 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.
- 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, 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.

- 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.
- Develop a maintenance and inspection plan which includes, but is not limited to the following:
 - The specific areas to be inspected and maintained that includes all the disturbed areas and material storage areas of the site.
 - The erosion and sediment controls identified in the SWPPP to be maintained and inspected and those additional controls that the contractor deems necessary.
 - Maintenance procedures.
 - The procedure to follow if additional work is required or whom to call.
 - Inspections and maintenance forms.
 - 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:

- Has successfully completed the Florida Stormwater, Erosion and Sediment Control Inspector Training Program.
 - Successfully completed a similar training program.
 - Has enough practical on the job training to be qualified to perform the inspections.
- Retain inspection reports and certifications for at least three years.
- 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.
 - Releases in Excess of Reportable Quantities.
 - 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:

- 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 release.
- 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 32309-2400; and
- 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 revised to identify measures to prevent the recurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

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

- Developer**
- 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.
 - Sign a Certification of Storm Water Pollution Prevention Plan and return to Clearview Land Design, P.L.
 - 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:**
- Total site acreage: 6.33 ACRES
 - Land use: MASS GRADED OUT PARCEL
 - Vegetation: CLEARED SITE - GRASS
 - Receiving water or municipal separate storm water system: CREEK
 - 2 Year/24 Hour rainfall depth: 4.14"
 - Soil types: SOILS

- PROJECT INFORMATION:**
- Project type (residential, commercial, etc.)
 - Anticipated construction sequence is as follows:
 - Complete erosion control installation
 - Clearing and grubbing
 - Earthwork activities
 - Storm water system construction
 - Utility construction
 - Site access and pavement construction
 - Final stabilization

The BMP's listed in Part D of the Contractor section of the SWPPP shall be considered during all phases of construction.

- GENERAL EROSION AND TURBIDITY CONTROL NOTES**
- 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.
 - 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.
 - The appropriate turbidity and erosion control methodologies selected by the Site Subcontractor for this project should be made following the following criteria:
 - Existing topography and directions of surface flow
 - Fill height relative to natural grade and length and steepness of the proposed slopes
 - Soil types
 - Duration of construction activities
 - Separation distance of onsite ponds
 - Ambient quality surface and groundwater
 - Temporary stockpile locations and heights
 - 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:
 - Clay content in excavated materials and/or permeabilities rates
 - Depth of cut in ponds, trenches, or utility lines
 - Ambient ground water levels
 - Actual rainfall amounts and time of year relative to normal rainy season
 - Proximity to wetlands, water bodies or offsite properties
 - 'Class' designation of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvesting areas, etc.)
 - Density, type and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)
 - Fill height relative to natural grade and length and steepness of the proposed slopes
 - Existing topography and directions of surface flow
 - Type of equipment used
 - Project type
 - Duration of construction activities
 - Separation distance of onsite ponds
 - Ambient quality surface and groundwater
 - Temporary stockpile locations and heights
 - The construction sequencing should be thought out in advance of initiation to provide adequate protection of water quality.
 - Any offsite disturbance shall be restored to the Pre or better condition.
 - Discharges of water quantities which affect offsite properties or may damage wetlands are also prohibited by regulating agencies.
 - Discharges which exceed 29 N.T.U.'s over the background levels are in violation of state water quality standards.
 - The erosion and turbidity control measures shown herein are the minimum required for agency approval. Additional control and measures may be required due to the Site Subcontractor's assessment of the proposed construction 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.
 - 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 conducted for the duration of the project until all soil is stabilized.
 - Floating turbidity barriers shall be in place in flowing systems or in open water lake edges prior to initiation of earthwork and until maintained for the duration of the project until all soil is stabilized.
 - 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. The Engineer shall determine if the material is non-confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written approval from the reviewing agency.
 - If silt 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.
 - 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.
 - The type of erosion control barriers used shall be governed by the nature of the construction operation and slope that will be exposed. Silt and erosion control material may require mild sediment barriers to prevent turbid water discharge, while sandy material may need only silt screens or hay bales to prevent erosion. Flooding turbidity curtains should generally be used in open water situations. Flooding turbidity curtains should be used 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.
 - 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.
 - 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, unprotected 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.
 - 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 sediment 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.
 - Water can be transported around the site by the use of internal swales or by pumps and pipes.
 - 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.
 - 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.
 - 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.
 - Attempt to install roadway curb and gutters as soon as possible to reduce the surface area for erosion to control.
 - 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.

- Water discharge velocities from impounded areas and temporary sedimentation basins shall be restricted to avoid scouring in receiving areas.
- 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.
- Hay bales, silt screens, or gravel beds can be added around the pipe or swale discharge points to help clarify discharges. Spreader wheels may help displace cloudy water prior to contact with wetlands.
- All fuel storage areas or other hazardous storage areas shall conform to accepted state or federal criteria for such containment areas.
- Vehicle or equipment washdown areas will be sufficiently removed from wetlands or offsite areas.
- Fugitive dust controls (primarily by using water spray trucks) shall be employed as needed to control windborn emissions.
- 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 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.
- Ongoing inspections and periodic maintenance by the Site Subcontractor shall occur daily (at a minimum) to insure the above methods are working properly. Corrective action must be taken immediately to repair or replace any damaged BMP's to ensure the above methods are working properly.
- Site Subcontractors are required to obtain and thoroughly review the Florida Department 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.

