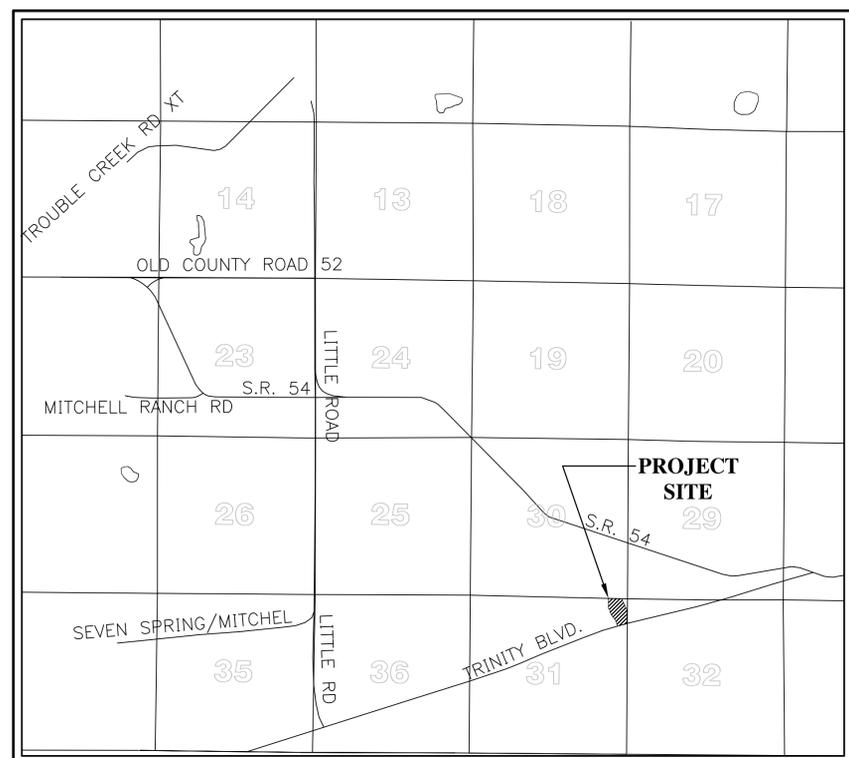


TRINITY ASSISTED LIVING FACILITY

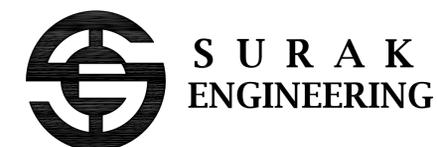
PRELIMINARY SITE / CONSTRUCTION PLANS



VICINITY MAP
PASCO COUNTY, FLORIDA
SECTIONS 31, TOWNSHIP 26 SOUTH, RANGE 17 EAST

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	EXISTING CONDITIONS PLAN
4	PRELIMINARY SITE PLAN
5	DIMENSIONAL LAYOUT (SIGNAGE, PAVEMENT MARKING)
6	SITE DETAILS / PAVEMENT SECTIONS
7	GRADING AND DRAINAGE PLAN
8	UTILITY PLAN
9	SS PROFILE / GRADING SECTIONS
10	DRAINAGE DETAILS
11	DRAINAGE DETAILS
12-14	WATER AND SEWER DETAILS
1 of 1	CONSTRUCTION SURFACE WATER MANAGEMENT PLAN LANDSCAPE PLANS (BY OTHERS) IRRIGATION PLANS (BY OTHERS)

PREPARED FOR:
THE FRESHWATER GROUP, INC.
2020 W. RUDASILL ROAD
TUCSON, ARIZONA 85704
(813) 230-9901



3628 VALENCIA COVE COURT
LAND O'LAKES, FLORIDA 34639
(813) 244 - 5136

Engineering Business Certificate of Authorization No.: 28789

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS, STATE OF FLORIDA IN EFFECT AT THE TIME OF PASCO COUNTY APPROVAL, AND ARE IN COMPLIANCE WITH THE STANDARDS.

NOTE:
THE PLAN HAS BEEN CERTIFIED BY THE DESIGN ENGINEER TO BE IN SUBSTANTIAL CONFORMANCE WITH THE UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE OF STREETS AND HIGHWAYS AS REQUIRED BY SECTION 336.045, FLORIDA STATUTES.

NOTE:
TOPOGRAPHIC INFORMATION SHOWN IN THESE PLANS REFERENCES THE BOUNDARY, TOPO AND TREE SURVEY PREPARED BY BERRY LAND SURVEYING, INC., DAVID L. BERRY RLS #4048, DATED JULY 2013.

TRINITY ASSISTED LIVING FACILITY			
DATE:	BRIAN G. SURAK, P.E. FLORIDA PROFESSIONAL ENGINEER 59064		
DATE:	DECEMBER 18, 2013	JOB NO.	13-FWG-001
ELEVATION BASED ON NGVD 1929 DATUM Conversion from NGVD 29 to NAVD 88 = -0.84 Feet			
03-07-14	SHEETS 3-9, 1 OF 1	BGS	
DATE	SHEET NO.	BY	
REVISIONS		FILE:	CV SHEET 1 OF 14

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

ENGINEER

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

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

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

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

E. Complete and submit a Notice of Termination and certification for developer.

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

Contractor

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

B. During construction, assure compliance with the designed Storm Water Pollution Prevention Plans prepared by Surak Engineering 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) that assure that silted or otherwise polluted storm water is not allowed to discharge from the site during all phases of construction. Stabilization BMP's that may be used include: temporary or permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees and preservation of mature vegetation. Structural erosion and sediment control BMP's that may be used include: straw bale dikes, silt fence, 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 materials wastes. Minimizing off-site tracking of sediments. Making adequate preparations, including training and equipment to contain spills of oil and hazardous materials. Complying with applicable state or local waste disposal, sanitary sewer or septic system regulations and the use of appropriate pollution prevention measures for allowable non-storm water components of discharge.

E. Notify Engineer 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 Surak Engineering. 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.

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.

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

A. Notify Engineer 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 Surak Engineering.

B. Sign a Certification of Storm Water Pollution Prevention Plan and return to Surak Engineering.

C. Notify Engineer when it is time to submit a Notice of Termination as defined under Part E of the Surak Engineering section of the SWPPP. Sign and return to Surak Engineering for submittal to FDEP a Notice of Termination form and certification.

PRE-DEVELOPED SITE INFORMATION:

- Total site acreage: 6.91 AC.
Land use: VACANT
Vegetation: GRASS PASTURE
Receiving waters or municipal separate storm water system: ANCLOTE RIVER
2 Year/24 Hour rainfall depth: 4.9 in
Soil types: MYAKKA AND POMELLA

PROJECT INFORMATION:

- Project type (residential, commercial, etc.)
Anticipated construction sequence is as follows:
1. Complete erosion control installation
2. Clearing and grubbing
3. Earthwork activities
4. Storm water system construction
5. Utility construction
6. Base and pavement construction
7. Final stabilization
Anticipated start date: JANUARY 2014
Anticipated completion date: DECEMBER 2014
Total acres disturbed: 4.2 AC.
Pre-developed "CN" factor: 80
Post-developed "CN" factor: 90
The BMP's listed in Part D of the Contractor section of the SWPPP shall be considered during all phases of construction.

OWNER'S INSTRUCTIONS FOR MAINTENANCE AND INSPECTION OF STORMWATER FACILITIES

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

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

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

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

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

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

Project lies within Flood Zones "X", as shown on Preliminary FIRM Community Panel #12101C 0367F dated July 15, 2013 and FIRM Panel 120230 0370D dated September 30, 1992

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 assure that all construction activities are in compliance with the conditions of all permits and open to the Engineer's review. This permit does not relieve the contractor of his dewatering plan approved by SWFWMD.
All construction, materials and workmanship are to be in accordance with Pasco County Land Development Code 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 16' wide area behind the back of curb shall be solid sodded. The remainder of the proposed rights-of-way to be seeded and mulched if the slope is greater 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.
Suitable fill obtained through excavation of streets and detention ponds shall be placed on lots and adjacent land in accordance with the Master Drainage and Grading Plan as directed by the Engineer. Sod/Seed & Mulch shall be placed in accordance with applicable City/County standards as well as in accordance with standard and specific conditions in the SWFWMD permit, if applicable. At a minimum this shall include sodding of all pond embankments of a slope 4:1 or greater to the NW line, as well as seeding and mulching of the balance of the pond tracts (including pond berms, excluding the area below NW), sodding at a minimum of 16" from the back of curb, and seeding and mulching of any project area with a slope of 4:1 or steeper.
Roadway underdrain has been located on these plans to ensure adequate base protection. Prior to curb construction, the Geotechnical Engineer shall review the predesign borings and, along with their field inspection, make a recommendation regarding additional underdrain requirements.
Site clearing shall be performed per the approved construction plans and in accordance with Pasco County Land Development Code. Installation and maintenance of the required barricading and erosion control shall be the responsibility of the site development contractor unless otherwise designated.
Prior to beginning construction, Contractor shall expose all existing utility inverts to which a tie-in is proposed and have Engineer verify the elevation and adequacy of these inverts.
All subgrade areas 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 alteration and construction activities, it shall be unlawful to remove vegetation by grubbing or to place soil deposits, debris, solvents, construction material, machinery or other equipment of any kind within the dripline of a tree to remain on the site unless otherwise approved by the County.
All erosion control installation and installation coordination shall be the responsibility of the Contractor. Surak Engineering, 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.
Building downspouts to be directed to the on-site storm drainage system.
Future expansion areas, if disturbed, to be seeded and mulched or sodded to prevent erosion to existing pavement surfaces.

STORMWATER NOTES

- If the slumping or sinkhole formation becomes evident before or during construction activities, all work (except mitigation activities) in the affected area shall remain stopped until the county and SWFWMD approve resuming construction activities.
Take immediate measures to ensure no surface water drains into the affected areas. Visually inspect the affected area.
Excavated areas shall be backfilled or grout as required to fill the affected area and prevent further subsidence.
Use soil reinforcement materials in the backfilling operation, when appropriate.
If the affected area is in the vicinity of a water-retention area, maintain a minimum distance of two feet from the bottom of the retention pond to the surface of the liner or core connection.
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.
Discharge of stormwater into depressions with direct or demonstrated hydrologic connection to the Floridian Aquifer shall be prohibited.
All stormwater maintenance areas/easements shall have a clear, operable access.

WORK IN R/W NOTES:

- THE CROSS SLOPE OF THE SHOULDERS SHALL NOT BE STEEPER THAN 0.06' PER FOOT.
THE SLOPE WITHIN THE CLEAR ZONE SHALL NOT EXCEED 6:1
ALL SLOPES WITHIN PASCO COUNTY R/W SHALL NOT EXCEED 4:1.
DITCH BOTTOMS IN COUNTY MAINTAINED R/W SHALL BE A MINIMUM OF 2' WIDE AND FLAT OR GENTLY ROUNDED.

TOPOGRAPHIC INFORMATION SHOWN IN THESE PLANS WAS TAKEN FROM "BOUNDARY, TOPO AND TREE SURVEY" BY BERRY LAND SURVEYING, INC., DAVID L. BERRY RLS #4048, DATED JULY 2013.

PASCO COUNTY STANDARD FIRE PROTECTION NOTES:

- All projects must comply with the Pasco County Fire Hydrant Ordinance No. 46-51.
Fire hydrants shall be installed and in service prior to the accumulation of combustibles onsite.
Per the National Fire Protection Association, NFPA-1, 16.4.3.1.3: where underground water mains and hydrants are to be provided, they shall be installed, completed and in service prior to building construction.
Per NFPA-1, 18.3.4.1: Clearances of 7 1/2 feet in front of and to the sides of the fire hydrant with a 4-foot clearance to the rear must be maintained at all times.
Gated entries will require a siren operating system or a 3M Opticom system for emergency access.
Fire protection shall meet the requirements of the Pasco County code of ordinances, chapter 46, fire prevention and protection and plans shall comply with referenced requirements.

PASCO COUNTY STORMWATER PRE-INSPECTION CERTIFICATE

- Upon notification by the developer of his intent to commence construction, Surak Engineering shall submit a Notice of Intent (NOI) to the Florida Department of Environmental Protection (FDEP) on behalf of the developer. The submission of the NOI implies that: a) The Stormwater Pollution Prevention Plan (SWPPP) shall be completed; b) the contractor and developer have a complete knowledge of the content of the General Construction Permit (GCP) and the SWPPP; c) The contractor will implement all necessary Best Management Practices (BMP's) on site before construction commences; d) The contractor shall inspect the construction site as needed or as established on the SWPPP and; e) that the contractor shall keep the SWPPP and inspections report on site.
The contractor shall obtain a stormwater pre-inspection by calling the Pasco County Stormwater Management Division Customer Service Representative at 727-834-3611 at least 48 hours before construction commences. The contractor shall be present at the time of the inspection to immediately correct any deficiencies found by the stormwater inspector.
An inspector from the Stormwater Management Division will pre-inspect the construction site and will check that the SWPPP and the BMP's are installed as required and that the NOI has been submitted to FDEP. If the construction site passes the inspection, the contractor will be authorized to commence construction. If adjustments are to be made, a new pre-inspection will be required to be successfully completed prior to the commencement of construction activities.

STANDARD SITE PLAN NOTES

- All utility construction shall comply with the Pasco County Standards for Design and Construction of Water and Wastewater Facilities Specifications, latest edition.
All on-site water and sewer facilities shall be owned and maintained by the Owner/Developer.
Installation of fuel storage tanks requires review and approval by the Fire Marshal and the issuance of a separate building permit. Approval of the site plan does not constitute approval of the location of the fuel tanks.
All proposed signs must be applied for, approved and permitted on an individual basis apart from any ultimately approved site plan. Approval of this site plan does not constitute approval of any signs.
Handicap parking spaces will be properly signed and striped in accordance with Florida Statute 316, the Manual on Uniform Traffic Control Devices or other applicable standards.
The architect/engineer certifies that the site plan has been designed in accordance with the Americans with Disabilities Act.
All on-site parking spaces will be signed and striped in accordance with the Manual on Uniform Traffic Control Devices, latest edition. Parking spaces, directional arrows and stop bars shall be striped in WHITE. It shall be the Owner/Developer's responsibility to properly sign and stripe in accordance with applicable standards.
The Owner/Developer acknowledges that this approval does not include any work in the County right-of-way. All right-of-way work work shall be a function of an approved Pasco County Right-of-Way Use Permit.
All clear-sight areas 20'x20' shall be kept free of any signs, plantings, trees, etc. in excess of three and one half (3-1/2) feet in height.
No irrigation system or landscaping shall be installed in any County or State right-of-way without issuance of appropriate Right-of-Way Use Permit.
The Owner/Developer acknowledges that the site and its subsequent building permits shall comply with all rezoning/MPUD/PUD conditions.
All structures, including buffer walls, retaining walls, signs, etc. require building permits.
Vehicular access rights along rear of double-fronted lots shall be dedicated to Pasco County.

PASCO STANDARD SITE PLAN NOTES

- The soil and sediment control devices shall be installed prior to construction, maintained throughout construction and until the site is permanently stabilized. (LDC 902.2)
During construction if something is uncovered, particularly of an archaeological nature, that all work shall stop and that the state archaeological office and the county are notified. (CF Ch. 2 FLU 1.2.14).
Prior to construction, a building permit shall be obtained for all structures that have a footer, regardless of size, through Pasco County Central Permitting. (i.e. including but not inclusive buildings, accessories and retaining walls)(LDC 403)
It is the owner's responsibility to inspect the water retention system on a regular basis
All sodded slopes over 4:1, shall be installed with sod pegs.
All demolition debris shall be removed from the site and legally disposed of.
All first floor elevations (FFE) shall be a minimum of 1' above the base flood elevation or as required by the LDC 1104 16" above the highest crown line of the street lying between the projection of the side building walls (LDC902.2.K)
The 5' wide internal to external sidewalk (bike path) connections is to be ADA compliant.
Any offsite disturbances shall be restored to the pre or better condition. (LDC 902.2)
As applicable, the owner/developer will provide copies of the required permits from the respective governing agencies, prior to issuance of the SOP. (LDC 902.2.C)
All work within the ROW will require a ROW Use permit. (LDC 901).
All onsite underdrain shall be maintained by owner.

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Engineering Business Certificate of Authorization No. 28789
SURA K ENGINEERING
3628 VALENCIA COVE COURT
LAND LAKES, FLORIDA 34639
(813) 244-5136 bsurak@verizon.net
BRIAN G. SURAK P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER

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

- 1) Purpose: These specifications have been developed to provide developers with a uniform system for installation of traffic control devices on the County road system. A uniform system provides for reduced maintenance costs and a high standard of visibility for drivers. All required traffic control devices shall be installed by the developer of the project.
2) Florida State Statute 316.0745:
2.1) Any and all traffic control devices installed on the County road system shall conform to Florida State Statute 316.0745, Uniform Signals and Devices.
2.2) This statute requires that all devices conform to Florida Department of Transportation (FDOT) Specifications. The FDOT has adopted the Federal Manual on Uniform Traffic Control Devices as the standards to be used in the State of Florida.
3) Pavement Markings:
3.1) All pavement markings shall be thermoplastic or preformed tapes; raised pavement markers shall be class "B".
3.2) Pavement markings and raised pavement markers shall be installed on all roads classified other than residential with an ADT greater than 500 vehicles, or if other conditions exist that require pavement markings, (see M.U.T.C.D. Section 3B-1).
4) Traffic Control Signs:
4.1) All sign blanks shall be of a type currently certified by the FDOT for use in the State of Florida.
4.2) All sign faces shall be High Intensity grade and of a type currently certified by the FDOT for use in the State of Florida.
4.3) All signs shall be no less than the standard size as specified by the Federal Manual on Uniform Traffic Control Devices. No minimum size signing shall be accepted. Larger signs shall be used when required by design speed, etc.
4.4) Street name signs shall be 6" on local roads, and 9" on collector and arterial roads. Six inch signs shall have 4" series C letters and 9" signs shall have 6" series B letters. All street name signs on private roads shall be standard 03 street name signs with the colors reversed. White background with green letters and border. At intersections with county maintained roads, the county maintained road shall be green background with white letters and border. Street name sign brackets for 6" signs 30" long or less, or 9" signs 24" long or less, shall have a 5 inch blade or cross. All other street name signs shall be mounted with brackets with a 12 inch blade or 8 inch cross. All street name sign brackets shall be supplied with bolts, set screws will not be accepted.
4.5) On roads to be maintained by Pasco County, all signs other than street names shall be date coded with a yellow reflective label affixed to the back of the sign. It will be punched to show month, day and year of installation (See Sample Label). Alternate label designs providing the date code information may be used if a sample is submitted and approved by Pasco County prior to installation.
Sample Label: size 2" x 4"

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

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

- 5) Certification of materials:
5.1) All traffic control devices and materials shall be on the current FDOT APPROVED PRODUCTS LIST. Proof of certification is required for all traffic control devices.
5.2) A Traffic Control Devices Submittal Data Form shall be submitted for approval prior to installation of any traffic control device. No traffic control devices shall be installed until the certification submittal has been approved by the Traffic Operations Division. These forms are available from the Traffic Operations Division. Copies of the approved Traffic Control Devices Submittal Data Form shall be sent to the contractor and the Engineering Inspections Division.

