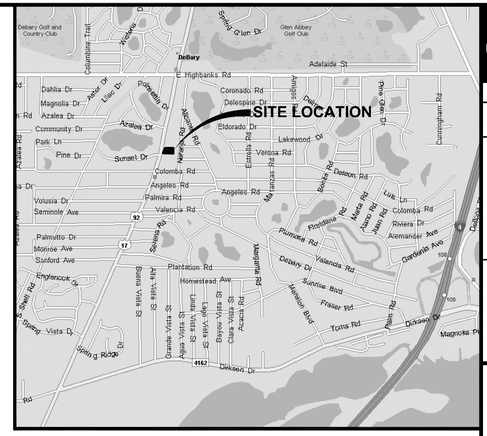
SITE IMPROVEMENT PLAN
FOR
DEBARY PUBLIC SAFETY COMPLEX
FIRE STATION

75 S. U.S. HIGHWAY 17-92
DEBARY, FLORIDA
PARCEL ID# 34-18-30-11-01-0250



N

LOCATION MAP
SCALE: 1" = 2,000'
VOLUSIA COUNTY, FLORIDA
SECTION 34 - TOWNSHIP 18 SOUTH - RANGE 30 EAST

OWNER
CITY OF DEBARY
16 COLOMBA ROAD
DEBARY, FLORIDA 32713
ATTN.: DAN PARROTT, CITY MANAGER
PHONE: (386) 668-2040

ENGINEER
CPH, INC.
500 WEST FULTON STREET
SANFORD, FLORIDA 32771
ATTN.: JEREMIAH D. OWENS, P.E.
PHONE: (407) 322-6841

ARCHITECTURE
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500 WEST FULTON STREET
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PERMITTING AGENCIES

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DOMESTIC WASTEWATER COLLECTION DIVISION
CENTRAL DISTRICT
3319 MAGUIRE BLVD., SUITE 232
ORLANDO, FLORIDA 32803
(407) 893-3300
ATTN.: DENNISE JUDY

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
601 S. LAKE DESTINY ROAD, SUITE 200
MAITLAND, FLORIDA 32751
(407) 659-4800

UTILITIES

WATER AND SEWER:
VOLUSIA COUNTY WATER RESOURCES AND UTILITIES
123 WEST INDIANA AVENUE
DELAND, FLORIDA 32720
(386) 822-6465
ATTN.: ALAN FERGUSON

ELECTRIC:
DUKE ENERGY
400 NORTH SPRING GARDEN AVENUE
DELAND, FLORIDA 32720
(386) 943-3907
ATTN.: JEFF HERRING

COMMUNICATIONS:
AT&T
268 N. RIDGEWOOD AVENUE ROOM 230
DAYTONA BEACH, FLORIDA 32114
(386) 281-6955
ATTN.: NATASHA ROBERSON

GAS:
FLORIDA PUBLIC UTILITIES
450 SOUTH U.S. HIGHWAY 17-92
DEBARY, FLORIDA 32713
(386) 668-9319
DAVE JOHNSON

INDEX OF SHEETS

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THE SIZE OF THESE PLANS MAY HAVE BEEN SLIGHTLY ALTERED BY REPRODUCTION PROCESSES. THIS MUST BE CONSIDERED WHEN SCALING ANY REPRODUCED PLANS FOR THE PURPOSE OF COLLECTING DATA.

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FL. P.E. NO. 65037

No.	Date	Revision	By

Designed by: JDO
Drawn by: DRB
Checked by: JDO
Approved by: JDO
Scale: AS NTD
Date: 10/26/15
Job No.: D8521

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COVER SHEET

DEBARY PUBLIC SAFETY COMPLEX
FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.
C-1

GENERAL PROVISIONS

1. THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL AVAILABLE REGULATORY AGENCY PERMITS AND LOCAL AGENCY PERMITS.

2. ALL CONSTRUCTION PROJECTS 1 OR MORE ACRES IN SIZE THAT DISCHARGE TO OFFSITE AREAS ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORMWATER DISCHARGE FROM SMALL AND LARGE CONSTRUCTION ACTIVITIES. IN ORDER TO MEET NPDES REQUIREMENTS, THE CONTRACTOR IS RESPONSIBLE FOR PREPARING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP), IMPLEMENTING, INSPECTING, MAINTAINING, AND REPORTING ON ALL ELEMENTS OF THE SWPPP, COMPLETING AND SUBMITTING THE REQUIRED NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT) FORMS AS THE OPERATOR, AND PAYING ALL ASSOCIATED FEES. FOR PROJECTS LESS THAN 1 ACRE IN SIZE THAT ARE NOT REQUIRED TO COMPLY WITH THE NPDES GENERAL PERMIT, THE CONTRACTOR IS STILL RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO AND DURING CONSTRUCTION IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

3. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL USE THE GEOMETRY PROVIDED ON THE CONSTRUCTION PLANS. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNER'S SURVEYOR. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

4. THIS SET OF PLANS MAY CONTAIN DRAWINGS PREPARED BY OTHER PROFESSIONALS, WHICH CONTAIN THE NAME, ADDRESS, AND LOGO OF THE PROFESSIONAL. CPH ENGINEERS, INC. IS NOT RESPONSIBLE FOR DRAWINGS PREPARED BY OTHER PROFESSIONALS.

5. THE CONTRACTOR SHALL SUBMIT (6) COPIES OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIALS REQUIRED FOR CONSTRUCTION. PRIOR TO SUBMISSION, THE CONTRACTOR SHALL THOROUGHLY CHECK SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR COMPLETENESS AND FOR COMPLIANCE WITH THE CONSTRUCTION PLANS AND SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND SHALL COORDINATE THE SHOP DRAWINGS WITH THE REQUIREMENTS FOR OTHER RELATED WORK. THE CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMITTALS IS NOT RELIEVED BY THE ENGINEER'S REVIEW OF SUBMITTALS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING AT THE TIME OF SUBMISSION, OF DEVIATIONS IN SUBMITTALS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

6. PROTECT BENCHMARKS, PROPERTY CORNERS, AND OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF MARKER NEEDS TO BE REMOVED IT SHALL BE REFERENCED BY LICENSED LAND SURVEYOR AND REPLACED, AS NECESSARY, BY SAME.

7. THE CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING. AS A MINIMUM, TESTING SHALL INCLUDE A) PIPING AND STRUCTURAL EXCAVATION, BEDDING AND BACKFILL MATERIALS AND DENSITY TESTS; B) DETERMINATION OF COMPACTIVE EFFORT NEEDED FOR COMPLIANCE WITH THE DENSITY REQUIREMENTS; C) PORTLAND CEMENT CONCRETE AND ASPHALT PAVING QUALITY CONTROL TESTING INCLUDING DESIGN MIX REVIEW, MATERIALS, FIELD SLUMP AND AIR CONTENT, AND FIELD AND LAB CURED STRENGTH SAMPLES AND TESTING.

8. IN ADDITION TO QUALITY CONTROL TESTING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TESTING OR APPROVALS FOR ANY WORK (OR ANY PART THEREOF) IF LAWS OR REGULATIONS OF ANY PUBLIC BODY HAVING JURISDICTION SPECIFICALLY REQUIRE TESTING, INSPECTIONS OR APPROVAL. THE CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION THEREWITH AND SHALL FURNISH THE OWNER AND ENGINEER THE REQUIRED CERTIFICATES OF INSPECTION, TESTING OR APPROVAL.

9. ANY DESIGN OR TESTING LABORATORY UTILIZED BY THE CONTRACTOR SHALL BE AN INDEPENDENT LABORATORY ACCEPTABLE TO THE OWNER AND THE ENGINEER, APPROVED IN WRITING, AND COMPLYING WITH THE LATEST EDITION OF THE "RECOMMENDED REQUIREMENTS FOR INDEPENDENT LABORATORY QUALIFICATION", PUBLISHED BY THE AMERICAN COUNCIL OF INDEPENDENT LABORATORIES.

10. TESTING RESULTS SHALL BE PROVIDED TO THE OWNER/OPERATOR AND THE ENGINEER. ALL TEST RESULTS SHALL BE PROVIDED (PASSING AND FAILING) ON A REGULAR AND IMMEDIATE BASIS.

11. THE ENTIRE PROJECT SITE SHALL BE THOROUGHLY CLEANED AT THE COMPLETION OF THE WORK. CLEAN ALL INSTALLED PIPELINES, STRUCTURES, SIDEWALKS, PAVED AREAS, ACCUMULATED SILT IN PONDS, PLUS ALL ADJACENT AREAS AFFECTED BY CONSTRUCTION, AS DIRECTED BY THE OWNER OR JURISDICTIONAL AGENCY. EQUIPMENT TO CLEAN THESE SURFACES SHALL BE SUBJECT TO APPROVAL BY THE OWNER.

UTILITY GENERAL NOTES

1. THE UTILITY DATA SHOWN ON THESE PLANS WAS LOCATED BY THE RESPECTIVE UTILITY, OR IS BASED ON UTILITY DRAWINGS, MAPS, OR FIELD RECONNAISSANCE.

2. THE LOCATION, MATERIAL TYPE, AND SIZE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ANY UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER AND THE RESPECTIVE UTILITY COMPANY FOR RELOCATION OR PROPER INSTRUCTION.

3. A SINGLE POINT UTILITY IDENTIFICATION SERVICE HAS BEEN SET UP FOR EXISTING UTILITIES. THE CONTRACTOR IS TO CONTACT THE SUNSHINE STATE ONE CALL CENTER BY DIALING "811" AT LEAST TWO (2) AND NO MORE THAN FIVE (5) WORKING DAYS PRIOR TO THE SPECIFIC CONSTRUCTION ACTIVITY FOR FIELD LOCATION. NOTE THAT NOT ALL UTILITIES PARTICIPATE IN THIS PROGRAM. THE CONTRACTOR SHOULD CONTACT ALL NON-PARTICIPATING UTILITIES SEPARATELY FOR FIELD LOCATION OF THEIR FACILITIES AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION. PER FLORIDA STATUTE 553.851, THE CONTRACTOR OR EXCAVATOR IS REQUIRED TO NOTIFY THE GAS COMPANY TWO (2) WORKING DAYS PRIOR TO STARTING EXCAVATION.

4. REFER TO COVER SHEET FOR UTILITIES THAT HAVE PREVIOUSLY INDICATED THAT THEY MAY HAVE FACILITIES IN THE VICINITY OF THE CONSTRUCTION AREA.

5. THE CONTRACTOR SHALL KEEP LOCATE TICKETS UP TO DATE AT ALL TIMES.

6. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH EACH UTILITY AND ALL COSTS ASSOCIATED WITH THE PROTECTION OF EXISTING FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO COORDINATE NECESSARY RELOCATIONS OR OTHER CONSTRUCTION RELATED MATTERS WITH EACH UTILITY.

7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING PIPING ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY PIPING WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE OWNER AND THE ENGINEER.

8. THE CONTRACTOR SHALL FIELD LOCATE ALL WATER AND SEWER SERVICES AND LATERALS WITHIN THE PROPOSED CONSTRUCTION AREA PRIOR TO CONSTRUCTION AND ADJUST THE PROPOSED CONSTRUCTION AS NEEDED TO ACCOMMODATE THESE EXISTING LINES.

9. TYPICAL DETAILS AND PROPOSED CONSTRUCTION AS SHOWN ILLUSTRATE THE ENGINEER'S INTENT AND ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY ALTER THE PROPOSED CONSTRUCTION TO SUIT FIELD CONDITIONS, PROVIDED IT COMPLIES WITH THE PROJECT SPECIFICATIONS AND APPROVAL IS RECEIVED FROM THE ENGINEER. WHERE SUCH PROPOSED REVISIONS DEVIATE FROM THE FDEP CONSTRUCTION PERMIT, THEN SUCH REVISIONS WILL ALSO REQUIRE APPROVAL FROM FDEP.

10. FOR EACH RESPECTIVE PIPELINE CONSTRUCTION REQUIRED, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DEPTH, SIZE, MATERIAL TYPE, AND ALIGNMENT OF ALL EXISTING PIPES, CABLES, ETC. TO BE CROSSED OR CONNECTED TO. IF THE CONTRACTOR DEEMS NECESSARY (A) A CHANGE IN ALIGNMENT OR DEPTH, OR THE NEED FOR ADDITIONAL FITTINGS, BENDS, OR COUPLINGS, WHICH REPRESENT A DEPARTURE FROM THE CONTRACT DRAWING, OR (B) A NEED FOR RELOCATION OF EXISTING UTILITIES, THEN DETAILS OF SUCH DEPARTURES, RELOCATIONS, OR ADDITIONAL FITTINGS, INCLUDING CHANGES IN RELATED PORTIONS OF THE PROJECT AND THE REASONS THEREFORE, SHALL BE SUBMITTED WITH SHOP DRAWINGS. APPROVED DEPARTURES FOR THE CONTRACTOR'S CONVENIENCE SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

11. THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC, LEAKAGE, AND PRESSURE TESTING. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE OWNER IN WRITTEN FORM, FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION.

AS-BUILT DRAWING REQUIREMENTS

1. AS-BUILT DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER THREE WEEKS PRIOR TO FINAL INSPECTION. ALL AS-BUILT DATA SHALL BE PROVIDED BY A FLORIDA LICENSED SURVEYOR, SIGNED, SEALED AND DATED BY THE RESPONSIBLE PARTY.

2. AT THE COMPLETION OF THE WORK, DELIVER THE DRAWINGS DOCUMENTING AS-BUILT INFORMATION, MEASURED BY A LICENSED SURVEYOR, TO THE ENGINEER, IN GOOD CONDITION AND FREE FROM ANY EXTRANEOUS NOTATION. THE AS-BUILT INFORMATION IS TO INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

   A. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS FOR ALL UTILITY AND STORM STRUCTURES INCLUDING BUT NOT LIMITED TO MANHOLES, INLETS AND CLEANOUTS, INCLUDING STRUCTURE TOP AND INVERT ELEVATIONS.

   B. DISTANCE ALONG PIPELINES BETWEEN STRUCTURES.

   C. STORMWATER POND TOP OF BERM AND POND BOTTOM ELEVATIONS AND HORIZONTAL DIMENSIONS MEASURED AT A MINIMUM OF TEN LOCATIONS PER POND, AT LOCATIONS DESIGNATED BY THE ENGINEER. TOP OF POND HORIZONTAL DIMENSIONS ARE ALSO TO BE TIED TO PROPERTY CORNERS, EASEMENTS, AND RIGHTS-OF-WAY.

   D. STORMWATER CONTROL STRUCTURE DIMENSIONS AND ELEVATIONS, INCLUDING ALL WEIRS, SLOTS, ORIFICES, GRATES, AND SKIMMERS.

   E. STORMWATER CONVEYANCE SYSTEMS INCLUDING DIMENSIONS, ELEVATIONS, CONTOURS, AND CROSS SECTIONS.

   F. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS OF ALL UTILITY VALVES, FITTINGS, CONNECTION POINTS, ETC.

   G. VERTICAL ELEVATIONS OF ALL PIPELINES AT CROSSINGS OF POTABLE WATER MAINS (WHETHER THE WATER MAIN IS EXISTING OR NEW) IN ORDER TO DOCUMENT THAT THE MINIMUM REQUIRED VERTICAL SEPARATION HAS BEEN MET.

   H. UTILITY PIPELINE TIED HORIZONTALLY TO EDGE OF PAVEMENT AND RIGHT-OF-WAY LINES, LOCATED EVERY 200-FT PLUS ALL CHANGES IN HORIZONTAL OFFSET.

   I. PAVEMENT WIDTH AND ELEVATIONS AT THE CENTERLINE AND EDGE OF PAVEMENT EVERY 200 FEET PLUS AT ALL CHANGES IN LONGITUDINAL SLOPE, CROSS SLOPE, INLET LOCATIONS, AND AT ALL DRIVEWAY AND STREET INTERSECTIONS. FOR PARKING LOTS, RECORD CENTERLINE AND EDGE OF PAVEMENT ELEVATIONS ALONG ALL DRIVE AISLES AND ISLANDS.

   J. ALL PARKING AREAS AND SIDEWALK RAMPS DESIGNATED FOR HANDICAP ACCESS SHALL CONTAIN HORIZONTAL AND VERTICAL MEASUREMENTS IN ORDER TO VERIFY REQUIRED WIDTHS AND SLOPES HAVE BEEN MET.

   K. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION THAT DEVIATES FROM THE APPROVED ENGINEERING DRAWINGS.

   L. WHERE THE PLANS CONTAIN SPECIFIC HORIZONTAL LOCATION DATA, SUCH AS STATION AND OFFSET, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL HORIZONTAL LOCATION.

   M. WHERE THE PLANS CONTAIN SPECIFIC VERTICAL ELEVATION DATA, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL MEASURED VERTICAL ELEVATION.

TRAFFIC CONTROL

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A MAINTENANCE OF TRAFFIC (M.O.T.) PLAN PRIOR TO CONSTRUCTION. THE M.O.T. PLAN SHALL SHOW ALL PROPOSED TRAFFIC CONTROL SIGNS, PAVEMENT MARKINGS, AND BARRICADES, AND SHALL DETAIL ALL PROPOSED CONSTRUCTION SEQUENCING. THE M.O.T. PLAN SHALL BE APPROVED BY THE ENGINEER, OWNER, AND ROADWAY JURISDICTIONAL AGENCY PRIOR TO CONSTRUCTION. ALL PROPOSED ROADWAY AND DRIVEWAY LANE CLOSURES SHALL BE RESTRICTED TO THE HOURS BETWEEN 9:00 A.M. AND 4:00 P.M. UNLESS OTHERWISE AUTHORIZED IN THE APPROVED M.O.T.

2. ALL CONSTRUCTION SIGNING AND MARKINGS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH FDOT INDEX NO. 600 AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE PLACEMENT OF THE SIGNING AND MARKINGS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER PRIOR TO CONSTRUCTION.

3. INSPECT TRAFFIC CONTROL DEVICES ON A DAILY BASIS TO ENSURE PLACEMENT OF BARRICADES AND FUNCTION OF LIGHTS IS MAINTAINED THROUGHOUT CONSTRUCTION.

4. CONTACT PROPERTY OWNERS AFFECTED BY CONSTRUCTION. COORDINATE TEMPORARY DRIVEWAY CLOSURES AND SEQUENCING. MAINTAIN ACCESS FOR ALL PROPERTY OWNERS DURING CONSTRUCTION.

5. WET UNSTABILIZED AREAS AS NECESSARY TO CONTROL DUST.

6. ADJUST TRAFFIC CONTROL DEVICES AS REQUIRED UNDER EMERGENCY CONDITIONS.

7. THE CONTRACTOR IS EXPECTED TO COORDINATE ITS ACTIVITIES WITH OTHER CONTRACTORS WHO MAY BE WORKING IN THE IMMEDIATE VICINITY.

8. WHEN WORK OCCURS WITHIN 15-FT OF ACTIVE ROAD TRAVEL LANES BUT NO CLOSER THAN 2-FT FROM THE EDGE OF PAVEMENT, SIGNAGE AND WARNING DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH FDOT INDEX NO. 600 AND 602.

9. TYPE I OR TYPE II BARRICADES AT 20-FT CENTERS SHALL BE PLACED AND MAINTAINED ALONG THE EDGE OF THE ROAD WHEREVER DROP-OFFS OR OTHER HAZARDS EXIST AND TO BLOCK ENTRANCE INTO COMPLETED OR PARTIALLY COMPLETED PAVEMENTS UNTIL SUCH PAVEMENTS ARE OPEN TO PUBLIC USE.

SITE PREPARATION

1. UNLESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER, THE CONTRACTOR IS EXPECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES WITHIN THE PROPERTY, RIGHT-OF-WAY, AND EASEMENTS AS INDICATED ON THE DRAWINGS. AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. ANY REPAIR OR RECONSTRUCTION OF DAMAGED AREAS IN SURROUNDING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED.

2. STAKE OUT THE CONSTRUCTION, ESTABLISH LINES AND LEVELS, TEMPORARY BENCH MARKS, BATTER BOARDS, CENTERLINES, BASELINES, AND REFERENCE POINTS FOR THE WORK, AND VERIFY ALL DIMENSIONS RELATING TO INTERCONNECTION WITH EXISTING FEATURES. REPORT ANY INCONSISTENCIES IN THE PROPOSED GRADES, LINES AND LEVELS, DIMENSIONS AND LOCATIONS TO THE ENGINEER BEFORE COMMENCING WORK.

3. PROTECT ALL TREES AND SHRUBS LOCATED OUTSIDE THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, PARTICULARLY THOSE TREES AND SHRUBS LOCATED ADJACENT TO WORK AREAS.

4. WITHIN THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, THE INTENT IS TO ALLOW TREES AND SHRUBS TO REMAIN IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: NEW ROADWAY CONSTRUCTION - TREES AND SHRUBS TO REMAIN WHERE LOCATED MORE THAN 15 FEET FROM THE BACK OF CURB, OR OUTSIDE THE LIMITS OF EXCAVATION OR FILL AREAS, WHICHEVER IS FURTHER. UTILITY PIPELINE CONSTRUCTION - TREES AND SHRUBS TO REMAIN OUTSIDE A 15 FOOT WIDE PATH, CENTERED ON THE PIPELINE.

5. TREES TO REMAIN IN THE CONSTRUCTION AREA SHALL BE BOXED, FENCED OR OTHERWISE PROTECTED IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. DO NOT PERMIT HEAVY EQUIPMENT OR STOCKPILES WITHIN BRANCH SPREAD

6. AREAS TO RECEIVE CLEARING AND GRUBBING SHALL INCLUDE ALL AREAS TO BE OCCUPIED BY THE PROPOSED IMPROVEMENTS, AREAS FOR FILL AND SITE GRADING, AND BORROW SITES. REMOVE TREES OUTSIDE OF THESE AREAS ONLY AS INDICATED ON THE DRAWINGS OR AS APPROVED IN WRITING BY THE ENGINEER.

7. CLEARING SHALL CONSIST OF REMOVING TREES AND BRUSH AND DISPOSAL OF OTHER MATERIALS THAT ENCROACH UPON OR OTHERWISE OBSTRUCT THE WORK.

8. EXERCISE EXTREME CARE DURING THE CLEARING AND GRUBBING OPERATIONS. DO NOT DAMAGE EXISTING STRUCTURES, PIPES OR UTILITIES.

9. GRUBBING SHALL CONSIST OF REMOVING AND DISPOSING OF STUMPS, ROOTS LARGER THAN 2" IN DIAMETER, AND MATTED ROOTS. REMOVE TO A DEPTH OF NOT LESS THAN 18" BELOW THE ORIGINAL SURFACE LEVEL OF THE GROUND.

10. ALL COMBUSTIBLE DEBRIS AND REFUSE FROM SITE PREPARATION OPERATIONS SHALL BE REMOVED TO LEGAL OFFSITE DISPOSAL AREAS.

DEWATERING

1. DESIGN AND PROVIDE A DEWATERING SYSTEM USING ACCEPTED AND PROFESSIONAL METHODS CONSISTENT WITH CURRENT INDUSTRY PRACTICE. PROVIDE A DEWATERING SYSTEM OF SUFFICIENT SIZE AND CAPACITY TO CONTROL GROUNDWATER IN A MANNER THAT PRESERVES STRENGTH OF FOUNDATION SOILS, DOES NOT CAUSE INSTABILITY OR RAVELING OF EXCAVATION SLOPES, AND DOES NOT RESULT IN DAMAGE TO EXISTING STRUCTURES. WHERE NECESSARY TO THESE PURPOSES, LOWER WATER LEVEL IN ADVANCE OF EXCAVATION, UTILIZING WELLS, WELLPOINTS, OR SIMILAR POSITIVE METHODS. MAINTAIN THE GROUNDWATER LEVEL TO A MINIMUM OF 2 FEET BELOW EXCAVATIONS. PROVIDE PIEZOMETERS IF DIRECTED BY THE ENGINEER TO DOCUMENT THE GROUNDWATER LEVEL IS BEING MAINTAINED.

2. CONTROL, BY ACCEPTABLE MEANS, ALL WATER REGARDLESS OF SOURCE AND BE FULLY RESPONSIBLE FOR DISPOSAL OF THE WATER. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY SUPPLEMENTAL MEASURES TO CONTROL SEEPAGE, GROUNDWATER, OR ARTESIAN HEAD.

3. DEWATERING DISCHARGE FROM THE SITE SHALL COMPLY WITH ALL NPDES GENERAL PERMIT REQUIREMENTS AND STATE WATER QUALITY STANDARDS. PROVIDE ALL TESTING AND PERMITTING REQUIRED AND COMPLY WITH ALL TREATMENT OR DISPOSAL METHODS REQUIRED TO MEET ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.

4. OPEN PUMPING WITH SUMPS AND DITCHES SHALL BE ALLOWED, PROVIDED IT DOES NOT RESULT IN BOILS, LOSS OF FINES, SOFTENING OF THE GROUND, OR INSTABILITY OF SLOPES. SUMPS SHALL BE LOCATED OUTSIDE OF LOAD BEARING AREAS SO THE BEARING SURFACES WILL NOT BE DISTURBED. WATER CONTAINING SILT IN SUSPENSION SHALL NOT BE PUMPED INTO SEWER LINES OR ADJACENT STREAMS. DURING NORMAL PUMPING, AND UPON DEVELOPMENT OF WELL(S), LEVELS OF FINE SAND OR SILT IN THE DISCHARGE WATER SHALL NOT EXCEED 5 PPM.