- HILLSBOROUGH COUNTY SUBDIVISION STREET & DRAINAGE CONSTRUCTION NOTES:**
- 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 ensure 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 SWP/MD.
 - All construction, materials and workmanship are to be in accordance with Hillsborough County Subdivision Regulations and DOT Specifications, latest editions.
 - Grass and mulch, or solid sod, all areas in existing rights-of-way disturbed by construction. In the proposed rights-of-way a 2' wide area behind the back of curb to be solid sodded. The remainder of the proposed rights-of-way to be seeded and mulched if the slope is steeper than 6:1.
 - In accordance with the Underground Facility Damage Prevention and Safety Act (Chapter 556, F.S.) the Contractor shall call the Sunshine State One Call of Florida (SSCOF) at 1-800-432-4770 forty eight (48) hours in advance of any excavation.
 - Prior to curb inlet construction, the Engineer shall lay out the back of the curb in the vicinity of the respective inlet for alignment and grade, and the Contractor shall construct the inlet allowing for an 18" concrete throat between the back of the curb and the face of the inlet. The top of the inlet shall be constructed to an elevation of 3/8" above the top of curb (these dimensions apply to the concrete valley gutter type section only). Any inlets constructed incorrectly by deviating from this sequence of inlet construction shall be the sole responsibility of the Contractor and no additional payment shall be made or allowed for removing and/or correcting the inlet.
 - Fill obtained through excavation of streets and detention ponds shall be placed on lots and adjacent lots in accordance with the Master Drainage and Grading Plan as directed by the Engineer unless otherwise noted.
 - Soil/Seed & Mulch shall be placed in accordance with applicable City/County standards as well as in accordance with standard and specific conditions in the SWP/MD permit, if applicable. At a minimum this shall include sodding of all pond embankments of a slope 5:1 or steeper 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 at a minimum of 2' from the back of curb and any project area with a slope of 5:1 or steeper.
 - Roadway underdrain has been located on these plans to meet the minimum standards of Hillsborough County. Prior to curb construction, the Geotechnical Engineer shall review the pre-design borings and, along with their field inspection, make a recommendation regarding additional underdrain requirements.
 - Site clearing shall be performed per the approved construction plans and in accordance with the Hillsborough County Natural Resources regulations. Installation and maintenance of the required barricading and erosion control shall be the responsibility of the site development contractor unless otherwise designated.
 - Prior to beginning construction, Contractor shall expose all existing utility inlets to which a tie-in is proposed and have Engineer verify the elevation and adequacy of these inlets.
 - 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.
 - 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.
 - During land clearing 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.
 - 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.

- 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 facilities, 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-sloped 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.

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

- Retain inspection reports and certifications for at least three years.
- 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.
- Releases in Excess of Reportable Quantities.
 - 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:

- 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 release.
- 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 32309-2400; and
- 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 revised to identify measures to prevent the recurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

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

- Developer**
- 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.
 - Sign a Certification of Storm Water Pollution Prevention Plan and return to Clearview Land Design, P.L.
 - 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:**
- Total site acreage: 6.33 ACRES
 - Land use: MASS GRADED OUT PARCEL
 - Vegetation: CLEARED SITE - GRASS
 - Receiving water or municipal separate storm water system: CREEK
 - 2 Year/24 Hour rainfall depth: 4.14"
 - Soil types: SOILS

- PROJECT INFORMATION:**
- Project type (residential, commercial, etc.)
 - Anticipated construction sequence is as follows:
 - Complete erosion control installation
 - Clearing and grubbing
 - Earthwork activities
 - Storm water system construction
 - Utility construction
 - Site access and pavement construction
 - Final stabilization

- The BMP's listed in Part D of the Contractor section of the SWPPP shall be considered during all phases of construction.

- GENERAL EROSION AND TURBIDITY CONTROL NOTES**
- 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.
 - 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.
 - The appropriate turbidity and erosion control methodologies selected by the Site Subcontractor for this project should be made following the following criteria:
 - Existing topography and directions of surface flow
 - Fill height relative to natural grade and length and steepness of the proposed slopes
 - Soil types
 - Duration of construction activities
 - Separation distance of onsite ponds
 - Ambient quality surface and groundwater
 - Temporary stockpile locations and heights
 - 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:
 - Clay content in excavated materials and/or permeabilities rates
 - Depth of cut in ponds, trenches, or utility lines
 - Ambient ground water levels
 - Actual rainfall amounts and time of year relative to normal rainy season
 - Proximity to wetlands, water bodies or offsite properties
 - 'Class' designation of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvesting areas, etc.)
 - Density, type and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)
 - Fill height relative to natural grade and length and steepness of the proposed slopes
 - Existing topography and directions of surface flow
 - Type of equipment used
 - Project type
 - Duration of construction activities
 - Separation distance of onsite ponds
 - Ambient quality surface and groundwater
 - Temporary stockpile locations and heights
 - The construction sequencing should be thought out in advance of initiation to provide adequate protection of water quality.
 - Any offsite disturbance shall be restored to the Pre or better condition.
 - Discharges of water quantities which affect offsite properties or may damage wetlands are also prohibited by regulating agencies.
 - Discharges which exceed 29 N.T.U.'s over the background levels are in violation of state water quality standards.
 - The erosion and turbidity control measures shown herein are the minimum required for agency approval. Additional control and measures may be required due to the Site Subcontractor's assessment of the proposed construction 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.
 - 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 conducted for the duration of the project until all soil is stabilized.
 - Floating turbidity barriers shall be in place in flowing systems or in open water lake edges prior to initiation of earthwork and until maintained for the duration of the project until all soil is stabilized.
 - 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. The Engineer shall determine if the material is non-confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written approval from the reviewing agency.
 - If silt 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.
 - 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.
 - The type of erosion control barriers used shall be governed by the nature of the construction operation and slope that will be exposed. Silt and erosion control material may require mild sediment barriers to prevent turbid water discharge, while sandy material may need only silt screens or hay bales to prevent erosion. Flooding turbidity curtains should generally be used in open water situations. Flooding turbidity curtains should be used 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.
 - 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.
 - 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, unprotected 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.
 - 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 sediment 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.
 - Water can be transported around the site by the use of internal swales or by pumps and pipes.
 - 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.
 - 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.
 - 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.
 - Attempt to install roadway curb and gutters as soon as possible to reduce the surface area for erosion to control.
 - 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.