- 6) Traffic Control Devices Plan:
6.1) A detailed set of plans for required traffic control devices shall be submitted for all road construction, site development, subdivision, and Right-of-Way Use Permits. These plans shall be in conformance with FDOT design standards. All plans shall be signed and sealed by a registered professional engineer in the State of Florida.
6.2) With the submittal of final plans to the Development Review Division, two additional sets of the traffic control plan portion of the entire plan shall be submitted. These two sets will be forwarded to the Traffic Operations Division.

- 7) Cost Estimate: An engineer's cost estimate shall be required for all proposed traffic control devices. The estimate shall be prepared in conjunction with the Traffic Control Devices Submittal Data Form (See Section 5.2).
8) Inspection and Acceptance:
8.1) Upon completion of the installation of the traffic control devices, the contractor shall call the Engineering Inspections Division for an inspection at (727) 847-8154.
8.2) The inspection shall be made by the Engineering Inspection Division within 48 hours (two working days) of the request.
8.3) An inspection report shall be made by the Engineering Inspections Division. Copies of the report shall be sent to the Engineer and the developer.
8.4) No roadway shall be open to the public until all traffic control devices have been inspected and accepted by Pasco County.

NOTES:

- Contractor must contact engineer of record prior to ordering street name signs. Approval of street names cannot 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.

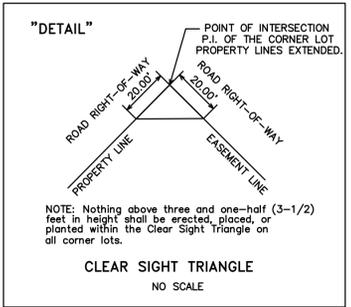
GENERAL NOTES

TRINITY ASSISTED LIVING FACILITY

Table with columns: JOB NO. 13-FWG-001, DESIGN: BGS, DRAWN: BGS, PREPARED FOR: THE FRESHWATER GROUP, INC., DATE: 12-18-13, FILE: GN, SHEET 2 OF 14 SHEETS.

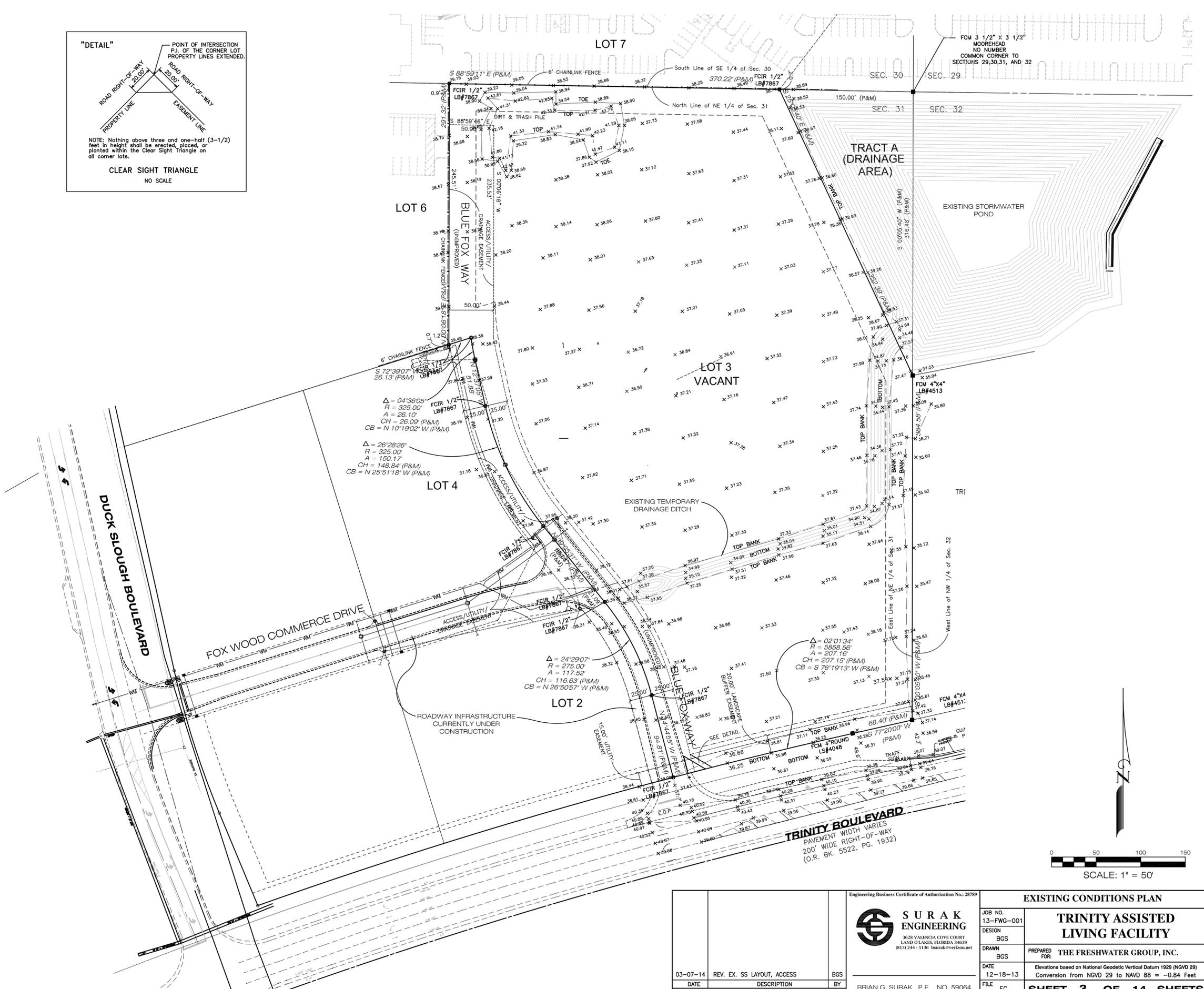
Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

- SURVEYOR'S NOTES:
- 1) THE BEARINGS ARE BASED UPON THE NORTH BOUNDARY LINE OF LOT 3 BEING S 88°59'11" E PER PLAT.
 - 2) THE DESCRIBED PROPERTY APPEARS TO LIE WITHIN FLOOD ZONES "X" AS SHOWN ON THE FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 120230 0370 D PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, DATED SEPTEMBER 30, 1992.
 - 3) DLB SURVEYING, INC. IS NOT RESPONSIBLE FOR OTHER POSSIBLE EASEMENTS, AGREEMENTS, AND MATTERS OF RECORD THAT MAY EXIST THAT WERE NOT INCLUDED IN THE TITLE COMMITMENT.
 - 4) ELEVATIONS SHOWN HEREON ARE REFERENCED TO FLDEP BM#U668, FOUND DISK IN CONCRETE RETAINING WALL, ELEVATION 40.67' NAVD88 (41.51' NGVD29) AND FLDEP BM#V668, FOUND DISK IN CONCRETE MONUMENT ELEVATION 54.64' NAVD88 (55.48' NGVD29). USING VERTCON CONVERSION, BENCHMARKS WERE ADJUSTED PLUS 0.84' TO NGVD29 DATUM. ALL ELEVATIONS SHOWN ARE IN FEET USING THE NGVD29 DATUM.
 - 4) THE LEGAL DESCRIPTION DESCRIBES THE SAME PROPERTY AS INSURED IN THE TITLE COMMITMENT PREPARED BY STEWART TITLE GUARANTY COMPANY, FILE NO. 20130191, EFFECTIVE DATE MARCH 29, 2013.
 - 5) COMMENTS PERTAINING TO SCHEDULE B SECTION II OF THE TITLE COMMITMENT:
EXCEPTIONS 4, 5, 6, 7, 8, 9, 11, AND 12 AFFECT THE PROPERTY SURVEYED BUT CAN NOT BE GRAPHICALLY SHOWN ON THE SURVEY.
EXCEPTIONS 14, 16, AND 17 DO NOT AFFECT OR PERTAIN TO THE PROPERTY SURVEYED.
EXCEPTIONS 10, 13, AND 15 WERE DELETED BY THE TITLE COMPANY.



LEGAL DESCRIPTION:
LOT 3, FOX WOOD COMMERCE PARK, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 66, PAGES 132 THROUGH 137, OF THE PUBLIC RECORDS OF PASCO COUNTY, FLORIDA.

- LEGEND
- A = ARC LENGTH
 - B.M. = BENCHMARK
 - (C) = COMPUTED
 - CB = CHORD BEARING
 - CH = CHORD LENGTH
 - C = CENTERLINE
 - CONC. = CONCRETE
 - (D) = AS PER DESCRIPTION
 - ELEV. = ELEVATION
 - (F) = FIELD
 - F.B. = FIELD BOOK
 - FCIR = FOUND CAPPED IRON ROD #
 - FCM = FOUND CONCRETE MONUMENT
 - F.F. = FINISHED FLOOR
 - FIP = FOUND IRON PIPE
 - FIPC = FOUND IRON PIPE CRIMPED
 - FIR = FOUND IRON ROD
 - (M) = MEASURED
 - N.G.V.D. = NATIONAL GEODETIC VERTICAL DATUM
 - O.R. = OFFICIAL RECORD BOOK
 - (P) = PLATTED
 - PG. = PAGE
 - P.P. = POWERPOLE
 - PAVT = PAVEMENT
 - R = RADIUS
 - (R) = RADIAL
 - R/W = RIGHT OF WAY
 - RNG. = RANGE
 - SCM = SET CONCRETE MONUMENT
 - SCIR = SET CAPPED IRON ROD 1/2" "LB#7867"
 - SEC. = SECTION
 - (TYP) = TYPICAL
 - TWP. = TOWNSHIP
 - +/- = MORE OR LESS
 - ∠ = CENTRAL ANGLE
 - N&D = NAIL AND DISK
 - L/P = LIGHT POLE



03-07-14			REV. EX. SS LAYOUT, ACCESS			BGS		
DATE	DESCRIPTION	BY	REVISIONS					
Engineering Business Certificate of Authorization No: 28789			 SURA K ENGINEERING 3628 VALENCIA COVE COURT LAND LAKES, FLORIDA 34639 (813) 244-5136 bsurak@verizon.net			EXISTING CONDITIONS PLAN TRINITY ASSISTED LIVING FACILITY		
JOB NO. 13-FWG-001			DESIGN BGS			DRAWN BGS		
DATE 12-18-13			PREPARED FOR: THE FRESHWATER GROUP, INC.			Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet		
FILE EC			BRIAN G. SURAK P.E. NO. 59064 FLORIDA PROFESSIONAL ENGINEER			SHEET 3 OF 14 SHEETS		

Preliminary Plan Notes

General Notes:

- Developer:** THE FRESHWATER GROUP, INC
 2020 W. RUDASILL ROAD
 TUCSON, ARIZONA 85704
 PH. (813) 230-9901
 CONTACT PERSON: SCOTT J. SALKILL
- Owner:** ADAM SMITH ENTERPRISES, Inc.
 43309 U.S. Highway 19 N.
 Tarpon Springs, FL 34688
 Ph. (727) 942-2591
 Dan Aldridge
- Engineer:** Surak Engineering, LLC.
 3628 Valencia Cove Court
 Land O'Lakes, Florida 34639
 (813) 244-5136
- Surveyor:** Berry Land Surveying, Inc.
 3822 Lake Padgett Drive
 Land O'Lakes, FL 34639
 Ph. (813) 996-7277
 David L. Berry
- Geotechnical Engineer:** PSI, Inc.
 16550 Scheer Boulevard, Suite 1
 Hudson, FL 34667
 Ph. (727) 868-9526
 Martin E. Williams, P.E.

- Existing zoning: MPUD PETITION #3759, Trinity Communities Phase 1 entitlements, life care (no. of beds)
- Existing Land Use Classification: VACANT PASTURE, Lot 3 of Foxwood Commerce Park, Future Land Use Classification: ROR
- The MPUD zoning petition #3759 was approved on March 25, 1997.
- Proposed development: Assisted Living Facility.
- Water supply to be provided by Florida Governmental Utility Authority.
- Sewage disposal service to be provided by Florida Governmental Utility Authority.
- Electrical power to be provided by Duke Energy.
- Telephone service to be provided by Verizon.
- Gas to be provided by Clearwater Gas Systems.
- Fire protection to be provided by the Pasco County Fire Department. Fire protection will be provided via fire hydrants spaced in accordance with Pasco County standards and Building Sprinklers.
- The uplands are actively grazed bahia pasture.
- Predominant soil types on-site consist of Pomona and Basinger fine sands.
- The owner shall provide for maintenance of all open space, drainage areas, common areas, buffer areas, preservation/conservation areas, recreation areas, wildlife corridor and crossing (unless otherwise approved by Pasco County), and other special purpose areas.
- Existing Contours shown on this plan are based on National Geodetic Vertical Datum of 1929 (NGVD29)
- All internal driveways shall be private.
- All roadway standards to comply with the Manual of Uniform Minimum Standards, State of Florida.
- All water and wastewater facilities to be installed in compliance with FGUA Standards for design and construction of water and wastewater facilities.
- All utility lines shall be installed underground.
- Project lies within Flood Zones "X", as shown on F.E.M.A. - F.I.R.M. Community Panel 120230 0400 D dated September 30, 1992 and draft Pasco County FIRM Panel 12101C0367F, dated July 15, 2013.
- All landscape and sodded areas along collector road will be irrigated.
- This project shall comply with the new Pasco County Tree Protection ordinance No. 01-017 and Pasco County Landscape and Irrigation ordinance No. 02-04, and any subsequent amendments.
- All construction work, including road, drainage and utilities, shall be constructed in accordance with Pasco County design standards and tested in compliance with the Pasco County Engineering Service Department Testing Specifications for construction of roads, storm drainage & utilities.
- If during construction activities any evidence of historic resources, including but not limited to aboriginal or historic pottery, prehistoric stone tools, bone or shell tools, historic trash pits, or historic building foundation, are discovered, work shall come to an immediate stop and the Florida Department of Historic Resources (State Historic Preservation Officer) and Pasco County shall be notified within two working days of the resources found on the site.
- If during the construction activities any evidence of the presence of State and Federally protected plant and/or animal species are 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 site.
- The Trinity ALF project is located in the Anclote River basin. The proposed drainage system will be offsite and will collect, attenuate and provide treatment for the projected runoff generated by the development. The system of interconnected facilities stormwater drainage pipes, attenuation ponds, with littoral zones for water quality treatment, existing and created wetlands has been designed to meet the minimum technical standards of Pasco County and the Southwest Florida Management District. Historical drainage basin patterns will be generally adhered to where practical to accommodate off-site stormwater discharges and stages from adjacent properties. The proposed stormwater drainage system will be owned and maintained by the owner.
- Maximum building height is 60 feet.
- Refuse disposal will be provided via onsite dumpster. The dumpster will be emptied by a private waste disposal service. The dumpster shall be screened with a 6' high masonry wall.
- The Lighting Plan shall be designed to have no light spillage or glare beyond the project site. Lighting used to illuminate any parking area shall be so arranged as to direct and/or shield light away from adjoining residential premises and ROW.
- Off-site stormwater ponds will be irrigated with spray and drip irrigation.
- The fill associated with this project is approximately 10,000 cy. All of this material will be used onsite with no export offsite.
- This project is a private community that will be maintained and operated by the owner. There will not be a Property Owner's Association (POA / HOA) for this project.
- This project is located in Hurricane Evacuation Zone: None

PARKING SUMMARY

PARKING REQUIRED:
 - BEDS: 112 BEDS @ 0.25 SPACES/BED = 28 SPACES
 - EMPLOYEES: 25 EMPLOYEES @ 1 SPACE/EMPLOYEE = 25 SPACES
 - SERVICE VEHICLES: 4 VEHICLES @ 1 SPACE/VEHICLE = 4 SPACES
 TOTAL PARKING REQUIRED: 57 SPACES

PARKING PROVIDED—
 - REGULAR SPACES (9'x20'): 63
 - HANDICAP SPACES(17'x20' INC. AISLE): 4
 TOTAL PARKING PROVIDED: 67 SPACES

BICYCLE PARKING IS PROVIDED AT A RATE OF 0.02 SPACES PER REQUIRED AUTO PARKING SPACES. THE REQUIRED NUMBER OF BICYCLE SPACES IS 2 SPACES (0.02 X 67 = 1.34). TWO (2) BICYCLE SPACES ARE PROVIDED IN THIS PROJECT

DEVELOPMENT SUMMARY

	TOTAL (Ac.)
BUILDING AREA (FOOTPRINT) =	0.82 AC. (11.9%)
PAVEMENT/SIDEWALK AREA =	1.20 AC. (17.4%)
WETLAND & POND AREA =	0.00 AC. (0.0%)
GREEN AREA/OPEN SPACE =	4.89 AC. (70.7%)
TOTAL =	6.91 AC.