5. IF DEWATERING EQUIPMENT NEEDED EXCEEDS ANY OF THE FOLLOWING: 1) 6" PUMP VOLUTE; 2) 100,000 GPD TOTAL 24 HOUR (1 DAY) DEWATERING, AND; 3) 1,000,000 GPD PUMP CAPACITY, THE CONTRACTOR SHALL BE REQUIRED TO PERMIT THE DEWATERING SYSTEM WITH THE WATER MANAGEMENT DISTRICT.

6. CONTINUOUSLY MAINTAIN EXCAVATIONS IN A DRY CONDITION WITH POSITIVE DEWATERING METHODS DURING PREPARATION OF SUBGRADE, INSTALLATION OF PIPE, AND CONSTRUCTION OF STRUCTURES UNTIL THE CRITICAL PERIOD OF CONSTRUCTION AND/OR BACKFILL IS COMPLETED TO PREVENT DAMAGE OF SUBGRADE SUPPORT, PIPING, STRUCTURE, SIDE SLOPES, OR ADJACENT FACILITIES FROM FLOTATION OR OTHER HYDROSTATIC PRESSURE IMBALANCE.

7. WHEN CONSTRUCTION IS COMPLETE, REMOVE ALL DEWATERING EQUIPMENT FROM THE SITE, INCLUDING WELLS AND RELATED TEMPORARY ELECTRICAL SERVICE.

GRADING

1. GRADING SHOWN ON THESE PLANS IS PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. THE CONTRACTOR SHALL BE EXPECTED TO GRADE THE ENTIRE SITE TO PROVIDE POSITIVE DRAINAGE IN ALL AREAS THROUGHOUT THE SITE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS OR SPOT ELEVATIONS AS SHOWN ON THE PLANS TO ACCOMPLISH THE GRADING INTENT. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.

2. ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. THE STANDARD CROWN MAY HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTIONS TO ACCOMPLISH THE INTENT OF THE PLANS.

3. UNIFORMLY SMOOTH GRADE THE SITE. DEPRESSIONS FROM SETTLEMENT SHALL BE FILLED AND COMPACTED. TOPS OF EMBANKMENTS AND BREAKS IN GRADE SHALL BE ROUNDED. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, FREE FROM IRREGULAR SURFACE CHANGES AND COMPARABLE TO THE SMOOTHNESS OBTAINED BY BLADE-GRADER OPERATIONS.

4. SLOPE GRADES TO DRAIN AWAY FROM STRUCTURES AT A MINIMUM OF ¼-INCH PER FOOT FOR 10 FEET. FINISHED SURFACES ADJACENT TO PAVED AREAS AND WITHIN 10 FEET OF STRUCTURES SHALL BE WITHIN 1 INCH OF THE PROPOSED GRADE. ALL OTHER AREAS SHALL BE WITHIN 3 INCHES OF THE PROPOSED GRADE.

5. NEWLY GRADED AREAS SHALL BE PROTECTED FROM TRAFFIC AND EROSION. ALL SETTLEMENT OR WASHING AWAY THAT MAY OCCUR FROM ANY CAUSE PRIOR TO SEEDING OR ACCEPTANCE SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER.

EXCAVATION, TRENCHING, AND FILL

1. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (FS 553.60-553.64). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.

2. ROUGH EXCAVATE AND GRADE ANY PROPOSED STORMWATER PONDS AT THE START OF SITE GRADING ACTIVITIES. DIRECT SITE RUNOFF TO THE PONDS TO MINIMIZE RUNOFF TO OFFSITE AREAS.

3. POND CONSTRUCTION SHALL RESULT IN THE FINISHED POND HAVING SIDE SLOPES AND DIMENSIONS THAT ARE IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT THESE REQUIREMENTS HAVE BEEN MET. IF THE CONSTRUCTED SIDE SLOPES ARE STEEPER THAN THE REQUIRED SIDE SLOPES, OR THE POND VOLUME IS NOT WITHIN THREE (3) PERCENT OF THE DESIGN VOLUME, THE CONTRACTOR MAY BE REQUIRED TO MAKE CORRECTIONS TO THE POND AT NO ADDITIONAL COST TO THE OWNER.

4. FIELD DENSITY TESTING FREQUENCIES: A) ONE TEST FOR EACH 10,000 SQUARE FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING, MINIMUM 2 TESTS EACH LAYER; B) ONE TEST FOR EACH 100 SQUARE FEET OR FRACTION THEREOF OF BACKFILL AROUND AND UNDER STRUCTURES; C) ONE TEST FOR EACH 300 LINEAL FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING IN THE PIPELINE TRENCH; D) ONE TEST PER LIFT PER EACH CHANGE IN TYPE OF FILL; E) ONE TEST PER 1000 SQUARE FEET OF PAVEMENT SUBGRADE, MINIMUM OF 2 TESTS.

5. IT IS INTENDED THAT PREVIOUSLY EXCAVATED MATERIALS CONFORMING TO THE FOLLOWING REQUIREMENTS BE UTILIZED WHEREVER POSSIBLE.

   A. ACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-1, A-3, A-2-4, A-2-6; ASTM D2487 CLASSIFICATION GW, GP, GM, SM, SW, SP; UNLESS OTHERWISE DISAPPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS. NO MORE THAN 12% OF ACCEPTABLE MATERIALS SHALL PASS THE NUMBER 200 SIEVE.

   B. UNACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-2-5, A-2-7, A-4, A-5, A-6, A-7, A-8; ASTM D2487 CLASSIFICATION GC, SC, ML, MH, CL, CH, OL, OH, PT; UNLESS OTHERWISE APPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS.

6. PROVIDE BARRIERS, WARNING LIGHTS AND OTHER PROTECTIVE DEVICES AT ALL EXCAVATIONS.

7. SIDEWALKS, ROADS, STREETS, AND PAVEMENTS SHALL NOT BE BLOCKED OR OBSTRUCTED BY EXCAVATED MATERIALS, EXCEPT AS AUTHORIZED BY THE ENGINEER, IN WHICH CASE ADEQUATE TEMPORARY PROVISIONS MUST BE MADE FOR SATISFACTORY TEMPORARY PASSAGE OF PEDESTRIANS, AND VEHICLES. MINIMIZE INCONVENIENCE TO PUBLIC TRAVEL OR TO TENANTS OCCUPYING ADJOINING PROPERTY.

8. FURNISH, INSTALL, AND MAINTAIN, WITHOUT ADDITIONAL COMPENSATION, SHEETING, BRACING, AND SHORING SUPPORT REQUIRED TO KEEP EXCAVATIONS WITHIN THE PROPERTY OR EASEMENTS PROVIDED, TO SUPPORT THE SIDES OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH MAY DAMAGE ADJACENT PAVEMENTS OR STRUCTURES, DAMAGE OR DELAY THE WORK, OR ENDANGER LIFE AND HEALTH. VOIDS OUTSIDE THE SUPPORTS SHALL BE IMMEDIATELY FILLED AND COMPACTED.

9. SHEETING, SHORING, AND BRACING USED FOR THE SUPPORT OF EXCAVATIONS OVER 20 FEET DEEP SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF FLORIDA.

10. ALL EXCAVATIONS SHALL BE MADE BY OPEN CUT UNLESS OTHERWISE INDICATED. SLOPE SIDES OF TRENCHES IN ACCORDANCE WITH OSHA REQUIREMENTS AND THE RECOMMENDATIONS CONTAINED WITHIN THE PROJECT GEOTECHNICAL REPORT.

11. EXCAVATE TRENCHES TO DEPTH INDICATED OR REQUIRED FOR INDICATED FLOW LINES AND INVERT ELEVATIONS. OVER EXCAVATE TRENCHES A MINIMUM OF 2 FEET WHERE EXCAVATIONS OCCUR WITHIN UNSUITABLE SOILS, AND REPLACE OVER EXCAVATED MATERIAL WITH SUITABLE SOILS.

12. EXCEPT AS OTHERWISE INDICATED, EXCAVATE FOR PRESSURE PIPING SO TOP OF PIPING IS MINIMUM 3 FEET BELOW FINISHED GRADE.

13. TRENCH BOTTOMS AND THE BOTTOMS OF ALL STRUCTURES SHALL BE KEPT DRY, COMPACTED, AND STABLE TO A DEPTH TWO FEET BELOW THE BOTTOM OF THE TRENCH OR STRUCTURE.

14. ALL BEDDING, FILL, AND BACKFILL MATERIAL SHALL BE SUITABLE SOILS OR FLOWABLE FILL. WHERE TRENCH OR EXCAVATION IS WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, FOUNDATIONS, OR SLABS, PLACE BACKFILL IN LAYERS OF 8 INCH LOOSE DEPTH. IN ALL OTHER AREAS, PLACE FILL AND BACKFILL IN LAYERS OF 12 INCH LOOSE DEPTH.

15. MINIMUM DENSITY REQUIREMENT (ASTM D1557 OR AASHTO T180): BACKFILL AND FILL UNDER AND WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, SLABS, FOUNDATIONS = 98 PERCENT; BACKFILL AND FILL PLACED WITHIN PUBLIC ROAD RIGHT-OF-WAY AND UTILITY EASEMENTS = 95 PERCENT; BACKFILL AND FILL PLACED WITHIN POND AND ROAD EMBANKMENT = 95 PERCENT; BACKFILL AND FILL PLACED IN ALL OTHER AREAS = 90 PERCENT.

UTILITY SEPARATION REQUIREMENTS

1. THE HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER, STORM SEWER, WASTEWATER FORCE MAINS, STORMWATER FORCE MAINS, RECLAIMED WATER MAINS AND ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

   A. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF THREE FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, VACUUM TYPE SANITARY SEWER AND RECLAIMED WATER MAIN.

   B. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF SIX FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN THE OUTSIDE OF WATER MAINS AND THE OUTSIDE OF GRAVITY SANITARY SEWERS CAN BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.

   C. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF TEN FEET FROM ALL PARTS OF ANY EXISTING OR PROPOSED ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.

2. THE VERTICAL SEPARATION BETWEEN WATER MAINS AND SANITARY AND STORM SEWER, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER MAINS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

   A. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OUTSIDE OF THE SEWER. WHERE IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, THEN THE WATER MAIN CAN CROSS UNDER THESE TYPES OF PIPELINE SYSTEMS PROVIDED THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE PIPELINE. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM VACUUM TYPE SANITARY SEWER OR STORM SEWER JOINTS, AND AT LEAST SIX FEET FROM GRAVITY SANITARY SEWER JOINTS.

   B. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED RECLAIMED WATER MAINS, WASTEWATER FORCE MAINS AND STORMWATER FORCE MAINS. WHETHER THE WATER MAIN CROSSES OVER OR UNDER THESE TYPES OF PIPELINE SYSTEMS, THE OUTSIDE OF THE WATER MAIN SHALL BE AT LEAST 12 INCHES FROM THE OUTSIDE OF THE EXISTING OR PROPOSED RECLAIMED WATER MAIN, WASTEWATER FORCE MAIN AND STORMWATER FORCE MAIN. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM RECLAIMED WATER MAIN JOINTS AND STORMWATER FORCE MAIN JOINTS, AND AT LEAST SIX FEET FROM THE JOINTS OF WASTEWATER FORCE MAINS.

3. NO WATER MAIN SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE.

4. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST:

   A. THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER.

   B. SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN.

   C. TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.

5. THE FOLLOWING ARE ACCEPTABLE ALTERNATIVE CONSTRUCTION FEATURES TO BE CONSIDERED FOR COST EVALUATION WITH NO GUARANTEE THEY WILL BE APPROVED FOR IMPLEMENTATION WHERE IT IS NOT POSSIBLE TO MEET THE SEPARATION REQUIREMENTS. EXCEPTIONS FROM MEETING THE PIPE SEPARATION REQUIREMENTS, WITHOUT MITIGATION, SHALL BE ALLOWED ONLY BY FDEP IF TECHNICAL OR ECONOMIC JUSTIFICATIONS FOR EACH EXCEPTION PROVIDED BY THE ENGINEER ARE ACCEPTABLE TO FDEP AND ARE ONLY TO BE IMPLEMENTED UPON RECEIPT OF EXPRESSED WRITTEN CONSENT FROM THE ENGINEER AND APPROVAL FROM FDEP ON A CASE BY CASE BASIS. ALL POSSIBLE MEASURES TO ACHIEVE COMPLIANCE WITH THE PIPE SEPARATION REQUIREMENTS SHALL BE CONSIDERED FIRST ALONG WITH DESIGN CHANGES TO MEET THE REQUIREMENTS BEFORE THE ENGINEER SUBMITS A JUSTIFICATION OF AN EXCEPTION TO FDEP FOR APPROVAL. IMPLEMENTATION OF THESE MEASURES WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER AND APPROVAL BY FDEP COULD RESULT IN THE REQUIREMENT THAT THE INSTALLED UNAPPROVED MEASURES BE REMOVED AND REPLACED AT NO ADDITIONAL COST.

   A. WHERE A WATER MAIN IS LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE OR WHERE A WATER MAIN CROSSES ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE LESS THAN THE MINIMUM REQUIRED DISTANCE BETWEEN THE JOINTS IN THE OTHER PIPELINE:

      1) USE OF PRESSURE RATED PIPE CONFORMING TO AWWA STANDARDS FOR A GRAVITY OR VACUUM TYPE PIPELINE.

      2) USE OF WELDED, FUSED, OR OTHERWISE RESTRAINED JOINTS FOR EITHER PIPELINE.

      3) USE OF WATERTIGHT CASING PIPE OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR EITHER PIPE.

   B. WHERE A WATER MAIN IS LESS THAN THREE FEET HORIZONTALLY FROM ANOTHER PIPELINE OR WHERE A WATER MAIN CROSSES ANOTHER PIPELINE LESS THAN THE REQUIRED MINIMUM SEPARATION:

      1) USE OF PIPE OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (AT LEAST EQUAL TO 0.25 INCH THICK DUCTILE IRON PIPE), OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE WATER MAIN AND FOR THE OTHER PIPELINE IF THE OTHER PIPELINE COVEYS WASTEWATER OR RECLAIMED WATER.

WATER DISTRIBUTION SYSTEMS

1. THE ENTITY THAT WILL OPERATE AND MAINTAIN THE WATER SYSTEMS SHOWN ON THESE PLANS IS VOLUSIA COUNTY TO THE METER AND CITY OF DEBARY ONSITE PAST METER. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF VOLUSIA COUNTY.

2. ALL WATER PIPE SHALL BE EITHER DUCTILE IRON OR PVC, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

3.. ALL SERVICE PIPING (½" -3") SHALL BE POLYETHYLENE. SDR-PR PE PIPE SHALL BE MANUFACTURED FROM PE4710 AND SHALL CONFORM TO AWWA C901. ALL PIPE SHALL BE DR9, PRESSURE CLASS 200 PSI. PIPE AND FITTINGS SHALL BE NSF APPROVED FOR THE USAGE TO WHICH THEY ARE TO BE APPLIED. JOINTS IN SDR-PR PE PIPE SHALL BE BUTT HEAT FUSION OR SOCKET HEAT FUSION TYPE. FITTINGS SHALL BE MANUFACTURED OF THE SAME MATERIAL AS THE PIPE AND SHALL BE OF THE SAME SDR OR LESS. PROVIDE ADAPTERS AS REQUIRED TO JOIN PE PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS.

4. SERVICE SADDLES SHALL CONSIST OF EPOXY COATED DUCTILE IRON BODIES IN ACCORDANCE WITH ASTM A536, WITH DOUBLE STAINLESS STEEL STRAPS, BOLTS, WASHERS AND NUTS. STAINLESS STEEL SHALL BE TYPE 304, AND NUTS ARE TO BE TEFLON COATED. THE DUCTILE IRON BODY IS TO BE FUSION BONDED NYLON COATED, MINIMUM THICKNESS 12 MILS, OUTLET OF SADDLE IS TO HAVE NPT THREADS. SERVICE SADDLES SHALL BE MANUFACTURED BY FORD, MUELLER, OR SMITH-BLAIR.

5. ALL SERVICES SHALL INCLUDE THE FOLLOWING: CURB STOPS, UNIONS AS REQUIRED, CORPORATION STOPS. CONFORMANCE WITH AWWA C800 AND C901 IS REQUIRED. THE CONTRACTOR SHALL CUT "W" IN THE TOP CURB OF EACH WATER SERVICE AND A "V" AT ALL VALVE LOCATIONS. CUT W'S AND V'S SHALL BE HIGHLIGHTED WITH BLUE PAINT.

6. UNLESS OTHERWISE NOTED IN THE PLANS, THE UTILITY COMPANY SHALL PROVIDE AND INSTALL WATER METERS. CONTRACTOR SHALL CONSTRUCT WATER SERVICE TO THE CORPORATION STOP.

7. UNLESS OTHERWISE INDICATED OR SPECIFIED, ALL VALVES TWO INCHES AND SMALLER SHALL BE ALL BRASS OR BRONZE; VALVES OVER TWO INCHES SHALL BE IRON BODY, FULLY BRONZE OR BRONZE MOUNTED.

8. ALL BURIED VALVES SHALL BE PROVIDED WITH ADJUSTABLE VALVE BOXES APPROXIMATELY 5 INCHES IN DIAMETER WITH A MINIMUM THICKNESS OF 3/16 INCH CAST IRON. BOXES SHALL BE OF SUFFICIENT LENGTH TO OPERATE ALL VALVES BURIED IN THE GROUND, CONSISTING OF BASE, CENTER SECTION, AND TOP SECTION WITH COVER. VALVE BOXES LOCATED IN UNPAVED AREAS SHALL BE SLIP TYPE DESIGN TO PERMIT MOVEMENT OF THE TOP SECTION WITHOUT TRANSMITTING FORCES ONTO THE VALVE BODY. VALVE BOXES CAST INTO CONCRETE OR ASPHALT SURFACING SHALL HAVE BRASS COVERS. ALL VALVE BOX COVERS SHALL BE INTERNALLY CHAINED TO VALVE BOXES WITH AN APPROXIMATELY 18 INCH GALVANIZED CHAIN. VALVE BOX COVERS SHALL BE CAST WITH THE INSCRIPTION "WATER".

9. PVC PIPE SHALL BE COLOR CODED BLUE (WATER MAINS), STENCILED "WATER LINE" OR, AS APPLICABLE, (2" LETTERING ON TWO SIDES OF THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION).

SANITARY SEWER SYSTEMS

1. THE ENTITY THAT WILL OPERATE AND MAINTAIN THE SEWER SYSTEM SHOWN ON THESE PLANS IS VOLUSIA COUNTY TO THE R/W AND CITY OF DEBARY ONSITE. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF VOLUSIA COUNTY.

2. PVC SEWER PIPE SHALL BE TYPE PSM PVC PIPE CONFORMING TO ASTM D3034 AND SHALL BE SDR 35 FOR 4" THROUGH 15", AND ASTM F 679, WALL THICKNESS T-1, FOR PIPE 18" THROUGH 27".

3. INSTALL ALL SEWER MAINS AT A MINIMUM 36 INCHES OF COVER.

4. JOINTS SHALL MEET THE REQUIREMENTS OF ASTM D3212 USING RUBBER GASKETS CONFORMING TO ASTM F477.

5. FITTINGS SHALL CONFORM TO THE SAME REQUIREMENTS AS THE PIPE. PROVIDE ADAPTERS AS REQUIRED TO JOIN PVC PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS. SOLVENT CEMENT SHALL BE AS RECOMMENDED BY THE PIPE MANUFACTURER.

6. PVC SEWER PIPE SHALL BE COLOR CODED GREEN, STENCILED "SEWER LINE" (2" LETTERING ON TWO SIDES OF THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION).

7. INSTALL ADHESIVE IDENTIFICATION TAPE ALONG PIPELINE. TAPE SHALL BE MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH. TAPE COLOR AND LETTERING SHALL BE "SEWER LINE", BLACK PRINTING ON GREEN BACKGROUND. PLACE TAPE AS FOLLOWS: 2" - 8" PIPE - CENTER ALONG TOP HALF OF PIPE; 10" - 18" PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.

8. INSTALL WARNING TAPE ALONG ALL SEWER PIPELINES. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE, COLORED GREEN WITH BLACK LETTERING CODED AND WORDED "CAUTION: SEWER BURIED BELOW". INSTALL ALONG PIPELINE, 2 FEET ABOVE PIPE, MINIMUM OF 1 FOOT BELOW GRADE.

9. CONNECTIONS TO EXISTING SEWER SHALL BE CONDUCTED IN SUCH A MANNER THAT THE EXISTING SEWER REMAINS IN OPERATION. PROVIDE BY PASS PUMPING OF EXISTING FLOWS OR COLLECT AND LEGALLY DISPOSE OF EXISTING SEWER FLOW AS NEEDED TO ACCOMMODATE CONSTRUCTION WHILE KEEPING EXISTING SEWER IN SERVICE.

10. PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND MANHOLES. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED.

11. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE LEAKS.

12. ALL SERVICE LATERALS SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING REQUIREMENTS AS THE MAIN LINE.

13. PROVIDE LIGHT SOURCE AND MIRRORS FOR LAMPING OF SEWER. ANY SEWER IN WHICH THE DIRECT LIGHT OF A LAMP CANNOT BE VIEWED IN EITHER DIRECTION, FULL CIRCLE, BETWEEN ADJACENT MANHOLES SHALL BE CONSIDERED UNSATISFACTORY, UNLESS THE LINE IS DESIGNED WITH HORIZONTAL DEFLECTIONS, AND SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.

14. CONDUCT LOW PRESSURE AIR TESTING (4.0 PSI INITIAL PRESSURE) OF INSTALLED SEWER PIPING IN ACCORDANCE WITH ASTM F1417. MAXIMUM ALLOWABLE LEAKAGE IS 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE AREA BEING TESTED. ALLOWABLE AIR PRESSURE DROP DURING THE TEST IS 0.5 PSIG. MINIMUM REQUIRED TEST TIME (DURATION) IS: A) 4" PIPE = 1 MIN 53 SEC; B) 6" PIPE = 2 MIN 50 SEC, OR 0.427 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; C) 8" PIPE = 3 MIN 47 SEC, OR 0.760 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; D) 10" PIPE = 4 MIN 43 SEC, OR 1.187 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; E) 12" PIPE = 5 MIN 40 SEC, OR 1.709 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER.

15. CONDUCT LEAKAGE TESTING OF MANHOLES BY PLUGGING INVERTS AND FILLING MANHOLE WITH WATER. ALLOWABLE WATER DROP IN MANHOLE TO BE FIELD DETERMINED BY UTILITY AND ENGINEER. MINIMUM TEST DURATION IS 1 HOUR.

16. CONDUCT DEFLECTION TESTING OF PIPELINE AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. MAXIMUM ALLOWABLE PIPE DEFLECTION IS 5%. MEASURE DEFLECTION BY MANUALLY PULLING A MANDREL THROUGH THE PIPE. THE MINIMUM MANDREL OUTER DIAMETER SHALL BE IN ACCORDANCE WITH THE FOLLOWING: 6" SEWER = 5.45" MANDREL; 8" SEWER = 7.28" MANDREL; 10" SEWER = 9.08" MANDREL; 12" SEWER = 10.79" MANDREL; 15" SEWER = 13.20" MANDREL; 18" SEWER = 16.13" MANDREL; 21" SEWER = 19.00" MANDREL; 24" SEWER = 21.36" MANDREL; 27" SEWER = 24.06" MANDREL.

17. DEFLECTION TESTING IS CONSIDERED SATISFACTORY IF THE MANDREL CAN BE PULLED BY HAND THROUGH THE PIPE BEING TESTED. IF THE MANDREL CANNOT BE PULLED THROUGH THE PIPE, REPLACE OR CORRECT THE PIPE AND RETEST UNTIL TESTING IS SATISFACTORY. ANY PIPE REMOVED OR CORRECTED DUE TO FAILING DEFLECTION TESTING SHALL ALSO BE RE-TESTED FOR LEAKAGE.

PRECAST STRUCTURES AND APPURTENANCES

1. FRAMES AND COVERS SHALL BE GREY IRON PER ASTM A48, CLASS 30B AND SHALL BE U.S. FOUNDRY TYPE 227AS, TRAFFIC BEARING (AASHTO H-20 LOADING), UNLESS OTHERWISE NOTED IN THE DRAWINGS. CASTINGS SHALL BE SMOOTH, CLEAN, FREE FROM BLISTERS, BLOWHOLES, AND SHRINKAGE. RAISED LETTERING ON COVERS SHALL BE "STORM", "SEWER", OR AS DETAILED ON THE DRAWINGS.

2. PROVIDE CAST IRON INLETS, FRAMES, AND GRATES IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. ALL FRAMES AND INLET GRATES SHALL BE PRODUCTS OF U.S. FOUNDRY & MANUFACTURING CORPORATION, OR EQUAL.

3. ALL INLET GRATES SHALL BE SECURED BY CHAIN AND EYEBOLT TO THE TOP OF THE STRUCTURE.

4. AS-BUILT INFORMATION SHALL INCLUDE ALL RIM, TOP AND INVERT ELEVATIONS FOR ALL PRECAST STRUCTURES.

STORM SEWER SYSTEMS

1. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE INDICATED ON THE DRAWINGS. ROUND CONCRETE PIPE SHALL COMPLY WITH ASTM C76. ELLIPTICAL CONCRETE PIPE SHALL COMPLY WITH ASTM C507. PIPE JOINTS SHALL COMPLY WITH ASTM C443 AND FDOT SPECIFICATION SECTION 430, AND RUBBER GASKETS SHALL COMPLY WITH FDOT SPECIFICATION SECTION 942. MINIMUM COVER OVER THE PIPE, INCLUDING COVER OVER THE BELL OF THE PIPE WHERE APPLICABLE, SHALL BE 30 INCHES.