- Water discharge velocities from impounded areas and temporary sedimentation basins shall be restricted to avoid scouring in receiving areas.
- 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.
- Hay bales, silt screens, or gravel beds can be added around the pipe or swale discharge points to help clarify discharges. Spreader wheels may help displace cloudy water prior to contact with wetlands.
- All fuel storage areas or other hazardous storage areas shall conform to accepted state or federal criteria for such containment areas.
- Vehicle or equipment washdown areas will be sufficiently removed from wetlands or offsite areas.
- Fugitive dust controls (primarily by using water spray trucks) shall be employed as needed to control windborn emissions.
- 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 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.
- Ongoing inspections and periodic maintenance by the Site Subcontractor shall occur daily (at a minimum) to insure the above methods are working properly. Corrective action must be taken immediately to repair or replace any damaged BMP's to ensure the above methods are working properly.
- Site Subcontractors are required to obtain and thoroughly review the Florida Department 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.

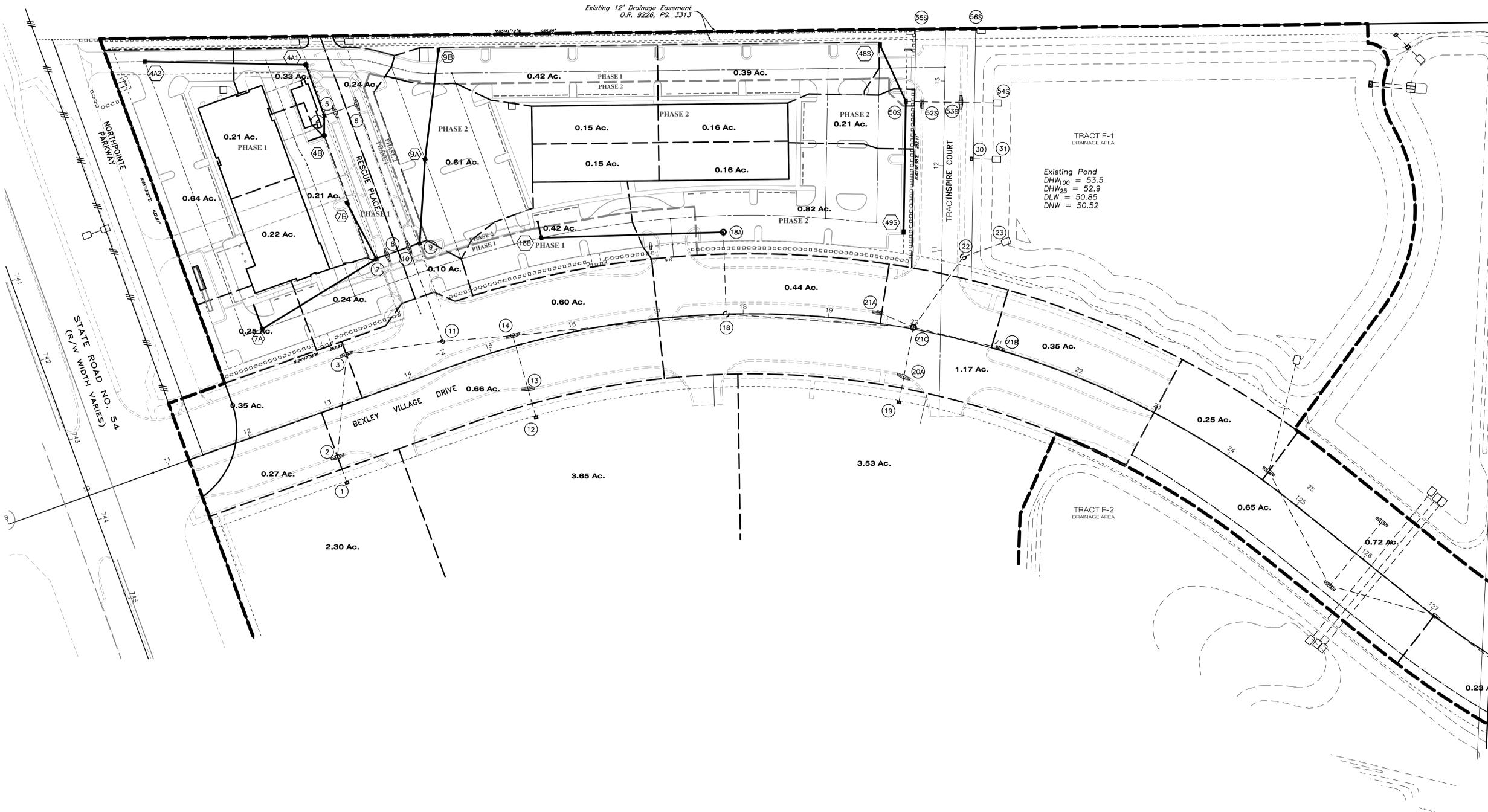
- HILLSBOROUGH COUNTY SUBDIVISION STREET & DRAINAGE CONSTRUCTION NOTES:**
- Prior to construction, the Contractor shall obtain from the Engineer or Owner a copy of all pertinent permits related to this project. It is the Contractor's responsibility to ensure that all construction activities are in compliance with the conditions of all permits and approvals. Contractor is also responsible for having his dewatering plan approved by SWP/MD.
 - All construction, materials and workmanship are to be in accordance with Hillsborough County Subdivision Regulations and DOT Specifications, latest editions.
 - Grass and mulch, or solid sod, all areas in existing rights-of-way disturbed by construction. In the proposed rights-of-way a 2' wide area behind the back of curb to be solid sodded. The remainder of the proposed rights-of-way to be seeded and mulched if the slope is steeper than 6:1.
 - In accordance with the Underground Facility Damage Prevention and Safety Act (Chapter 556, F.S.) the Contractor shall call the Sunshine State One Call of Florida (SSCOF) at 1-800-432-4770 forty eight (48) hours in advance of any excavation.
 - Prior to curb inlet construction, the Engineer shall lay out the back of the curb in the vicinity of the respective inlet for alignment and grade, and the Contractor shall construct the inlet allowing for an 18" concrete throat between the back of the curb and the face of the inlet. The top of the inlet shall be constructed to an elevation of 3/8" above the top of curb (these dimensions apply to the concrete valley gutter type section only). Any inlets constructed incorrectly by deviating from this sequence of inlet construction shall be the sole responsibility of the Contractor and no additional payment shall be made or allowed for removing and/or correcting the inlet.
 - Fill obtained through excavation of streets and detention ponds shall be placed on lots and adjacent lots in accordance with the Master Drainage and Grading Plan as directed by the Engineer unless otherwise noted.
 - Soil/Seed & Mulch shall be placed in accordance with applicable City/County standards as well as in accordance with standard and specific conditions in the SWP/MD permit, if applicable. At a minimum this shall include sodding of all pond embankments of a slope 5:1 or steeper 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 at a minimum of 2' from the back of curb and any project area with a slope of 5:1 or steeper.
 - Roadway underdrain has been located on these plans to meet the minimum standards of Hillsborough County. Prior to curb construction, the Geotechnical Engineer shall review the pre-design borings and, along with their field inspection, make a recommendation regarding additional underdrain requirements.
 - Site clearing shall be performed per the approved construction plans and in accordance with the Hillsborough County Natural Resources regulations. Installation and maintenance of the required barricading and erosion control shall be the responsibility of the site development contractor unless otherwise designated.
 - Prior to beginning construction, Contractor shall expose all existing utility inlets to which a tie-in is proposed and have Engineer verify the elevation and adequacy of these inlets.
 - 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.
 - 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.
 - During land clearing 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.
 - 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.