BUILDING SUMMARY

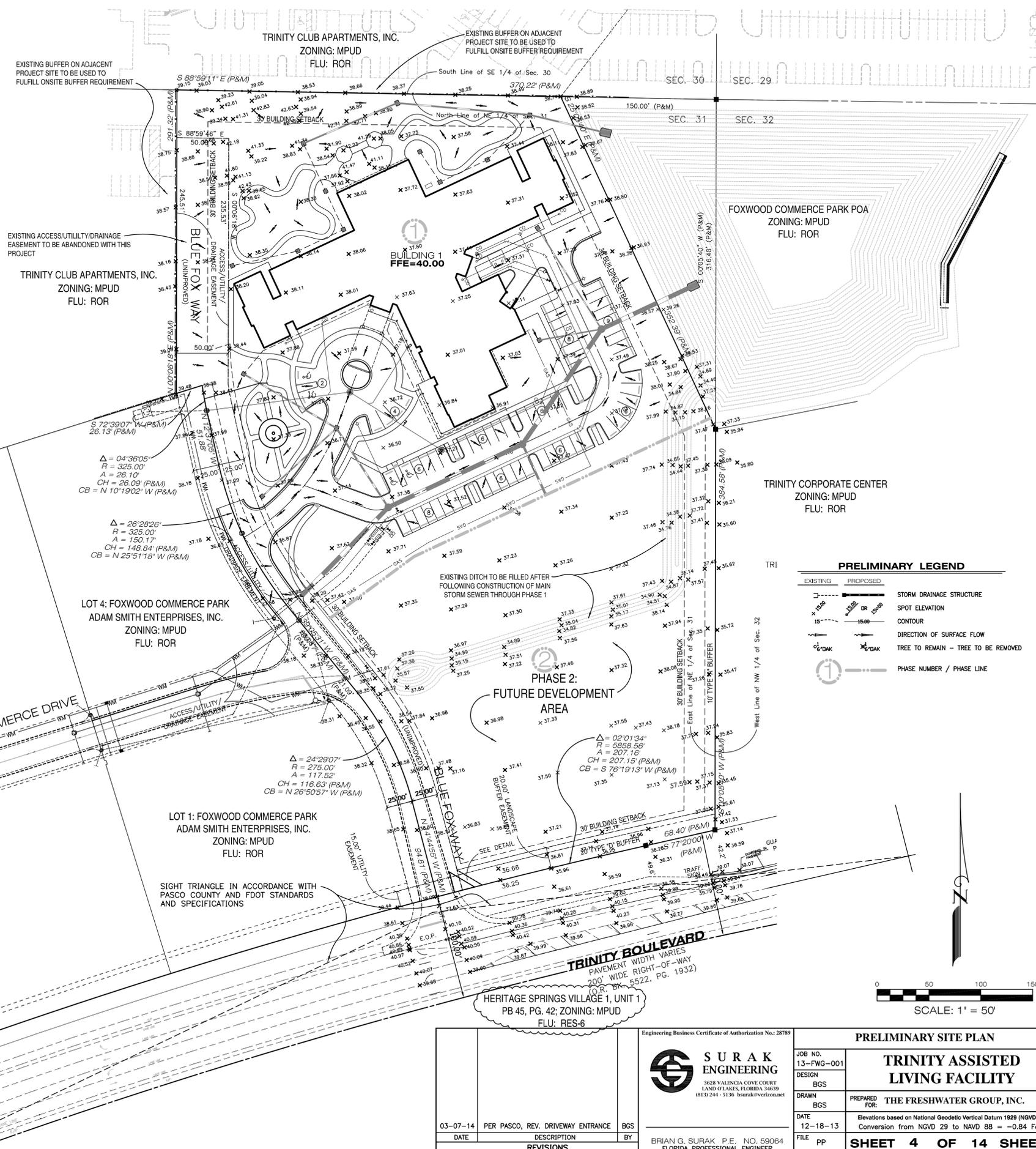
BUILDING HEIGHT = +/-45 FEET (3 STORIES)
 BUILDING FOOTPRINT AREA = 34,558 SF
 BUILDING GROSS FLOOR AREA (GFA) = 84,217 SF
 FLOOR TO AREA RATIO (F.A.R.) = 0.28
 NUMBER OF BEDS PROPOSED = 112 BEDS

LEGAL DESCRIPTION:

LOT 3, FOX WOOD COMMERCE PARK, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 66, PAGES 132 THROUGH 137, OF THE PUBLIC RECORDS OF PASCO COUNTY, FLORIDA.

C-2 STANDARDS

FLOOR-AREA RATIO (FAR) :0.28
 MIN. LOT AREA: 15,000 SF
 MIN. LOT WIDTH/DEPTH: 90 FT
 BUILDING COVERAGE: 50%
 BUILDING SETBACKS:
 - FRONT = 25 FEET
 - REAR = 30 FEET
 - SIDE = 30 FEET
 BUILDING SEPARATION: 15' MIN.
 BUILDING HEIGHT: 60' MAX.



DATE	DESCRIPTION	BY
03-07-14	PER PASCO, REV. DRIVEWAY ENTRANCE	BGS
	REVISIONS	

Engineering Business Certificate of Authorization No: 28789

SURAK ENGINEERING
 3628 VALENCIA COVE COURT
 LAND LAKES, FLORIDA 34639
 (813) 244-5136 bsurak@verizon.net

BRIAN G. SURAK, P.E. NO. 59064
 FLORIDA PROFESSIONAL ENGINEER

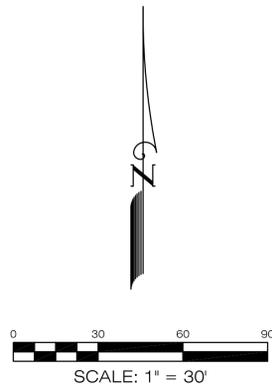
PRELIMINARY SITE PLAN

JOB NO. 13-FWG-001
 DESIGN: BGS
 DRAWN: BGS
 DATE: 12-18-13
 FILE: PP

TRINITY ASSISTED LIVING FACILITY

PREPARED FOR: THE FRESHWATER GROUP, INC.
 Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
 Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

SHEET 4 OF 14 SHEETS

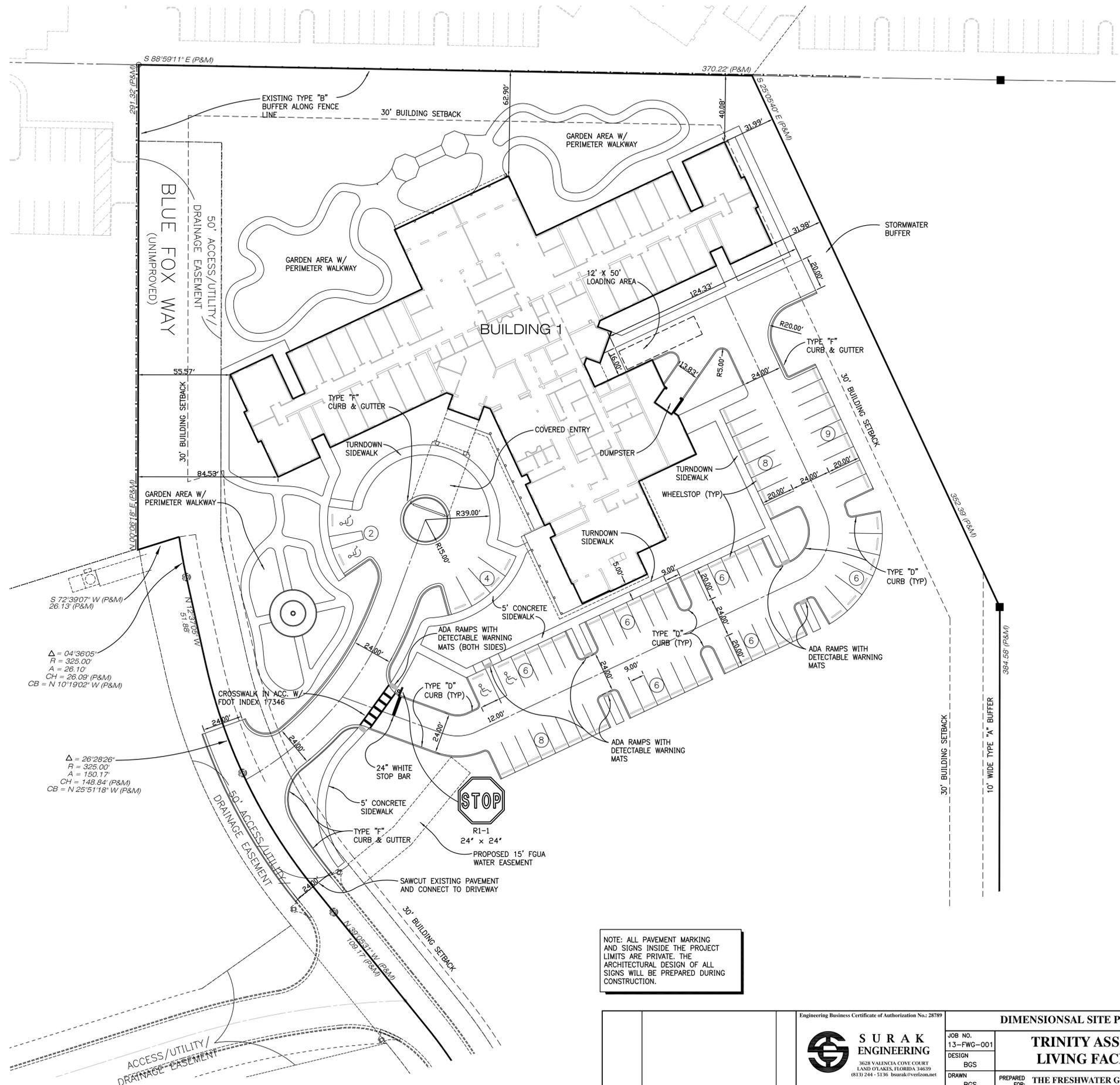


SIDEWALK NOTES

1. 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.
2. ALL 4' WIDE SIDEWALK SHALL HAVE A 5' X 5' PASSING AREA AT INTERVALS NOT TO EXCEED 200 FEET PER ADA GUIDELINES.
3. 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.
4. CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FOOT INDEX 304.
5. DETECTABLE WARNING "DOMES" WITHIN HANDICAP RAMPS SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL.

STANDARD NOTES (PRIVATE ROADWAYS):

1. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN CONFORMANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
2. STREET NAME SIGNS SHALL BE 6" ON LOCAL ROADS AND 9" ON COLLECTOR AND ARTERIAL ROADS. SIX-INCH SIGNS SHALL HAVE 4" SERIES C LETTERS AND 9" SIGNS SHALL HAVE 6" SERIES B LETTERS. ALL STREET NAME SIGNS ON PRIVATE STREETS (NON-COUNTY MAINTAINED) SHALL BE STANDARD D3 STREET NAMES WITH THE COLORS REVERSED, WHITE BACKGROUND WITH GREEN LETTERS AND BORDER. AT INTERSECTIONS WITH COUNTY MAINTAINED ROADS, THE COUNTY MAINTAINED ROAD SHALL BE GREEN BACKGROUND WITH WHITE LETTERS.
3. CONTRACTOR MUST CONTACT ENGINEER OF RECORD PRIOR TO ORDERING STREET NAME SIGNS. APPROVED STREET NAMES CAN NOT BE DETERMINED UNTIL RECORDING OF THE PLAT.
4. EXISTING STRIPING AND OTHER PAVEMENT MARKINGS TO BE REMOVED SHALL BE DONE AS NECESSARY BY HYDROBLASTING. GRINDING IS NOT PERMITTED.



$\Delta = 04^{\circ}36'05''$
 $R = 325.00'$
 $A = 26.10'$
 $CH = 26.09' (P\&M)$
 $CB = N 10^{\circ}19'02'' W (P\&M)$

$\Delta = 26^{\circ}28'26''$
 $R = 325.00'$
 $A = 150.17'$
 $CH = 149.84' (P\&M)$
 $CB = N 25^{\circ}51'18'' W (P\&M)$

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

DATE	DESCRIPTION	BY
03-07-14	DRIVEWAY ENTRANCE	BGS
	REVISIONS	

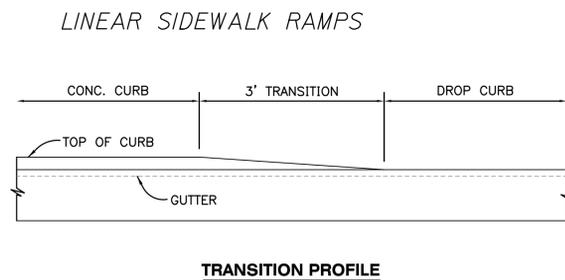
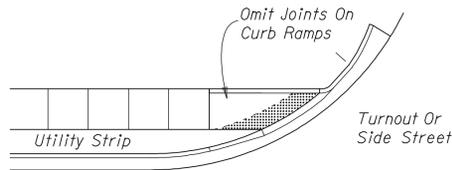
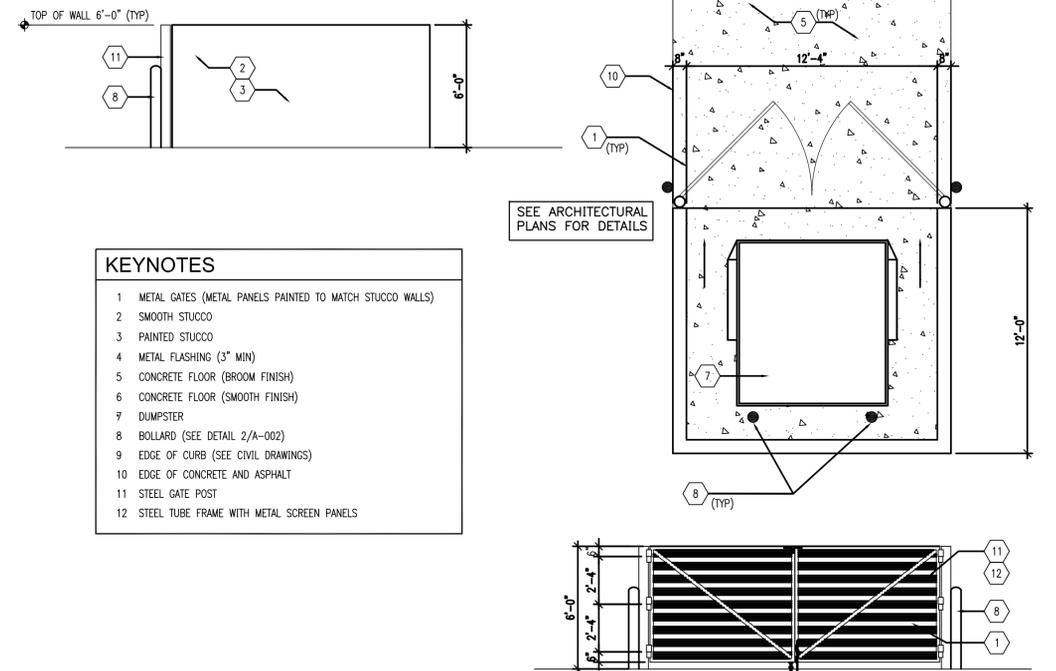
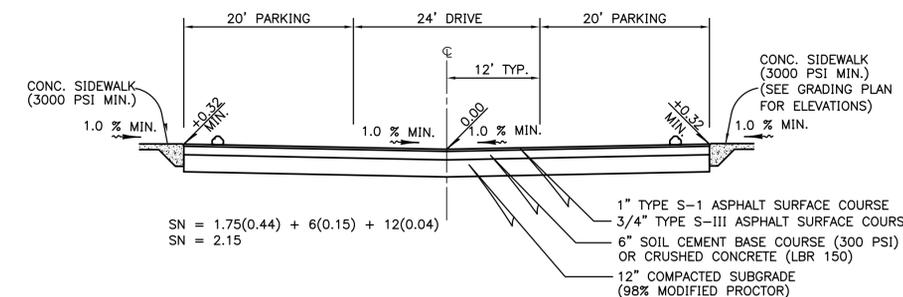
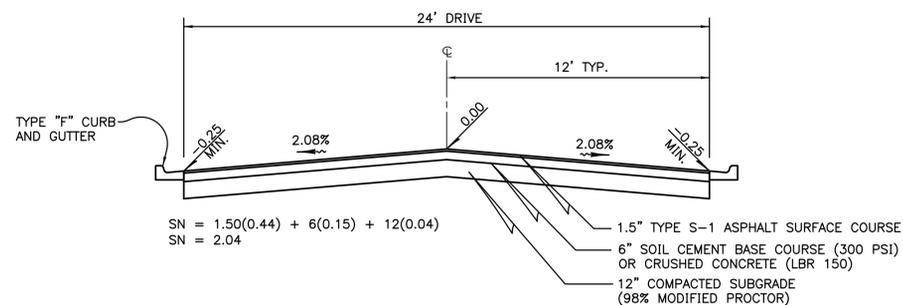
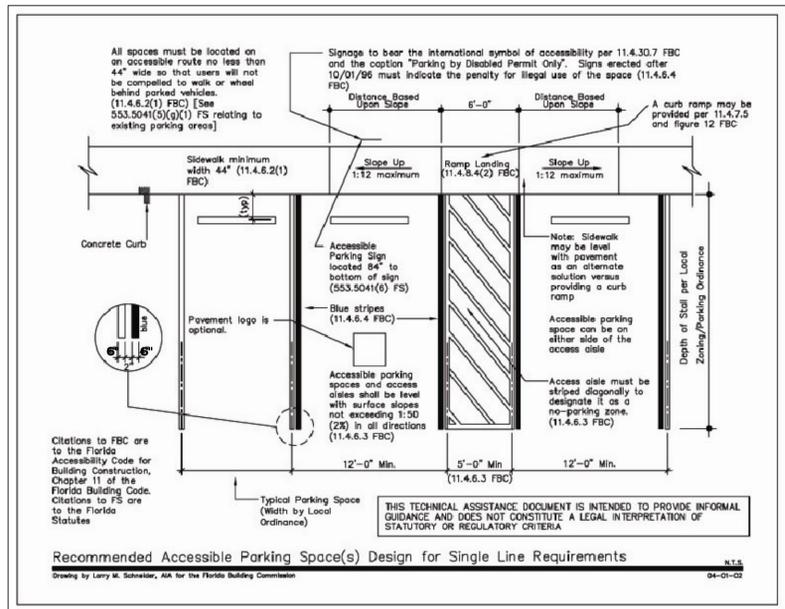
Engineering Business Certificate of Authorization No: 28789



SURAK ENGINEERING
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 LAND O'LAKE, FLORIDA 34639
 (813) 244-5136 bsurak@verizon.net

BRIAN G. SURAK, P.E. NO. 59064
 FLORIDA PROFESSIONAL ENGINEER

DIMENSIONAL SITE PLAN	
JOB NO. 13-FWG-001	TRINITY ASSISTED LIVING FACILITY
DESIGN BGS	PREPARED FOR: THE FRESHWATER GROUP, INC.
DRAWN BGS	DATE: 12-18-13
FILE DM	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
SHEET 5 OF 14 SHEETS	



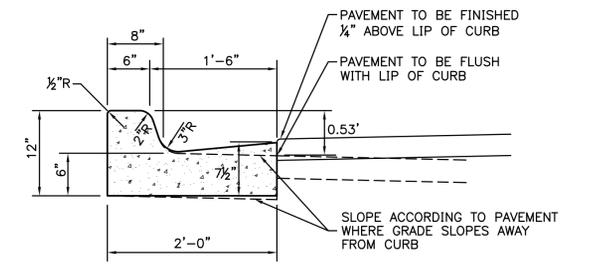
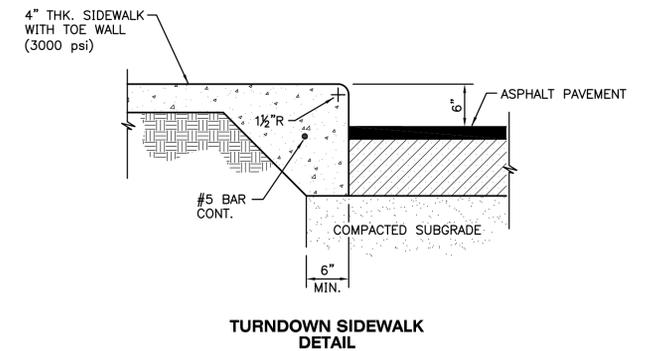
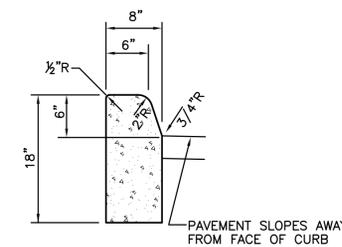
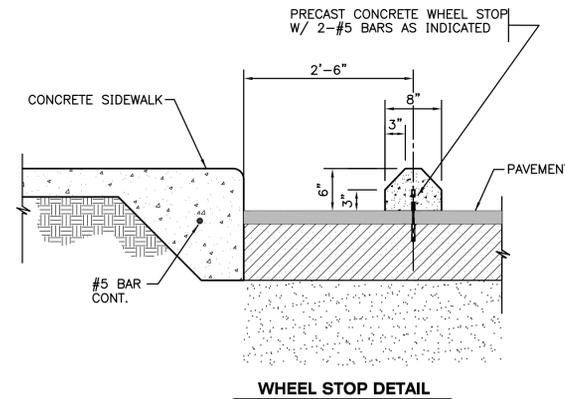
PAVEMENT CONSTRUCTION NOTES

- Pavement wearing surface shall be asphaltic concrete of type and thickness shown in detail and shall meet current Department of Transportation Specifications.
- Pavement base shall be soil-cement, as designated in plans, and shall be compacted to a minimum thickness as shown.
- All Portland Cement Concrete shall have a minimum compressive strength of 3000 p.s.i.
- Subgrade shall be prepared in accordance with FDOT Index No. 505, latest edition. Embankment fills or natural sands to 24-inches below the bottom of the pavement base (if no stabilized subgrade), or to 24-inches below the bottom of stabilized subgrade, shall be sandy soils (A-3 or SP/SP-SM) with typically 15% fines or less passing the No. 200 sieve.
- Subgrade under a soil-cement base shall be proof-rolled to grade, as directed by the Engineer and approved by the Engineer with suitable compaction equipment to achieve a density of ninety-eight (98%) percent Modified Proctor for a depth of twelve (12) inches prior to placing soil-cement base.
- Soil-cement mix design shall be provided a minimum 30 days in advance of placement of base material for approval by the Engineer. The soil-cement product shall be in accordance with PCA standards.
- Soil-cement surface shall be inspected and approved by the Engineer prior to any paving operation.
- Roadway underdrain has been located on these plans to ensure adequate base protection. 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.
- Should no underdrain be specified on the plans the Contractor is to include 1,000 linear feet of underdrain at unit prices for bid purposes.
- All curbs and gutters shall be placed on a foundation of Type "B" stabilized subgrade with a minimum LBR value of 40 (or a minimum FBV of 75) which has been compacted to a minimum density of ninety-eight (98) percent of the maximum density as determined by AASHTO T-180 for a minimum depth of twelve (12) inches.