2. RCP PIPE SHALL NOT BE SHIPPED FROM MANUFACTURER UNTIL THE COMPRESSIVE STRENGTH OF THE PIPE HAS REACHED 4000 PSI AND A MINIMUM OF 5 DAYS HAVE PASSED SINCE THE MANUFACTURING OR REPAIR OF THE PIPE HAS BEEN COMPLETED.

3. CORRUGATED POLYETHYLENE PIPE AND FITTINGS 4 INCH THROUGH 10 INCH DIAMETER SHALL COMPLY WITH AASHTO M252, TYPE S. PIPE 12 INCH THROUGH 48 INCH DIAMETER SHALL COMPLY WITH AASHTO M294, TYPE S, AND ASTM F2306. PIPE 54 INCH THROUGH 60 INCH DIAMETER SHALL COMPLY WITH FDOT SPECIFICATION SECTION 948 (CLASS II PIPE) AND SHALL COMPLY WITH AASHTO M294. VIRGIN MATERIAL FOR THE PRODUCTION OF PIPE AND FITTINGS SHALL BE HIGH DENSITY POLYETHYLENE CONFORMING TO THE MINIMUM REQUIREMENTS OF CELL CLASSIFICATION 424420C FOR 4-INCH THROUGH 10-INCH DIAMETERS AND 435400C FOR 12-INCH THROUGH 60-INCH DIAMETERS PER ASTM D3350. THE 12-INCH THROUGH 60-INCH VIRGIN PIPE MATERIAL SHALL COMPLY WITH THE NOTCHED CONSTANT LIGAMENT-STRESS (NCLS) TEST AS SPECIFIED IN ASTM F2306. BELL JOINTS FOR 4 INCH THROUGH 10 INCH DIAMETER PIPE SHALL BE PUSH-ON SLEEVE. BELL JOINTS FOR 12 INCH THROUGH 60 INCH DIAMETER PIPE SHALL BE INTEGRALLY FORMED ON PIPE. PIPE JOINTS SHALL BE WATERTIGHT PER ASTM D3212. GASKETS SHALL BE INSTALLED BY PIPE MANUFACTURER AND SHALL COMPLY WITH ASTM F477.

4. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. FILTER FABRIC SHALL BE IN ACCORDANCE WITH FDOT INDEX NO. 199, TYPE D-3, A.O.S. 70-100. INSTALL IN ACCORDANCE WITH FDOT INDEX NO. 280. PROVIDE MINIMUM 12" OVERLAP.

5. INSTALL POLYETHYLENE PIPE IN ACCORDANCE WITH ASTM D2321. BACKFILL AND COMPACT EVENLY ON EACH SIDE TO PREVENT DISPLACEMENT. MINIMUM COVER OVER POLYETHYLENE PIPE SHALL BE AS FOLLOWS: A) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS SUITABLE SOILS AS DEFINED IN THE GENERAL NOTES: MINIMUM COVER SHALL BE 36 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER; B) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS MANUFACTURED AGGREGATES CLASS 1A OR 1B AS DEFINED IN ASTM D2321: MINIMUM COVER SHALL BE 30 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER.

6. PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND STRUCTURES.

7. ALL STORM PIPE SHALL BE SUBJECTED TO LEAKAGE TESTING. WHEN THE GROUND WATER LEVEL IS ABOVE THE TOP OF THE PIPE, AN INFILTRATION TEST SHALL BE PERFORMED BY SEALING OFF A LENGTH OF PIPE AND MEASURING THE DEPTH OF FLOW OVER A MEASURING WEIR, OR BY PUMPING THE INFILTRATED WATER INTO CONTAINERS FOR MEASUREMENT. TESTS SHALL BE CONDUCTED FOR A MINIMUM OF FOUR HOURS. INFILTRATION LEAKAGE SHALL NOT EXCEED 150 GALLONS PER 24 HOURS, PER INCH DIAMETER, PER MILE OF PIPE. WHEN THE GROUND WATER LEVEL IS BELOW THE TOP OF THE PIPE, THE PIPE SHALL BE TESTED FOR LEAKAGE BY EXFILTRATION. EXFILTRATION LEAKAGE TEST SHALL CONSIST OF ISOLATING THE PARTICULAR SECTION, FILLING WITH WATER TO A POINT 4 FEET ABOVE THE TOP OF THE PIPE AT THE UPPER MANHOLE OR INLET, AND ALLOWING IT TO STAND NOT LESS THAN FOUR HOURS. THE SECTION SHALL THEN BE REFILLED WITH WATER UP TO THE ORIGINAL LEVEL AND AFTER TWO HOURS THE DROP IN WATER SURFACE SHALL BE MEASURED. THE COMPUTED LEAKAGE SHALL NOT EXCEED 150 GALLONS PER INCH DIAMETER, PER 24 HOURS, PER MILE OF PIPE.

PAVING, SIDEWALKS, AND CURBING

1. MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY AND PAVING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

2. ROADWAY PAVING, BASE, AND SUBGRADE THICKNESSES SHALL BE IN ACCORDANCE WITH DETAILS ON THESE DRAWINGS. MATERIAL STABILITY AND DENSITY REQUIREMENTS ARE AS FOLLOWS:

   A. 2" TYPE SP STRUCTURAL COURSE 9.5 MM TRAFFIC LEVEL C

   B. 6" LIMEROCK BASE: MINIMUM PLACED IN 6" MAXIMUM LIFTS, COMPACTED TO A MINIMUM DENSITY OF 98% OF THE MODIFIED PROCTOR DRY DENSITY (AASHTO T-180).

   C. SUBGRADE: CONSISTS OF NEW 6" COMPACTED THICKNESS GRANULAR FILL OR NATIVE SUBGRADE SOILS MIXED WITH A QUANTITY OF SUITABLE STABILIZATION MATERIAL SUFFICIENT TO ACHIEVE A MINIMUM LBR OF 40. SUBGRADE SHOULD BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% OF THE MATERIAL MODIFIED PROCTOR (ASTM D-1557, AASHTO T-180 LABORATORY MAXIMUM DRY DENSITY.

3. SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREAS AS SHOWN ON THE CONSTRUCTION PLANS. THE SIDEWALK SHALL BE CONSTRUCTED OF 4" OF CONCRETE WITH A 28-DAY COMPRESSION STRENGTH OF 3000 PSI. JOINTS SHALL BE EITHER TOOLED OR SAW CUT AT A DISTANCE OF 10'. HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS AND SHALL BE IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, LATEST EDITION.

4. CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. CONCRETE FOR CURBS SHALL BE FDOT CLASS "1" CONCRETE WITH A 28-DAY COMPRESSION STRENGTH OF 3000 PSI. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) SECTION 520 AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.

5. FIELD COMPACTION DENSITY, STABILITY, AND THICKNESS TESTING FREQUENCIES OF SUB-BASE, BASE, AND ASPHALT SHALL BE TESTED ONCE EVERY 300 LINEAR FEET OF PAVING PER 24-FT WIDE STRIP, STAGGERED LEFT, CENTER AND RIGHT OF CENTERLINE. WHERE LESS THAN 300 LINEAR FEET OF SUB-BASE, BASE, AND ASPHALT IS PLACED IN ONE DAY, PROVIDE MIN. OF ONE TEST FOR EACH PER DAY'S CONSTRUCTION AT A LOCATION DESIGNATED BY THE ENGINEER. ASPHALT EXTRACTION GRADATION SHALL BE TESTED FROM GRAB SAMPLES COLLECTED ONCE EVERY 1800 SQUARE YARDS OF ASPHALT DELIVERED TO THE SITE (OR A MINIMUM OF ONCE PER DAY).

6. MAXIMUM LENGTH OF CURB RAMP SHALL NOT EXCEED 6' NOR THE RISE BE GREATER THAN 6" UNLESS APPROVED BY THE ENGINEER.

PAVING TIMING REQUIREMENTS

1. INSTALL SUBGRADE AND BASE COURSE MATERIALS WITHIN 48 HOURS OF THE REMOVAL/OPEN CUTTING OF EXISTING PAVEMENT CONSISTING OF STREETS, DRIVEWAYS, OR SIDEWALK. INSTALL FINAL SURFACE COURSES WITHIN 14 DAYS AFTER REMOVAL OF EXISTING PAVEMENT.

2. AREAS TO RECEIVE ASPHALT SHALL RECEIVE EROSION CONTROL MEASURES NO LATER THAN 48 HOURS AFTER ACCEPTANCE OF BASE COURSE. TEMPORARY EROSION CONTROL CONSISTS OF PLACEMENT OF A BITUMINOUS PRIME COAT AND SANDING THE SURFACE. PERMANENT EROSION CONTROL CONSISTS OF PLACEMENT OF THE STRUCTURAL COURSE.

3. AREAS TO RECEIVE CONCRETE PAVING SHALL BE EITHER PROTECTED WITH A LAYER OF FDOT COARSE AGGREGATE MATERIAL OR SHALL BE PAVED WITHIN 48 HOURS OF ACCEPTANCE OF THE SUBGRADE.

SIGNS AND PAVEMENT MARKINGS

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE LATEST IMPLEMENTED EDITION OF FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS. STANDARD INDEX NO. 11200, 11860, 11862, 11863, 11864, 11865, 17302, 17344, 17346, 17349, AND 17355 APPLY. GENERALLY, ALL MARKINGS SHALL CONFORM TO THE FOLLOWING: 6" EDGE LINES, 6" LANE LINES, 6" SINGLE CENTERLINES, AND 6" DOUBLE LINE PATTERNS, UNLESS OTHERWISE NOTED ON THE PLANS.

2. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH RAISED PAVEMENT MARKERS (TYPE 911 - 4" X 4"). RAISED PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH THESE PLANS AND FDOT INDEX NO. 17352.

3. PARKING STALL PAVEMENT MARKINGS SHALL BE PAINTED. PAINT SHALL MEET THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 971, NON-REFLECTIVE WHITE TRAFFIC PAINT.

4. ALL ROADWAY TRAFFIC SIGNS SHALL BE MANUFACTURED USING HIGH INTENSITY RETROREFLECTIVE MATERIALS. THE BACK OF ALL FINISHED PANELS SHALL BE STENCILED WITH THE DATE OF FABRICATION, THE FABRICATOR'S INITIALS, AND THE NAME OF THE SHEETING IN THREE-INCH LETTERS.

5. INTERNAL SITE TRAFFIC SIGNS ARE NOT REQUIRED TO BE RETROREFLECTIVE.

6. THE CONTRACTOR SHALL VERIFY THE REQUIRED LENGTH OF THE SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.

7. ALL PAVEMENT MARKINGS REQUIRE LAYOUT APPROVAL IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.

8. PRIOR TO FINAL PAVEMENT MARKING INSTALLATION, A TWO WEEK CURE TIME OF THE ASPHALT IS REQUIRED.

FIRE PROTECTION SYSTEMS

1. COMBUSTIBLE CONSTRUCTION CANNOT OCCUR UNTIL PROPER DOCUMENTATION HAS BEEN SUBMITTED TO THE LOCAL FIRE MARSHAL. DOCUMENTATION SHALL SHOW THAT HYDRANTS HAVE BEEN INSTALLED, TESTED, AND ARE IN PROPER WORKING ORDER.

2. INSTALL ALL FIRE LINE PIPING AT A MINIMUM 36 INCHES OF COVER.

3. ALL FIRE LINE PIPING FROM POINT OF SERVICE AS DEFINED BY FS 633.021(16) SHALL BE C900 DR 14. THE FIRE LINE SHALL BE PRESSURE TESTED TO 200 PSI FOR A MINIMUM OF TWO HOURS, TESTED IN ACCORDANCE WITH NFPA 24-9-2.

4. THE CONTRACTOR INSTALLING THE UNDERGROUND FIRE PROTECTION PIPING SHALL HOLD A CLASS I, II, OR LEVEL V CERTIFICATION AS ISSUED BY THE STATE OF FLORIDA, AS REQUIRED BY FS 633.021(5).

5. ALL FIRE PROTECTION SPRINKLER SYSTEMS INSTALLED SHALL COMPLY WITH NFPA 13, AND SHALL BE MONITORED BY A COMPANY LISTED AS A CENTRAL STATION.

6. HYDRANTS SHALL CONFORM TO AWWA C502 AND SHALL BE FURNISHED COMPLETE WITH WRENCH AND OTHER APPURTENANCES. MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH AWWA C502 AND TESTS LISTED THEREIN WILL BE REQUIRED.

7. ALL HYDRANTS SHALL BE OF BREAKABLE TYPE, WITH THE BREAKABLE SECTION LOCATED SLIGHTLY ABOVE THE FINISH GROUND LINE. HYDRANTS SHALL CONTAIN TWO-TWO AND A HALF INCH (2-1/2") HOSE CONNECTIONS AND ONE-FOUR AND A HALF INCH (4-1/2") STEAMER CONNECTIONS WITH NATIONAL STANDARD FIRE HOSE COUPLING SCREW THREADS, FIVE AND ONE QUARTER INCH (5-1/4") VALVE OPENING, SIX INCH (6") DIAMETER MECHANICAL JOINT INLET, ONE AND ONE-HALF INCH (1-1/2") PENTAGON OPERATING NUT. THE HYDRANTS SHALL OPEN COUNTERCLOCKWISE.

8. ALL HYDRANTS SHALL BE PAINTED IN AN APPROVED MANNER WITH THE PRIMER PAINT BEING KOPPER'S "GLAMORTEX" NO. 622 RUST PRIMER AND THE FINISH PAINT SHALL BE TWO COATS OF ENAMEL OR SPECIAL COATING TO COLOR AS REQUIRED BY THE LOCAL FIRE DEPARTMENT.

9. BLUE PAVEMENT REFLECTORS (CAT EYES) SHALL BE PLACED IN THE CENTERLINE OF THE DRIVING LANE DIRECTLY IN FRONT OF ALL FIRE HYDRANTS. THERE SHALL BE NO TREES, SHRUBS, OR LANDSCAPING PLANTED AROUND THE FIRE HYDRANTS OR IN AREAS DESIGNATED AS FIRE LANES.

10. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST: THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER; SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN; AND TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.

11. THE SEQUENCE OF TESTING AND DISINFECTION SHALL BE AS FOLLOWS: 1) CONDUCT FIRE FLOW, PRESSURE AND LEAKAGE TESTING; 2) PERFORM FLUSHING PER UTILITY REQUIREMENTS AND AWWA C651; 3) DISINFECT THE WATER MAIN, INCLUDING VALVES AND FITTINGS; AND 4) FLUSH AFTER DISINFECTION.

12. THE CONTRACTOR SHALL PROVIDE A POST-CONSTRUCTION FIRE FLOW TEST WITNESSED AND APPROVED BY THE ENGINEER AND THE UTILITY. HYDRANTS SHALL DELIVER A MINIMUM OF 1250 GPM WITH A RESIDUAL PRESSURE OF 20 PSI.

13. APPLY HYDRO STATIC TEST PRESSURE OF 200 PSA (FIRE MAINS) FOR 10 MINUTES AND FOR SUCH ADDITIONAL PERIOD NECESSARY FOR THE ENGINEER TO COMPLETE THE INSPECTION OF THE LINE UNDER TEST. DO NOT EXCEED PIPE MANUFACTURER'S SUGGESTED TIME DURATION AT THE TEST PRESSURE. IF DEFECTS ARE NOTED, REPAIRS SHALL BE MADE AND THE TEST REPEATED UNTIL ALL PARTS OF THE LINE WITHSTAND THE TEST PRESSURE.

14. APPLY LEAKAGE TEST PRESSURE OF 200 PSI (FIRE MAINS) MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY FOR THE ENGINEER TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED, THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.

15. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES.

16. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA L=SDP/148000 WHERE L=MAXIMUM PERMISSIBLE LEAKAGE RATE IN GALLONS PER HOUR, THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED; S=LENGTH OF LINE TESTED (IN FEET); D=NOMINAL INTERNAL DIAMETER (IN INCHES) OF THE PIPE; AND P=THE SQUARE ROOT OF THE ACTUAL PRESSURE IN PSIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING THE DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED PIPE JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.

17. DISINFECT ALL POTABLE WATER LINES, FIRE LINES, VALVES, FITTINGS, HYDRANTS.

18. ALL DISINFECTION WORK SHALL BE ACCEPTABLE TO THE STATE HEALTH AUTHORITY. IF ANY REQUIREMENTS OF THIS SECTION ARE IN CONFLICT WITH REQUIREMENTS OF THE AUTHORITY FOR DISINFECTION, THOSE OF THE AUTHORITY SHALL GOVERN. THE WATER MAIN DISINFECTION AND BACTERIOLOGICAL SAMPLING AND METHODS OF DISINFECTION FOR ALL WATER CONTAINMENT DEVICES AND PIPING SYSTEMS SHALL CONFORM TO AWWA C651.

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No.	Date	Revision	By
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Designed by:	JDO
Drawn by:	DRB
Checked by:	JDO
Approved by:	JDO
Scale:	N.T.S.
Date:	10/26/15
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GENERAL NOTES

DEBARY PUBLIC SAFETY COMPLEX
FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.
C-2

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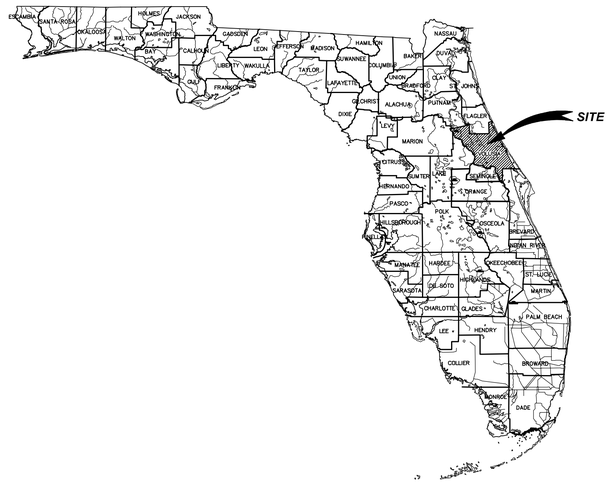


"BOUNDARY & TOPOGRAPHIC SURVEY"

FOR

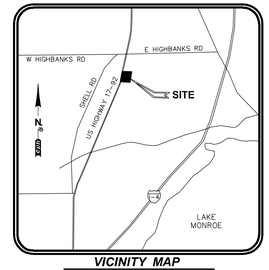
CITY OF DEBARY

AT

75 S US HIGHWAY 17-92

LYING IN

SECTION 34-TOWNSHIP 18 SOUTH-RANGE 30EAST
VOLUSIA COUNTY, FLORIDA



VICINITY MAP
NOT TO SCALE

Legal Description 1:

LOT 24, ACCORDING TO THE PLAT OF PLANTATION ESTATES, UNIT NO. 2 AS RECORDED IN MAP BOOK 11, PAGE 183 AS RECORDED IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

Legal Description 2:

LOT 25, ACCORDING TO THE PLAT OF PLANTATION ESTATES, UNIT NO. 2 AS RECORDED IN MAP BOOK 11, PAGE 183 AS RECORDED IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

Legal Description 3:

LOTS 26 AND 27, ACCORDING TO THE PLAT OF PLANTATION ESTATES, UNIT NO. 2 AS RECORDED IN MAP BOOK 11, PAGE 183 AS RECORDED IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

Reference Material

1) PLANTATION ESTATES AS RECORDED IN MAP BOOK 11, PAGE 183 AS RECORDED IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

Survey Notes:

1. "SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER."
2. "ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES."
3. THE TWO SITE BENCHMARKS FOR THIS TOPOGRAPHIC SURVEY ARE DISPLAYED ON THE RESPECTIVE SURVEY FILE. THESE BENCHMARKS ARE BASED ON A CLOSED VERTICAL CONTROL LOOP HAVING AN ACTUAL ERROR OF CLOSURE OF 0.004' WHICH MEETS THE ALLOWABLE CLOSURE OF 0.04'. THIS FIELDWORK WAS PERFORMED USING A TOPCON LEVEL MODEL # DL101-C AND REFERENCES THE FOLLOWING PUBLISHED BENCHMARKS AS ESTABLISHED BY THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) AND SAID ELEVATIONS ARE BASED ON A VERTICAL CONTROL BENCHMARK SUPPLIED BY NGS DATA SHEETS PUBLISHED AT WWW.LABINS.ORG AND IS AS FOLLOWS.

a) DESIGNATION #G 196, PID# AK0115.
ELEVATION = 73.13 FEET (NAVD88)

SITE BENCHMARKS ARE AS SHOWN ON SHEET 3 OF 3.

3. THIS SURVEY IS NOT VALID WITHOUT SHEETS THROUGH 3 OF 3.
4. THE LAST DAY FIELD WORK WAS PERFORMED WAS JUNE 12, 2014; ALL BOUNDARY CORNERS WERE RECOVERED OR SET AS NOTED HEREON.
5. THE "LEGAL DESCRIPTION" HEREON IS IN ACCORD WITH THE INSTRUMENT OF RECORD, AND WAS PROVIDED BY THE CLIENT.
6. BEARINGS SHOWN HEREON ARE RELATIVE TO THE EASTERLY RIGHT OF WAY LINE OF US HIGHWAY NO. 17-92 AS BEING S 13°28'15" W AN ASSUMED BEARING.
7. THE APPARENT USE OF THE LAND, AS CLASSIFIED BY THE MINIMUM TECHNICAL STANDARDS RULE CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE ESTABLISHES THAT THE MINIMUM RELATIVE ACCURACY FOR THIS TYPE OF BOUNDARY SURVEY MEET THE HORIZONTAL CONTROL ACCURACY OF 1'/10,000 FEET FOR A HIGH RISK SURVEY. THE MEASUREMENTS AND CALCULATIONS OF THE CLOSED GEOMETRIC FIGURES WERE FOUND TO MEET THIS ACCURACY REQUIREMENT. THE EQUIPMENT USED TO VERIFY THE HORIZONTAL CONTROL ON THE SUBJECT SURVEY WAS A TOPCON TOTAL STATION MODEL# GPT-3005W.
8. HORIZONTAL WELL-IDENTIFIED FEATURES IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED HORIZONTAL POSITIONAL ACCURACY OF 0.05'. THE EQUIPMENT USED TO LOCATE THE FEATURES WAS A TOPCON TOTAL STATION MODEL # GPT-3005W.
9. THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OR OPINION OF TITLE. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WERE FURNISHED TO THIS SURVEYOR EXCEPT AS NOTED.
10. NO UNDERGROUND UTILITIES, FOUNDATIONS OR IMPROVEMENTS, IF ANY, HAVE BEEN LOCATED EXCEPT AS SHOWN.
11. THIS SURVEY DOES NOT IDENTIFY THE LIMITS OR EXTENT OF POTENTIAL JURISDICTIONAL WETLAND BOUNDARIES.
12. FENCES EXISTING ON, OVER OR ADJACENT TO SUBJECT PROPERTY, ARE DISPLAYED HEREON; OWNERSHIP WHETHER SINGULAR OR JOINT WAS NOT DETERMINED BY THIS SURVEY.
13. DIMENSIONS ARE SHOWN RELATIVE TO UNITED STATES STANDARD FEET AND DECIMALS THEREOF, UNLESS THE OBJECT SHOWN IS COMMONLY IDENTIFIED IN INCHES, I.E. TREE DIAMETER, PIPE DIAMETER, ETC.
14. CERTAIN INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WERE FURNISHED TO THIS SURVEYOR AS NOTED OR DISPLAYED HEREON.
15. THE PURPOSE OF THIS SURVEY WAS TO ESTABLISH/RECOVER THE BOUNDARY CORNERS OF THE THREE PARCELS AND SHOW LIMITED ABOVE GROUND IMPROVEMENTS.
17. VERTICAL FEATURE ACCURACY: "ELEVATIONS OF WELL-IDENTIFIED FEATURES CONTAINED IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED VERTICAL POSITIONAL ACCURACY OF 0.04 (FT).
27. THE UNDERGROUND UTILITIES DEPICTED BY PIPE LINETYPES ARE APPROXIMATE IN NATURE BASED UPON AN INSPECTION OF THE MANHOLE, GRATE, ETC. OF EACH FACILITY. EXISTING PIPES WERE NOT LAMPED OR REMOTELY VIEWED FOR OBSTRUCTIONS OR CONNECTIVITY.
9. HAVING CONSULTED THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 1206720620 J EFFECTIVE DATE FEBRUARY 19, 2014, THE SUBJECT PROPERTY APPEARS TO LIE IN ZONE X, WHICH ARE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THIS DETERMINATION WAS BASED ON GEOSPATIAL DATA DOWNLOADED FROM WWW.FEMA.GOV AND THE SHAPE FILE DISPLAYED HEREON WAS REFERENCED TO ABOVE GROUND IMPROVEMENTS. THIS DETERMINATION WAS BASED ON A GRAPHIC INTERPOLATION OF SAID MAP AND NOT ON ACTUAL FIELD MEASUREMENTS.