- 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 facilities, 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-sloped 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.

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

- Retain inspection reports and certifications for at least three years.
- 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.
- Releases in Excess of Reportable Quantities.
 - 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:

- 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 release.
- 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 32309-2400; and
- 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



LEGEND

EXISTING	PROPOSED	DESCRIPTION
		STORM DRAINAGE STRUCTURE
		STRUCTURE NO.
		SPOT ELEVATION
		CONTOUR
		FINISHED FLOOR ELEVATION
		DIRECTION OF SURFACE FLOW
		UNDERDRAIN WITH CLEANOUT
		SOIL BORING LOCATION
		CONSTRUCTION PHASE LINE
		MAJOR DRAINAGE AREA ACREAGE
		MINOR DRAINAGE AREA ACREAGE

SCALE: 1" = 50'

ELEVATIONS BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88)
 CONVERSION FROM NAVD 88 TO NGVD 29 = +0.83 FEET
 FEMA FLOOD ZONE INFORMATION IS PER
 FEMA FIRM MAP 12101C 0383F DATED 09-26-2014

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

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

FLORIDA HOSPITAL
 Wesley Chapel

FL HOSPITAL FREE-STANDING E.R.

Hunton Brady
 ARCHITECTS

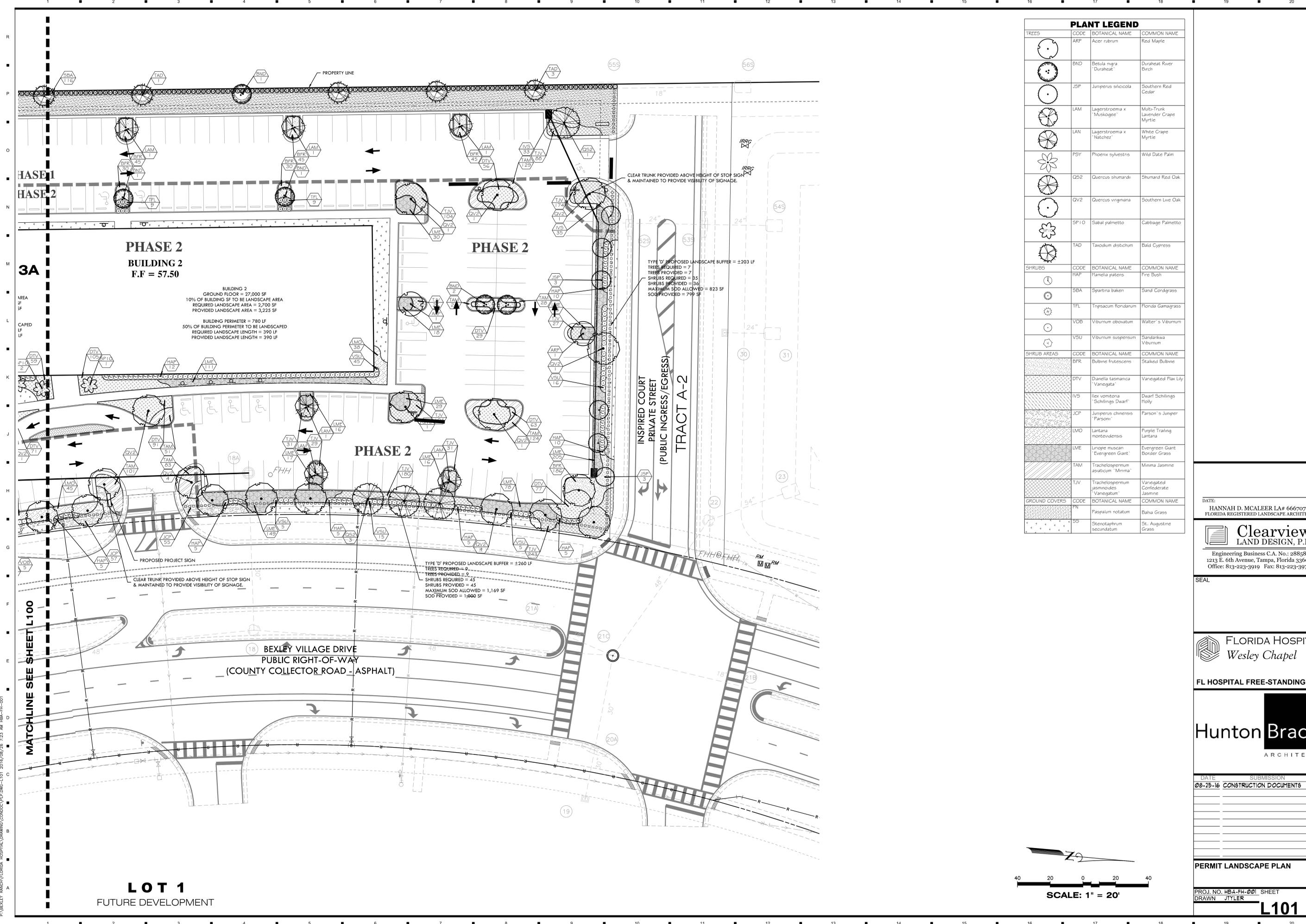
DATE	SUBMISSION	NO.
08-25-16	CONSTRUCTION DOCUMENTS	

PRE-DEVELOPMENT DRAINAGE AREA MAP

PROJ. NO. HBA-FH-001 SHEET
 DRAWN MED

C118

P:\BEXLEY_RANCHO\FLORIDA_HOSPITAL\DRAWING\CONDO\DRAINAGE-0119 PRE-DEVELOPMENT DRAINAGE AREA MAP 2016/08/25 7:43 AM HBA-FH-001



PLANT LEGEND		
TREES		
ARP	Acer rubrum	Red Maple