ALTERNATIVE BASE MATERIAL
CRUSHED CONCRETE

Crushed concrete road base material should meet the following conditions:

- Should be of uniform quality, free of all organics, steel rebar, asphalt debris, and any other deleterious material.
- Should have a minimum Limerock Bearing Ratio (LBR) of 150.
- Single course lifts should not exceed 6-inches (loose).
- Should conform to the gradation chart for graded aggregate base, FDOT Section 204.
- Should be compacted to a minimum of ninety-eight percent (98%) of AASHTO T-180.
- Subgrade shall be placed and constructed for Type "B" stabilization in accordance with FDOT Section 160 and shall have a minimum LBR 40 or greater. Subgrade shall be compacted to the minimum thickness as shown. Subgrade shall be compacted to ninety-eight percent (98%) Modified Proctor per AASHTO T-180.
- All testing referenced above shall, at a minimum, be at the frequency required by the Governing Agency having jurisdiction, or in the absence thereof, by minimum FDOT standards.



DATE	DESCRIPTION	BY
03-07-14	REVISED STRIPE WIDTH ON HC DETAIL	BGS
REVISIONS		

Engineering Business Certificate of Authorization No: 28789

SURAK ENGINEERING

3628 VALENCIA COVE COURT
LAND OAKS, FLORIDA 34639
(813) 244-5136 bsurak@verizon.net

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

SITE DETAILS / PAVEMENT SECTIONS	
JOB NO. 13-FWG-001	DESIGN BGS
DESIGN BGS	PREPARED FOR: THE FRESHWATER GROUP, INC.
DATE 12-18-13	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE RS	SHEET 6 OF 14 SHEETS

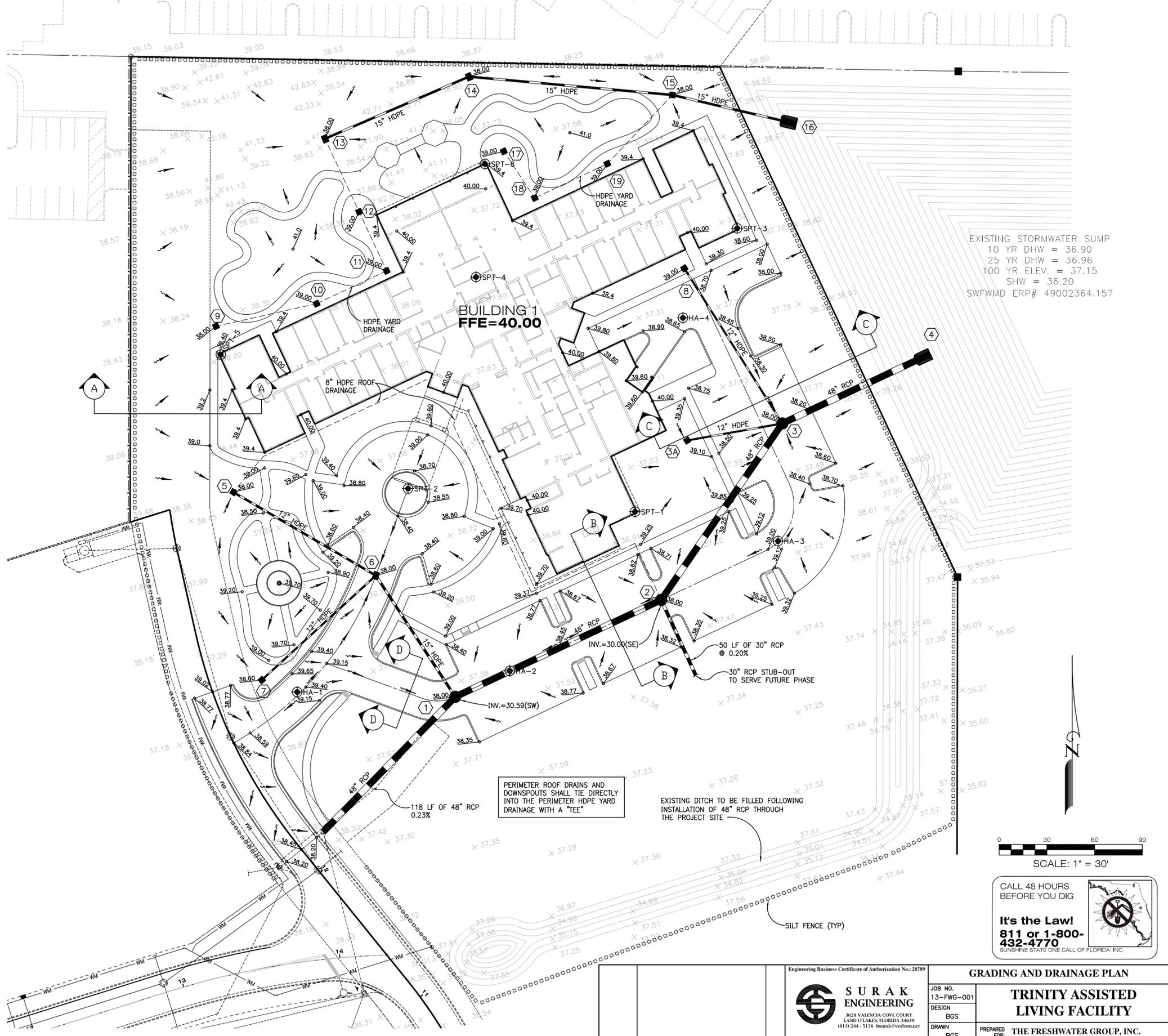
STORM STRUCTURE DATA										
NO.	STRUCTURE		LINE					STRUCTURE LOCATION & REMARKS		
	TYPE & SIZE	TOP ELEV.	TYPE	DIAM. IN.	LENGTH FEET	SLOPE %	INVERT ELEV. UPPER END	INVERT ELEV. LOWER END	FALL IN FEET	
1	TYPE 'D' GTI	38.00	RCP	48	143	0.15	30.50	30.29	0.21	TYPE 'J' STRUCTURE BOTTOM
2	TYPE 'D' GTI	38.00	RCP	48	134	0.15	29.79	29.58	0.21	TYPE 'J' STRUCTURE BOTTOM
3	TYPE 'D' GTI	38.00	RCP	48	105	0.27	29.58	29.30	0.28	TYPE 'J' STRUCTURE BOTTOM
4	MES									EXISTING POND
3A	YARD DRAIN	38.80	HDPE	12	60	1.00	32.00	31.40	0.60	NYLOPLAST
5	YARD DRAIN	38.00	HDPE	12	103	0.25	34.00	33.74	0.26	NYLOPLAST
6	TYPE 'C' GTI	38.00	HDPE	15	91	0.60	33.49	32.95	0.54	
7	YARD DRAIN	38.00	HDPE	12	97	0.27	34.00	33.74	0.26	NYLOPLAST
8	YARD DRAIN	39.00	HDPE	12	115	1.50	34.00	32.28	1.72	NYLOPLAST
9	INLINE DRAIN	38.00	HDPE	12	65	0.26	35.00	34.83	0.17	NYLOPLAST
10	INLINE DRAIN	39.00	HDPE	12	49	0.26	34.83	34.70	0.13	NYLOPLAST
11	INLINE DRAIN	39.00	HDPE	12	41	0.35	34.70	34.56	0.14	NYLOPLAST
12	INLINE DRAIN	39.00	HDPE	12	51	0.44	34.56	34.34	0.22	NYLOPLAST
13	YARD DRAIN	38.00	HDPE	15	98	0.32	34.09	33.77	0.32	
14	YARD DRAIN	38.00	HDPE	15	128	0.38	33.77	33.29	0.48	
15	YARD DRAIN	38.00	HDPE	15	88	0.60	33.29	32.76	0.53	
16	MES									
17	INLINE DRAIN	39.00	HDPE	8	35	0.45	35.33	35.18	0.15	NYLOPLAST
18	INLINE DRAIN	39.00	HDPE	8	50	0.45	35.18	34.95	0.23	NYLOPLAST
19	INLINE DRAIN	39.00	HDPE	8	59	0.80	34.95	34.48	0.47	NYLOPLAST

NOTES:

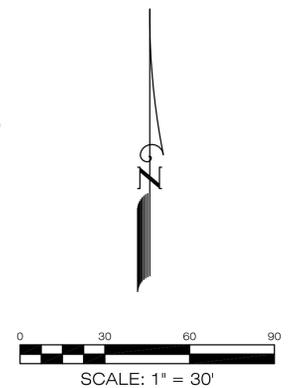
- ALL INLET AND MANHOLE STRUCTURE BOTTOMS ARE SPECIFIED TYPE 'P' UNLESS OTHERWISE NOTED. REFER TO FDOT DESIGN STANDARDS INDEX #200 & #201.
- ALL MITERED END SECTIONS (MES) ARE SPECIFIED FDOT INDEX #272 UNLESS OTHERWISE NOTED.
- ALL PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO THE CENTER OF STRUCTURE OR END OF MES, TO THE NEAREST FOOT.
- ALL HDPE PIPE SHALL HAVE A DOUBLE WALL, SMOOTH BORE.

DRAINAGE LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
		STRUCTURE NO.
		SPOT ELEVATION
		CONTOUR
		FF 39.0
		DIRECTION OF SURFACE FLOW
		UNDERDRAIN WITH CLEANOUT
		STAKED EROSION CONTROL
		SOIL BORING LOCATION (> 20')
		ROAD BORING LOCATION (6' - 8')
		100 YEAR FLOODPLAIN
		EXISTING TREE TO BE REMOVED



EXISTING STORMWATER SUMP
 10 YR DHW = 36.90
 25 YR DHW = 36.96
 100 YR ELEV. = 37.15
 SHW = 36.20
 SWFWMD ERP# 49002364.157



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 811 or 1-800-432-4770
 SUNSHINE STATE ONE CALL OF FLORIDA, INC.

03-07-14 DRIVEWAY, STORM DATA		BGS	 SURA K ENGINEERING 3628 VALENCIA COVE COURT LAND O'LAKE, FLORIDA 34639 (813) 244-5136 bsurak@verizon.net	GRADING AND DRAINAGE PLAN JOB NO. 13-FWG-001 DESIGN BGS DRAWN BGS PREPARED FOR: THE FRESHWATER GROUP, INC. DATE 12-18-13 FILE GDP Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet	
DATE	DESCRIPTION	BY		SHEET 7 OF 14 SHEETS	

Engineering Business Certificate of Authorization No: 28789

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

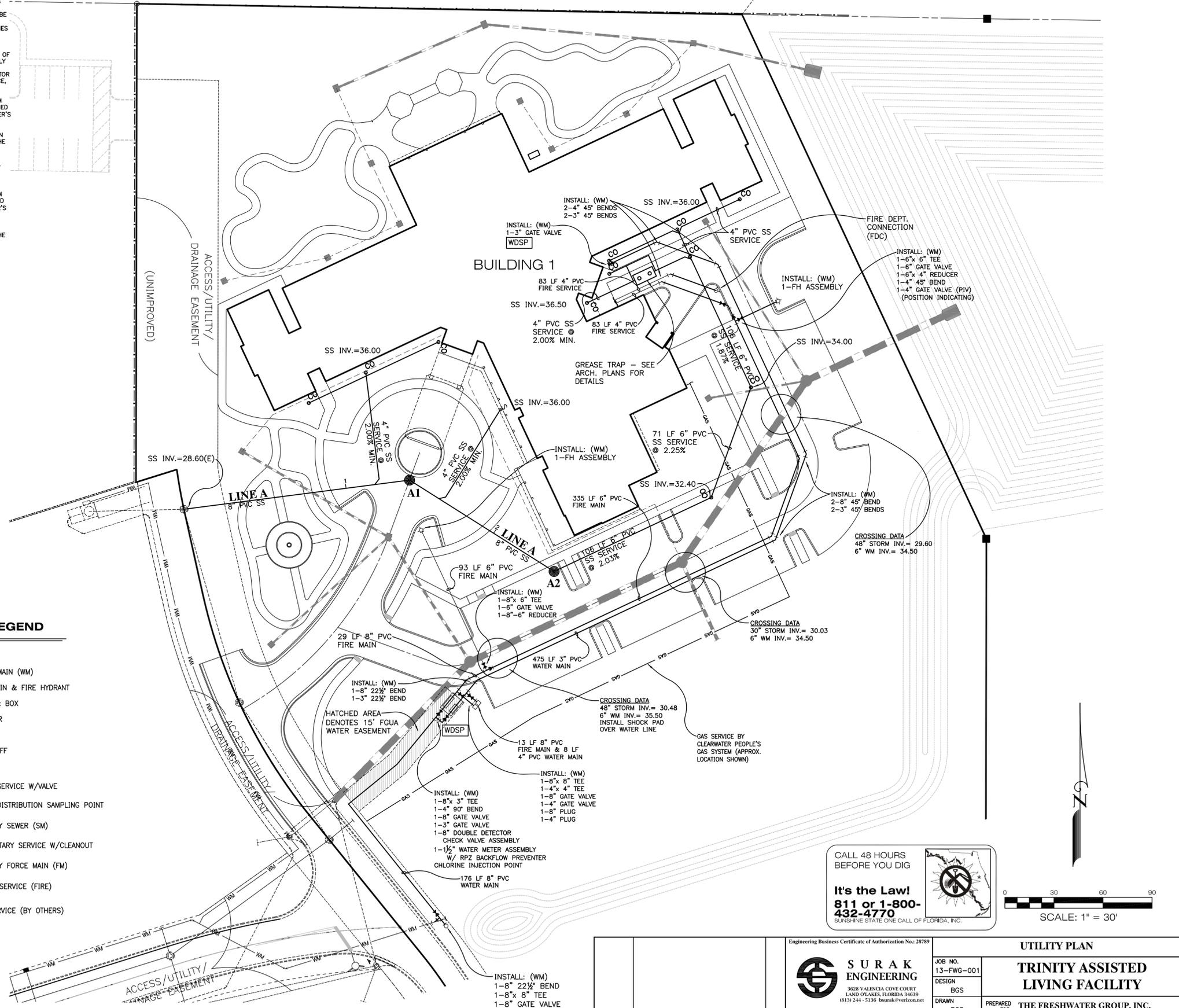
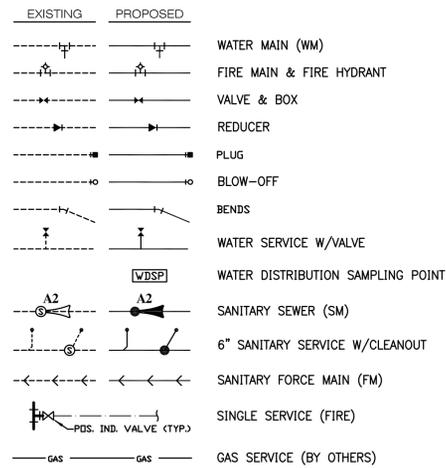
WATER, SANITARY SEWER & REUSE WATER CONSTRUCTION NOTES:

- 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 assure that all construction activities are in compliance with the conditions of all permits and approvals.
- Grass and mulch, or solid sod, all areas in existing rights-of-way disturbed by construction.
- 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 (SSOCF) at 1-800-432-4770 forty eight (48) hours in advance of any excavation.
- All utility materials and workmanship must comply with Standards for Design and Construction of Water, Wastewater and Reclaimed Water Facilities Specs., June 1995 Edition.
- Contractor shall be responsible for obtaining any and all road crossing or utility permits.
- The field-surveyed or reported locations of all existing underground and above-ground utilities known to exist at the time of plans production have been depicted hereon, however conflicts between existing and proposed utilities shall be brought to the attention of the Engineer of Record immediately.
- Contractor shall verify locations and depths of existing water and sewer lines prior to beginning construction.
- The locations and elevation of all service lines are to be determined in the field by Owner and/or Contractor prior to construction of same.
- Fire hydrant, gate valve and blow-off valve assemblies shall consist of all pipe, valves, tees, fittings, and any and all other appurtenances comprising a complete, working unit.
- All fire hydrants shall be flow tested and color coded based on flow results in accordance with Pasco County specifications.
- All DIP pipe shall be in accordance with ANSI A21.52, Class 50 (minimum).
- All PVC water main pipe shall conform to the requirements found in AWWA Standard, latest edition at the time of plan approval and be as follows: Water mains smaller than 2" in diameter shall be Class 1120 or 1220, Schedule 80 and meet the requirements of ASTM D-1785; service pipe less than 4" in diameter shall be PVC Pressure Pipe, Pressure Rate 200, DR 21 per ASTM Standard D-2241; 4"-12" shall be AWWA C-900 CLASS 150 DR 18 PVC; 14"-24" shall be AWWA C-905 CLASS 165 DR 25 PVC.
- All water main pipe and fittings installed under this project shall be color coded or marked in accordance with subparagraph 62-555.320(21)(b)3, Florida Administrative Codes, using blue as the predominant color.
- Reuse water mains, valves, and services shall include the following to avoid confusion with potable system:
 - All reuse piping shall be Purple pigmented.
 - All PVC reuse pipe shall conform to the requirements found in AWWA Standard, latest edition at the time of plan approval and be as follows: 2" shall be SDR 21 PVC; 4"-12" shall be AWWA C-900 CLASS 150 DR 18 PVC; 16"-24" shall be AWWA C-905 CLASS 165 DR 25 PVC.
 - Square top valve boxes for isolation valves in system, with covers marked "Effluent."
 - Purple stripe on curb to identify reuse water services.
 - One inch services for reuse water services.
 - Purple magnetic locating tape, stating "REUSE MAIN BURIED BELOW" over all reuse water mains (18 inches below grade).
 - Reclaimed water service on opposite lot from potable service.
- All aspects of reuse water system must comply with Chapter 62-610, F.A.C., latest edition.
- All 8" sanitary sewer pipe shall be constructed at a 0.40% minimum slope unless otherwise noted.
- Sanitary sewer mains with invert elevations from 0-18 feet below finished grade shall be constructed of SDR 26 PVC pipe. Sanitary sewer mains with invert elevations greater than 18 feet below finished grade shall be constructed of C-900 DR 18 PVC pipe.
- Force mains shall be constructed of C-900 DR 18 PVC pigmented green.
- Adjusting manhole tops to match grade and slope of the finish paving shall be included in the respective contract unit price for manholes, payment of which will constitute full compensation for the construction and completion of the manhole, and no additional payment will be allowed for adjusting manhole tops.
- Bends shall be installed in force main or water main to avoid unforeseen conflicts in existing or proposed structures.
- The joint deflection method shall be used where practical in lieu of installing bends.
- All valve box assemblies located in roadways or parking areas shall be protected from truck traffic by use of 6" thick reinforced concrete pads poured around valve boxes (see detail).
- Connections into existing county-owned systems shall be via wet tap. Wet taps shall be performed by the Pasco County Utilities Services Branch at the developer's expense. Material for wet taps larger than 2" shall be provided and installed by the project contractor. Excavation, backfill and surface restoration shall be the contractor's responsibility.
- Gate valves installed for phasing shall be restrained per current Pasco County standards.
- Off-road utility easements shall be "stabilized" for access by maintenance vehicles.
- Stub-out lines on the water main, force main, and reuse main shall have restrained joints from the main line to the stub-out.
- All PVC pressure pipe shall have a minimum 36" cover.
- Maintain 5' minimum horizontal separation between reuse mains and water mains or force mains.
- All water mains shall be deflected vertically where crossing storm sewer pipe to obtain a minimum vertical distance of 18 inches between the outside of the water main and the outside of the storm sewer. Joints shall be located such that the distance from the storm sewer and water main joint is as great as practical.
- Water mains should be laid at least 10 feet horizontally from any existing or proposed storm sewer.
- At no time should vertical clearance between force main or gravity sewer and water main be less than 18" at crossing of same.
- At no time should horizontal clearance between force main or gravity sewer and water main be less than 10' when same are paralleling each other.
- Sanitary sewers, force and reuse mains and storm sewers should cross under water mains. Sanitary sewers, force and reuse mains and storm sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the invert of the upper pipe and the crown of the lower pipe whenever possible.
- When sanitary sewers, force and reuse mains and storm sewers must cross a water main with less than 18 inches vertical distance, both the sewer and the water main shall be constructed of ductile iron pipe (DIP) at the crossing. (DIP is not required for storm sewers if it is not available in the size proposed.) Sufficient lengths of DIP must be used to provide a minimum separation of 10 feet between any two joints. All joints on the water main within 20 feet of the crossing must be leak free and mechanically restrained. A minimum vertical clearance of 6 inches must be maintained at the crossing.
- Where there is no alternative to sewer and reuse pipes crossing over a water main, the criteria for minimum separation of 18 inches between lines and 10 feet between joints shall be required.
- All crossings shall be arranged so that the sewer and reuse pipes joints and the water main pipe joints are equidistant from the point of crossing (pipes centered on the crossing).
- Where a new pipe conflicts with an existing pipe, the new pipe shall be constructed of DIP and the crossing shall be arranged to meet the requirements above.
- A minimum 10-foot horizontal separation shall be maintained in parallel installations between any type of sewer (including drainage inlets) and water main whenever possible. A minimum 5-foot horizontal separation shall be maintained in parallel installation between reuse water mains and water mains, and between reuse water mains and sanitary sewers whenever possible.
- In cases where it is not possible to maintain a 10-foot horizontal separation between any type of parallel sewer and water main, or a 5-foot separation between reuse main and water main, the water main must be laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer, reuse main, or force main at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer.
- Where it is not possible to maintain a vertical distance of 18 inches or a horizontal distance of 10 feet in parallel installations, the water main shall be constructed of DIP and the sewer, reuse main or the force main shall be constructed of DIP (if available in the size proposed) with a minimum vertical distance of 6 inches. The water main should be above the sewer, reuse main, or force main. Joints on the water main shall be located as far apart as possible from joints on the sewer, reuse main, or force main (staggered joints).
- 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.
- The Pasco County Utilities Services Branch shall not own or maintain water and sewer lines or facilities on-site.
- Sanitary sewer manholes constructed in unproved areas shall be stabilized with 6" thick compacted limestone (LBR 100) for a ten foot radius.
- The Contractor shall install mechanical plugs in the gravity sewer system at the locations indicated on the construction plans. The sanitary sewer plugs shall be installed at the beginning of construction by the Contractor and shall remain in place until the system has been cleaned, inspected and approved by the Utilities Services Branch. When the system has been approved the Contractor shall be responsible for removal of the plugs.

NOTES:

- ALL WATER MAINS TO MAINTAIN 18 INCH MINIMUM VERTICAL CLEARANCE BETWEEN STORM SEWERS AND SANITARY SEWERS. (SEE SANITARY SEWER PROFILES FOR ADDITIONAL CONFLICTS)
- INVERT ELEVATIONS AT WATER MAIN CROSSINGS INDICATE MINIMUM REQUIRED SEPARATION. ELEVATION MAY BE ADJUSTED FOR SEPARATION GREATER THAN 18 INCHES.
- FIRE MAIN TO BE CONSTRUCTED AT 48" COVER UNLESS OTHERWISE INDICATED TO MINIMIZE CONFLICTS WITH POTABLE WATER MAIN. IN ALL CASES WATER MAIN TO BE CONSTRUCTED OVER FIRE MAIN.
- THE DESIGN/SPECIFICATIONS OF THE FIRE SERVICE LINES FROM EACH TEE TO EACH BUILDING INCLUDING THE POSITION INDICATING VALVE SHALL BE BY OTHERS. INSTALLATION OF THESE LINES FROM THEIR ORIGIN TO THEIR TERMINI ONE FOOT ABOVE THE FINISHED FLOOR OF EACH FIRE RISER ROOM SHALL BE BY AN APPROPRIATELY CERTIFIED FIRE SUPPRESSION SYSTEMS CONTRACTOR.
- A SEPARATE PLAN AND PERMIT, ISSUED TO A CONTRACTOR LICENSED BY THE FLORIDA STATE FIRE MARSHALS OFFICE, IS REQUIRED FOR THE INSTALLATION OF UNDERGROUND FIRE LINES.
- CONNECTIONS INTO AN EXISTING COUNTY-OWNED SYSTEM SHALL BE VIA WET TAP. WET TAPS SHALL BE PERFORMED BY THE UTILITIES SERVICES BRANCH AT THE DEVELOPER'S EXPENSE. EXCAVATION, BACKFILL, AND SURFACE RESTORATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. MATERIAL FOR WET TAPS LARGER THAN TWO INCHES SHALL BE PROVIDED AND INSTALLED BY THE PROJECT CONTRACTOR.
- FIRE HYDRANTS SHALL BE FLOW-TESTED AND COLOR-CODED BASED ON FLOW RESULTS.
- ALL UTILITY MATERIAL AND WORKMANSHIP SHALL COMPLY WITH STANDARDS FOR DESIGN AND CONSTRUCTION OF WATER, WASTEWATER, AND RECLAIMED WATER FACILITIES SPECIFICATIONS, JUNE 1995 EDITION.
- CONNECTIONS INTO AN EXISTING COUNTY-OWNED SYSTEM SHALL BE VIA WET TAP. WET TAPS SHALL BE PERFORMED BY THE UTILITIES SERVICES BRANCH AT THE DEVELOPER'S EXPENSE. EXCAVATION, BACKFILL, AND SURFACE RESTORATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. MATERIAL FOR WET TAPS LARGER THAN TWO INCHES SHALL BE PROVIDED AND INSTALLED BY THE PROJECT CONTRACTOR.
- THE UTILITIES SERVICE BRANCH SHALL NOT OWN OR MAINTAIN WATER AND SEWER LINES OR FACILITIES ON SITE, INCLUDING PUMP STATION.

WATER & SEWER LEGEND



CALL 48 HOURS BEFORE YOU DIG

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811 or 1-800-432-4770
 SUNSHINE STATE ONE CALL OF FLORIDA, INC.

SCALE: 1" = 30'

DATE	DESCRIPTION	BY
03-07-14	REV. SS SYSTEM LOCATION	BGS
	REVISIONS	

Engineering Business Certificate of Authorization No: 28789

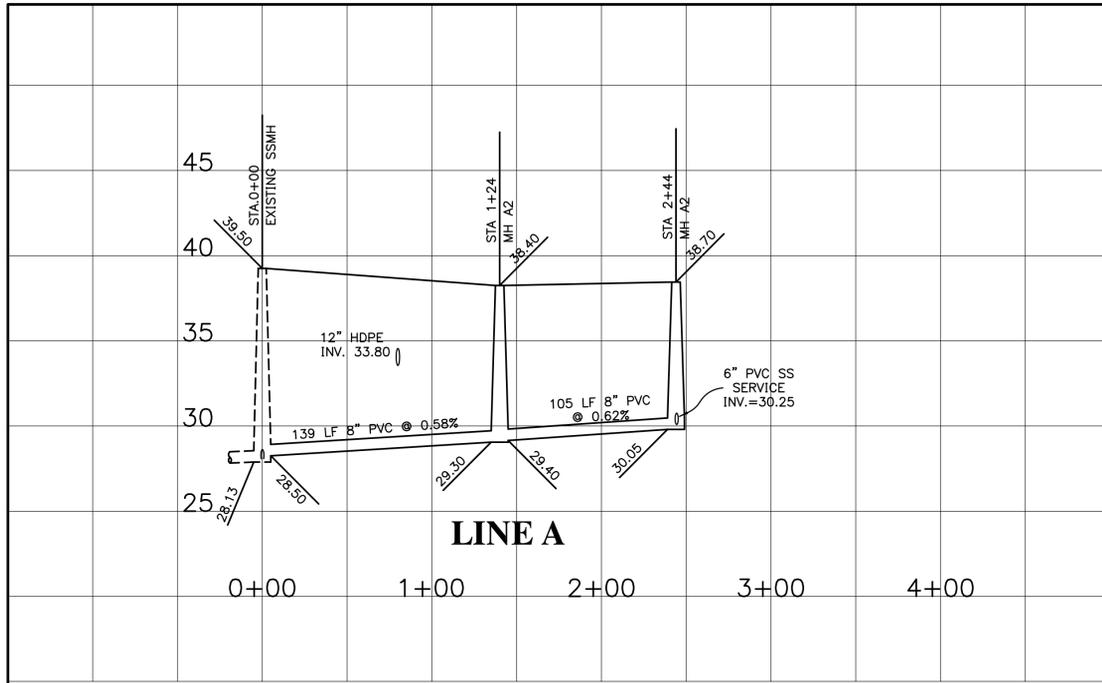
SURAK ENGINEERING
 3628 VALENCIA COVE COURT
 LAND OAKS, FLORIDA 34639
 (813) 244-5136 bsurak@verizon.net

UTILITY PLAN

JOB NO. 13-FWG-001
 DESIGN: BGS
 DRAWN: BGS
 PREPARED FOR: THE FRESHWATER GROUP, INC.
 DATE: 12-18-13
 Elevation based on National Geodetic Vertical Datum 1929 (NGVD 29)
 Conversion from NGVD 29 to NAVD 88 = -0.84 Feet

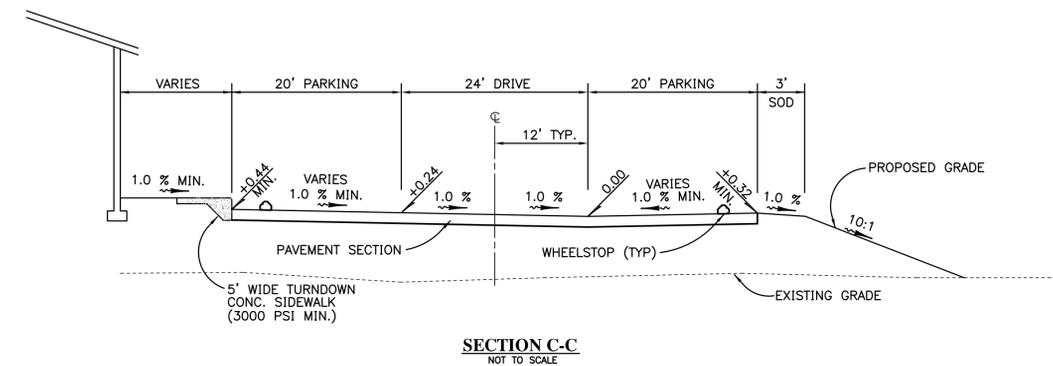
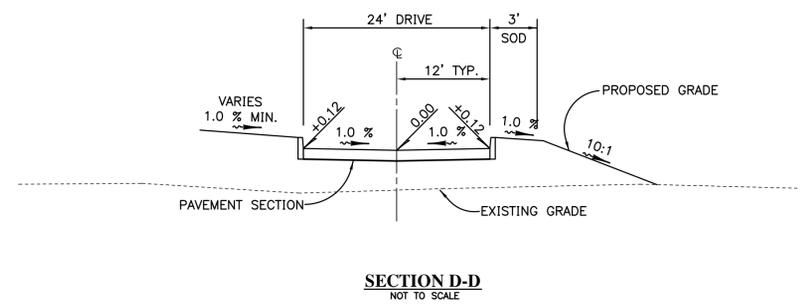
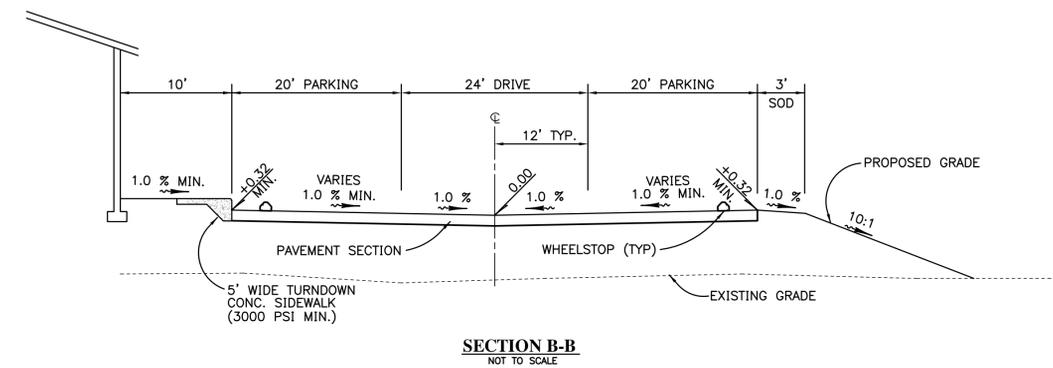
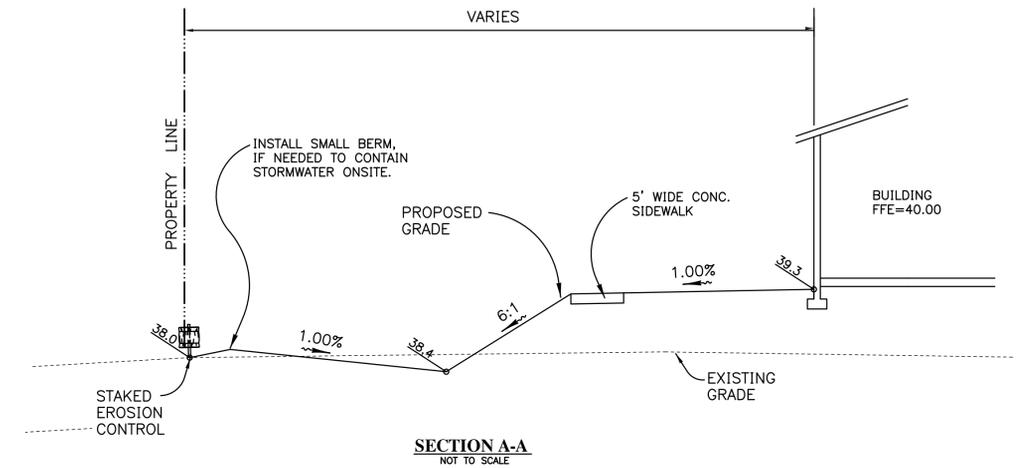
BRIAN G. SURAK, P.E. NO. 59064
 FLORIDA PROFESSIONAL ENGINEER

SHEET 8 OF 14 SHEETS

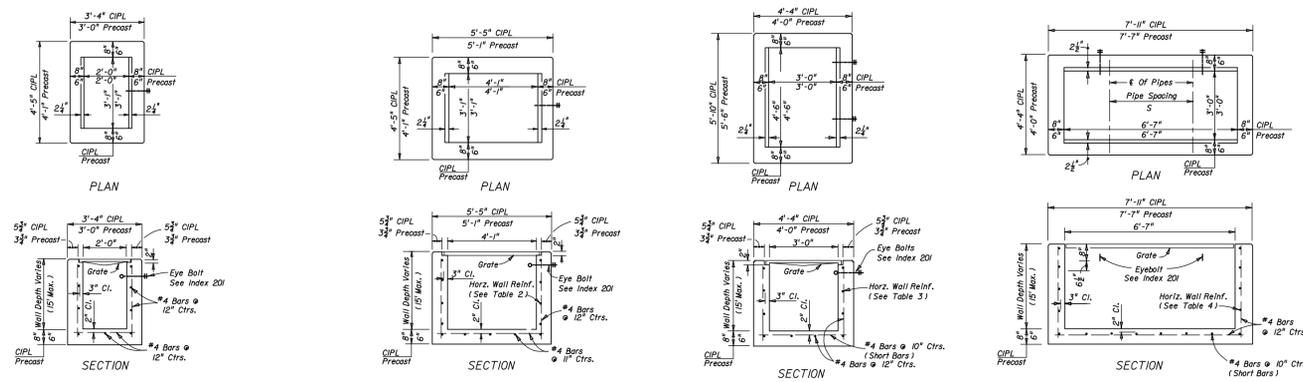


NOTE: ALL SANITARY SEWER PIPE SHALL BE SDR-26 PVC UNLESS OTHERWISE NOTED.