Abbreviation Legend:

(A)	– ACTUAL	MH	– MANHOLE
A/C	– AIR CONDITIONER	MLP	– METAL LIGHT POLE
ACSM	– AMERICAN CONGRESS ON SURVEYING & MAPPING	MPH	– MILES PER HOUR
ADA	– AMERICANS WITH DISABILITIES ACT	MPP	– METAL POWER POLE
ALTA	– AMERICAN LAND TITLE ASSOCIATION	N/A	– NOT APPLICABLE
APPROX	– APPROXIMATE	NAVD	– NORTH AMERICAN VERTICAL DATUM
ARV	– AIR RELEASE VALVE	NAD	– NORTH AMERICAN DATUM
AVE	– AVENUE	NG	– NATURAL GROUND
AVG	– AVERAGE	NGS	– NATIONAL GEODETIC SURVEY
(BB)	– BEARING BASIS	NGVD	– NATIONAL GEODETIC VERTICAL DATUM
BFP	– BACK FLOW PREVENTER	N & D	– NAIL AND DISK
BLK	– BLOCK	NO.	– NUMBER
BLDG	– BUILDING	NR	– NON-RADIAL
BLVD	– BOULEVARD	NSPS	– NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
BM	– BENCH MARK	NT	– NON-TANGENT
BOC	– BACK OF CURB	NTS	– NOT TO SCALE
BOW	– BACK OF WALK	OD	– OUTSIDE DIAMETER
BSL	– BUILDING SETBACK LINE	ORB	– OFFICIAL RECORDS BOOK
BWF	– BARBED WIRE FENCE	OR	– OFFICIAL RECORDS
C-X	– DENOTES SHEET NUMBERING FOR ENGINEERING PLANS	OUL	– OVERHEAD UTILITY LINES
(C)	– CALCULATED	OTL	– OVERHEAD TRAFFIC LINES
C	– CHORD	(P)	– PLAT
CATV	– CABLE TELEVISION RISER	PB	– PLAT BOOK
CB	– CHORD BEARING	PC	– POINT OF CURVATURE
CBS	– CONCRETE BLOCK STRUCTURE	PCC	– POINT OF COMPOUND CURVATURE
C & G	– CURB & GUTTER	PCP	– PERMANENT CONTROL POINT
CI	– CATCH INLET	PFF	– PROPOSED FINISHED FLOOR
C/L	– CENTERLINE	PG	– PAGE
CLF	– CHAIN LINK FENCE	PGS	– PAGES
CM	– CONCRETE MONUMENT	PI	– POINT OF INTERSECTION
CMP	– CORRUGATED METAL PIPE	PK	– PARKER KAYLON
CO	– CLEANOUT	POB	– POINT OF BEGINNING
CONC	– CONCRETE	POC	– POINT OF COMMENCEMENT
COR	– CORNER	POL	– POINT ON LINE
CPP	– CORRUGATED PLASTIC PIPE	PP	– POWER POLE
CUE	– COUNTY UTILITY EASEMENT	PRC	– POINT OF REVERSE CURVATURE
CWS	– CROSSWALK SIGNAL	PRM	– PERMANENT REFERENCE MONUMENT
Δ	– DELTA	PSM	– PROFESSIONAL SURVEYOR & MAPPER
(D)	– DESCRIPTION	PT	– POINT OF TANGENCY
DB	– DEED BOOK	PVC	– POLYVINYL CHLORIDE PIPE
DBH	– DIAMETER AT BREAST HEIGHT IN INCHES	PVMT	– PAVEMENT
DE	– DRAINAGE EASEMENT	R30E	– RANGE 30 EAST
DEPT	– DEPARTMENT	R	– RADIUS
DIP	– DUCTILE IRON PIPE	RAD	– RADIAL
DR	– DRIVE	RCP	– REINFORCED CONCRETE PIPE
D/U	– DRAINAGE AND UTILITY EASEMENT	REC	– RECOVERED
(E)	– ENGINEERING PLAN	REV	– REVISION
EJB	– ELECTRIC JUNCTION BOX	RP	– RADIUS POINT
EL	– UNDERGROUND ELECTRICAL LINES	R/W	– RIGHT-OF-WAY
ELEC	– ELECTRIC	RLS	– REGISTERED LAND SURVEYOR
ELEV	– ELEVATION	RP	– RADIUS POINT
ELLIP	– ELLIPTICAL	RWL	– UNDERGROUND RECLAIM WATER LINE
EOI	– END OF INFORMATION	RWM	– RECLAIMED WATER METER
EOP	– EDGE OF PAVEMENT	SE	– SPECIAL EASEMENT
FB	– FIELD BOOK	SEC 23	– SECTION 23
FDOT	– FLORIDA DEPARTMENT OF TRANSPORTATION	SMH	– SANITARY SEWER MANHOLE
FF	– FINISH FLOOR	SQ	– SQUARE
FGI	– FLAT GRATE INLET	SQ FT	– SQUARE FEET
FGLP	– FIBERGLASS LIGHT POLE	ST	– STREET
FH	– FIRE HYDRANT	STMH	– STORM DRAINAGE MANHOLE
FM	– FORCE MAIN	S/W	– SIDEWALK
FND	– FOUND	TB	– TANGENT BEARING
FP&L	– FLORIDA POWER AND LIGHT	T18S	– TOWNSHIP 18 SOUTH
(G)	– GRID (STATE PLANE)	TELE	– TELEPHONE
GL	– UNDERGROUND GAS LINES	TL	– OVERHEAD TRAFFIC SIGNAL LINES
GOVT	– GOVERNMENT	TOB	– TOP OF BANK
GPR	– GROUND PENETRATING RADAR	TOE	– TOE OF SLOPE
GTMH	– GREASE TRAP MANHOLE	TR	– TELEPHONE RISER
HDPE	– HIGH DENSITY POLYETHYLENE PIPE	TRANS	– TRANSFORMER PAD
HWF	– HOG WIRE FENCE	TSB	– TRAFFIC SIGNAL BOX
ID	– IDENTIFICATION	TSSP	– TRAFFIC SIGNAL SUPPORT POLE
ICV	– IRRIGATION CONTROL VALVE	TVL	– UNDERGROUND CABLE TV LINES
INFO	– INFORMATION	(TYP)	– TYPICAL
INV	– INVERT	UE	– UTILITY EASEMENT
IP	– IRON PIPE	UNK	– UNKNOWN
IP&C	– IRON PIPE & CAP	UTL	– UNDERGROUND TELEPHONE LINES
IR	– IRON ROD	W/	– WITH
IR&C	– IRON REBAR & CAP	WL	– UNDERGROUND WATER LINE
IRR	– IRRIGATION	WLP	– WOOD LIGHT POLE
L	– ARC LENGTH	WM	– WATER METER
LB#	– LICENSED BUSINESS NUMBER	WP	– WORK PROGRAM
LP	– LIGHT POLE	WPF	– WOOD POST FENCE
(M)	– MEASURED	WPP	– WOOD POWER POLE
MB	– MAP BOOK	WV	– WATER VALVE
MES	– MITERED END SECTION		

Line Legend:

NOT TO SCALE

- = 1 FOOT CONTOURS
- = 5 FOOT CONTOURS
- = ADJOINER PROPERTY LINES
- = BARBED WIRE FENCE
- = BROKEN LINE
- = BURIED CABLE
- = BURIED CABLE TELEVISION
- = BURIED ELECTRIC
- = BURIED FIBER OPTICS
- = BURIED GAS
- = BURIED RECLAIMED WATER LINE
- = BURIED SANITARY LINES
- = BURIED SANITARY SEWER FORCE MAIN LINE
- = BURIED TRAFFIC CONTROL
- = BURIED TELEPHONE LINE
- = BURIED WATER LINES
- = CENTER LINE R/W
- = CHAIN LINK FENCE
- = EASEMENT LINES (EXISTING)
- = EASEMENT LINES (PROPOSED)
- = EDGE OF WATER LINES
- = EXISTING DRAINAGE PIPES
- = EXISTING DRAINAGE PIPES (OUTFALL NOT LOCATED)
- = HOT WATER SUPPLY LINES
- = IRRIGATION LINES
- = OVERHEAD TRAFFIC LINES
- = OVERHEAD UTILITY LINES
- = RAILROAD TRACK LINES
- = RIGHT-OF-WAY LINES
- = SECTION LINES
- = STONE WALL LINES
- = TOP OF BANK LINES
- = TOE OF SLOPE LINES
- = TREE LINES
- = TRAVERSE LINES
- = UNKNOWN BURIED LINES
- = VINYL FENCE
- = WOOD FENCE
- = WETLAND LINE

Symbol Legend:

NOT TO SCALE

- – AIR RELEASE VALVE
- – BORING HOLE LOCATION
- – CABLE TV RISER
- – CENTRAL ANGLE
- – CONCRETE
- – CLEAN OUT
- – CONCRETE MITERED END SECTION
- – CONCRETE RIP RAP
- – CONCRETE UTILITY POLE
- – COUNTY ROAD SYMBOL
- – DUAL SUPPORT SIGN
- – ELECTRICAL MANHOLE
- – ELECTRIC OUTLET
- – ELECTRIC RISER
- – FIRE HYDRANT
- – FLOOD LIGHT
- – FOUND CONCRETE MONUMENT (AS NOTED)
- – FOUND IRON PIPE (AS NOTED)
- – FOUND IRON REBAR (AS NOTED)
- – GAS VALVE
- – GRATE INLET
- – GREASE TRAP MANHOLE
- – GUY ANCHOR
- – HANDICAP PARKING SPACE
- – INTERSTATE SYMBOL
- – IRRIGATION CONTROL VALVE
- – CONCRETE LIGHT POLE
- – LIGHT POLE
- – LIGHT POLE (DUAL)
- – LIGHT POLE (TRIPLE)
- – LIGHT POLE (QUAD)
- – MAILBOX
- – MONITOR WELLS
- – BRICK PAVERS
- – GARBAGE CAN
- – PULL BOX AS NOTED
- – TRAFFIC SIGNAL SUPPORT POLE
- – NAIL & DISC (AS NOTED)
- – PARKING SPACES (2)
- – REVISION NUMBER (3)
- – RECLAIMED WATER METER
- – RECLAIMED WATER VALVE
- – ROOF DRAIN
- – SANITARY SEWER MANHOLE
- – SANITARY SEWER VALVE
- – SCHEDULE B ITEM NUMBER (8)
- – GROUND LIGHT
- – SECTION CORNER
- – 4" X 4" CM LB #7143
- – 5/8" IR&C LB #7143
- – SIGN
- – SITE BENCH MARK
- – STORM SEWER MANHOLE
- – STRIPING (DIRECTIONAL)
- – TELEPHONE CABLE RISER
- – TELEPHONE MANHOLE
- – TEST HOLE
- – TRANSFORMER PAD
- – UTILITY RISER
- – WATER METER
- – WATER SERVICE
- – WATER SPIGOT
- – WATER SPRINKLER
- – WATER VALVE
- – WELL
- – WETLAND FLAG
- – WOOD UTILITY POLE
- – UNKNOWN MANHOLE
- – CONCRETE PAVERS
- – DETECTABLE WARNING AREA
- – CONCRETE LIGHT POLE (DUAL)
- – CONCRETE LIGHT POLE (TRIPLE)
- – CONCRETE LIGHT POLE (QUAD)
- – UNKNOWN RISER

Sign Legend:

NOT TO SCALE

- (A1) – AISLE SIGN
- (B) – BUS STOP SIGN
- (DNE) – DO NOT ENTER SIGN (R5-1)
- (HC) – HANDICAP SIGN
- (KR) – KEEP RIGHT SIGN
- (ME) – MEDIAN SIGN
- (ND) – NO DUMPING SIGN
- (NL) – NO LEFT TURN SIGN (R3-2)
- (NLI) – NO LITTERING SIGN
- (FL) – NO PARKING FIRE LANE SIGN
- (NOR) – NO RIGHT TURN SIGN (R3-1)
- (NOT) – NO TRUCKS (R5-2)
- (NP) – NO PARKING SIGN
- (1W) – ONE WAY SIGN (R6-2)
- (PE) – PEDESTRIAN CROSSING SIGN
- (RTO) – RIGHT TURN ONLY
- (SL) – SPEED LIMIT SIGN
- (ST) – STOP SIGN (R1-1)
- (SS) – STREET SIGN
- (TZ) – TOW AWAY ZONE SIGN
- (TE) – TRUCK ENTRANCE SIGN
- (U) – UNKNOWN SIGN
- (WL) – WEIGHT LIMIT SIGN
- (WW) – WRONG WAY SIGN
- (Y) – YIELD SIGN

NOTE:
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Index of Sheets

C-3

Surveyor's Certification:

I hereby certify that the attached "Boundary & Topographic Survey" of the hereon-described property is true and correct to the best of my knowledge, information and belief as surveyed in the field on June 12, 2014. I further certify that this "Boundary & Topographic Survey" meets the minimum technical standards set forth in Rule Chapter 5J-17 of the Florida Administrative Code.

For the Firm By: _____
R. L. Roberts, R.L.S.
Professional Surveyor and Mapper
Florida Registration No. 3144

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No.	Revision	Date	By
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Field Crew:	E.H.
Drawn by:	R.D.B.
Checked by:	R.L.R.
Approved by:	T.J.G.
Scale:	N/A
Date:	06/12/14
Job No.:	D8515
File:	D8515.dwg
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CPH, Inc.
500 West Fulton St.
Sanford, FL 32771
Ph: 407.322.6841
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Lndscp. Lic. No. LC0000298

"BOUNDARY & TOPOGRAPHIC SURVEY"

CITY OF DEBARY
75 S US HIGHWAY 17-92
SECTION 34-TOWNSHIP 18 SOUTH-RANGE 30 EAST
VOLUSIA COUNTY, FLORIDA

Sheet No.
1
of 3

C-3A

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No.	Revision	By	Date
1			06/12/14

Field Crew: E.H.
Drawn by: R.D.B.
Checked by: R.L.R.
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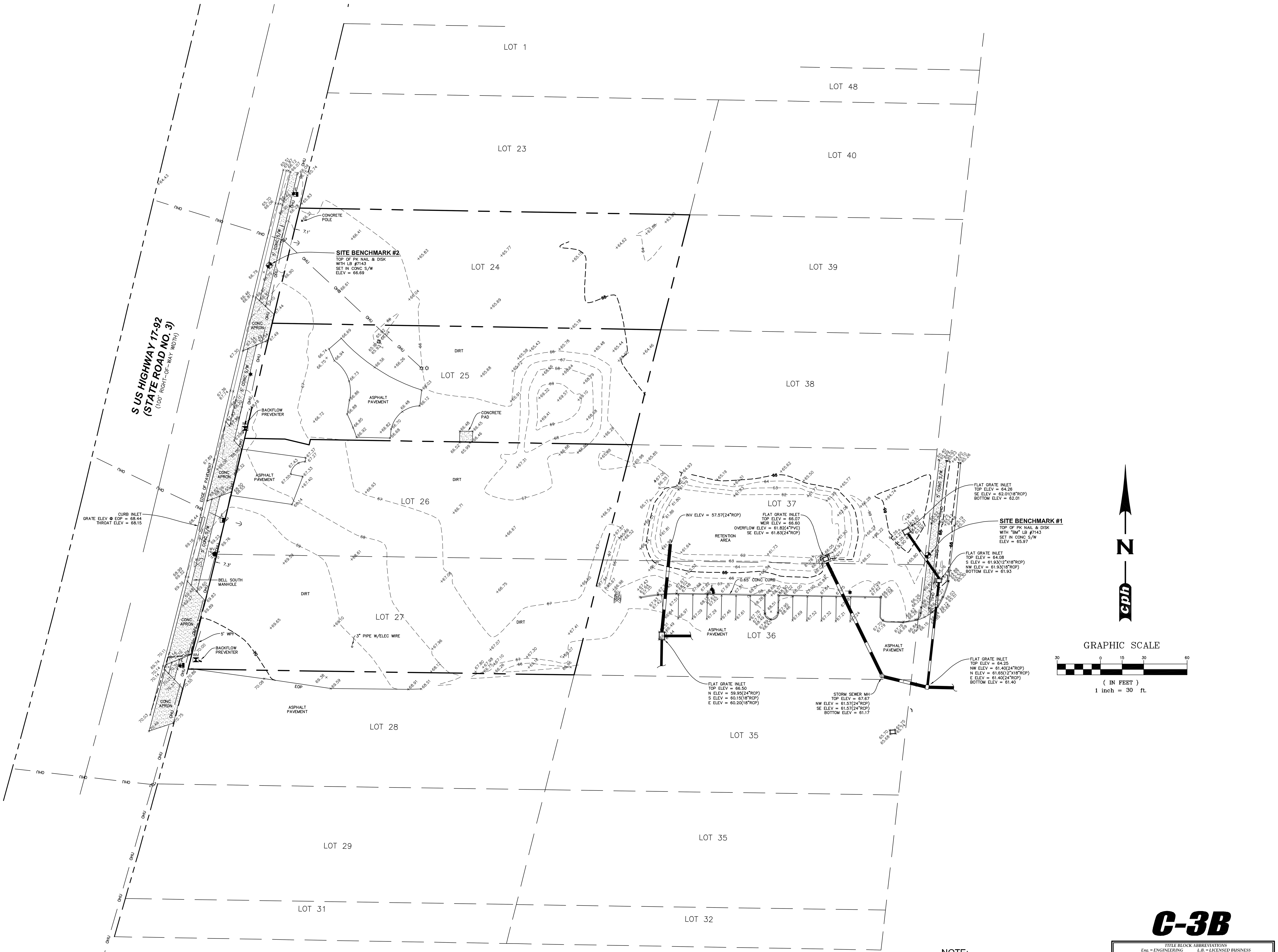
"BOUNDARY & TOPOGRAPHIC SURVEY"

CITY OF DEBARY
75 S US HIGHWAY 17-92
SECTION 34-TOWNSHIP 18 SOUTH-RANGE 30 EAST
VOLUSIA COUNTY, FLORIDA

Sheet No.
2
of 3



LOT 1
LOT 48
LOT 23
LOT 40
LOT 24
LOT 39
LOT 25
LOT 38
LOT 26
LOT 37
LOT 27
LOT 36
LOT 28
LOT 35
LOT 29
LOT 35
LOT 31
LOT 32
S US HIGHWAY 17-92
(STATE ROAD NO. 3)
(100' RIGHT-OF-WAY WIDTH)
SITE BENCHMARK #2
TOP OF PK NAIL & DISK
WITH LB #7143
SET IN CONC S/W
ELEV = 66.69
SITE BENCHMARK #1
TOP OF PK NAIL & DISK
WITH "BM" LB #7143
SET IN CONC S/W
ELEV = 65.97
CONCRETE POLE
CONC APRON
ASPHALT PAVEMENT
DIRT
CONCRETE PAD
BACKFLOW PREVENTER
CURB INLET
GRATE ELEV @ EOP = 68.44
THROAT ELEV = 68.15
BELL SOUTH MANHOLE
5' WPI
3" PIPE W/ELEC WIRE
EDP
RETENTION AREA
INV ELEV = 57.57(24"RCP)
FLAT GRATE INLET
TOP ELEV = 66.07
WDR ELEV = 66.60
OVERFLOW ELEV = 61.82(4"PVC)
SE ELEV = 61.83(24"RCP)
0.65' CONC CURB
FLAT GRATE INLET
TOP ELEV = 64.26
SE ELEV = 62.01(18"RCP)
BOTTOM ELEV = 62.01
FLAT GRATE INLET
TOP ELEV = 64.08
S ELEV = 61.93(12"X18"RCP)
NW ELEV = 61.93(18"RCP)
BOTTOM ELEV = 61.93
FLAT GRATE INLET
TOP ELEV = 64.25
NW ELEV = 61.40(24"RCP)
N ELEV = 61.65(12"X18"RCP)
E ELEV = 61.40(24"RCP)
BOTTOM ELEV = 61.40
FLAT GRATE INLET
TOP ELEV = 66.50
N ELEV = 59.95(24"RCP)
S ELEV = 60.15(18"RCP)
E ELEV = 60.20(18"RCP)
STORM SEWER MH
TOP ELEV = 67.67
NW ELEV = 61.57(24"RCP)
SE ELEV = 61.57(24"RCP)
BOTTOM ELEV = 61.17
N
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

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CITY OF DEBARY
75 S US HIGHWAY 17-92
SECTION 34-TOWNSHIP 18 SOUTH-RANGE 30 EAST
VOLUSIA COUNTY, FLORIDA

C-3B

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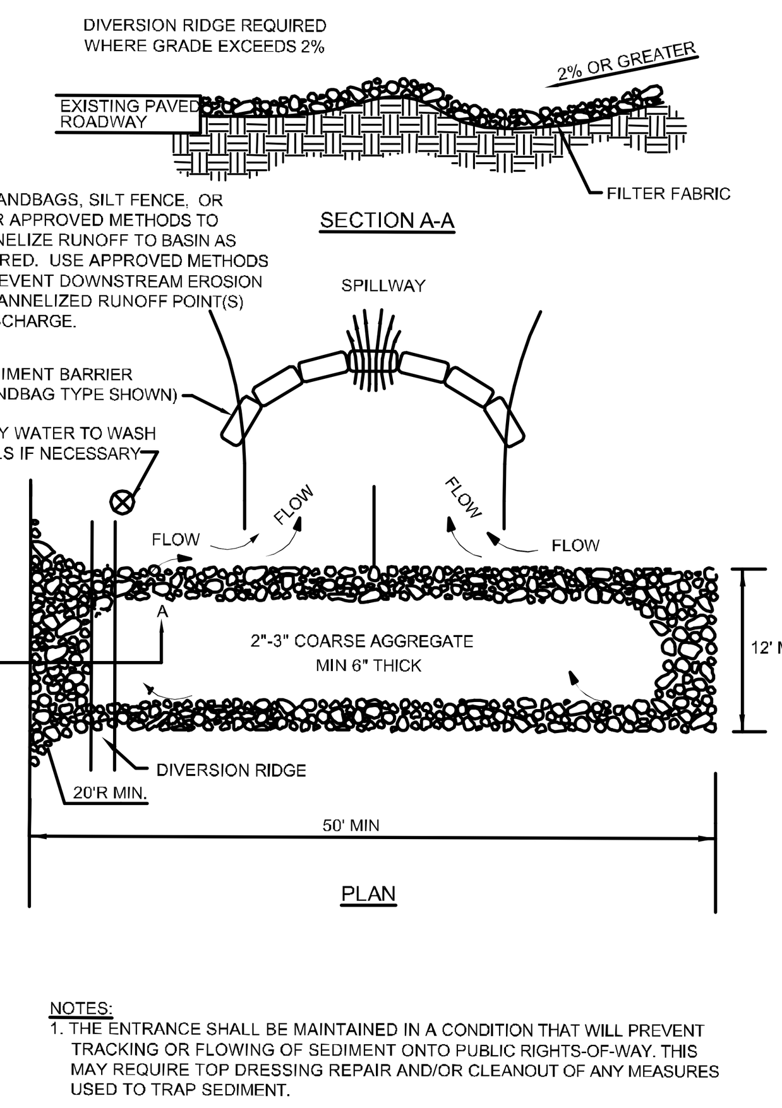
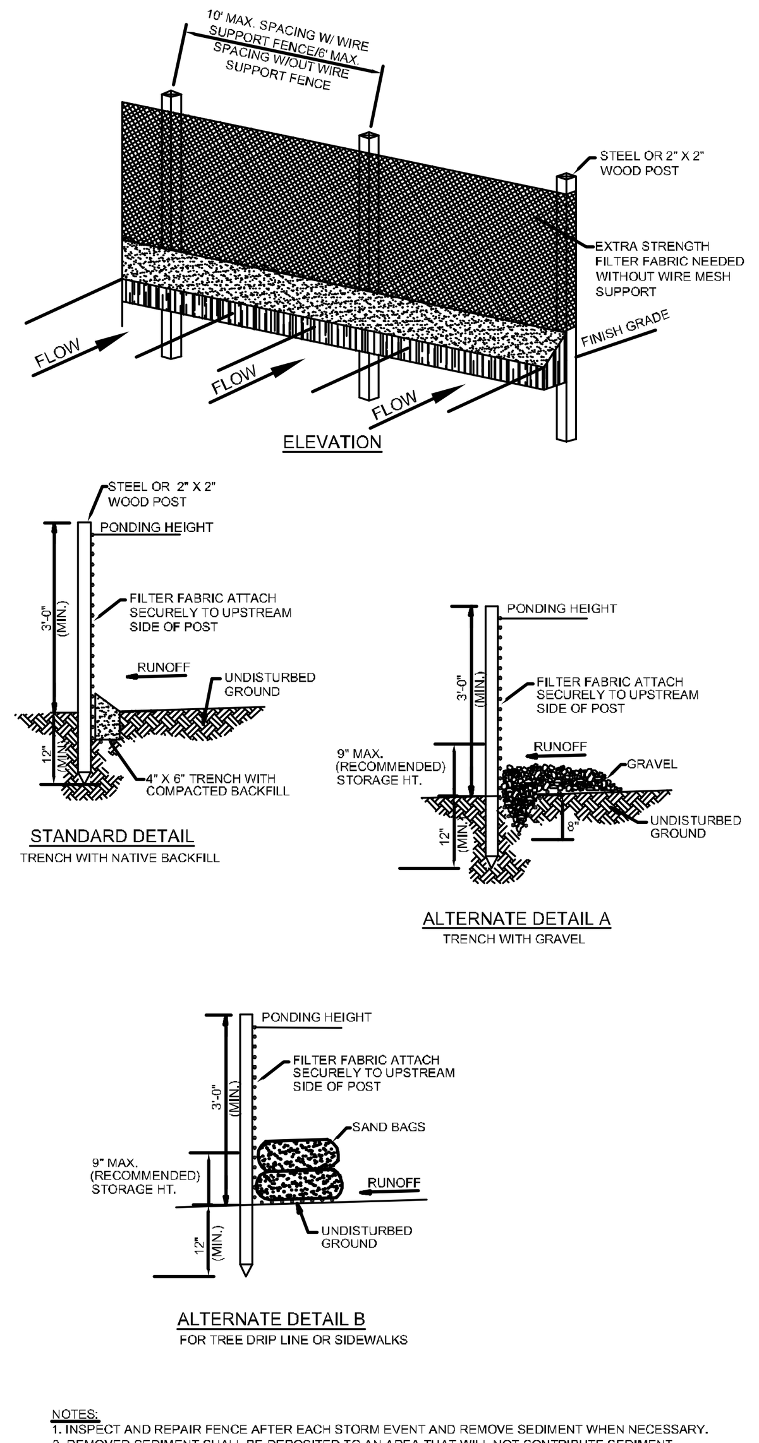


NOTE:
USE SANDBAGS, SILT FENCE, OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED. USE APPROVED METHODS TO PREVENT DOWNSTREAM EROSION AT CHANNELIZED RUNOFF POINT(S) OF DISCHARGE.