BND	Betula nigra 'Durahat'	Durahat River Birch
JSP	Juniperus siliocola	Southern Red Cedar
LAM	Lagerstroemia x 'Muskogee'	Multi-Trunk Lavender Crape Myrtle
LAN	Lagerstroemia x 'Natchez'	White Crape Myrtle
PSY	Phoenix sylvestris	Wild Date Palm
Q52	Quercus shumardi	Shumard Red Oak
QV2	Quercus virginiana	Southern Live Oak
SP10	Sabal palmetto	Cabbage Palmetto
TAD	Taxodium distichum	Bald Cypress
SHRUBS		
HAP	Hamelia patens	Fire Bush
SBA	Spartina bakeri	Sand Cordgrass
TFL	Tropaeolum andonum	Florida Gamagrass
VOB	Viburnum obovatum	Walter's Viburnum
VSU	Viburnum suspensum	Sandbaraka Viburnum
SHRUB AREAS		
BFR	Bulbine frutescens	Stalked Bulbine
DTV	Danella lasmanica 'Vanegata'	Variegated Flax Lily
IVS	Ilex vomitoria 'Schlingens Dwarf'	Dwarf Schlingens Holly
JCP	Juniperus chinensis 'Parsoni'	Parson's Juniper
LMO	Lantana montevidensis	Purple Trailing Lantana
LME	Liriodendron muscari 'Evergreen Giant'	Evergreen Giant Border Grass
TAM	Trachelospermum asiaticum 'Minima'	Minima Jasmine
TJV	Trachelospermum jasminoides 'Vanegatum'	Variegated Confederate Jasmine
GROUND COVERS		
FN	Paspalum notatum	Baha Grass
SS	Stenotaphrum secundatum	St. Augustine Grass

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

Clearview
 LAND DESIGN, P.L.L.C.

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

FLORIDA HOSPITAL
 Wesley Chapel

FL HOSPITAL FREE-STANDING E.R.

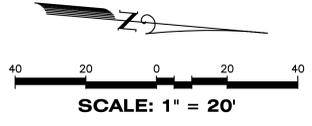
Hunton Brady
 ARCHITECTS

DATE	SUBMISSION	NO.
08-25-16	CONSTRUCTION DOCUMENTS	

PERMIT LANDSCAPE PLAN

PROJ. NO. HBA-FH-001 SHEET
 DRAWN JTYLER

L101



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PLANT SCHEDULE NOTE: The plant schedule represents minimum landscape requirements to meet land development code. Additional landscape may be added.