SCALE: 1" = 5' VERTICAL
1" = 50' HORIZONTAL

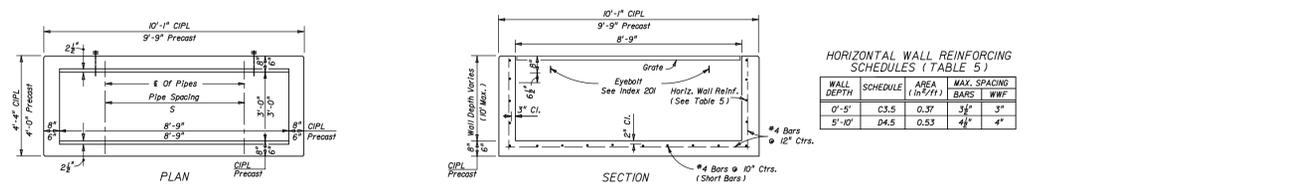


03-07-14			REVISED SS PROFILE			BGS		
DATE	DESCRIPTION	BY						
REVISIONS								
<p>SURA K ENGINEERING 3628 VALENCIA COVE COURT LAND O'LAKE, FLORIDA 34639 (813) 244-5136 bsurak@verizon.net</p>			<p>Engineering Business Certificate of Authorization No: 28789</p> <p>SANITARY SEWER PROFILES / CROSS SECTIONS</p>			<p>JOB NO. 13-FWG-001</p> <p>DESIGN BGS</p> <p>PREPARED FOR: THE FRESHWATER GROUP, INC.</p>		
<p>BRIAN G. SUPRAK P.E. NO. 59064 FLORIDA PROFESSIONAL ENGINEER</p>			<p>DATE 12-18-13</p> <p>FILE SP</p>			<p>Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet</p> <p>SHEET 9 OF 14 SHEETS</p>		



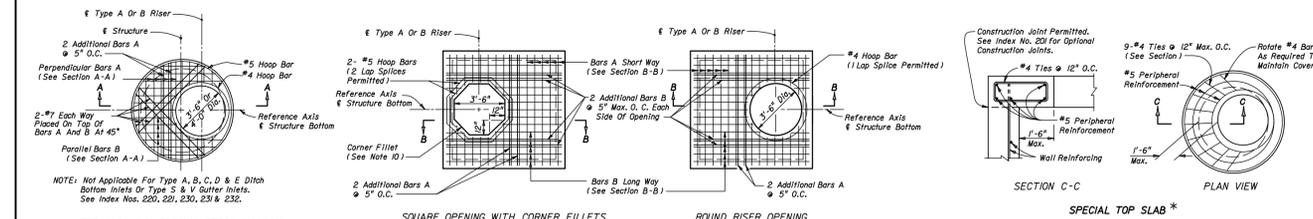
WALL DEPTH	SCHEDULE	AREA (in ² /ft)	MAX. SPACING BARS	WWF
0'-0"	A12	0.20	12"	8"
0'-10"	A6	0.20	6"	5"
10'-15"	A4	0.20	4"	3"
10'-15"	B5.5	0.24	5 1/2"	5"

TYPE C
Recommended Maximum Pipe Size:
2'-0" Wall - 18" Pipe
3'-1" Wall - 24" Pipe (18" where top 18" pipe enters a 2'-0" wall)



WALL DEPTH	SCHEDULE	AREA (in ² /ft)	MAX. SPACING BARS	WWF
0'-5"	C3.5	0.37	3 1/2"	4"
5'-10"	D4.5	0.53	4 1/2"	4"

TYPE H (4-GRATE INLET)
Recommended Maximum Pipe Size:
3'-0" Wall - 24" Pipe
8'-9" Wall - 1'-3" Pipe
8'-9" Wall - 2'-30" Pipe (1'-3" & 3'-5")



Structure / Riser Diameter (feet)	Cast-in-Place Items			Precast Items		
	Riser Bottom (inches)	Class II Concrete (in ² /ft)	ASTM C476 (inches)	Riser Bottom (inches)	Class II Concrete (in ² /ft)	ASTM C476 (inches)
P 3'-6"	6	8	0.20	6	8	0.20
P 4'-0"	6	8	0.20	6	8	0.20
J 5'-0"	-	8	0.20	-	8	0.20
J 6'-0"	-	8	0.20	-	8	0.20
J 7'-0"	-	8	0.20	-	8	0.20
J 8'-0"	-	8	0.20	-	8	0.20
J 10'-0"	-	10	0.40	-	10	0.40
J 12'-0"	-	10	0.40	-	10	0.40

TABLE 1 NOTES:
 ** Provide 0.20 sq. in./ft. of each face, 12" max. bar spacing.
 *** Modified minimum wall thickness.
 **** Min. total circumferential reinforcement for continuous steel hoops.
 A₂ = 0.50 sq. in. for riser section height equal to or less than 2'-0" (1'2" hoop min.).
 A₂ = 0.75 sq. in. for riser section height more than 2'-0" up to 4'-0" (1'2" hoop min.).
 Areas of reinforcing for precast items are based on Grade 60 reinforcing.
 No reduction in the area of reinforcement is allowed for welded wire fabric in Table 1.
 Area of vertical reinforcing may be reduced in accordance with ASTM C476.

- GENERAL NOTES**
- Standard structure bottoms 4'-0" diameter and smaller (Alt. A) and 3'-6" square (Alt. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted for all structures. Round risers are designated Type A, square risers are designated Type B.
 - Walls of circular structures (Alt. A) constructed in place may be of brick or reinforced concrete. Precast and rectangular structures (Alt. 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 C476 (see modified wall thicknesses in Table 1).
 - Top and bottom slab thickness and reinforcement are for precast and cast-in-place construction. All concrete shall be of Class II concrete, except use Class III concrete when shown in the Plans, for structures located in extremely aggressive environments. Concrete as specified in ASTM C476 (4000 psi) may be used in lieu of Class II concrete for precast items manufactured in accordance with Specifications Section 449.
 - All reinforcement shown is ASTM A615/A616M Grade 60 steel, deformed bar. Equivalent area Grade 40 steel or equivalent area ASTM A615 (smooth) or ASTM A616 (deformed) welded wire fabric may be substituted according to Index No. 200, unless otherwise noted.

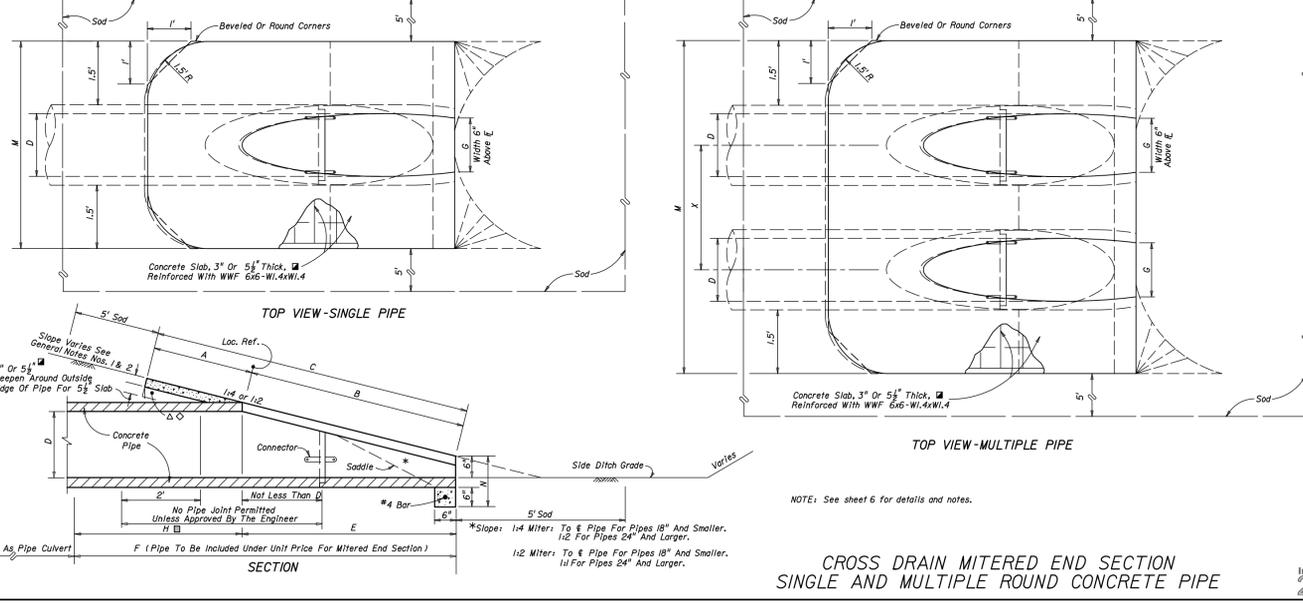
SQUARE & RECTANGULAR STRUCTURES (ALTERNATE B) - TABLE 2

Type	Wall Depth (feet)	Max. Depth (ft.)	Reinforcing (ft.)	Precast (ft.)
P	3'-6"	40	6 Riser 6 Bottom	6
J	4'-0"	40	6 Riser 6 Bottom	6
J	5'-0"	22	-	6
J	6'-0"	15	-	6
J	5'-0" to 9'-0"	40	8	8
J	10'-0"	26	8	8
J	≥ 10'-0"	40	10	10

TABLE 2 NOTES:
See Table 8 for Reinforcing Schedule.

DITCH BOTTOM INLET TYPES C, D, E & H

D	X	A	B	C	E	F	G	H	M				N				SODDING (SQ. YDS.)				
									Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	
15"	2'-7"	1.92	2.18	4.0	2.06	5'	1.22	2.9	4.63	7.21	9.79	12.37	1.09	0.38	0.58	0.77	1.06	21	24	27	30
18"	2'-11"	1.99	2.74	4.71	2.56	6'	1.41	3.4	4.92	7.75	10.58	13.42	1.21	0.44	0.65	0.87	1.09	22	25	28	31
24"	3'-5"	2.06	3.85	5.51	3.56	7'	1.73	3.4	5.50	8.92	12.33	16.75	1.25	0.54	0.83	1.12	1.42	24	28	32	35
30"	4'-3"	2.15	4.95	7.10	4.56	8'	2.00	3.4	6.08	10.33	14.58	18.83	1.29	0.66	1.03	1.50	1.91	26	31	35	40
36"	5'-1"	2.24	6.08	8.33	5.56	9'	2.24	3.4	6.67	11.75	16.53	21.92	1.33	0.81	1.38	1.95	2.34	28	34	39	45
42"	6'-0"	2.34	7.29	9.56	6.56	10'	2.49	3.4	7.25	13.25	19.25	25.25	1.38	0.97	1.70	2.45	3.19	30	37	43	50
48"	6'-9"	2.43	8.53	10.78	7.56	11'	2.65	3.4	7.83	14.88	21.53	28.08	1.42	1.13	2.04	2.93	3.84	32	39	47	54
54"	7'-8"	2.52	9.84	11.96	8.56	12'	2.83	3.4	8.42	16.58	23.75	31.42	1.46	1.31	2.44	3.58	4.72	34	42	51	59
60"	8'-6"	2.62	10.58	13.18	9.56	14'	3.00	4.4	9.00	17.50	25.00	34.50	1.50	1.51	2.89	4.28	5.68	36	46	55	64
66"	9'-5"	2.71	11.68	14.39	10.56	15'	3.18	4.4	9.58	18.75	27.08	37.08	1.54	1.69	3.25	4.84	6.43	38	49	59	69
72"	10'-0"	2.80	12.80	15.60	11.56	16'	3.30	4.4	10.16	20.16	30.16	40.16	1.58	1.89	3.74	5.59	7.45	40	51	62	73



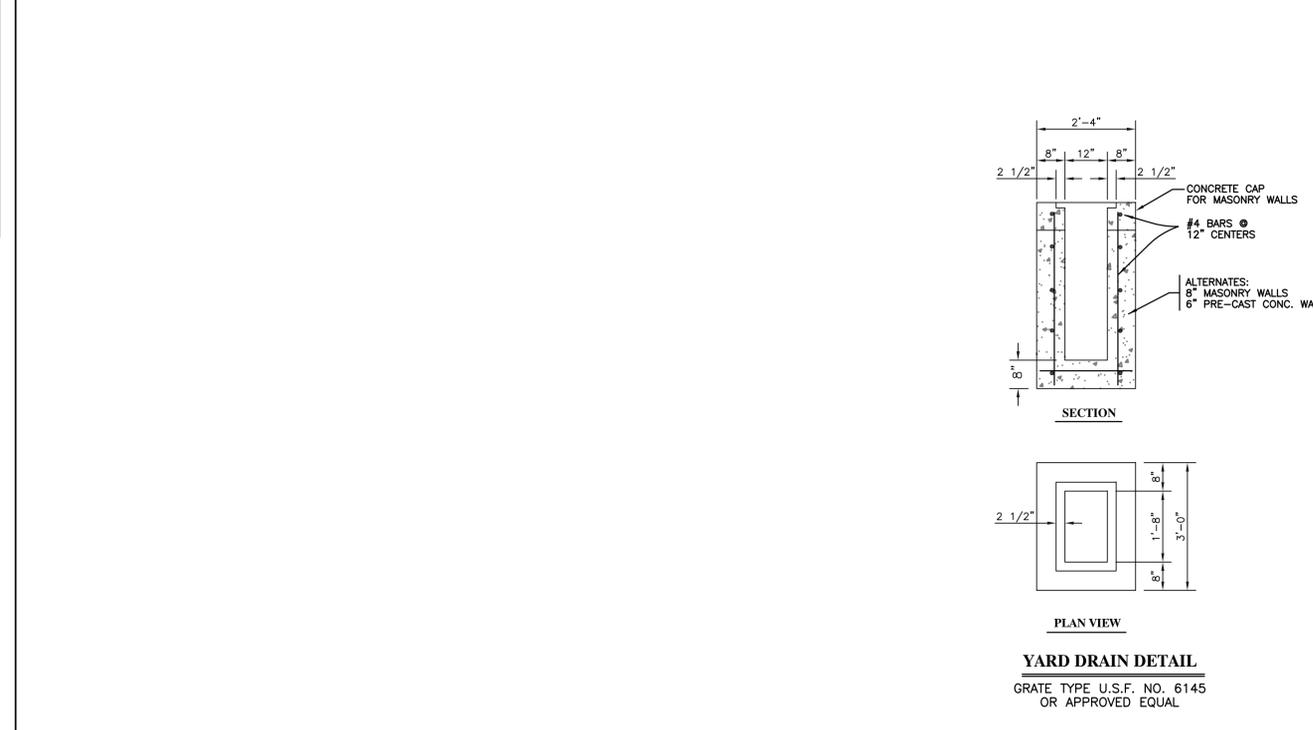
CROSS DRAIN MITERED END SECTION SINGLE AND MULTIPLE ROUND CONCRETE PIPE

NOTE: See sheet 6 for details and notes.

*Slope: 1/4 Miter: To 6" Pipe For Pipes 18" And Smaller, 1/2 For Pipes 24" And Larger.
1/2 Miter: To 6" Pipe For Pipes 18" And Smaller, 1/4 For Pipes 24" And Larger.

Sheet No. 1 of 3
Index No. 200

STRUCTURE BOTTOMS TYPE J AND P



Engineering Business Certificate of Authorization No. 28789

SURAK ENGINEERING
3628 VALLENCA COVE COURT
LAND OAKS, FLORIDA 34639
(813) 244-5136 bsurak@verizon.net

DRAINAGE DETAILS

JOB NO. 13-FWG-001

DESIGN: BGS

DRAWN: BGS

PREPARED FOR: THE FRESHWATER GROUP, INC.