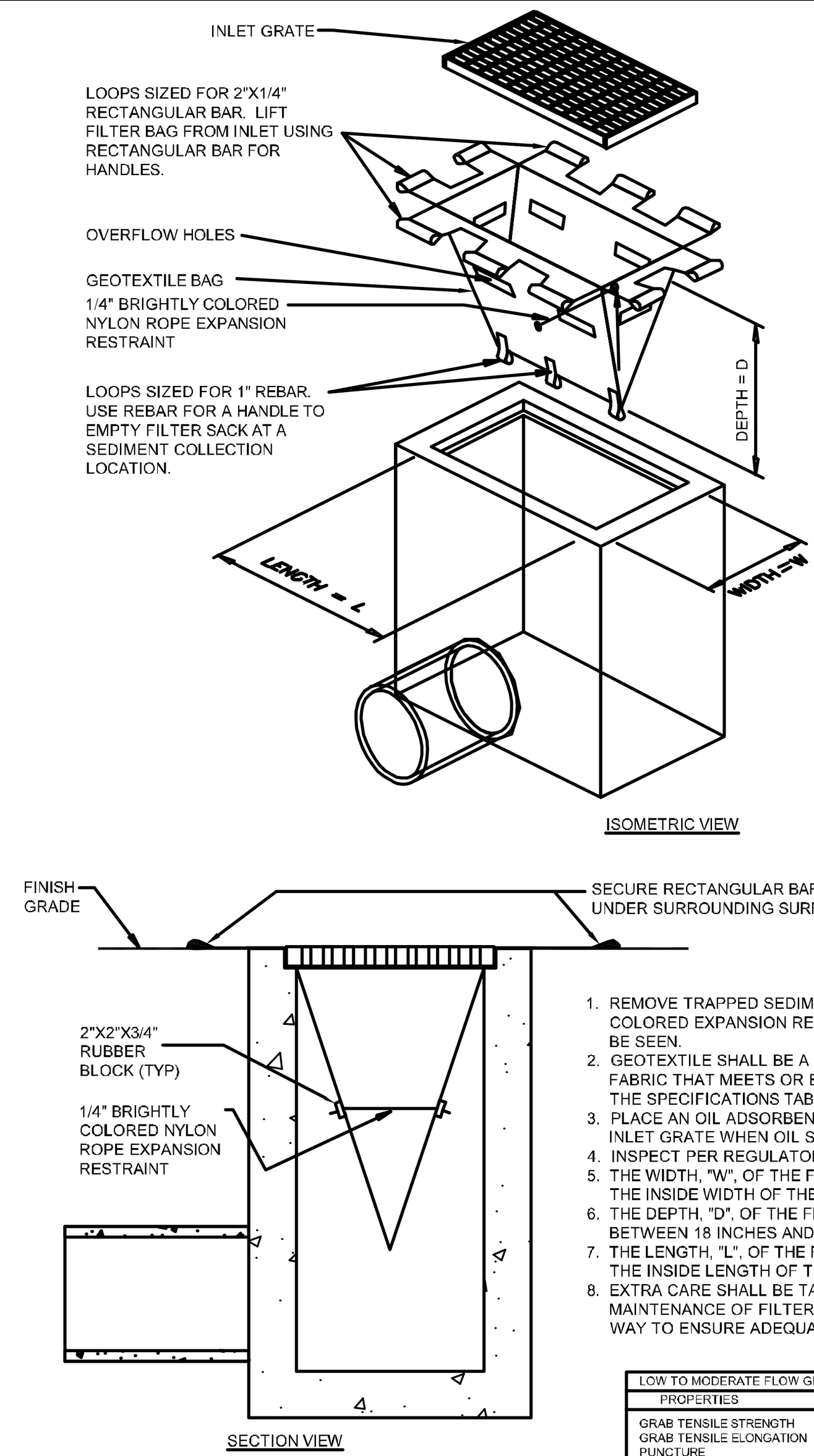
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY CONSTRUCTION EXIT DETAIL
N.T.S.



NOTES:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SEDIMENTATION / SILT FENCE
N.T.S.



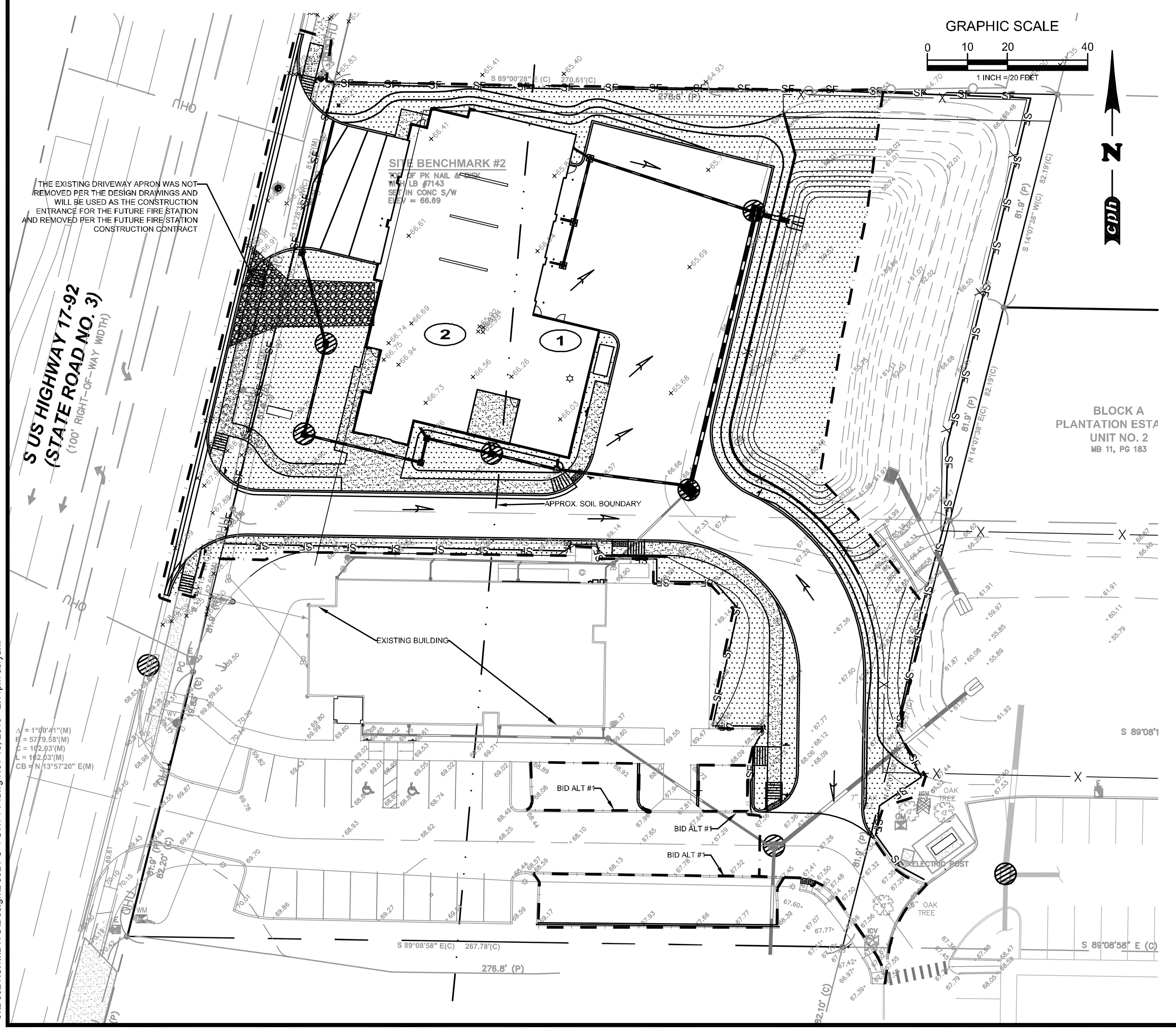
CAUTION: BAGGED INLET PROTECTION REQUIRES ADDITIONAL MAINTENANCE TO ENSURE THAT THE BMP FUNCTIONS PROPERLY AND DOES NOT CAUSE FLOODING.

1. REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. PLACE AN OIL ADSORBENT PAD OR PILLOW OVER INLET GRATE WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY EQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.
8. EXTRA CARE SHALL BE TAKEN TO ENSURE REGULAR MAINTENANCE OF FILTER SACKS USED IN RIGHT OF WAY TO ENSURE ADEQUATE DRAINAGE CAPACITY.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC-1

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC-1

GEOTEXTILE BAG INLET PROTECTION DETAIL
N.T.S.



SEQUENCE OF CONSTRUCTION

THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION AS DESCRIBED BELOW. IF THE CONTRACTOR FINDS THAT THE SEQUENCE NEEDS TO BE MODIFIED, THE CONTRACTOR SHALL CONTACT THE CEC FOR FURTHER DIRECTION. THE INSTALLATION OR REMOVAL OF BMPS, EARTH DISTURBANCE, GRADING, TEMPORARY STABILIZATION AND PERMANENT STABILIZATION SHALL BE IMMEDIATELY NOTED IN THE SWPPP IMPLEMENTATION LOG AND ON THE SITE MAP. THE CONTRACTOR SHALL DISTURB ONLY THOSE AREAS NECESSARY TO INSTALL THE BMPS UNTIL DIRECTED IN THE SEQUENCE TO BEGIN CLEARING AND GRUBBING OPERATIONS. ALL TEMPORARY BMPS SHALL BE REPAIRED AND MAINTAINED UNTIL STABILIZATION HAS OCCURRED AND THERE IS NO RISK OF DISCHARGE, THEN THEY SHALL BE REMOVED.

1. POST A COPY OF THE NOI OR LETTER FROM FDEP CONFIRMING COVERAGE UNDER THE GENERIC PERMIT, AND THE NAME AND PHONE NUMBER OF THE CONTRACTOR'S REPRESENTATIVE RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROL INSTALLATION AND MAINTENANCE ON A 24 HOUR BASIS.
2. INSTALL PERIMETER CONTROLS IMMEDIATELY DOWNSTREAM OF THE PLANNED LOCATION OF THE CONSTRUCTION EXIT.
3. INSTALL STABILIZED CONSTRUCTION EXIT.
4. INSTALL REMAINING PERIMETER CONTROLS.
5. INSTALL TEMPORARY PARKING AND STORAGE AREAS (TRAILER, PARKING, LAY DOWN, SANITARY FACILITIES, WHEEL WASH, CONCRETE WASHOUT, MASONS AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC).
6. CONSTRUCT AND STABILIZE THE SEDIMENT BASINS AND SEDIMENT TRAPS WITH APPROPRIATE OUTFALL STRUCTURES
7. CONSTRUCT AND STABILIZE HYDRAULIC CONTROLS (DITCHES, SWALES, DIKES, CHECK DAMS, ETC.).
8. BEGIN DEMOLITION, CLEARING AND GRUBBING OPERATIONS AS APPLICABLE.
9. BEGIN CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
10. TEMPORARILY SEED, IMMEDIATELY AND THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE.
11. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
12. INSTALL RIP RAP AROUND OUTLET STRUCTURES AS EACH OUTLET STRUCTURE IS INSTALLED.
13. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES AS EACH INLET STRUCTURE IS INSTALLED.
14. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
15. PREPARE SITE FOR PAVING.
16. PAVE SITE.
17. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES.
18. COMPLETE GRADING AND INSTALL PERMANENT STABILIZATION OVER ALL AREAS.
19. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED).
20. SUBMIT NOTICE OF TERMINATION (NOT) ONCE ALL CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED PER PLAN.

LEGEND

- DIRECTION OF FLOW
- X.X% SLOPE OF FLOW
- LIMITS OF DISTURBANCE
- TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
- PERMANENT SEEDING/VEGETATION
- SF — SF TEMPORARY SILT FENCE
- PROPOSED INLET PROTECTION
- (1) SOIL TYPE: CASSIA FINE SAND
- (2) SOIL TYPE: APOPKA FINE SAND
- SOIL BOUNDARY

ACREAGE SUMMARY

TOTAL PUBLIC SAFETY COMPLEX SITE	2.00 AC.
ON-SITE DISTURBED AREA	1.11 AC.
UNDISTURBED AREA	0.89 AC.
TOTAL DISTURBED AREA	1.11 AC.

NOTE:
CONTRACTOR SHALL PAY CLOSE ATTENTION WHEN CLEARING AND/OR GRADING THE SITE TO ENSURE THAT WHEN EXISTING ROOTS ARE ENCOUNTERED THEY ARE CUT OFF EVENLY WITH CLEAN SHARP PRUNING TOOLS. CONTRACTOR SHALL BE RESPONSIBLE FOR MINIMIZING THE DAMAGE OF THE EXISTING ROOT SYSTEMS.

STORMWATER POLLUTION PREVENTION NOTES

THIS PLAN HAS BEEN PREPARED TO ENSURE COMPLIANCE WITH RULES OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, CHAPTER 17-25-FAC AND THE ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT.

SITE DESCRIPTION
A. SITE LOCATION:
THE SITE IS LOCATED AT 75S. U.S. HWY 17-92, DEBARY, FLORIDA
B. THE EXISTING SITE HAS BEEN CLEARED OF EXISTING STRUCTURES. THE PROPOSED SITE WILL HAVE NO MAJOR EFFECT ON ABUTTING PROPERTIES.
C. THE FOLLOWING SITE DATA IS PROVIDED TO THE CONTRACTOR FOR USE IN PREPARING THE SWPPP AND COMPLETING THE NOI:

TOTAL SITE AREA:	**2.00 AC.**
ONSITE AND 0.30 AC. OFFSITE	
TOTAL AREA IMPACTED BY CONSTRUCTION:	**1.11 AC.**
EXISTING SITE SOILS:	**APOPKA FINE SAND AND CASSIA FINE SAND**
DRAINAGE AREA CONTRIBUTING TO EACH DISCHARGE POINT:	**3.54 ACRES**
LATITUDE AND LONGITUDE OF PROJECT LOCATION:	**LAT. 28.883827°, LONG 81.307427°**
MS4 OPERATOR NAME:	**CITY OF DEBARY**
RECEIVING WATERS:	**HALF MOON LAKE AND LAKE GEM**

WETLANDS/BUFFERS
WETLAND AND VEGETATION ADJACENT TO THE NORTH SIDE OF THE EXISTING CITY HALL DETENTION POND WERE MITIGATED AS PART OF THE CITY HALL SITE PLAN PERMITTING. THERE ARE NO WETLANDS LOCATED ON THE PUBLIC SAFETY SITE.

SWPPP INTENT
THE INTENT OF THIS SWPPP IS TO COMPLY WITH THE INTENT OF THE GENERIC PERMIT AND TO PREVENT THE RELEASE OF SOILS, TRASH, CHEMICALS, TOXINS AND OTHER POLLUTANTS, BY WATER , AIR, VEHICLE TRANSPORT OR OTHER MEANS THAT CAN IMPACT STORM WATER QUALITY. THE CONTRACTOR SHALL OBTAIN A COPY OF THE GENERIC PERMIT AND RETAIN ON-SITE FOR FUTURE REFERENCE. THE CONTRACTOR SHALL READ AND UNDERSTAND THE PERMIT, AND ENSURE THAT THE BMP'S ARE INSTALLED AND THE EXECUTION OF THE WORK IS PERFORMED TO MEET THE INTENT OF THE GENERIC PERMIT AND THE SWPPP.

POTENTIAL SOURCES OF POLLUTION
THE POTENTIAL SOURCES OF POLLUTION THAT MAY REASONABLY BE EXPECTED TO AFFECT THE QUALITY OF STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY INCLUDE: RUNOFF FROM CONSTRUCTION RELATED ACTIVITY.

GENERAL NOTES
A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FILE "NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES" (DEP FORM 62-621.300(4)(B) OR LATEST VERSION) TO FDEP TO THE FOLLOWING ADDRESS OR THROUGH THE FDEP ON-LINE SYSTEM AT LEAST TWO (2) DAYS BEFORE COMMENCEMENT OF CONSTRUCTION:

NPDES STORMWATER NOTICES CENTER, MS #2510 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2600 BLAIR STONE ROAD, TALLAHASSEE, FLORIDA 32399-2400

AN ENVIRONMENTAL RESOURCE PERMIT, PERMITTED WILL BE OBTAINED FOR THIS PROJECT.

MS4 OPERATOR NAME CITY OF DEBARY.

THE CONTRACTOR SHALL PROVIDE A COPY OF THE NOI AND SUBSEQUENT NOT TO THE MS4. THE CONTRACTOR SHALL ALSO COORDINATE WITH THE MS4 TO ENSURE THAT ALL SPECIFIC REQUIREMENTS ARE MET.

B. WHERE PRACTICAL, STORMWATER SHALL BE CONVEYED BY SWALES. SWALES SHALL BE CONSTRUCTED AS SHOWN ON PLANS.

C. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE TURBIDITY OF SURFACE WATERS LOCATED DOWNSTREAM OF ANY CONSTRUCTION ACTIVITY. WHILE THE VARIOUS MEASURES REQUIRED WILL BE SITE SPECIFIC, THEY SHALL BE EMPLOYED AS NEEDED IN ACCORDANCE WITH THE FOLLOWING:

I. IN GENERAL, EROSION SHALL BE CONTROLLED AT THE FURTHEST PRACTICAL UPSTREAM LOCATION.
II. NEW AND EXISTING STORMWATER INLETS AND OUTFALL STRUCTURES SHALL BE PROTECTED DURING CONSTRUCTION. PROTECTION MEASURES SHALL BE EMPLOYED IMMEDIATELY AS REQUIRED DURING THE VARIOUS STAGES OF CONSTRUCTION.
III. PERIMETER EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL FINAL SITE STABILIZATION HAS BEEN ESTABLISHED

D. CLEARING AND GRUBBING OPERATIONS SHALL BE CONTROLLED SO AS TO MINIMIZE UNPROTECTED ERODIBLE AREAS EXPOSED TO WEATHER. GENERAL EROSION CONTROL BMP'S SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION AND OFF-SITE SEDIMENTATION. WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHOULD BE EMPLOYED PRIOR TO ANY CONSTRUCTION ACTIVITY.

E. THE CONTRACTOR SHALL FURNISH, INSTALL PER THE SEQUENCE OF CONSTRUCTION, MAINTAIN AND SUBSEQUENTLY REMOVE, ALL NECESSARY TEMPORARY BMPS. THE CONTRACTOR WILL FURNISH AND INSTALL ALL NECESSARY PERMANENT BMPS.

F. THE CONTRACTOR SHALL ADJUST, ADD OR MODIFY BMPS AS NECESSARY TO COMPLY WITH THE INTENT OF THE GENERIC NPDES PERMIT AND THE SWPPP FOR NO ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL CONSULT WITH THE CEC PRIOR TO ADJUSTING, ADDING OR MODIFYING BMPS THAT AFFECT THE HYDRAULICS OF THE SITE OR BEFORE ADDING BMPS NOT DETAILED IN THE SWPPP.

G. THE CONTRACTOR IS ADVISED THAT THE CONTRACT DRAWINGS ONLY INDICATE EROSION, SEDIMENT, AND TURBIDITY CONTROLS AT LOCATIONS DETERMINED IN THE DESIGN PROCESS. HOWEVER, THE CONTRACTOR IS REQUIRED TO PROVIDE ANY ADDITIONAL CONTROLS NECESSARY TO PREVENT THE POSSIBILITY OF SILTING ANY ADJACENT LOWLAND PARCEL OR RECEIVING WATER.

H. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION, THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES, OR THE APPLICABLE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES (IF NEEDED) SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT SHOULD BE NOTED THAT THE MEASURES IDENTIFIED ON THIS PLAN ARE ONLY SUGGESTED BEST MANAGEMENT PRACTICES (BMPS). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND EROSION CONTROL MEASURES AS SPECIFIED IN FDOT INDEXES #100 THROUGH #102 AND AS NECESSARY FOR EACH SPECIFIC APPLICATION. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORMWATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE APPLICABLE JURISDICTIONAL AUTHORITIES.

I DISCHARGES RESULTING FROM GROUND WATER DEWATERING ACTIVITIES ARE NOT COVERED BY THE NPDES GENERIC PERMIT. SEPARATE PERMIT COVERAGE MUST BE OBTAINED BY THE CONTRACTOR UNDER THE DEPARTMENT'S GENERIC PERMIT FOR DISCHARGE OF PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED SITE ACTIVITY PURSUANT TO SUBSECTION 62-621.300(2), F.A.C.

J. THE CONTRACTOR SHALL ENSURE THAT THE CONTRACTOR AND ALL SUBCONTRACTORS RESPONSIBLE FOR IMPLEMENTING SWPPP CONTROL MEASURES FILL OUT THE CONTRACTOR / SUBCONTRACTOR CERTIFICATION TABLE INCLUDED IN THIS SWPPP.

K. THE CONTRACTOR SHALL COMPLETE THE CONSTRUCTION SEQUENCE TABLE INCLUDING IN THIS SWPPP PRIOR TO PROCEEDING WITH THE INSTALLATION OF BMPS AND PRIOR TO GROUND DISTURBING ACTIVITIES. THE CONTRACTOR SHALL COMPLETE THE TABLE WITH ANTICIPATED DATES IN WHICH THE BMP WILL BE UTILIZED OR THE ACTIVITY WILL OCCUR.

STABILIZATION
A. STABILIZATION MEASURES SHALL BE INITIATED IMMEDIATELY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED AND WILL REMAIN UNDISTURBED FOR 7 DAYS OR MORE. STABILIZE BY COVERING WITH ADEQUATE AMOUNTS OF MULCH OVER SEED AND PERIODICALLY WATER TO PROMOTE AND MAINTAIN GROWTH OF THE TEMPORARY GROUNDCOVER, OR BY THE USE OF AN APPROPRIATE ALTERNATIVE BMP.

B. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED IMMEDIATELY AFTER FINAL GRADING. WHEN IT IS NOT POSSIBLE TO PERMANENTLY PROTECT A DISTURBED AREA IMMEDIATELY AFTER GRADING OPERATIONS, TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED. ALL TEMPORARY PROTECTION SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE IN PLACE AND ESTABLISHED.

C. ALL GRASS SLOPES CONSTRUCTED STEEPER THAN 4H:1V SHALL BE SODDED IMMEDIATELY AFTER FINAL GRADE IS ESTABLISHED.

DUST CONTROL
A. BARE EARTH AREAS SHALL BE WATERED DURING CONSTRUCTION AS NECESSARY TO MINIMIZE THE TRANSPORT OF FUGITIVE DUST. IN NO CASE SHALL FUGITIVE DUST BE ALLOWED TO LEAVE THE SITE UNDER CONSTRUCTION.

B. AS REQUIRED AFTER COMPLETION OF CONSTRUCTION, BARE EARTH AREAS SHALL BE VEGETATED.

C. AT ANY TIME BOTH DURING AND AFTER SITE CONSTRUCTION THAT WATERING AND/OR VEGETATION ARE NOT EFFECTIVE IN CONTROLLING WIND EROSION AND/OR TRANSPORT OF FUGITIVE DUST, OTHER METHODS AS ARE NECESSARY FOR SUCH CONTROL SHALL BE EMPLOYED. THESE METHODS MAY INCLUDE ERECTION OF DUST CONTROL FENCES. IF REQUIRED, DUST CONTROL FENCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL FOR A SILT FENCE EXCEPT THE MINIMUM HEIGHT SHALL BE 4 FEET.

WASTE MANAGEMENT
A. THE CONTRACTOR SHALL ENSURE THAT ALL WASTE AND DEBRIS ARE MANAGED DAILY SUCH THAT THEY WILL NOT IMPACT STORMWATER OR LEAVE THE PERMITTED AREA, AND DISPOSED OF PROPERLY IN ACCORDANCE WITH APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS.

B. THE CONTRACTOR SHALL ENSURE THAT ALL CHEMICALS, OILS, FUELS, HAZARDOUS WASTE, UNIVERSAL WASTE AND TOXIC SUBSTANCES ARE PROPERLY MANAGED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL ENSURE THAT WASTE IS NOT DISCHARGED FROM THE SITE, AND DOES NOT IMPACT STORMWATER OR GROUNDWATER.

C. THE CONTRACTOR SHALL PROVIDE APPROPRIATE AND ADEQUATE WASHOUT FACILITIES TO ENSURE THAT CHEMICALS AND WASTE IS NOT DISCHARGED FROM THE SITE, AND DO NOT IMPACT STORMWATER OR GROUNDWATER. (E.G. CONCRETE/MASONRY WASHOUT, PAINT WASHOUT, EIFS, ETC.) THE CONTRACTOR SHALL CLEAN UP SPILLS PROMPTLY AND ENSURE THAT WASHOUT AREAS ARE PROPERLY MAINTAINED TO PROVIDE ADEQUATE VOLUME TO PREVENT OVERFLOW.