TREES										
Code	Quantity	Botanical	Common	Cont	Cal	Size	Native	Drought	Remarks	
ARP	15	Acer rubrum	Red Maple	30 gal	2' Cal	6-8' HT x 3-4' SPR	Native	Medium	Single straight central leader. Even branching distributed throughout canopy. Dense foliage. 5' ct.	
BND	10	Betula nigra 'Duraheat'	Duraheat River Birch	30 gal	3' Cal	6-8' HT x 3-4' SPR	Native	Medium	Multi-trunk. 3 trunk min. 5 trunk max. 3' cal. min. each trunk. Straight trunks, equal separation between trunks. No crossing trunks. Even branching distributed throughout each tree.	
JSP	11	Juniperus silicicola	Southern Red Cedar	30 gal	2' Cal	6-8' HT x 3-4' SPR	Native	High	Straight trunk with symmetrical head. Full to ground. Dense canopy with no gaps.	
LAM	10	Lagerstroemia x 'Muskegee'	Multi-Trunk Lavender Crape Myrtle	30 gal	3' Cal	6-7' HT x 3-4' SPR	Non-Native	Medium	3 trunk min. 5 trunk max. Matched in groups. Full head with even branching. Near equal size trunks at 1' cal. min. each.	
LAN	6	Lagerstroemia x 'Natchez'	White Crape Myrtle	30 gal	3' Cal	6-7' HT x 3-4' SPR	Non-Native	High	2 trunk min. 5 trunk max. Matched in groups. Full head with even branching. Near equal size trunks at 1' cal. min. each.	
PSY	3	Phoenix sylvestris	Wild Date Palm	FG	N/A	10' CT	Non-Native	High	Heavy trunk. Straight. Full head.	
QS2	13	Quercus shumardii	Shumard Red Oak	30 gal	2' Cal	6-8' HT x 3-4' SPR	Native	High	Single, straight central leader. Even branching distributed throughout canopy. Well-spaced limbs around entire circumference of tree.	
QV2	44	Quercus virginiana	Southern Live Oak	30 gal	2' Cal	6-8' HT x 3-4' SPR	Native	High	Single, straight central leader. Even branching distributed throughout canopy. Well-spaced limbs around entire circumference of tree.	
SP10	36	Sabal palmetto	Cabbage Palmetto	FG	N/A	10' CT	Native	High	Single, straight trunk with boots.	
TAD	12	Taxodium distichum	Bald Cypress	30 gal	2' Cal	6-8' HT x 3-4' SPR	Native	High	Single, straight central leader with branching distributed evenly throughout the height and circumference of tree. RPG container.	
Qty. %										
TREES: 136										
Drought Tolerant (50% Req.): 136 100%										
Native (30% Req.): 117 86%										
Species Provided: 9										
*136 Trees Required = 8 Species Required										
SHRUBS										
Code	Quantity	Botanical	Common	Cont	Size	Native	Drought	Spacing	Remarks	
HAR	262	Hamelia patens	Fire Bush	3 gal	18' HT	Native	Medium	36' o.c.	Full in pot with dense foliage.	
SBA	319	Spartina bakeri	Sand Cordgrass	3 gal	28-32' HT x 18-20' SPR	Native	High	36' o.c.	Full in pot. Erect blades. Measured to bulk of plant, not to extreme tips or where blades drop.	
VOB	133	Viburnum obovatum	Walter's Viburnum	3 gal	18' HT	Native	High	36' o.c.	'Withlacoochee'	
VSU	129	Viburnum suspensum	Sandankwa Viburnum	3 gal	18' HT	Non-Native	Low	36' o.c.	Full in pot with dense foliage.	
DWARF SHRUBS AND GROUND COVER										
Code	Quantity	Botanical	Common	Cont	Size	Native	Drought	Spacing	Remarks	
BFR	1,747	Bulbine frutescens	Stalked Bulbine	1 gal	10-12' HT x 6-8' SPR	Native	High	18' o.c.	Full in pot.	
DTV	846	Dianella tasmanica 'Variegata'	Variegated Flax Lily	3 gal	12-14' HT x 8-10' SPR	Non-Native	High	24' o.c.	Full in pot. Clean with no discolored or browned foliage. Erect blades.	
IVS	419	Ilex vomitoria 'Schillings Dwarf'	Dwarf Schillings Holly	3 gal	10-12' HT x 10-12' SPR	Native	High	24' o.c.	Full in pot.	
JCP	874	Juniperus chinensis 'Parsonii'	Parson's Juniper	2 gal	10-12' SPR	Non-Native	High	30' o.c.	Full in pot with dense foliage. No bare branches.	
LMG	724	Lantana montevidensis	Purple Trailing Lantana	1 gal	8-10' HT x 12-14' SPR	Non-Native	Medium	24' o.c.	Full in pot. Dense foliage, evenly distributed.	
8%	LME	848	Liriope muscari 'Evergreen Giant'	Evergreen Giant Border Grass	1 gal	10-12' SPR	Non-Native	Medium	24' o.c.	Full in pot.
16%	TAV	1,483	Trachelospermum asiaticum 'Minima'	Minima Jasmine	1 gal	6' HT x 10-12' SPR	Non-Native	Medium	18' o.c.	Full in pot. 6 runners min.
13%	TAM	1,158	Trachelospermum jasminoides 'Variegatum'	Variegated Confederate Jasmine	1 gal	8' HT x 12-14' SPR	Non-Native	Medium	18' o.c.	Full in pot. 6 runners min.
1%	TFL	112	Tripsacum floridanum	Florida Gamagrass	3 gal	14-16' HT x 12-14' SPR	Native	Medium	36' o.c.	Full in pot. Erect blades. Measured to bulk of plant, not to extreme tips or where blades drop.
Qty. %										
SHRUBS, DWARF SHRUBS & GROUND COVER TREES: 9,054										
Drought Tolerant (50% Req.): 8,925 99%										
Native (30% Req.): 2,992 33%										
SOD										
Code	Quantity	Botanical	Common	Cont	Remarks					
PN	11,527	Paspalum notatum	Bahia Grass	sod	Smooth grade with no low spots or bumps. Full coverage. No discoloration between pieces. Fully rolled and no visible gaps between pieces.					
SS	14,091	Stenotaphrum secundatum	St. Augustine Grass	sod	Smooth grade with no low spots or bumps. Full coverage. No discoloration between pieces. Fully rolled and no visible gaps between pieces.					