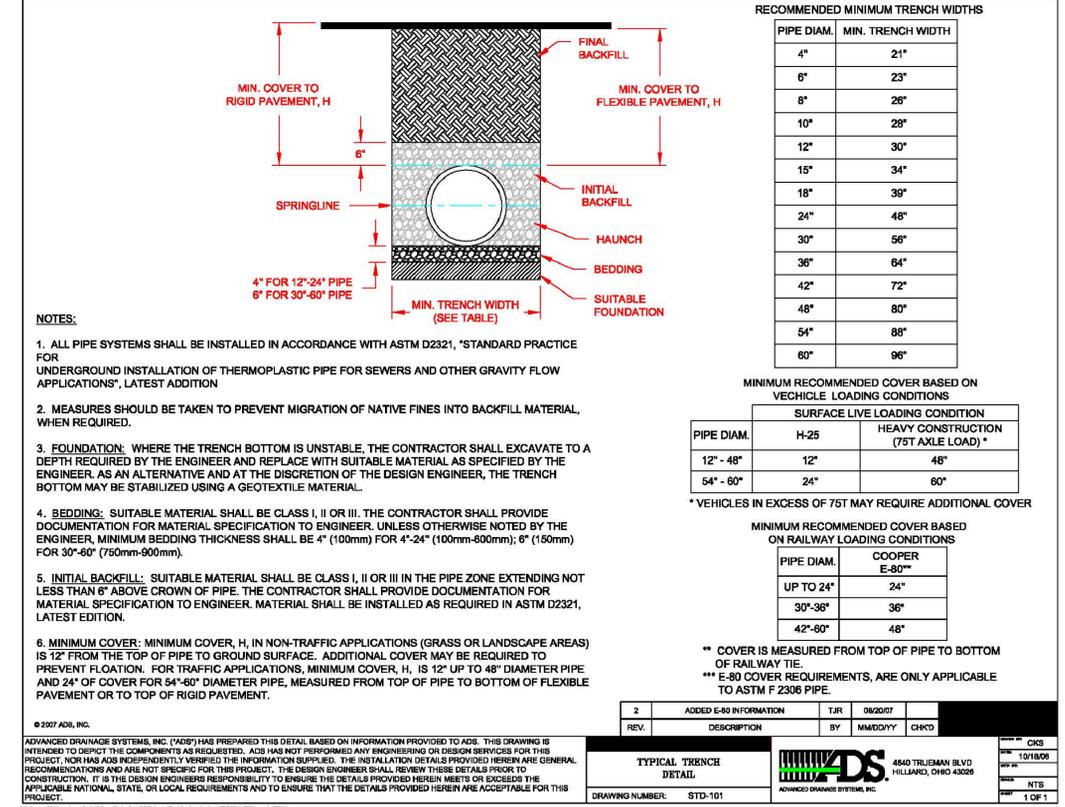
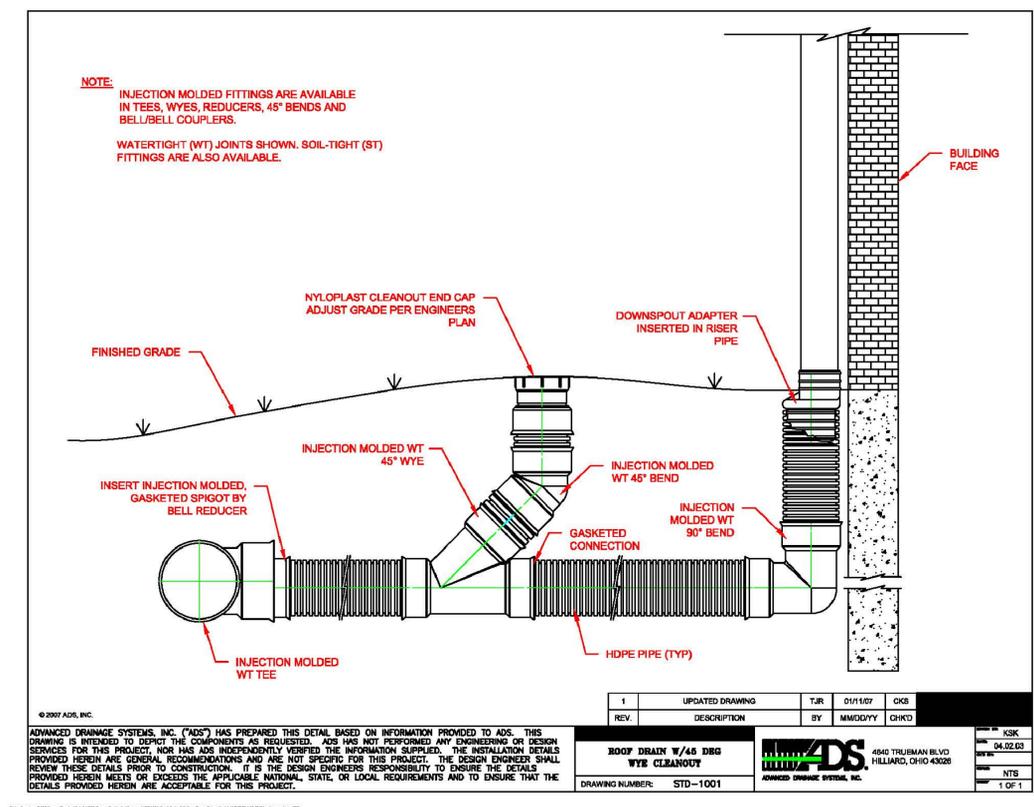
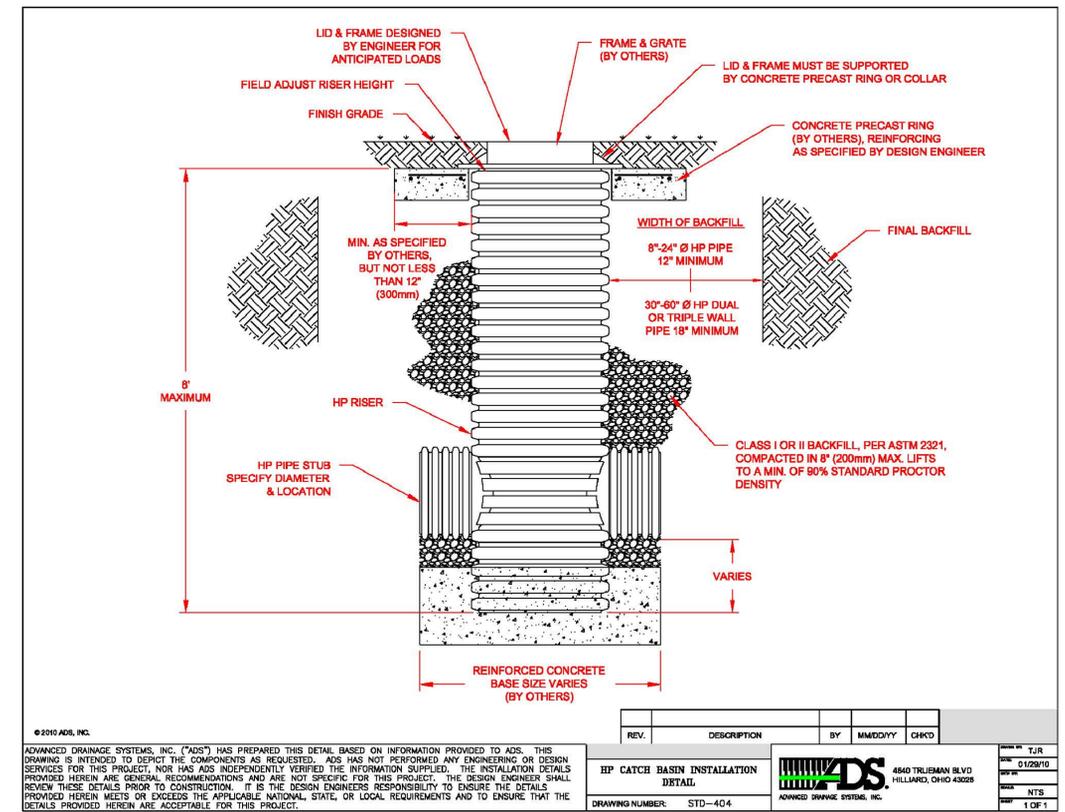
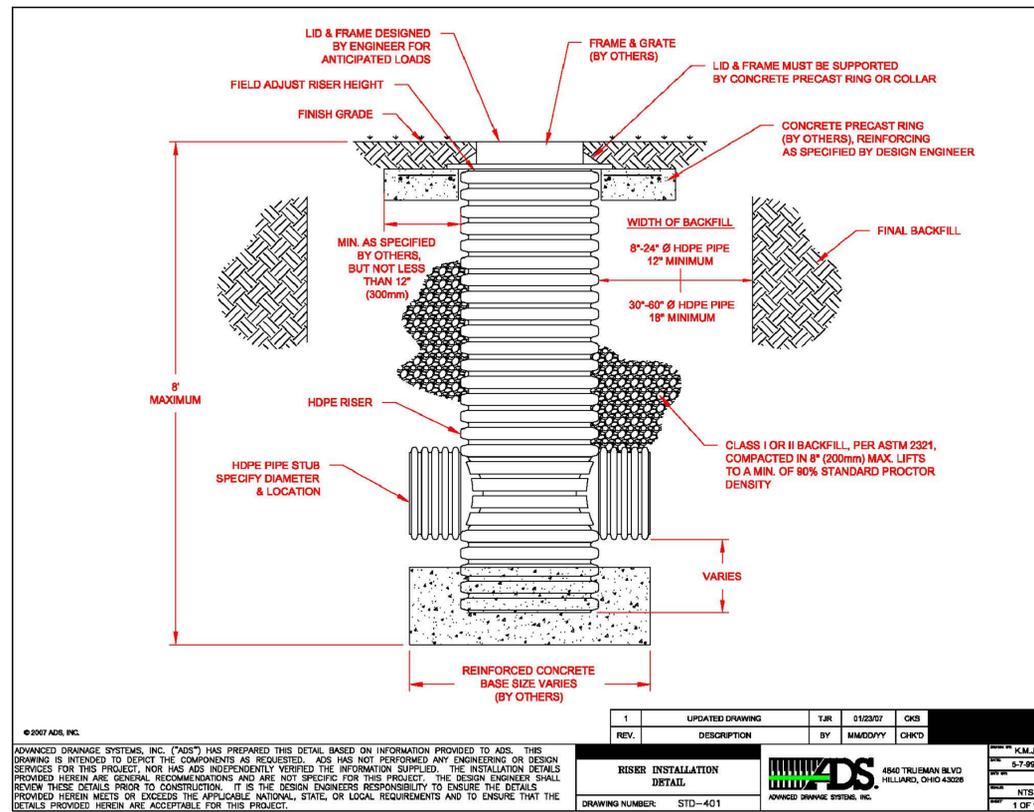
DATE: 12-18-13

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

FILE: DD

SHEET 10 OF 14 SHEETS

BRIAN G. SURAK, P.E. NO. 59064
FLORIDA PROFESSIONAL ENGINEER



RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

MINIMUM RECOMMENDED COVER BASED ON RAILWAY LOADING CONDITIONS

PIPE DIAM.	COOPER	
	E-80**	E-80**
UP TO 24"	24"	24"
30" - 36"	36"	36"
42" - 60"	48"	48"

** COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF RAILWAY TIE.
*** E-80 COVER REQUIREMENTS, ARE ONLY APPLICABLE TO ASTM F 2306 PIPE.

- NOTES:
- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
 - MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
 - FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
 - BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
 - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 - MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

Engineering Business Certificate of Authorization No: 28789

SURAK ENGINEERING
3628 VALENCIA COVE COURT
LAND OAKS, FLORIDA 34639
(813) 244-5136 bsurak@verizon.net

DRAINAGE DETAILS

JOB NO. 13-FWG-001

DESIGN: BGS

DRAWN: BGS

DATE: 12-18-13

FILE: DD2

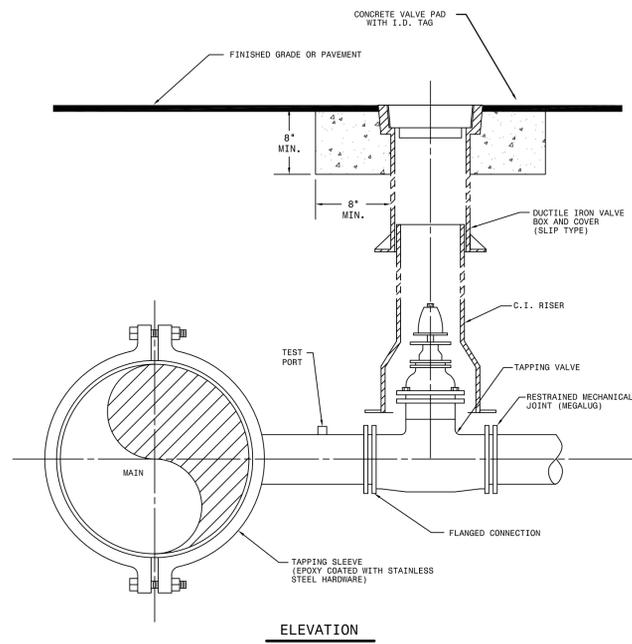
TRINITY ASSISTED LIVING FACILITY

PREPARED FOR: THE FRESHWATER GROUP, INC.

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

SHEET 11 OF 14 SHEETS

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



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

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

PIPE RESTRAINT LENGTHS IN FEET TEES (BRANCH SIDE)

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

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

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

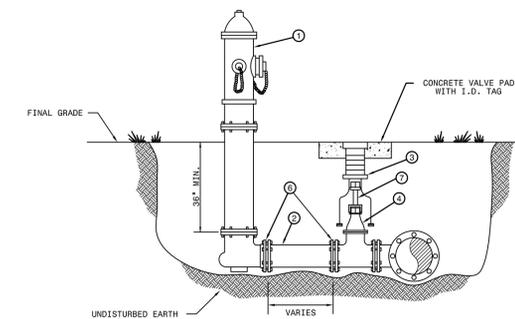
PIPE RESTRAINT LENGTHS IN FEET COMMON FITTINGS

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

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

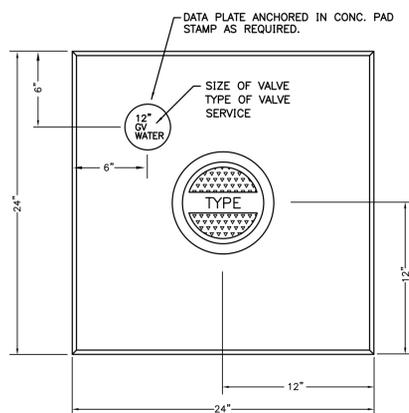
RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE FITTING ALONG THE PIPE IN BOTH DIRECTIONS (EXCEPT DEAD ENDS).

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



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

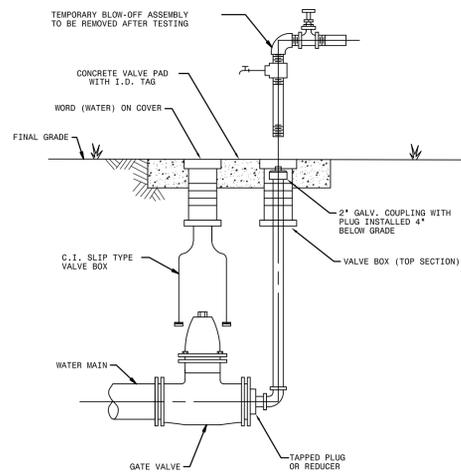
CREATED	02/24/03	FIRE HYDRANT PERPENDICULAR TO THE MAIN	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED			
		PASCO COUNTY UTILITIES	DETAIL 24



CONCRETE VALVE PAD (FOR UNPAVED AREAS)

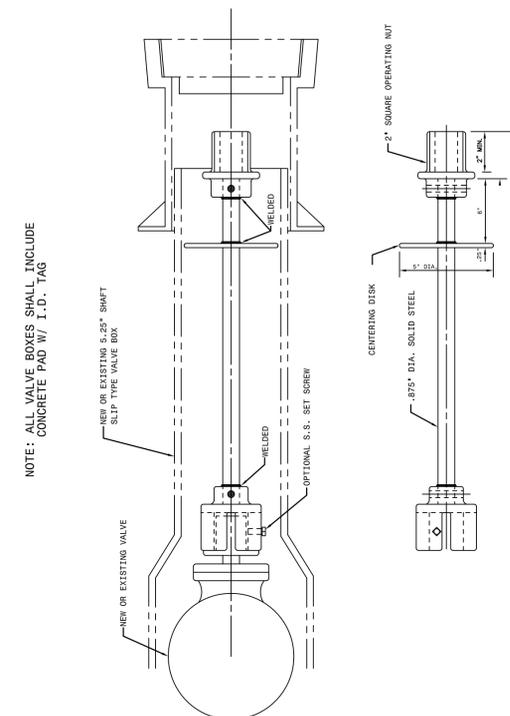
NOTES:
 CONCRETE TO BE TYPE I GENERAL PORTLAND CEMENT WITH 3/4" TOP SIZE AGGREGATE AND SHALL DEVELOP A 28-DAY STRENGTH OF 3000 P.S.I.
 CONCRETE VALVE PAD SHALL BE POURED IN PLACE AND SHALL BE SET 1/2" ABOVE FINISHED GRADE

CREATED	02/24/03	PERMANENT BLOW-OFF DETAIL	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED			
		PASCO COUNTY UTILITIES	DETAIL 25



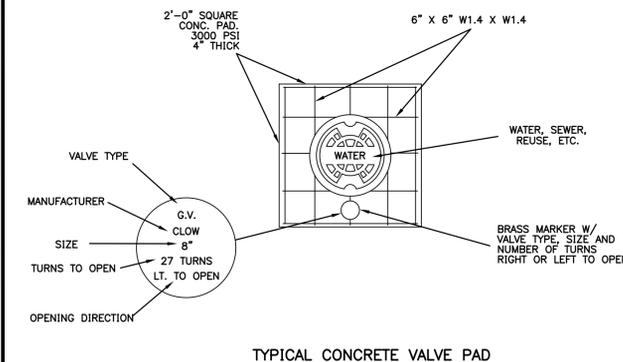
NOTES:
 - MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED IN JOINT RESTRAINT TABLE (DETAIL 46)
 - VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

CREATED	02/24/03	VALVE EXTENSION RODS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED			
		PASCO COUNTY UTILITIES	DETAIL 26

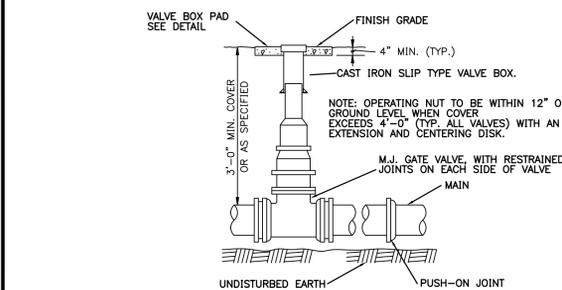


NOTE: ALL VALVE BOXES SHALL INCLUDE CONCRETE PAD W/ I.D. TAG

CREATED	02/24/03	VALVE BOX DETAIL SLIP TYPE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED			
		PASCO COUNTY UTILITIES	DETAIL 27



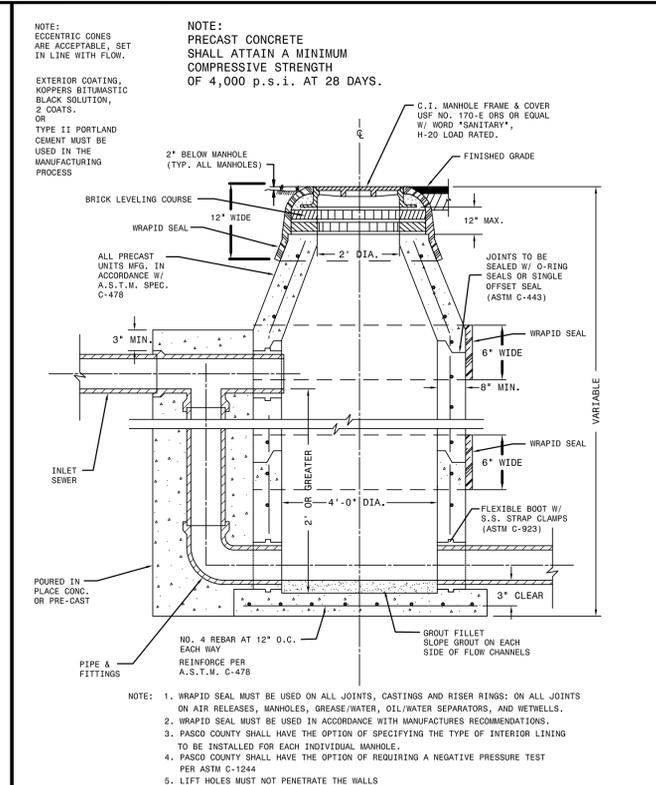
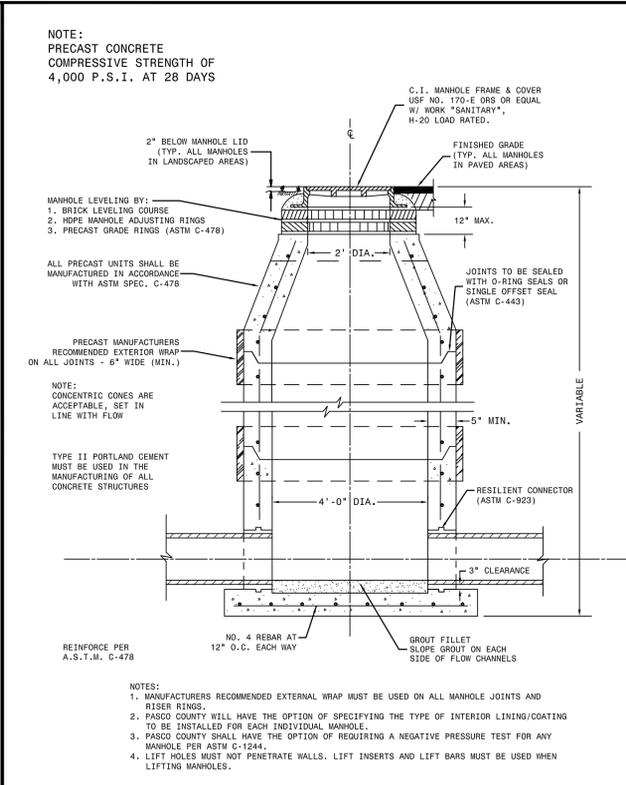
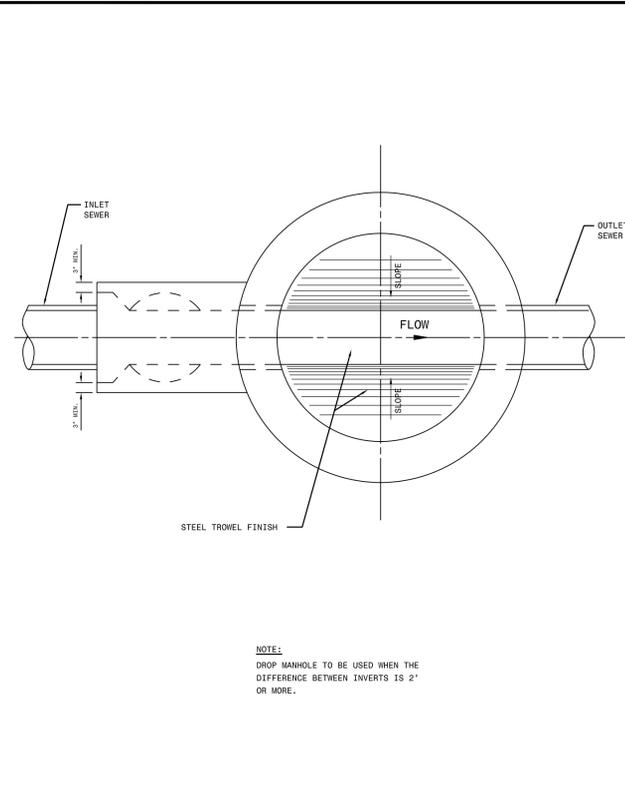
TYPICAL CONCRETE VALVE PAD