D. THE CONTRACTOR SHALL PROVIDE ADEQUATE SANITARY FACILITIES FOR SITE PERSONNEL, MAINTAIN THROUGHOUT CONSTRUCTION, AND PROVIDE FOR PROPER DISPOSAL IN ACCORDANCE WITH APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. SANITARY FACILITIES SHALL BE PROPERLY SECURED TO PREVENT TIPPING.

E. WHEN A SPILL OF REPORTABLE QUANTITIES IS DISCOVERED ON THE SITE, THE CONTRACTOR SHALL CLEAN UP ALL SPILLED MATERIALS AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AUTHORITIES IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS, THE OWNER AND PROJECT ENGINEER. THE CONTRACTOR SHALL RETAIN CLEANUP INFORMATION AS WELL AS DISPOSAL MANIFESTS WITH THEIR SWPPP.

MATERIALS MANAGEMENT, AND EQUIPMENT STAGING AND MAINTENANCE
A. EXCAVATED MATERIAL SHALL NOT BE DEPOSITED IN LOCATIONS WHERE IT COULD BE WASHED AWAY BY HIGH WATER OR STORM WATER RUNOFF. STOCKPILED MATERIAL SHALL BE COVERED OR ENCIRCLED WITH SEDIMENT CONTAINMENT DEVICES.

B. HEAVY CONSTRUCTION EQUIPMENT PARKING AND MAINTENANCE AREAS SHALL BE DESIGNED TO PREVENT OIL, GREASE, AND LUBRICANTS FROM ENTERING SITE DRAINAGE FEATURES INCLUDING STORMWATER COLLECTION AND TREATMENT SYSTEMS. CONTRACTORS SHALL PROVIDE BROAD DIKES OR SILT SCREENS AROUND, AND SEDIMENT SUMPS WITHIN, SUCH AREAS AS REQUIRED TO CONTAIN SPILLS OR OIL, GREASE, LUBRICANTS, OR OTHER CONTAMINANTS. CONTRACTOR SHALL HAVE AVAILABLE, AND SHALL USE, ABSORBENT FILTER PADS TO CLEAN UP SPILLS IMMEDIATELY AFTER ANY OCCURRENCE.

C. THE CONTRACTOR SHALL ENSURE THAT ALL TOXIC / HAZARDOUS SUBSTANCES AND CHEMICALS ARE PROPERLY STORED, OUT OF THE WEATHER, AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL ENSURE THAT THESE PRODUCTS ARE USED IN SUCH A MANNER THAT WILL NOT NEGATIVELY IMPACT STORMWATER, GROUNDWATER OR PROTECTED SPECIES.

D. THE CONTRACTOR SHALL ENSURE THAT ALL MATERIALS, EQUIPMENT, DEBRIS, WASTE, TRAILERS, AND OTHER SUPPORT RELATED ITEMS ARE CONTAINED WITHIN THE PERMITTED LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL ENSURE THAT THE STORAGE AND USE OF SUCH ITEMS DOES NOT NEGATIVELY IMPACT STORMWATER OR GROUNDWATER.

OFFSITE VEHICLE TRACKING
A. THE CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION EXIT IS USED BY ALL VEHICLES AND EQUIPMENT ENTERING OR LEAVING THE JOBSITE. THE CONTRACTOR SHALL MONITOR AND MAINTAIN THE CONSTRUCTION EXIT TO ENSURE THAT NO SOILS ARE TRACKED OFFSITE BY TIRES OR TRACKS, AND THAT NO SOILS ARE SPILLED BY TRUCKS OR EQUIPMENT LEAVING THE SITE. ALL TRACKED OR SPILLED SOILS SHALL BE SHOVELED OR SWEPT FROM THE ROADWAY AND RETURNED TO THE SITE. WATER SHALL NOT BE USED TO CLEAN THE SOILS FROM THE ROADWAY UNLESS THE WATER AND SOILS ARE RECOVERED BY THE USE OF A VACUUM TRUCK OR SIMILAR DEVICE.

FERTILIZERS, HERBICIDES AND PESTICIDES
A. THE CONTRACTOR SHALL ENSURE THAT ALL FERTILIZERS, HERBICIDES, PESTICIDES AND SIMILAR PRODUCTS ARE PROPERLY STORED, OUT OF THE WEATHER, AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL ENSURE THAT THESE PRODUCTS ARE USED IN SUCH A MANNER THAT WILL NOT NEGATIVELY IMPACT STORMWATER, GROUNDWATER OR PROTECTED SPECIES.

B. NUTRIENTS SHALL BE APPLIED ONLY AT RATES NECESSARY TO ESTABLISH AND MAINTAIN VEGETATION.

INSPECTIONS AND MAINTENANCE
A. THE CONTRACTOR SHALL INSPECT BMPS (I.E. DISCHARGE LOCATIONS, CONSTRUCTION EXIT, PERIMETER CONTROLS, INLET PROTECTION, STABILIZATION, EROSION CONTROL, DOCUMENTATION, WASTE DISPOSAL AREAS, MATERIAL STORAGE AREAS, ETC.) TO DETERMINE IF CONSTRUCTION ACTIVITIES HAVE ALTERED THE EFFECTIVENESS BMPS, CONFIRM BMPS ARE ACHIEVING PERMIT COMPLIANCE, AND MAINTAIN BMPS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS, AND WITHIN 24 HOURS AFTER A RAINSTORM IN EXCESS OF 0.50 INCHES.

B. THE CONTRACTOR SHALL REPORT ALL INSPECTION FINDINGS AND CORRECTIVE ACTIONS TAKEN AS A RESULT OF THE INSPECTION USING THE STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT FORM PROVIDED BY FDEP OR AN EQUIVALENT FORM. INSPECTION REPORTS SHALL BE SIGNED BY THE INSPECTOR AND MAINTAINED FOR FUTURE REFERENCE AS NEEDED. THE INSPECTOR MUST BE A QUALIFIED EROSION AND SEDIMENT CONTROL INSPECTOR AS DEFINED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

C. ANY MAINTENANCE, REPAIR AND NECESSARY REVISIONS TO BMP ITEMS SHALL BE ADDRESSED IN A TIMELY MANNER, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. UNLESS OTHERWISE SPECIFIED, ACCUMULATED SEDIMENTS SHOULD BE REMOVED BEFORE THEY REACH ONE-HALF OF THE CAPACITY OF THE CONTROL DEVICE.

ALLOWABLE NON-STORMWATER DISCHARGES
THE GENERIC PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES PROHIBIT MOST NON-STORMWATER DISCHARGES DURING THE CONSTRUCTION PHASE. ALLOWABLE NON-STORMWATER DISCHARGES THAT OCCUR DURING CONSTRUCTION ON THIS PROJECT PER PART IV.A.3 OF THE GENERIC PERMIT ARE: DISCHARGES FROM FIREFIGHTING ACTIVITIES; FIRE HYDRANT FLUSHING; WATER USED TO SPRAY OFF LOOSE SOLIDS FROM VEHICLES (WASTEWATER FROM A MORE THOROUGH CLEANING, INCLUDING THE USE OF DETERGENTS OR OTHER CLEANERS IS NOT AUTHORIZED BY THIS PART) OR CONTROL DUST IN ACCORDANCE WITH PART V.D.2.C.(2) OF THE GENERIC PERMIT; POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; IRRIGATION DRAINAGE; ROUTINE EXTERNAL BUILDING WASHDOWN WHICH DOES NOT USE DETERGENTS; PAVEMENT WASHWATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILLED MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED; AIR CONDITIONING CONDENSATE; SPRINGS; AND FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS.

RETENTION OF RECORDS
THE PERMITTEE SHALL RETAIN COPIES OF STORMWATER POLLUTION PREVENTION PLANS AND ALL REPORTS REQUIRED BY THIS PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT, FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED.

REFERENCES
THE CONSTRUCTION PLANS AND SPECIFICATIONS FOR JOB #D8518 AS PREPARED BY CPH, INC. ON SEPTEMBER 3, 2014 ARE HEREBY REFERENCED AND MADE A PART OF THIS PLAN.

CONSTRUCTION SEQUENCING TABLE

ANTICIPATED CONSTRUCTION SEQUENCE*	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
CONSTRUCTION ENTRANCE									
TEMPORARY CONTROL MEASURES									
STORM FACILITIES									
ROUGH GRADE / SEDIMENT CONTROL									
FOUNDATION / BUILDING CONSTRUCTION									
SITE CONSTRUCTION									
FINISH GRADING									
PERMANENT CONTROL MEASURES									

* THIS IS ONLY A GUIDE, CONTRACTOR IS TO USE HIS JUDGMENT TO MODIFY AS NEEDED.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name (Operator and/or Responsible Authority　　　　Date

Project Name and location information:

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JEREMIAH D. OWENS, P.E.
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No.	Date	Revision	By
1			
2			
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5			
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7			

Designed by:	JDO
Drawn by:	DRB
Checked by:	JDO
Approved by:	JDO
Scale:	1" = 30'
Date:	10/26/15
Job No.:	D8521
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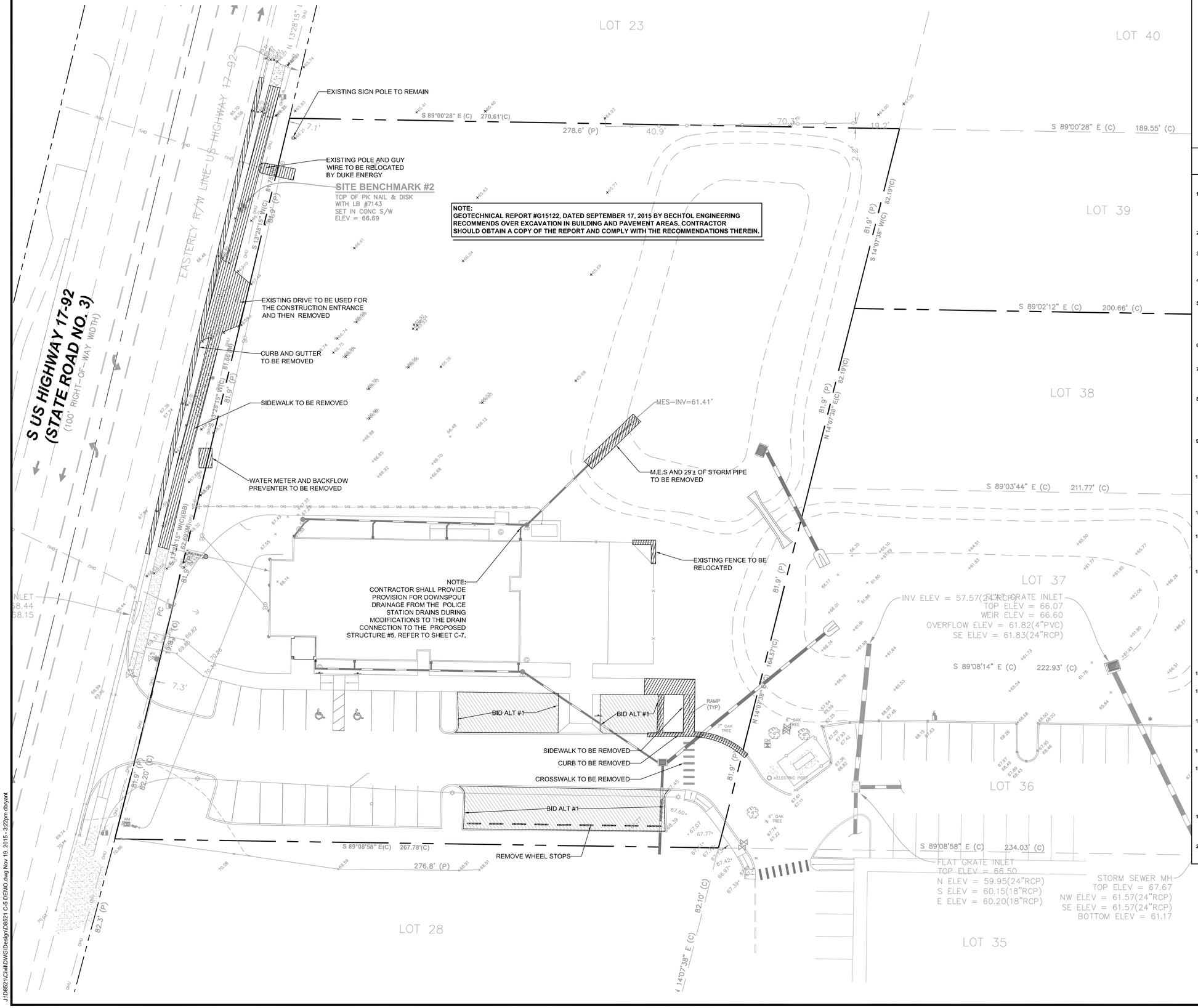
STORMWATER POLLUTION PREVENTION PLAN

DEBARY PUBLIC SAFETY COMPLEX
FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.
C-4



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GRAPHIC SCALE

0 10 20 40

1 INCH = 20 FEET

DEMOLITION GENERAL NOTES

1. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON SITE LOCATIONS OF EXISTING UTILITIES.
2. CHAPTER 553.851 OF THE FLORIDA STATUTES REQUIRES THAT AN EXCAVATOR NOTIFY ALL GAS UTILITIES A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO EXCAVATING.
3. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, SUPERVISION, AND EQUIPMENT REQUIRED FOR THE ORDERLY DEMOLITION AND REMOVAL OF EXISTING STRUCTURES, PAVEMENT AND UTILITIES AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.
4. THE CONTRACTOR IS REQUIRED TO FAMILIARIZE HIMSELF WITH THE STRUCTURES TO BE DEMOLISHED. A BRIEF DESCRIPTION OF THE STRUCTURES IS INCLUDED FOR THE CONTRACTOR'S CONVENIENCE ONLY.
5. ALL ON SITE UNDERGROUND STRUCTURES AND PIPING MUST BE COMPLETELY REMOVED AND OVER EXCAVATED BY A MINIMUM OF 12" BENEATH THE STRUCTURES. CONTRACTOR SHALL USE APPROVED FILLING MATERIAL FOR FILLING THESE AREAS. FILL SHALL BE OF CLEAN, FINE SAND AASHTO CLASS A-3 AND SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN THICKNESS AND COMPACTED TO AT LEAST 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557).
6. CONTRACTOR SHALL OBTAIN A PERMIT FROM THE VOLUSIA COUNTY HEALTH DEPARTMENT PRIOR TO REMOVAL OF THE SEPTIC SYSTEM AND RELATED COMPONENTS. DISPOSAL SHALL BE TO AN APPROVED DUMP SITE.
7. ALL EXISTING STRUCTURES, PAVEMENTS, SLABS, FOUNDATIONS, STEPS, AND OTHER EXISTING FEATURES INDICATED ON THE DRAWINGS TO BE REMOVED SHALL BE DEMOLISHED AND REMOVED BY THE CONTRACTOR. REMOVE NO STRUCTURE SUBSTANTIALLY AS A WHOLE. DEMOLISH COMPLETELY ON THE PREMISES.
8. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.
9. ELECTRICAL, TELEPHONE, CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY PRIOR TO COMMENCEMENT OF CONSTRUCTION. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS A NECESSITY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.
10. PROVIDE ADEQUATE PROTECTION FOR PERSONS AND PROPERTY AT ALL TIMES. EXECUTE THE WORK IN A MANNER TO AVOID HAZARDS TO PERSONS AND PROPERTY AND PREVENT INTERFERENCE WITH THE USE OF AND ACCESS TO ADJACENT BUILDINGS. STREETS AND SIDEWALKS SHALL NOT BE BLOCKED BY DEBRIS AND EQUIPMENT.
11. CONTRACTOR MUST STOP OPERATION AND NOTIFY THE OWNER FOR PROPER DIRECTION IF ANY ENVIRONMENTAL OR HEALTH RELATED CONTAMINATE IS ENCOUNTERED DURING THE DEMOLITION / EXCAVATION PROCESS.
12. DISPOSAL
    A. REMOVE AND LEGALLY DISPOSE OF ALL OTHER RUBBISH, RUBBLE, AND DEBRIS. COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS GOVERNING DISPOSAL OF WASTES AND DEBRIS.
13. PAVEMENT REMOVAL
    A. WHERE EXISTING PAVEMENT IS TO BE REMOVED, SAW-CUT THE SURFACE LEAVING A UNIFORM AND STRAIGHT EDGE WITH MINIMUM DISTURBANCE TO THE REMAINING ADJACENT SURFACE. IF CONSTRUCTION RESULTS IN RAVELING OF THE SAW-CUT SURFACE, RECUT BACK FROM THE RAVELED EDGE PRIOR TO RESTORATION.
    B. WHERE EXISTING PAVEMENT, CURB, CURB AND GUTTER, SIDEWALK, DRIVEWAY, OR VALLEY GUTTER IS REMOVED FOR THE PURPOSE OF CONSTRUCTING OR REMOVING BOX CULVERTS, PIPE, INLETS, MANHOLES, APPURTENANCES, FACILITIES OR STRUCTURES OR FOR RECONSTRUCTION PURPOSES SAID PAVEMENT, ETC., SHALL BE REPLACED AND RESTORED IN EQUAL OR BETTER CONDITION THAN THE ORIGINAL. CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOR, MATERIALS, EQUIPMENT, TOOLS, SUPPLIES, AND OTHER EQUIPMENT AS REQUIRED.
14. CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.
15. PERMITTING: IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY REQUIRED PERMITTING FOR DEMOLITION FROM RESPONSIBLE REGULATIONS AND FULLY ACKNOWLEDGE AND COMPLY WITH ALL REQUIREMENTS PRIOR TO COMMENCING DEMOLITION WORK.
16. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE EXTENT OF THIS PROJECT. THE CONTRACTOR SHALL CONDUCT SITE VISITS AND SHALL CHECK FOR DISCREPANCIES AND/OR OMISSIONS THAT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BID SUBMITTAL.
17. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
18. THE CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO COMMENCEMENT OF ANY WORK. ACTUAL REMOVAL AND/OR RELOCATION OF ALL EXISTING PLANTS IS TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE SITE WORK CONTRACTOR TO COORDINATE DEMOLITION ACTIVITIES WITH THE LANDSCAPE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND PRESERVING TREES AS INDICATED BY THE LANDSCAPE PLAN.
19. CONTRACTOR SHALL LIMIT ALL DEMOLITION ACTIVITY TO THAT AREA DELINEATED IN THE DRAWING. ALL EXISTING UTILITIES INCLUDING: STORM DRAINAGE, GAS, ELECTRIC, TELEPHONE, WATER AND SEWER SHALL BE PRESERVED AND PROTECTED, UNLESS OTHERWISE NOTED.
20. REMOVE ALL EXISTING TREES ON-SITE EXCEPT FOR THOSE INDICATED TO BE SAVED. TREES TO BE PRESERVED SHALL BE PROTECTED, SEE LANDSCAPE PLAN FOR TREE PROTECTION DETAILS.

LEGEND

DEMOLITION

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No.	Date	Revision	By

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Drawn by:	DRB
Checked by:	JDO
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DEMOLITION PLAN

DEBARY PUBLIC SAFETY COMPLEX
FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.
C-5

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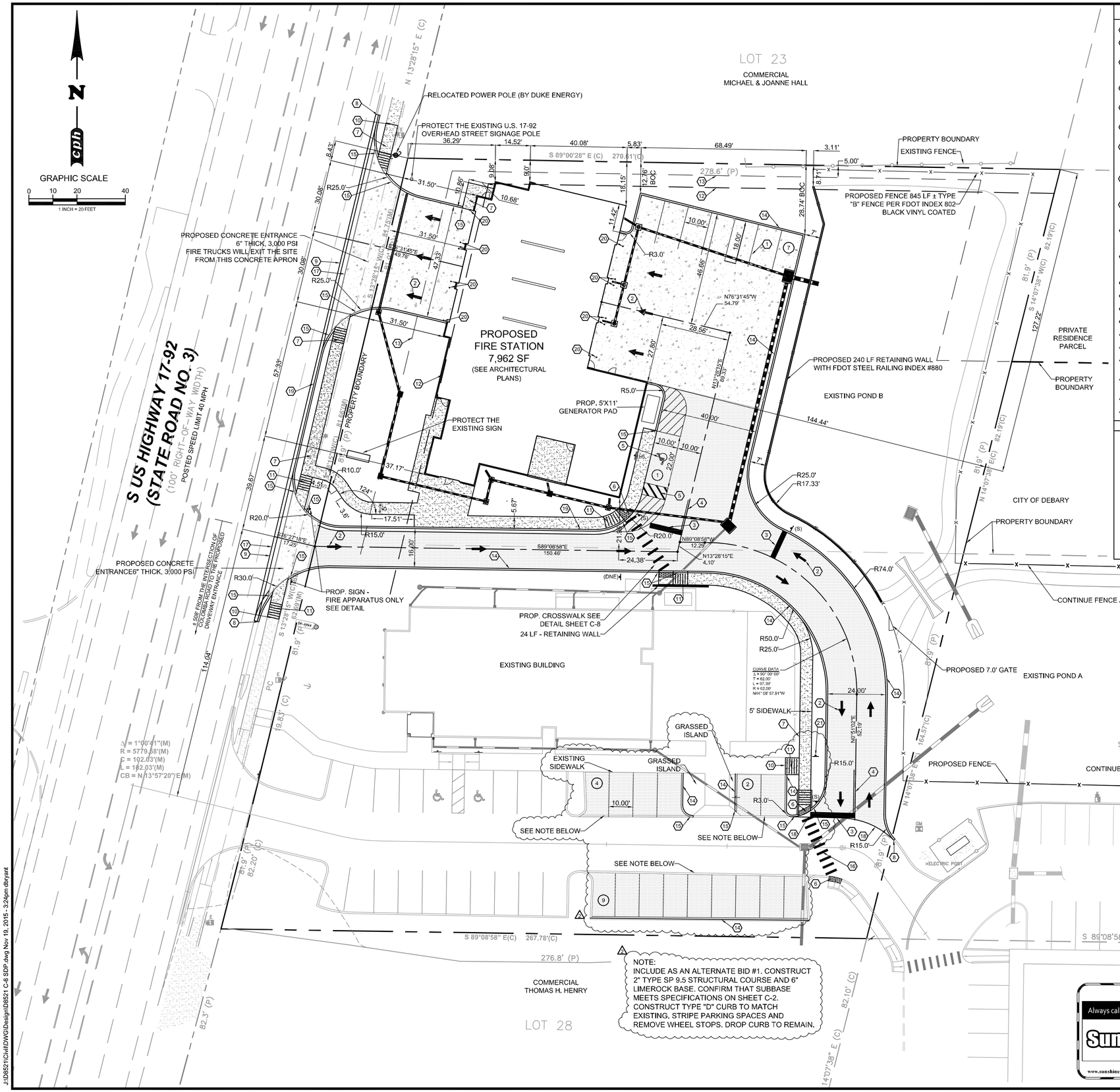

KEYNOTES LEGEND

1. PROPOSED SWSL /4"
2. PROPOSED PAVEMENT STRIPING, REFER TO DETAIL SHEET C-8
3. PROPOSED 24" WIDE WHITE PAINT STOP BAR ON PAVEMENT PER FDOT INDEX #17346. REFER TO DETAIL SHEET C-8
4. PROPOSED DYSL /4" (LINES TO BE EXTENDED 20' FROM THE STOP BAR)
5. PROPOSED HANDICAP STRIPING. REFER TO DETAIL SHEET C-8
6. PROPOSED TRUNCATED DOMES TO BE OVERLAY PAD 36" DEEP. REFER TO DETAIL SHEET C-8.
7. PROPOSED CONCRETE SIDEWALK PER FDOT INDEX #310 (5% MAXIMUM LONGITUDINAL SLOPE, 2% MAXIMUM CROSS SLOPE. REFER TO DETAIL SHEET C-8
8. NEATLY SAW-CUT, REMOVE AND MATCH EXISTING CURB TO PROPOSED CURB WITH A SMOOTH TRANSITION
9. NEATLY SAW-CUT, REMOVE AND MATCH EXISTING PAVEMENT TO PROPOSED PAVEMENT WITH A SMOOTH TRANSITION
10. NEATLY SAW-CUT, REMOVE AND MATCH EXISTING SIDEWALK TO PROPOSED SIDEWALK WITH A SMOOTH TRANSITION
11. PROPOSED HANDICAP RAMP 1:12 MAXIMUM RUNNING SLOPE, 2% MAXIMUM CROSS SLOPE PER FDOT INDEX #304
12. BUILDING SETBACKS
13. LANDSCAPE BUFFER, SEE LANDSCAPE PLANS
14. FDOT TYPE D CURB, REFER TO DETAIL SHEET C-8
15. PROPOSED NOSE DOWN CURB, REFER TO DETAIL SHEET C-8
16. PROPOSED CROSSWALK PER FDOT INDEX 17346
17. CONCRETE VALLEY GUTTER PER FDOT INDEX 300
18. REMOVE EXISTING CURB AND SIDEWALK TO LIMITS SHOWN, FDOT INDEX #300
19. CURB & GUTTER WITH TYPE 'F' GUTTER PER FDOT INDEX #300
20. BOLLARD, SEE ARCH. PLANS FOR LOCATION AND DETAL
21. PEDESTRIAN SIGN "SIDEWALK TO FIRE STATION"

LEGEND (PROPOSED)

- (S) = STOP SIGN (R1-1), SEE DETAIL SHEET C-10
- (H) = HANDICAP SIGN (FTP-20-4) SEE DETAIL SHEET C-10
- SWSL/4" = SINGLE WHITE SOLID LINE 4" WIDE
- DYSL/6" = DOUBLE YELLOW SOLID LINE 6" WIDE
- TYP. = TYPICAL
- = HANDICAP RAMP
- = NUMBERS OF SPACES IN A ROW
- = TRAFFIC FLOW ARROWS, SEE DETAIL SHEET
- = SITE LIGHTING, SEE LIGHTING PLAN
- = CURB RAMP

SITE DATA

STATEMENT OF INTENT:SSA
THE OWNER PROPOSES TO CONSTRUCT A NEW 7,962 ± FIRE STATION AND THE REQUIRED SITE SUPPORT ELEMENTS TO SERVE IT. THIS IS TO BE BUILT ON THE SAME PARCEL AS THE RECENTLY CONSTRUCTED PUBLIC SAFETY BUILDING.