PASCO COUNTY STANDARD LANDSCAPE NOTES

- Maintenance Responsibility. The County is not responsible for maintenance of any landscaping unless approved through a County maintenance agreement. (LDC 905.2-C.1.a) Florida Hospital (or its successors) will be responsible for maintenance.
- Clear-Sight Triangle. Where a driveway/accessway intersects a road right-of-way or where two (2) road right-of-way intersect, vegetation, structures, and non-vegetative visual screens shall not be located so as to interfere with the clear-sight triangle as defined in this Code or the Florida Department of Transportation, Manual of Uniform Minimum Standards, most recent edition (Green Book), whichever is more restrictive. (LDC 905.2-C.1.b)
- Sustainable Practices. Landscaping shall be installed so that landscaping materials meet the concept of right material/right place. Installed trees and plants shall be grouped into zones according to water, soil, climate, and light requirements. Plant groupings based on water requirements are drought tolerant, natural, and oasis. (LDC 905.2-C.1.c)
- Diversity. A maximum of 50 percent of the plant materials used, other than trees, may be non-drought tolerant. A minimum of 30 percent of the plant materials, other than trees and turfgrass, used to fulfill the requirements of this subsection shall be native Florida species, suitable for growth in the county. (LDC 905.2-C.1.d)
- Diversity. No one plant species of shrubs or ground cover plants, excluding turfgrass, shall constitute more than 25 percent coverage of the overall landscape area. (LDC 905.2-C.1.d.5)
- Quality. All plant materials shall be Florida No. 1 grade per "Grades and Standards for Nursery Plants," Florida Department of Agriculture and Consumer Services (FDACS). (LDC 905.2-C.2.a)
- Avoid Easements. Trees shall not be planted within any easement so as to interfere with the use of that easement, nor under any present or planned overhead utility, nor in any rights-of-way without County approval through the associated review process. (LDC 905.2-C.3.c)
- Mulch shall be used in conjunction with living plant materials so as to cover exposed soil. Mulch shall be installed to a minimum depth of three (3) inches. The mulch should not be placed directly against the plant stem or tree trunk. Mulch shall not be required for annual beds. Stone or gravel may be used to cover a maximum of 20 percent of the landscaped area. (LDC 905.2-C.3.d)
- Quality Practices. All landscaping shall be installed in accordance with standards and practices of the Florida Nursery, Growers, and Landscape Association and the Florida Chapter of the International Society of Arboriculture. (LDC 905.2-C.3.e)
- All portions of a lot upon which development has commenced, but not continued for a period of 30 days, shall be planted with a grass species or ground cover to prevent erosion and encourage soil stabilization. Adequate coverage, so as to suppress fugitive dust, shall be achieved within 45 days. (LDC 905.2-C.3.g)
- All required landscaping shall be maintained in a healthy condition in perpetuity in accordance with this Code. (LDC 905.2-E.2)
- Ongoing maintenance to prevent the establishment of prohibited exotic species is required. (LDC 905.2-E.4)

LANDSCAPE CONSTRUCTION / PERMITTING NOTES

- This Landscape Plan is for permitting purposes only. Additional trees, shrubs, groundcovers, and landscape materials may be added for aesthetic or environmental benefits. Additional landscape shall comply with Pasco County requirements and standards.
- No reference to engineering or survey shall be made from this Landscape Plan.
- No plants from the most current Appendix B and/or Appendix C of Pasco County LDC shall be planted on the project site.
- Shade trees utilized to meet requirements of the code shall have a mature spread of 20' and at time of planting have a min. 2" cal. and min. 6' ht.
- Multi-trunk trees shall be 6' ht. min., have 3 trunks min. with 1" min. cal. per trunk.
- Where overhead utilities exist, understory trees shall be planted with a spacing of 30' o.c. Trees that exceed 25' ht. at maturity shall be planted no closer than 20' to the overhead utility.
- Palm trees may be substituted at a 3:1 ratio, to meet no more than 30% of required shade trees. Phoenix species, excluding Roebellini, may be planted to count for one tree. Palms to meet shade tree requirements shall be 10' c.t. min. and planted in groups.
- Required shrubs shall be 18" ht. min. at time of planting. Shrubs shall obtain 24" ht. within 1 year of planting to form a continuous appearance. Shrubs shall be spaced 36" o.c. max.
- Dwarf varieties of shrubs used to meet code requirements shall be 14" ht. min. at time of planting and spaced 36" o.c. max.

- Groundcovers shall be spaced to provide complete coverage within 1 year of planting.
- Beds shall be kept free of disease, pests, weeds, and other debris.
- Groundcovers and shrubs shall be planted with triangular spacing for optimum growth and fill in of planting bed.
- Any required plant material that is removed or dies shall be replaced within 30 days.
- All trees shall be guaranteed for a period of one year from the date of acceptance.
- Trees used for Tree Replacement shall be in accordance with Pasco County LDC 602.7: All trees used to meet the requirements of tree replacement shall be equal to or greater than two (2) inches in caliper. Multi-trunked trees shall be equal to or greater than three (3) inches in caliper, with a minimum of 3 trunks.
- To provide diversity, trees required shall be provided according to the chart below. Even distribution shall be strived for.

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

- Trees and other landscape material shall be planted in such a manner as not to impede the storm-water run off to or in a ditch, swale or pond and away from the pipes, underdrains and sidewalk without obstructing the maintenance access to the stormwater facility.
- Landscape shall be placed to avoid conflict with existing or proposed overhead and underground utilities.
- All portions of a lot upon which development has commenced but not continued for a period of 30 days shall be planted with a grass species or ground cover to prevent erosion and encourage soil stabilization. Adequate coverage shall be achieved within 45 days.
- All necessary permits for the work, prior to commencement of operations on-site shall be obtained.
- All work within the right-of-way areas shall require a R.O.W. use permit and conform to the standards and specifications of all applicable local and/or state highway jurisdictions.
- All utility locations, existing and proposed shall be located prior to commencement of work. Field adjustments may be made as necessary to avoid utility conflicts.

PERMIT IRRIGATION NOTES

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

SIGHT VISIBILITY NOTES

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

TREE REMOVAL AND REPLACEMENT			
INCHES REMOVED PER SURVEY		REPLACEMENT REQ.	REPLACEMENT INCHES REQUIRED
LIVE OAKS	0	INCHES	REPLACEMENT 1 : 1
OTHER	0	INCHES	REPLACEMENT 1:3
PALMS	0	INCHES	NOREPLACEMENT REQUIRED
PALMS	0	INCHES	NOREPLACEMENT REQUIRED
TOTAL INCHES REMOVED	0		TOTAL REPLACEMENT INCHES REQ. 0

VEHICULAR USE AREA LANDSCAPE			
CODE REQUIREMENT	MEASUREMENT	REQUIRED LANDSCAPE	PROVIDED LANDSCAPE
Interior landscape equal to 10% of VUA area.	150,922 SF x 0.1	15,092 SF	SF
1 shade tree per 200 SF of required interior landscape	15,092 SF / 200 SF	76 TREES (2" cal)	76 TREES (2" cal)

NOTE: LANDSCAPE ISLANDS PROVIDED EVERY 10 SPACES PLANTED WITH 1 SHADE TREE, SHRUBS, DWARF SHRUBS AND GROUND COVER PER ISLAND.