CREATED	02/24/03	VALVE BOX DETAIL SLIP TYPE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.
REVISED			
		PASCO COUNTY UTILITIES	DETAIL 27

Engineering Business Certificate of Authorization No: 28780		WATER AND SEWER DETAILS	
 SURA K ENGINEERING 3628 VALENCIA COVE COURT LAND O'LAKES, FLORIDA 34639 (813) 244-5136 bsurak@verizon.net	JOB NO.	13-FWG-001	
	DESIGN	BGS	
	DRAWN	BGS	
	DATE	12-18-13	
	FILE	WSD01	
TRINITY ASSISTED LIVING FACILITY PREPARED FOR: THE FRESHWATER GROUP, INC. Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet		SHEET 12 OF 14 SHEETS	
BRIAN G. SURAK P.E. NO. 59064 FLORIDA PROFESSIONAL ENGINEER			

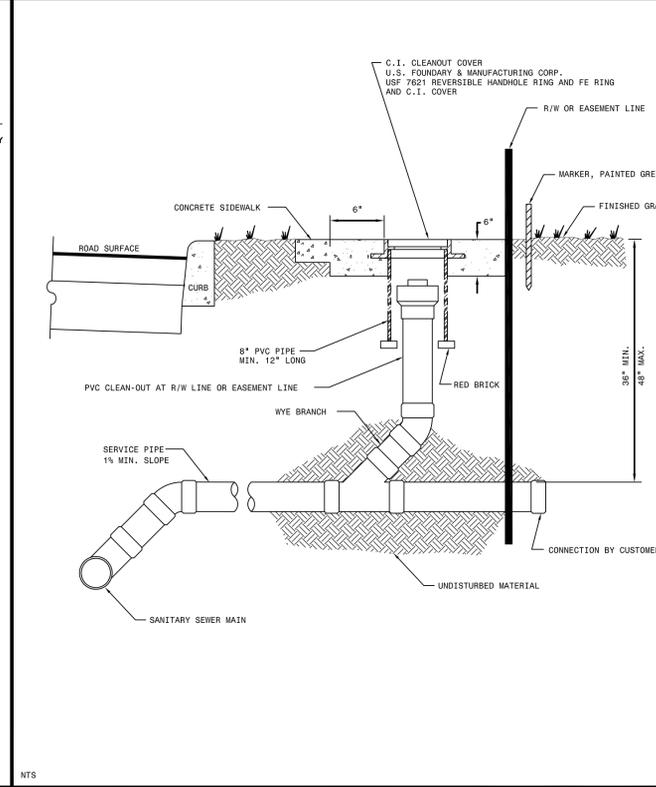
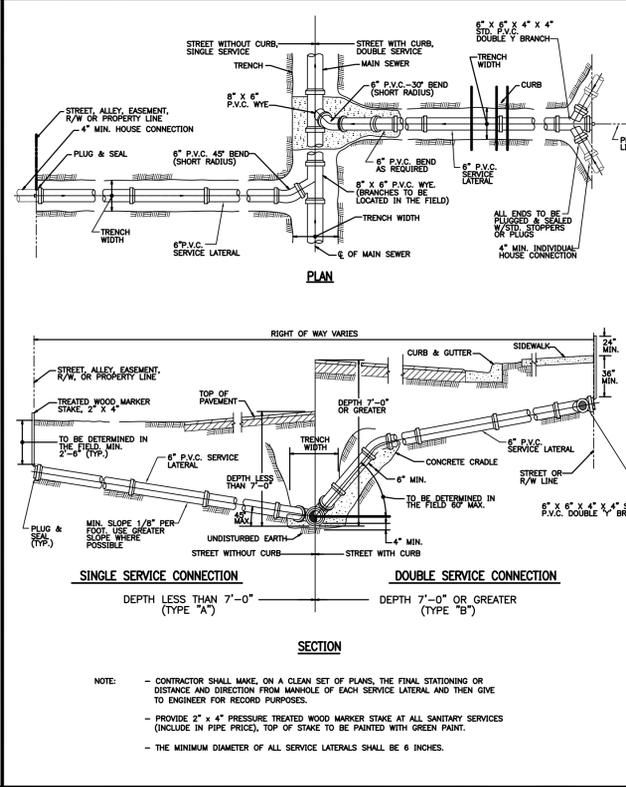
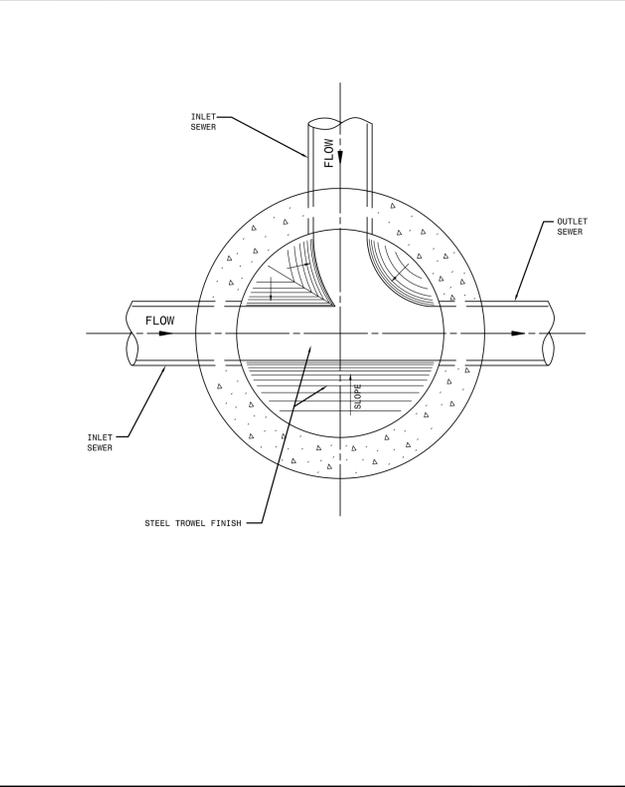
DATE	DESCRIPTION	BY



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

CREATED	02/24/03	STANDARD MANHOLE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	10/06/03		
			PASCO COUNTY UTILITIES

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



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

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

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

Engineering Business Certificate of Authorization No: 28780			WATER AND SEWER DETAILS	
<p>SURA K ENGINEERING 3628 VALENCIA COVE COURT LAND O'LAKE, FLORIDA 34639 (813) 244-5136 bsurak@verizon.net</p>			TRINITY ASSISTED LIVING FACILITY	
			<p>JOB NO. 13-FWG-001 DESIGN BGS DRAWN BGS PREPARED FOR: THE FRESHWATER GROUP, INC. DATE 12-18-13 Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet FILE WSD02</p>	
<p>BRIAN G. SURAK P.E. NO. 59064 FLORIDA PROFESSIONAL ENGINEER</p>			SHEET 14 OF 14 SHEETS	

STORM WATER POLLUTION PREVENTION PLAN

Contained on these plans and within the following notes is a Storm Water Pollution Prevention Plan (SWPPP) which has been developed by Surak Engineering, LLC. 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": Surak Engineering, the Developer as identified in the title box of these plans, and the site contractor and his sub-contractors. Each team member has specific responsibilities and obligations. In general, all team members, with regard to their involvement and responsibilities on the project, are to implement all necessary storm water management controls to assure compliance with the NPDES Generic Permit for Storm Water Discharges from Construction Activities, the Southwest Florida Water Management District Permit, the applicable local governing agency (i.e. Pasco County) and the guidelines listed in the SWPPP. The duties and responsibilities of the team members as they pertain to the SWPPP are as follows:

ENGINEER

- 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 SWFWMD 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 surrounding vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures. As an alternative, permanent stabilization measures (such as riprap, gabions, or geotextiles) may be employed. The client shall notify Surak Engineering when one of these criteria has been met.

Contractor

- Sign and return to Engineer 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 Surak Engineering 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, geotextiles, sodding, vegetative buffer strips, protection of trees and preservation of mature vegetation. Structural erosion and sediment control BMP's that may be used include: straw bale dikes, silt fences, 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 Engineer 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 shall 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 Surak Engineering. 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.

H. 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 discharge;
 - The operator shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and remedial steps to be taken, to the Florida Department of Environmental Protection, NPDES Stormwater Section, Mail Station 2500, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and
 - The stormwater pollution prevention plan required under Part V of this permit must be modified within 14 calendar days of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.
- This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

Developer

- Notify Engineer 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 Surak Engineering.
- Sign a Certification of Storm Water Pollution Prevention Plan and return to Surak Engineering.
- Notify Engineer when it is time to submit a Notice of Termination as defined under Part E of the Surak Engineering section of the SWPPP. Sign and return to Surak Engineering for submittal to FDEP a Notice of Termination form and certification.

PRE-DEVELOPED SITE INFORMATION:

- Total site acreage:
- Land use:
- Vegetation:
- Receiving waters or municipal separate storm water system:
- 2 Year/24 Hour rainfall depth:
- Soil types:

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
 - Base and pavement construction
 - Final stabilization
- Anticipated start date: JANUARY 2014
- Anticipated completion date: DECEMBER 2014
- Total acres disturbed: 4.2 AC.
- Pre-developed "CN" factor: 80
- Post-developed "CN" factor: 90
- The storm water management system, upon completion of construction and appropriate certification and as-built submittals will be operated and maintained by OWNER.
- The potential source of pollution from this project is on-site development and construction activity.

OWNER'S INSTRUCTIONS FOR MAINTENANCE AND INSPECTION OF STORMWATER FACILITIES

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

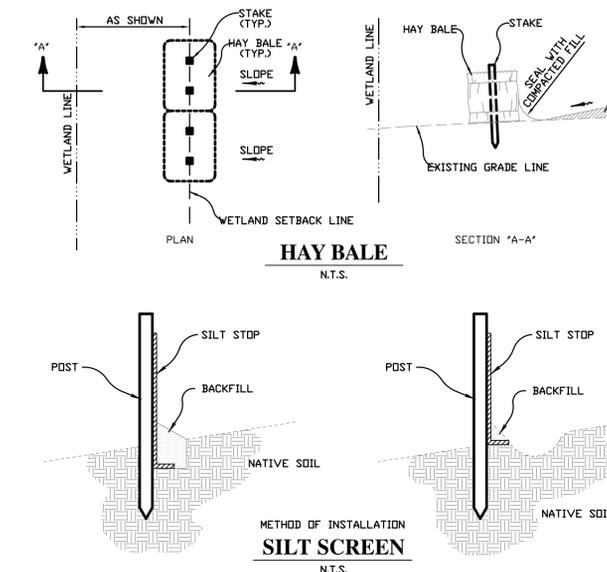
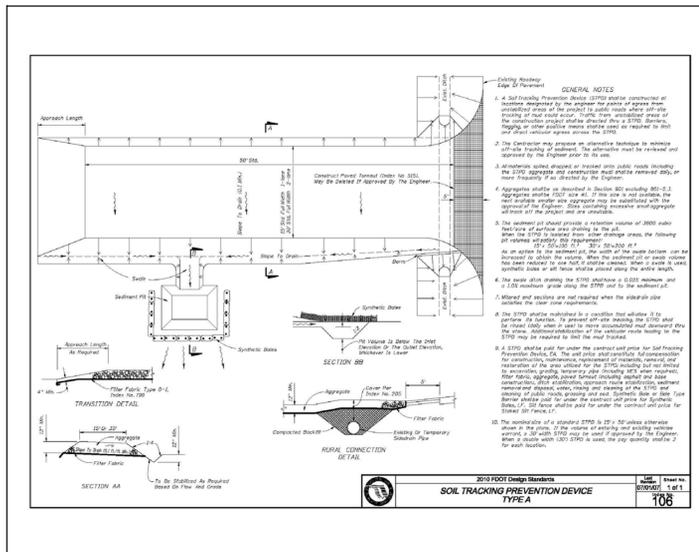
Wetland plants, if intentionally installed, should be monitored and maintained as required on the approved construction plans. Areas of littoral shelving, which are required to be vegetated but not intentionally planted, should not be cleared of the wetland plants. These areas should have as high a plant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

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

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

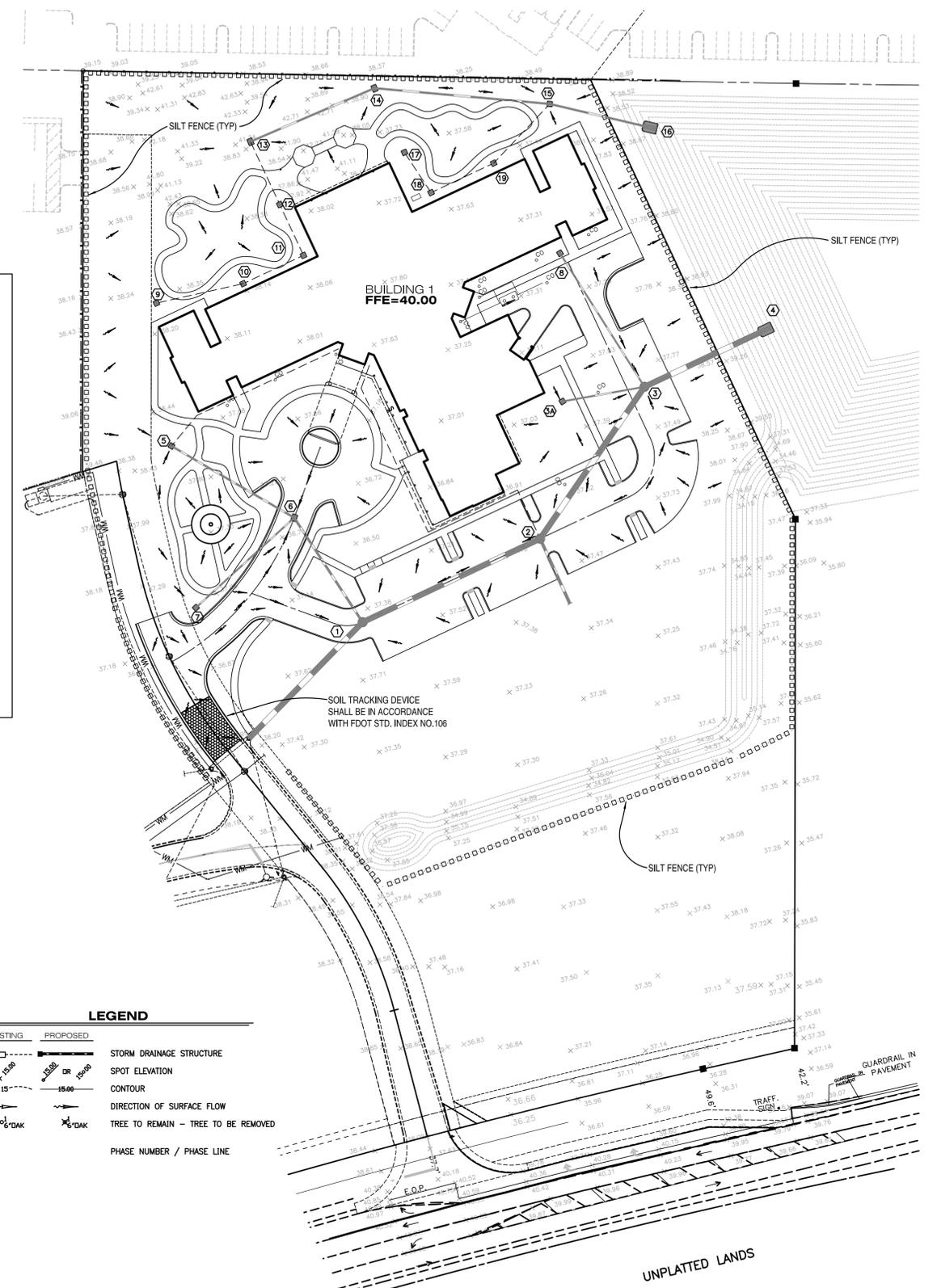
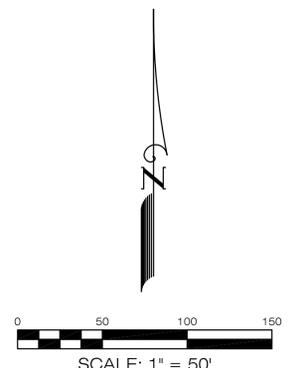
Please check the construction plans to see if written reports on monitoring or plant survival rates are required to be sent to any reviewing agencies. Written notes should always be kept which describe maintenance activities undertaken during each inspection.

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



EROSION CONTROL DETAILS

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



APPLICANT NAME: SCOTT SALKILL
 APPLICANT SIGNATURE: _____

03-07-14	REV. DRIVEWAY ENTRANCE	BGS
DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No: 28789

SURAK ENGINEERING
 3628 VALENCIA COVE COURT
 LAND O'LAKE, FLORIDA 34609
 (813) 244-5136 bsurak@verizon.net

BRIAN G. SURAK, P.E. NO. 59064
 FLORIDA PROFESSIONAL ENGINEER

CONSTRUCTION SURFACE WATER MANAGEMENT PLAN	
JOB NO. 13-FWG-001	TRINITY ASSISTED LIVING FACILITY
DESIGN BGS	
DRAWN BGS	PREPARED FOR: THE FRESHWATER GROUP, INC.
DATE 12-18-13	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.84 Feet
FILE CSWMP	SHEET 1 OF 1 SHEETS