SITE ADDRESS:	75 SOUTH HIGHWAY 17-92
PARCEL I.D. NUMBER:	34-18-30-11-0250
SITE TOTAL AREA:	86,234 ± S.F. (2.0 A.C. ±)
EXISTING LAND USE:	VACANT / POLICE STATION
PROPOSED LAND USE:	COMMERCIAL / OFFICE
EXISTING USE:	VACANT / POLICE STATION
PROPOSED USE:	FIRE STATION WITH EXISTING POLICE STATION
MAXIMUM BUILDING HEIGHT:	40'

AREA CALCULATIONS

IMPROVEMENT	SQUARE FEET	ACRES	% OF PARCEL
PROPOSED - FIRE STATION			
BUILDING AREA:	8,460 ± S.F.	.19 AC.	(9.71%)
PAVED AREA:	17,833 ± S.F.	.41 AC.	(20.47%)
IMPERVIOUS AREA:	26,293 ± S.F.	.60 AC.	(30.18%)
EXISTING - POLICE STATION			
BUILDING AREA:	7,590 ± S.F.	.17 AC.	(8.71%)
PAVED AREA:	12,774 ± S.F.	.29 AC.	(14.66%)
GRASS PARKING AREA:	3,046 ± S.F.	.07 AC.	(3.50%)
IMPERVIOUS AREA:	23,410± S.F.	.54 AC.	(26.87%)
TOTAL PERVIOUS AREA:	37,417 ± S.F.	.86 AC.	(42.95%)
TOTAL AREA:	87,120 ± S.F.	2.0 AC.	(100%)

BUILDING SETBACKS

	REQUIRED	PROVIDED	VARIANCE
NORTH:	10'	9'	10%
WEST:	20'	31.50'	10%
EAST:	35'	144.44'	
SOUTH:	N/A	N/A	

ZONING:

SUBJECT SITE:	B-4 (GENERAL COMMERCIAL)
NORTH:	B-4 (GENERAL COMMERCIAL)
EAST:	R-4 (URBAN SINGLE FAMILY RESIDENCE)
SOUTH:	B-4 (GENERAL COMMERCIAL
WEST:	ROW

FDOT NOTES

1. MAINTENANCE OF TRAFFIC TO BE SUPERVISED BY A CERTIFIED PERSON.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT A MINIMUM OF TWO BUSINESS DAYS PRIOR TO ANY LANE CLOSURES OR BEGINNING ANY CONSTRUCTION WITHIN THE FDOT RIGHT-OF-WAY.
3. ALL WORK PERFORMED WITHIN THE FDOT RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE 2015 EDITIONS OF FDOT DESIGN STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE UTILITY ACCOMMODATION MANUAL.
4. IF THE DEPARTMENT DETERMINES THAT AS-BUILT CONDITIONS VARY SIGNIFICANTLY FROM THE APPROVED PLANS, THE PERMITTEE SHALL PROVIDE AS-BUILT PLANS, ALONG WITH A RECORD DRAWINGS REPORT BY PERMITTEE'S PROFESSIONAL ENGINEER, FROM 850-040-19, WITHIN 30 DAYS.
5. IT WILL BE THE RESPONSIBILITY OF THE PERMITTEE TO REPAIR ANY DAMAGED TO FDOT FACILITIES CAUSED BY CONSTRUCTION OF THE PROJECT.
6. TEST RESULTS OF ANY TESTS TAKEN FOR OR DURING CONSTRUCTION OF THE PERMITTED WORK SHALL BE PROVIDED TO THE FDOT UPON REQUEST.
7. ALL CONCRETE TO BE REMOVED SHALL BE SAW-CUT AT THE NEAREST JOINT IN GOOD CONDITION, SO AS TO PRODUCE A CONNECTION WITH NEW CONCRETE THAT IS FREE OF CRACKS, DEFORMITY IN SHAPE, NOTICEABLE VOIDS, SURFACE IRREGULARITIES AND OTHER DEFECTS.
8. ALL CONCRETE SHALL BE AN APPROVED FDOT MIX DESIGN OF 3,000 PSI.
9. ALL MATERIALS INSTALLED WITHIN FDOT RIGHT OF WAY SHALL BE LIMITED TO THOSE ON THE FDOT'S QUALIFIED PRODUCTS LIST OR APPROVED PRODUCT LIST OF TRAFFIC CONTROL SIGNALS AND DEVICES.
10. FDOT LANE CLOSURES:
    NO CLOSING N.B. BETWEEN, 3pm AND 6pm
    NO CLOSING S.B. BETEEEN, 7am AND 9am
11. THE FIRE STATION WILL UTILIZE THE DUMPSTER LOCATED ON THE ADJACENT CITY HALL PROPERTY.

NOTES

1. SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS
2. CONTRACTOR SHALL COORDINATE WITH DUKE ENERGY ON INSTALLATION OF SITE LIGHTING.

PARKING INFORMATION

TOTAL SPACES REQUIRED **39 ***	PROPOSED FIRE STATION 1 SPACES PER 250 SF OF GROSS FLOOR AREA (3,625 SF / 250 SF = 15 PARKING STALLS) EXISTING POLICE STATION 1 SPACES PER 250 SF OF GROSS FLOOR AREA (5,655 SF / 250 SF = 24 PARKING STALLS) ★BASED ON THE DEFINITION OF GROSS FLOOR AREA, THE STORAGE AREA SPACE HAS BEEN REMOVED FROM THE TOTAL REQUIRED PARKING CALCULATION
TOTAL SPACES PROVIDED **42**	7 PROPOSED SPACES: 10' X 18' STANDARD @ 90° 1 PROPOSED ADA SPACES: 10' X 22' STANDARD @ 0° 2 EXISTING ADA SPACES: 12' X 18' STANDARD @ 90° (PSB) 17 EXISTING SPACES: 10' X 18' STANDARD @ 90° (PSB) 15 EXISTING GRASSED SPACES: 9' X 19' STANDARD @ 90° (PSB)

UTILITY INFORMATION

	LOCATION
SANITARY SEWER	STUB-OUT NEW NORTH PROPERTY LINE & EAST RIGHT OF WAY
WATER	WATERMAIN ALONG EAST SIDE OF US 17-92
RECLAIM WATER	N/A
STORM SEWER	ONSITE DETENTION POND
ELECTRIC	OVERHEAD LINE ALONG EAST SIDE OF US 17-92 EXISTING TRANSFORMER ONSITE

PAVEMENT SYMBOLS LEGEND

- PROPOSED LIGHT DUTY CONCRETE (RE: DETAIL SHEET)
- PROPOSED CONCRETE SIDEWALK (RE: DETAIL SHEET)
- PROPOSED CONCRETE PAVING

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No.	Date	Revision	By
1	11-16-15	Per DRC comments	JB
2	11-4-15	Added Alternate Bld #1	JB
3	11-3-15	Rev., per application review	JB

Designed by: JDO
Drawn by: DRB
Checked by: JDO
Approved by: JDO
Scale: 1" = 20'
Date: 10/26/15
Job No.: D8521
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SITE DIMENSION PLAN

DEBARY PUBLIC SAFETY COMPLEX
FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.
C-6

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ACREAGE SUMMARY

TOTAL PUBLIC SAFETY COMPLEX SITE	2.00 AC.
ON-SITE DISTURBED AREA	1.01 AC.
UNDISTURBED AREA	0.99 AC.
TOTAL DISTURBED AREA	1.01 AC.

LEGEND

- DIRECTION OF FLOW
- LIMITS OF DISTURBANCE
- M.E. XX.XXx — MATCH EXISTING PAVEMENT / CURB ELEVATION
- XX.XX / XX.XX — PROPOSED TOP OF CURB ELEVATION / PROPOSED EDGE OF PAVEMENT ELEVATION

SANITARY SEWER LINE SCHEDULE

1. CONNECT TO EXISTING 6" PVC WITH CLEANOUT AND 4" X 6" WYE (FITTINGS REQUIRED) FIELD VERIFY INVERT = 64.91±
2. 27 LF - 6" PVC @ 1.0% MINIMUM
3. 6" WYE W/ CLEANOUT CONNECT TO BUILDING SERVICE LINE
4. ADJUST EXISTING CLEANOUT TOP TO FINISHED PAVEMENT GRADE WITH TRAFFIC BEARING TOP AND CONCRETE COLLAR. TYP. ALL CLEANOUTS
5. ADJUST EXISTING CLEANOUT TOP TO ELEVATION 67.50

POTABLE WATER SCHEDULE

1. TAP EXISTING 16" WATER MAIN WITH 16" X 6" TAPPING SLEEVE AND VALVE
2. PROPOSED 1-1/2" WATER METER AND BOX W/ 2" RPZ
3. PROPOSED 2" PE WATER SERVICE LINE
4. PROPOSED CONNECTION TO BLDG. (RE. ARCH. PLANS) (2" TO 1" REDUCER)
5. PROPOSED 6" TEE, FIRE HYDRANT AND GATE VALVE ASSEMBLY
6. PROP. 6" DOUBLE DETECTOR CHECK VALVE ASSEMBLY (FIRE LINE)
7. FDC - FIRE DEPARTMENT CONNECTION.
8. 6" PVC (C900 DR-14) FIRE LINE BLDG.
9. 6" X 4" REDUCER
10. 6" X 6" TEE

STORM SEWER LEGEND

1. 15" M.E.S., FL 55.80
2. 20 LF-15" RCP @ 1.0%
3. TYPE "E" INLET, GRATE EL 67.00 W FL 63.00, S FL 59.80, E FL 56.00
4. 102 LF-15" RCP @ 2.25%
5. TYPE "E" INLET, GRATE EL 67.00 SW FL 62.10± FIELD VERIFY W FL 62.45 (10"), N FL 62.10(15")
6. 48 LF - 12" PVC @ 0.94%
7. 6" CLEANOUT TOP EL 67.90, W/ 6" X 12" WYE FL 62.90
8. 25 LF - 12" PVC @ 1.0%
9. 2' X 2' YARD INLET, GRATE EL 67.5 FL 63.15
10. 25 LF - 12" PVC @ 1.0%
11. 6" CLEANOUT, TOP EL 67.90, W/ 6" X 12" WYE FL 63.40
12. 64 LF - 12" PVC @ 1.33%
13. 6" CLEANOUT, TOP EL 68.20, W/ 6" X 12" WYE FL 63.85
14. 25 LF -12" PVC @ 1.0%
15. 6" CLEANOUT, TOP 68.35, W/ 6" X 12" FL 64.10
16. 15 LF -12" PVC @ 1.0%
17. 6" CLEANOUT, TOP 68.35, W/ 6" X 12" WYE FL 64.25
18. 5 LF - 6" PVC @ 1.0% MIN.
19. 5 LF - 6" PVC @ 1.0% MIN.
20. 7 LF - 6" PVC @ 1.0% MIN.
21. 9.5 LF - 12" PVC @ 1.05%
22. 6" CLEANOUT, TOP 67.90, W/ 6" X 12" WYE FL 63.50
23. 45 LF - 12" PVC @ 1.0% MIN.
24. 2' X 2' YARD INLET, GRATE EL 67.50 FL 63.95
25. 35 LF - 12" PVC @ 1.0%
26. 2' X 2' YARD INLET, GRATE EL 67.50 N FL 65.90, S FL 64.30
27. 35 LF - 12" PVC @ 1.0%
28. 6" CLEANOUT, TOP 67.50, W/ 6" X 12" WYE FL 66.25
29. 50' - 12" WIDE TRENCH DRAIN, CAP NORTH END, N FL 66.50 CONNECT TO CLEANOUT SOUTH END, FL 66.25
30. CONNECT 6" PVC TO PATIO DRAIN. SEE ARCHITECTURAL DRAWINGS FOR LOCATION

GENERAL UTILITY NOTES

1. SEE COVER SHEET FOR A LIST OF UTILITY COMPANIES.
2. GENERAL CONTRACTOR IS TO COORDINATE WITH APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION, ADJUSTMENT OR RELOCATION OF EXISTING UTILITIES AS DESIGNATED ON PLANS.
3. THE CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITY INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
4. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES. EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO NEW UTILITY LINES BEING INSTALLED.
5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/ OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
6. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITY DURING CONSTRUCTION AT NO COST TO THE OWNER.
7. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES, IN SUCH A MANNER AS TO AVOID CONFLICT AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH UTILITY REQUIREMENTS AS TO LOCATION AND SCHEDULING FOR TIE-INS/ CONNECTIONS PRIOR TO CONNECTING TO EXISTING UTILITIES.
8. ALL CLEAN-OUTS WITH CONCRETE COLLAR SHALL BE INSTALLED WITH TRAFFIC BEARING PARTS APPLICABLE. REFER TO DETAIL SHEET C-8.
9. ALL CONCRETE FOR ENCASEMENT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS.
10. CONTRACTOR SHALL PROVIDE ALL APPURTENANCES SUCH AS CHECK VALVES, BACKFLOW PREVENTERS, ETC., AS REQUIRED BY GOVERNING AUTHORITIES.
11. ALL SANITARY SEWER LINES SHALL HAVE A MINIMUM OF 3' OF COVER. PE WATER SERVICE MAY BE REDUCED TO 2' WHEN NECESSARY.
12. CONTRACTOR SHALL COORDINATE INSPECTION ON ALL UTILITIES, WITH APPROPRIATE AUTHORITIES PRIOR TO COVERING TRENCHES DURING INSTALLATION.
13. CONSTRUCTION SHALL COMPLY WITH ALL GOVERNING CODES AND REQUIREMENTS.
14. THE CONTRACTOR SHALL CONDUCT ALL REQUIRED TESTS TO THE SATISFACTION OF THE RESPECTIVE UTILITY COMPANIES AND THE OWNER'S INSPECTING AUTHORITIES.
15. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
16. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS TO INCLUDE BUT NOT BE LIMITED, FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR OSHA.
17. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (90-96, LAWS OF FLORIDA). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
18. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
19. CONTRACTOR MUST STOP OPERATION AND NOTIFY THE OWNER FOR PROPER DIRECTION IF ANY ENVIRONMENTAL OR HEALTH RELATED CONTAMINATE IS ENCOUNTERED DURING EXCAVATION.
20. ALL SERVICES SHALL BE TESTED, APPROVED AND DISINFECTED IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS PRIOR TO CONNECTION TO MUNICIPAL SYSTEM.
21. THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS SIX (6) FEET, OR MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER OVER SEWER LINE IS (12) INCHES.
22. CHAPTER 553.851 OF THE FLORIDA STATUTES REQUIRES THAT AN EXCAVATOR NOTIFY ALL GAS UTILITIES A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO EXCAVATING.
23. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY PROVIDERS 48 HOURS PRIOR TO ANY UTILITIES CONSTRUCTION.
24. VERTICAL DATUM PER TOPOGRAPHIC SURVEY IS NAVD-88.
25. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL THE RPZ AND THE COUNTY SHALL PROVIDE AND INSTALL THE WATER METER.
26. CONTRACTOR SHALL CONTACT VOLUSIA COUNTY UTILITIES PRIOR TO CONNECTION TO THE COUNTY WATER OR SEWER SYSTEMS TO ARRANGE FOR INSPECTION.
27. COORDINATE DOWNSPOUT LOCATIONS WITH THE ARCHITECTURAL PLANS.
28. ALL GRATES SHALL BE RETICULINE STEEL.
29. STORM DRAINAGE STRUCTURES AND PIPES INTALLED FOR THIS PROJECT SHALL BE INSPECTED AND ACCEPTED BY THE ENGINEER OF RECORD PRIOR TO FINAL PAVING OR SURFACE RESTORATION. PRIOR TO FINAL ACCEPTANCE STORM PIPES INSTALLED FOR THIS PROJECT SHALL BE INSPECTED USING A CLOSED CIRCUIT TELEVISION (CCTV) CAMERA. THE CCTV INSPECTION SHALL BE COMPLETED BY A FIRM WITH PERSONNEL THAT SPECALIZE IN THIS TYPE OF WORK AND MUST BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

GENERAL GRADING NOTES

1. PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON PLANS AND PROVIDED FOR IN FDOT INDEX NO. 102 AS CONSTRUCTION PROGRESSES, THE CONTRACTOR SHALL PERIODICALLY CHECK THE SEDIMENTATION CONTROLS AND REPAIR THEM AS NECESSARY TO KEEP THEM IN GOOD FUNCTIONING ORDER. THE CONTRACTOR SHALL ALSO PROTECT INLETS AND OTHER SITE APPURTENANCES FROM SEDIMENTATION USING PROTECTION AS DETAILED IN FDOT INDEX NO. 102.
2. THE CONTRACTOR SHALL CONDUCT GROUND STABILIZING MEASURES (PAVING, GRASSING, MULCHING AND SODDING) AS SOON AS PRACTICABLE FOLLOWING FINAL GRADING OF THE SITE.
3. FOLLOWING COMPLETION OF CONSTRUCTION AND COMPLETED STABILIZATION OF POTENTIAL EROSION AREAS, THE CONTRACTOR SHALL REMOVE SEDIMENTATION CONTROL MEASURES AND CLEAN AND REPAIR ANY AREAS AFFECTED BY THE CONSTRUCTION ACTIVITIES. ANY SILTATION IN THE STORMWATER SYSTEM SHALL BE COMPLETELY FLUSHED PRIOR TO CERTIFICATION OF COMPLETION.
4. ALL WORK PERFORMED WITHIN US 17-92 REQUIRES A SEPARATE PERMIT ISSUED BY THE FDOT.
5. HAVING CONSULTED THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (FIRM) IT WAS DETERMINED THAT THE SUBJECT PROPERTY LIES IN ZONE "X", AREAS DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN, PER COMMUNITY PANEL #120672 0620 H, AND CITY OF DEBARY, DATED FEBRUARY 19, 2014. THIS DETERMINATION WAS BASED ON A GRAPHIC INTERPOLATION OF SAID MAP AND NOT ON ACTUAL FIELD MEASUREMENTS.
6. CONTRACTOR SHALL FIELD VERIFY EXISTING AND SURROUNDING DEVELOPMENT GRADES AND CONTACT ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO CONSTRUCTION.
7. CONTRACTOR SHALL VERIFY POSITIVE DRAINAGE FLOW AWAY FROM BLDG. AND THAT A MINIMUM SLOPE OF AT LEAST 1% IN THE DIRECTION OF DRAINAGE FLOW INDICATED CAN BE ACHIEVED.
8. SOD ALL DISTURBED AREAS.
9. ALL PROPOSED SIDEWALKS ADJACENT TO PARKING SPACES SHALL HAVE 6" RAISED CURB WITH THICKENED EDGE. SEE DETAIL ON SHEET C-8.

UTILITY LEGEND

- S — PROPOSED SEWER
- W — PROPOSED WATER LINE

NOTE:
CONTRACTOR SHALL PAY CLOSE ATTENTION WHEN CLEARING AND/OR GRADING THE SITE TO ENSURE THAT WHEN EXISTING ROOTS ARE ENCOUNTERED THEY ARE CUT OFF EVENLY WITH CLEAN SHARP PRUNING TOOLS. CONTRACTOR SHALL BE RESPONSIBLE FOR MINIMIZING THE DAMAGE OF THE EXISTING ROOT SYSTEMS.

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No.	Date	By
1	10-28-15	IB
2	11-4-15	IB
3	11-16-15	IB

Rev. per FDOT drainage comments
Added Alternate Bid #1
Per DRC comments

Designed by:	JDO
Drawn by:	DRB
Checked by:	JDO
Approved by:	JDO
Scale:	1" = 20'
Date:	10/26/15
Job No.:	D8521

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Lndscp. Lic. No. LC0000298

SITE GRADING AND COMPOSITE UTILITY PLAN
DEBARY PUBLIC SAFETY COMPLEX
FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.
C-7

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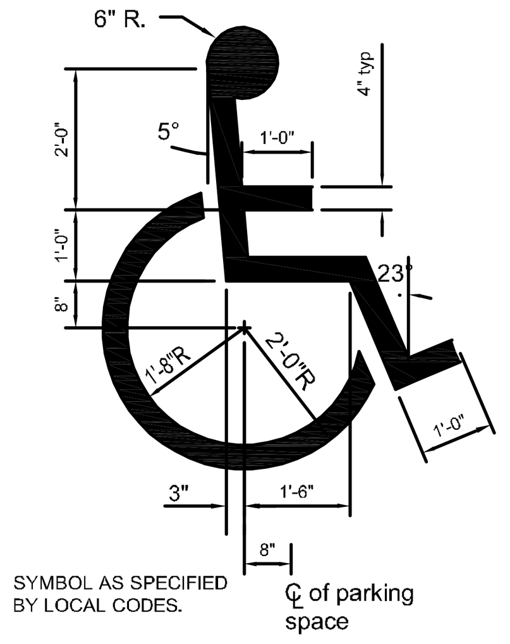
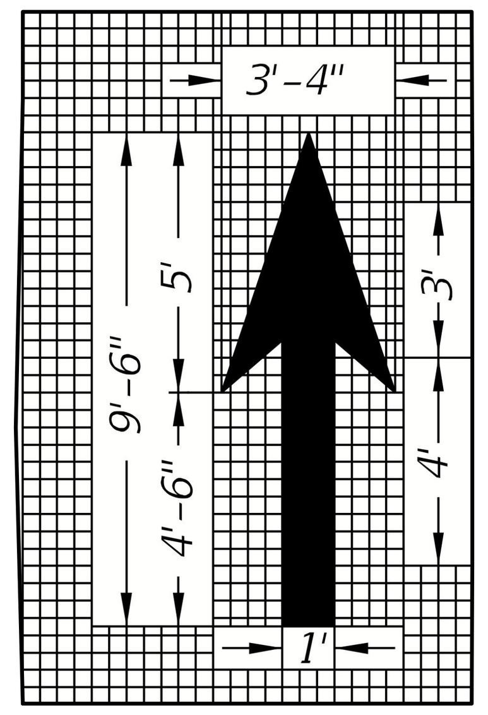
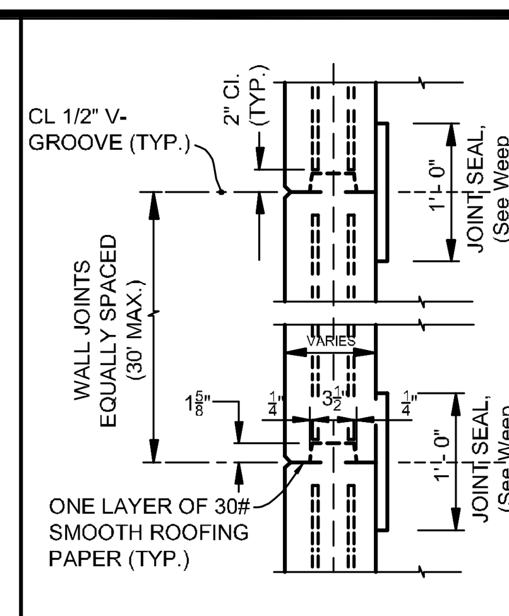


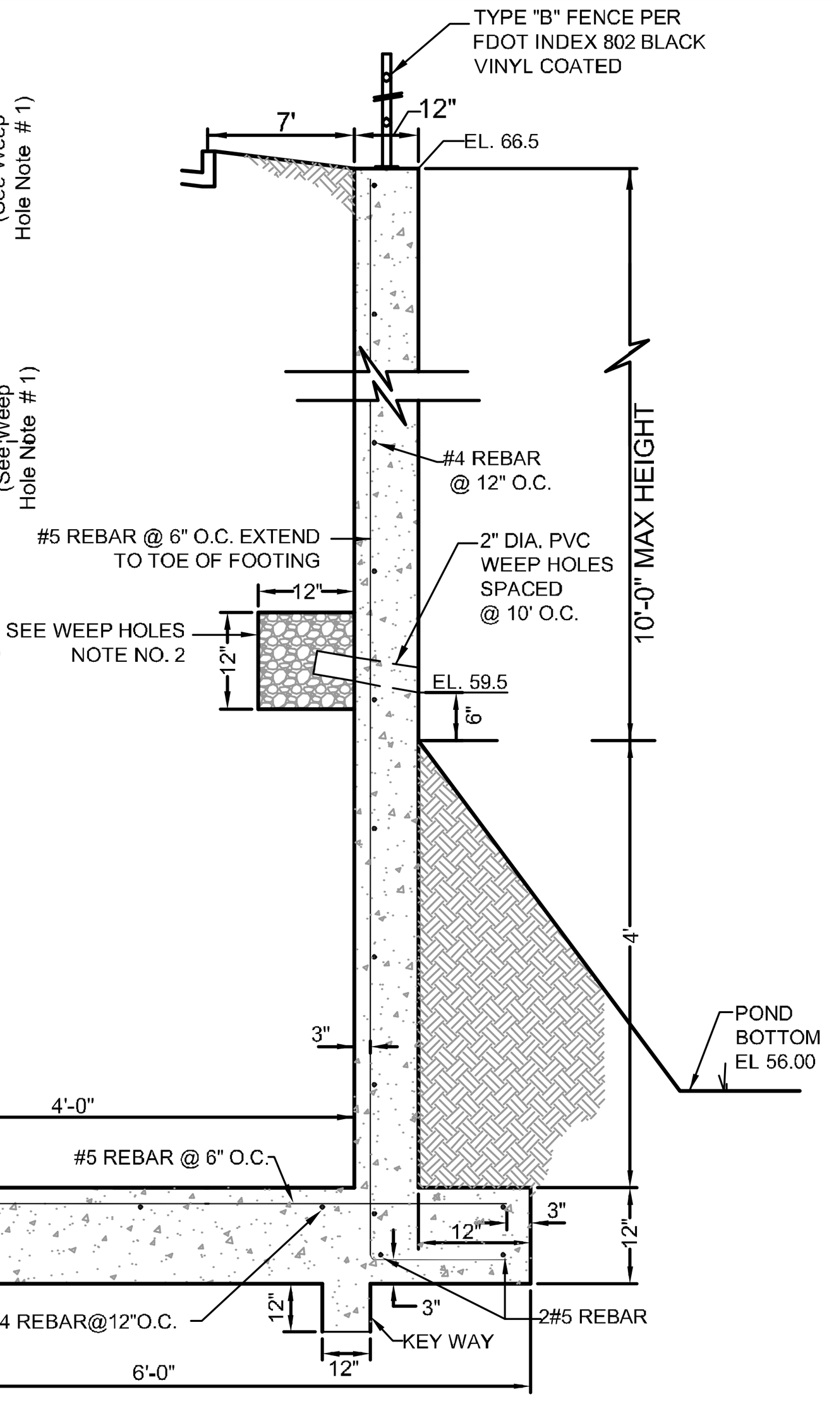
HANDICAP SYMBOL
N.T.S.