BUFFER AREA LANDSCAPE			
CODE REQUIREMENT	MEASUREMENT	REQUIRED LANDSCAPE	PROVIDED LANDSCAPE
Type A Buffer - 1 tree every 60' o.c. + continuous shrub	952 LF	16 TREES (2" cal) + Continuous Hedge Row (18" Ht. Evergreen)	SF
Type D Buffer - 1 tree every 30' o.c. + 5 shrubs per tree + planting beds	1308 LF	44 TREES (2" cal) + 220 Shrubs (18" Ht.)	76 TREES (2" cal)

MINIMUM LANDSCAPE REQUIREMENTS FOR THIS PROJECT

LDC 905.2.D.3 Vehicular Use Areas

- Minimum 10% of on-site vehicular use area shall be devoted to interior landscaped area.
- A minimum of 1 shade tree shall be provided for every 200 square feet of required interior landscaped area.
- Proposed tree species shall be appropriate for the space available considering the size of the tree, root growth patterns, and water needs at maturity.
- A minimum of 1 landscape island per every 10 parking spaces shall be provided. Landscape islands shall be 100 square feet minimum with a minimum dimension of 8 feet.
- A minimum of 1 shade tree with shrubs, dwarf shrubs, and/or other groundcover plants shall be provided in each landscape island. Other than trees, planting material in islands shall naturally grow no taller than 30" height.
- Trees shall be set back from drive aisles a minimum of 4 feet.
- All rows of parking shall be bordered by terminal landscaped islands, with a minimum width of 8' and a minimum 19' length for a single row, or a minimum 38' length for double rows. Terminal islands shall be planted with shade trees, shrubs, dwarf shrubs, and groundcovers. Where large trees with mature canopy of 45' or more is proposed in a double island, only 1 tree required to be planted.
- Landscape areas shall be protected from vehicular encroachment.

LDC 905.2.D.4 Building Perimeters

- A minimum 50% of building perimeter shall be landscaped. Landscape to be placed to break up wall and pavement expanses and define entryways.
- Landscape areas shall be adjacent to the building and be 5' minimum.
- Landscape area provided shall equal a minimum 10% of proposed building ground-level floor area.

LDC 905.2.E-D Landscaping and Screening Requirements

Type A Buffer: A landscape buffer shall be required adjacent to any Agriculture District.

- Ten (10) feet wide.
- Single row of trees; maximum sixty (60) feet on center.
- Continuous row of evergreen shrubs.

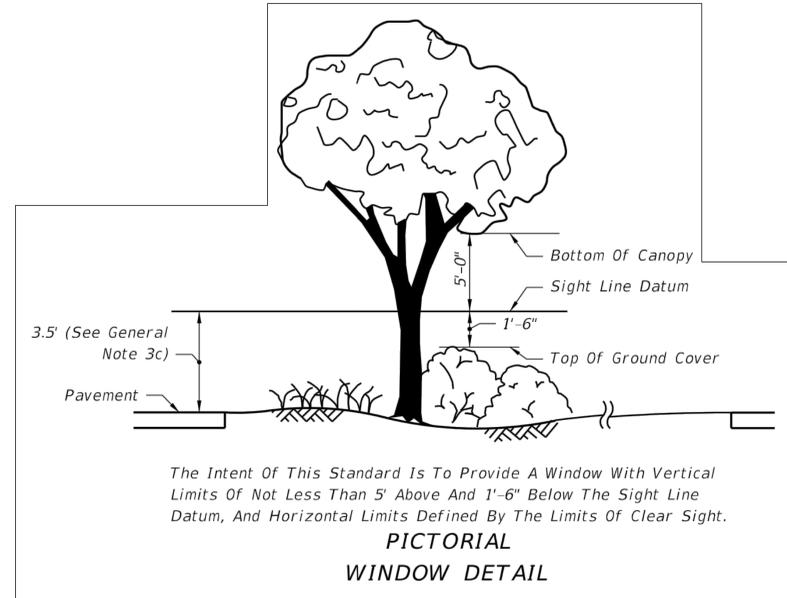
Type D Buffer: A landscape buffer shall be required adjacent to any road right-of-way external to the development project and adjacent to any non-local access roads internal to a development and adjacent to all double frontage lots.

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

BUILDING 1 PERIMETER LANDSCAPE			
CODE REQUIREMENT	MEASUREMENT	REQUIRED LANDSCAPE	PROVIDED LANDSCAPE
50% of building perimeter	827 LF	414 LF	543 LF
Landscape area equal to 10% of proposed building ground floor area	19,517 SF x 0.10	1,952 SF	2,544 SF

BUILDING 2 PERIMETER LANDSCAPE			
CODE REQUIREMENT	MEASUREMENT	REQUIRED LANDSCAPE	PROVIDED LANDSCAPE
50% of building perimeter	780 LF	390 LF	390 SF
Landscape area equal to 10% of proposed building ground floor area	27,000 SF x 0.10	2,700 SF	3,225 SF

NOTE:
137 TOTAL REQUIRED TREES.
30% MAY BE PALMS
30% OF 137 = 41 x 3 = 123 MAXIMUM NUMBER OF PALMS



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

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LAND DESIGN, P.L.L.C.

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FL HOSPITAL FREE-STANDING E.R.

Hunton Brady
ARCHITECTS

DATE: 08-25-16 SUBMISSION NO. CONSTRUCTION DOCUMENTS

PERMIT LANDSCAPE PLAN

PROJ. NO. HBA-FH-001 SHEET
DRAWN: JTYLER

L102