PAVEMENT MARKINGS
N.T.S.



KEY WAY AND WALL JOINT DETAIL (TOP VIEW)
NTS



RETAINING WALL DETAIL
N.T.S.

FOUNDATIONS

1. ALLOWABLE BEARING CAPACITY HAS BEEN ASSUMED TO BE 2,000 PSF.

2. NOTIFY ENGINEER OF ANY UNUSUAL SITE SUB-SURFACE CONDITION WHICH IS IN VARIANCE WITH TEST BORINGS, SUCH AS DIFFERENT SOILS ENCOUNTERED, SEEPAGE OR PRESENCE OF WATER, OR WHEN THERE IS A QUESTION OF BEARING CAPACITY.

3. DEWATER EXCAVATIONS BEFORE PLACING CONCRETE. REFER TO GEOTECHNICAL REPORT FOR MORE INFORMATION.

4. REMOVE AND DISPOSE OF ALL ORGANIC AND UNSATISFACTORY SOIL.

5. COMPACT ALL SOIL UNDER FOOTINGS, PADS AND SLABS TO 98 PERCENT OF THE MAXIMUM DENSITY PER ASTM D 1557, "MODIFIED PROCTOR COMPACTION TEST" REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL COMPACTION REQUIREMENTS.

6. NOTIFY ENGINEER IF FIRM BEARING MATERIAL OF DESIGN CAPACITY IS NOT ATTAINED AT BOTTOM OF FOOTING ELEVATION SHOWN.

7. DESIGN, INSTALLATION AND FINAL CLEARANCE OF TEMPORARY BRACING IS THE RESPONSIBILITY OF THE CONTRACTOR.

8. FOUNDATIONS ARE DESIGNED TO BEAR ON WELL COMPACTED GRADE OR CLEAN FILL OF AN ALLOWABLE BEARING CAPACITY OF 2,000 PSF MAXIMUM. A CERTIFIED TESTING LABORATORY SHALL BE ENGAGED BY THE OWNER TO VERIFY THAT THE REQUIRED MINIMUM BEARING CAPACITY IS OBTAINED. SAID SOIL CAPACITY SHALL BE CERTIFIED AND TESTED BY A FLORIDA REGISTERED ENGINEER, PRIOR TO CASTING OF CONCRETE BEARING ON SOIL.

CAST - IN - PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-05).

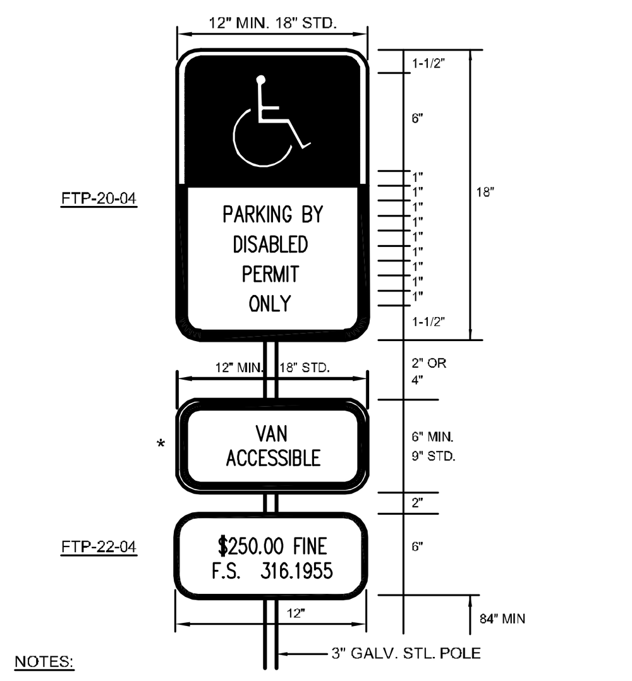
2. DESIGN COMPRESSIVE STRENGTH OF CONCRETE SHALL BE A MINIMUM OF 5500 PSI AT 28 DAYS AT FOOTINGS, AND 5500 PSI AT WALLS. THE SLUMP JUST PRIOR TO PLACING SHALL BE 5" MAX FOR WALLS, 4" MAX FOR ALL OTHER CONCRETE. ALL SLUMPS HAVE A FIELD TOLERANCE OF +/- ONE INCH.

3. REINFORCING BARS: ASTM A 615 GRADE 60 DEFORMED NEW BILLET STEEL OF DOMESTIC MANUFACTURE, FABRICATED IN ACCORDANCE WITH THE C.R.S.I. MANUAL OF STANDING PRACTICE.

WEEP HOLES

1. JOINT SEAL TO BE 2 LAYERS OF 30# SMOOTH ROOFING PAPER OR TYPE D-5 GEOTEXTILE FABRIC IN ACCORDANCE WITH FDOT INDEX NO. 199. MOP ALL CONTACT SURFACES OF CONCRETE AND ROOFING PAPER OR GEOTEXTILE FABRIC WITH CUT BACK ASPHALT (STOP ROOFING PAPER OR GEOTEXTILE FABRIC 6" BELOW TOP OF WALL).

2. PROVIDE A CONTINUOUS 1X1 CLEAN GRAVEL OR CRUSH ROCK DRAIN FOR WRAP DRAINAGE LAYER AS SHOWN, WITH TYPE D-3 GEOTEXTILE FABRIC IN ACCORDANCE WITH FDOT INDEX NO. 199. PROVIDE 8" X 8" GALVANIZED MESH WITH 1/4" OPENING AT THE INSIDE END OF PVC DRAIN PIPE. PROVIDE 2" DIA. PVC DRAIN PIPE (SCH. 40) AT 10' FT. MAX. SPACING LOCATE MINIMUM 2'-0" CLEAR OF WALL JOINTS.



NOTES:

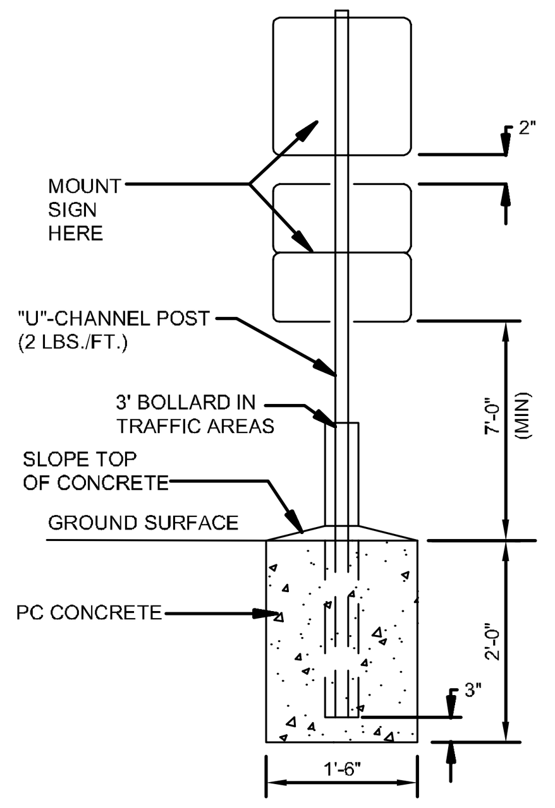
SIGNS FTP-20-04 & FTP-22-04 SHALL BE IN ACCORDANCE WITH F.D.O.T. INDEX NO. 17355 AND SHALL MEET THE REQUIREMENTS OF FLORIDA STATUTES 316.1955 AND 316.1956.

* SUPPLEMENTAL PANEL TO BE USED AS PER LOCAL REQUIREMENTS WHEN NEEDED.

ACCESSIBLE SIGN DETAIL
N.T.S.

NOTE: (HANDICAP SIGN ONLY)

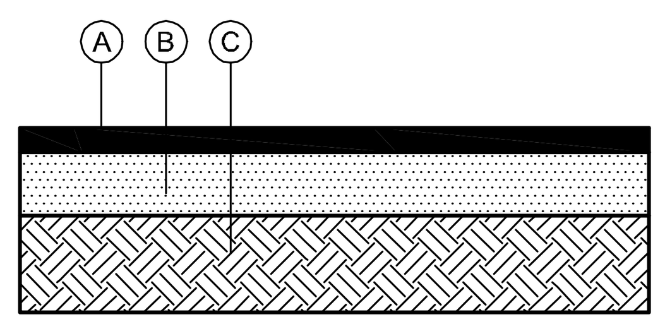
1. ALL LETTERS SHALL BE BLACK AND SHALL CONFORM TO FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS".
2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK BORDER.
4. ONE SIGN REQUIRED FOR EACH PARKING SPACE.
5. HEIGHT OF SIGN SHALL BE 7' ABOVE GROUND IN ACCORDANCE WITH FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS".



NOTE:

ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

STANDARD SIGN BASE
N.T.S.

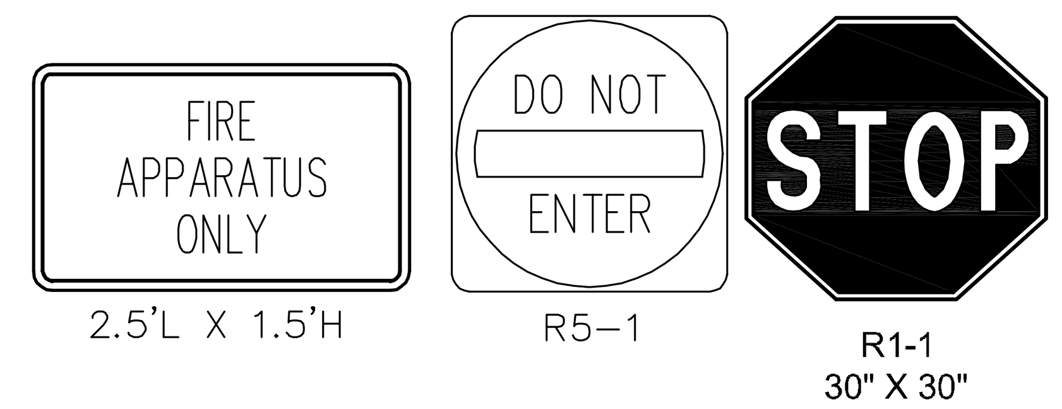


(A.) 6" CONCRETE, 3,000 PSI.

(B.) 6" LIMEROCK BASE: MINIMUM PLACED IN 6" MAXIMUM LIFTS, COMPACTED TO A MINIMUM DENSITY OF 98% OF THE MODIFIED PROCTOR DRY DENSITY (AASHTO T-180).

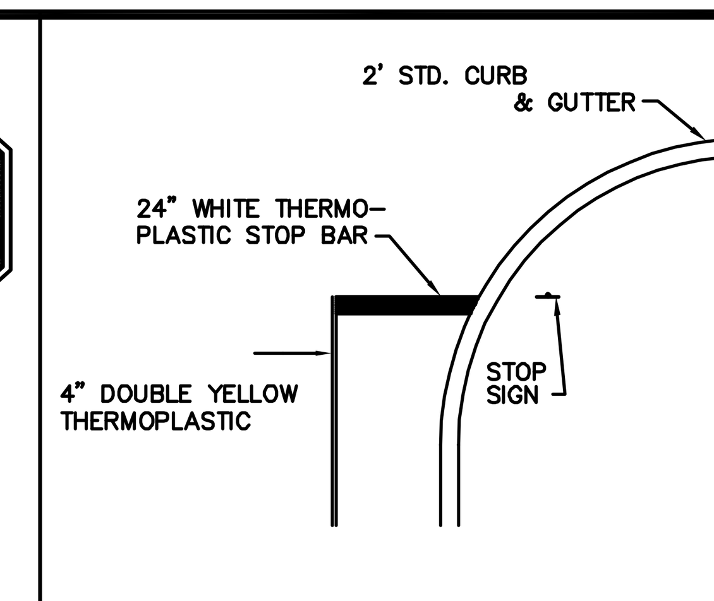
(C.) SUBGRADE: CONSISTS OF NEW 6" COMPACTED THICKNESS GRANULAR FILL OR NATIVE SUBGRADE SOILS MIXED WITH A QUANTITY OF SUITABLE STABILIZATION MATERIAL SUFFICIENT TO ACHIEVE A MINIMUM LBR OF 40. SUBGRADE SHOULD BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% OF THE MATERIAL MODIFIED PROCTOR (ASTM D-1557, AASHTO T-180 LABORATORY MAXIMUM DRY DENSITY.

CONCRETE PAVING SECTION
N.T.S.

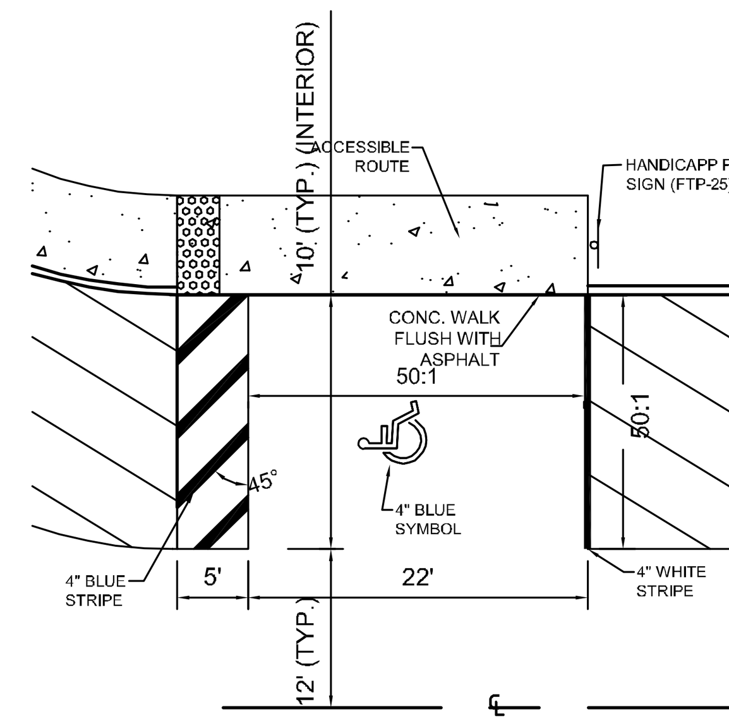


FIRE APPARATUS ONLY — DO NOT ENTER — STOP SIGN

SIGN DETAILS
N.T.S.



STOP BAR DETAIL
N.T.S.



NOTE: PARKING STALLS SHALL BE MARKED WITH WHITE AND BLUE PAINT PER FLORIDA ACCESSIBILITY CODE SECTION 4.6.1.

NOTES:

1. NUMERALS SHALL BE NO LESS THAN 6 INCHES IN HEIGHT AND 1/2" WIDE FOR ALL BUILDINGS.

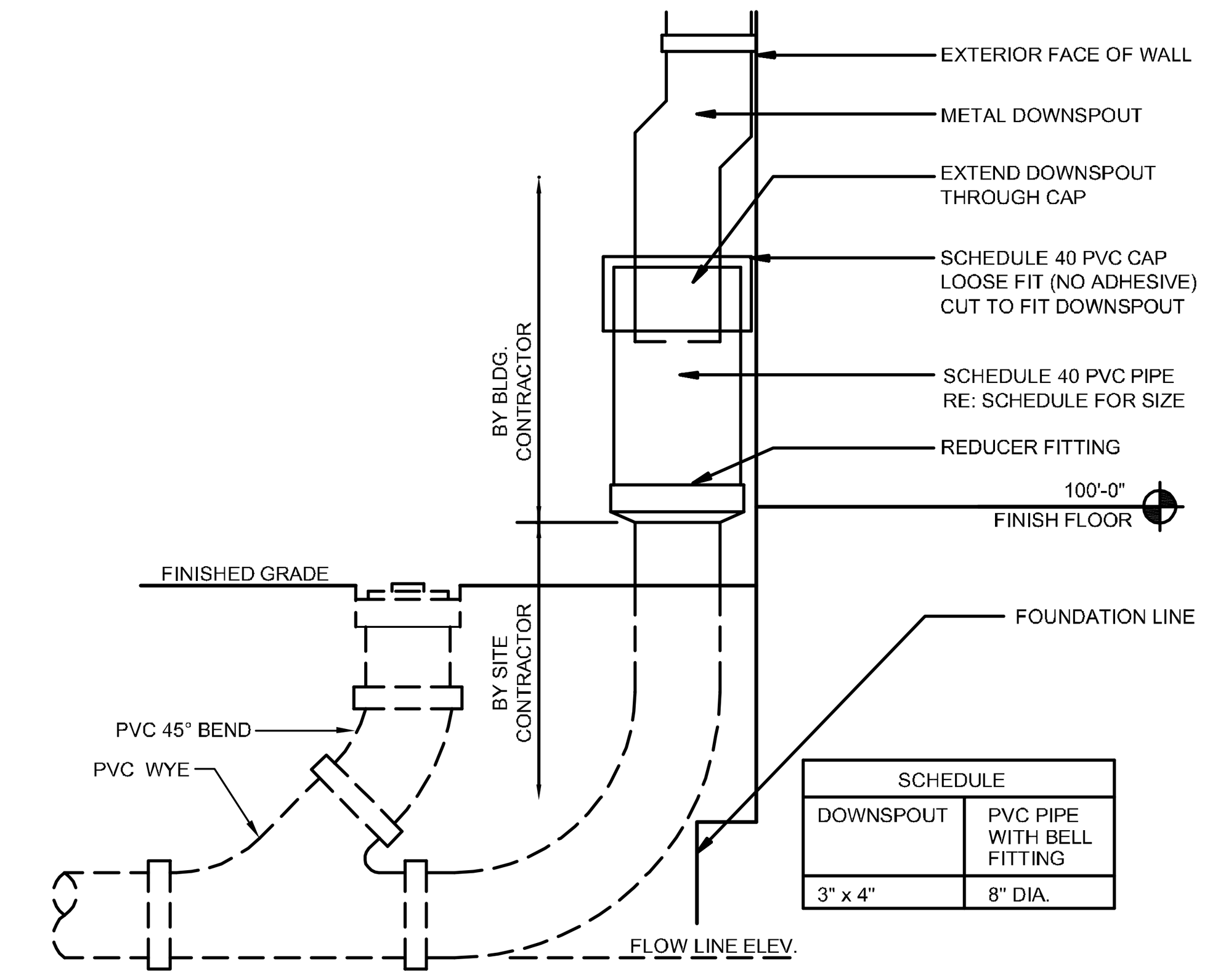
2. ACCESSIBILITY: A) IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, CHAPTER 4, DATED 2012. AT LEAST ONE ACCESSIBLE ROUTE COMPLYING WITH CHAPTER 4 SHALL CONNECT ACCESSIBLE BUILDING OR FACILITY ENTRANCES AND WITH ALL ACCESSIBLE SPACES ABD ELEMENTS WITHIN THE BUILDING OR FACILITY. DOORS ACCESSING THE BUILDING MUST BE DEPICTED ON SITE PLAN. RAMP DETAILS WITH SLOPE INFORMATION SHALL BE DEPICTED ON SITE PLAN. B) THE LOCATION OF HANDICAPPED PARKING STALLS, LOADING ZONES, SIDEWALKS AND RAMPS ON SITE SHALL MEET CHAPTER 316.1955 OF THE FLORIDA STATUTES AND THE FLORIDA ACCESSIBILITY CODE. CURB RAMPS SHALL NOT EXCEED 12:1 SLOPES PARKING SPACE AND AISLE SHALL NOT EXCEED 50:1 CROSS-SLOPE. (TLO 11-26-96) 12-11-96

3. A SEPARATE BUILDING PERMIT (ISSUED BY THE BUILDING DIVISION) IS REQUIRED FOR ANY SIGNAGE.

NOTE: (HANDICAP SIGN ONLY)

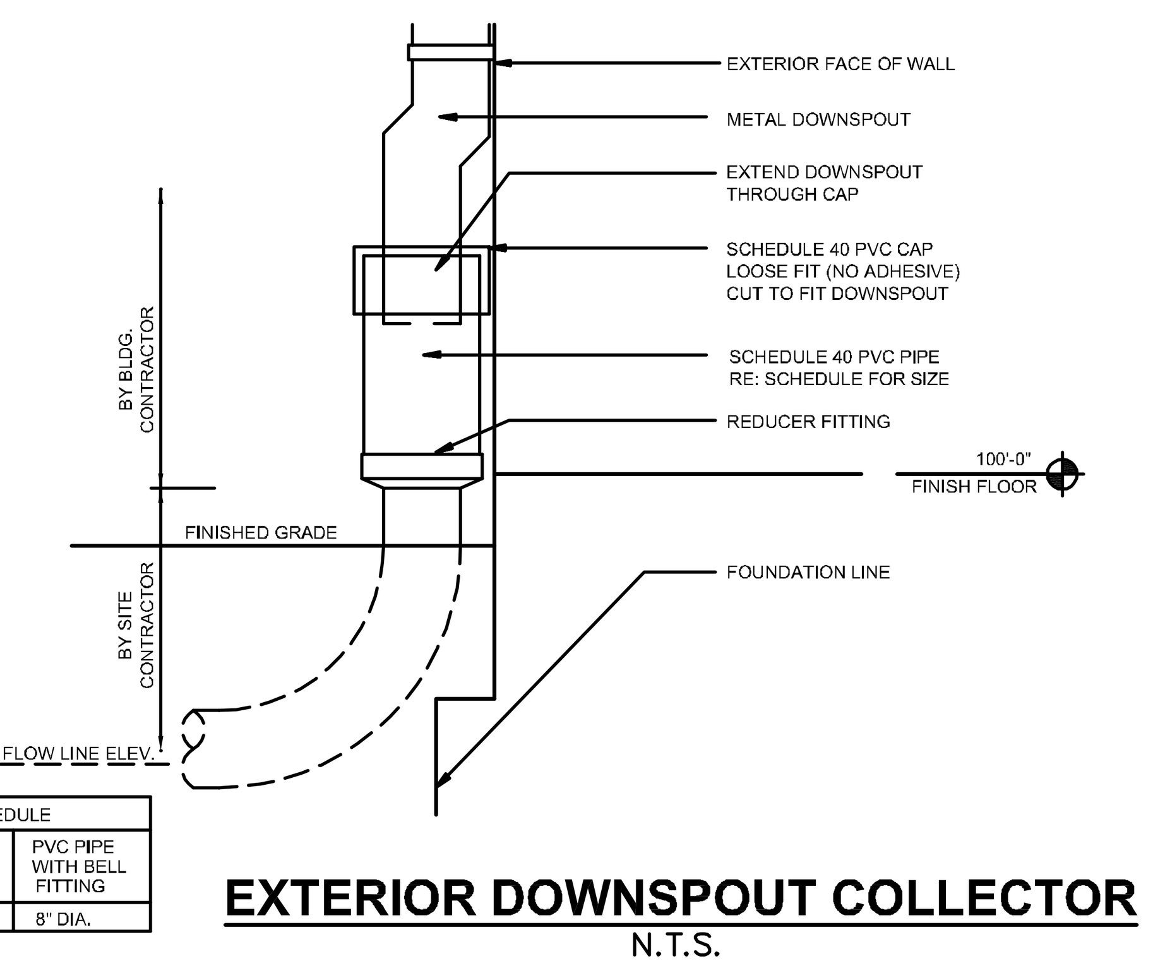
1. ALL LETTERS SHALL BE BLACK AND SHALL CONFORM TO FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS".
2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK BORDER.
4. ONE SIGN REQUIRED FOR EACH PARKING SPACE.
5. HEIGHT OF SIGN SHALL BE 7' ABOVE GROUND IN ACCORDANCE WITH FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS".

HANDICAP PARKING STALL DETAIL
N.T.S.



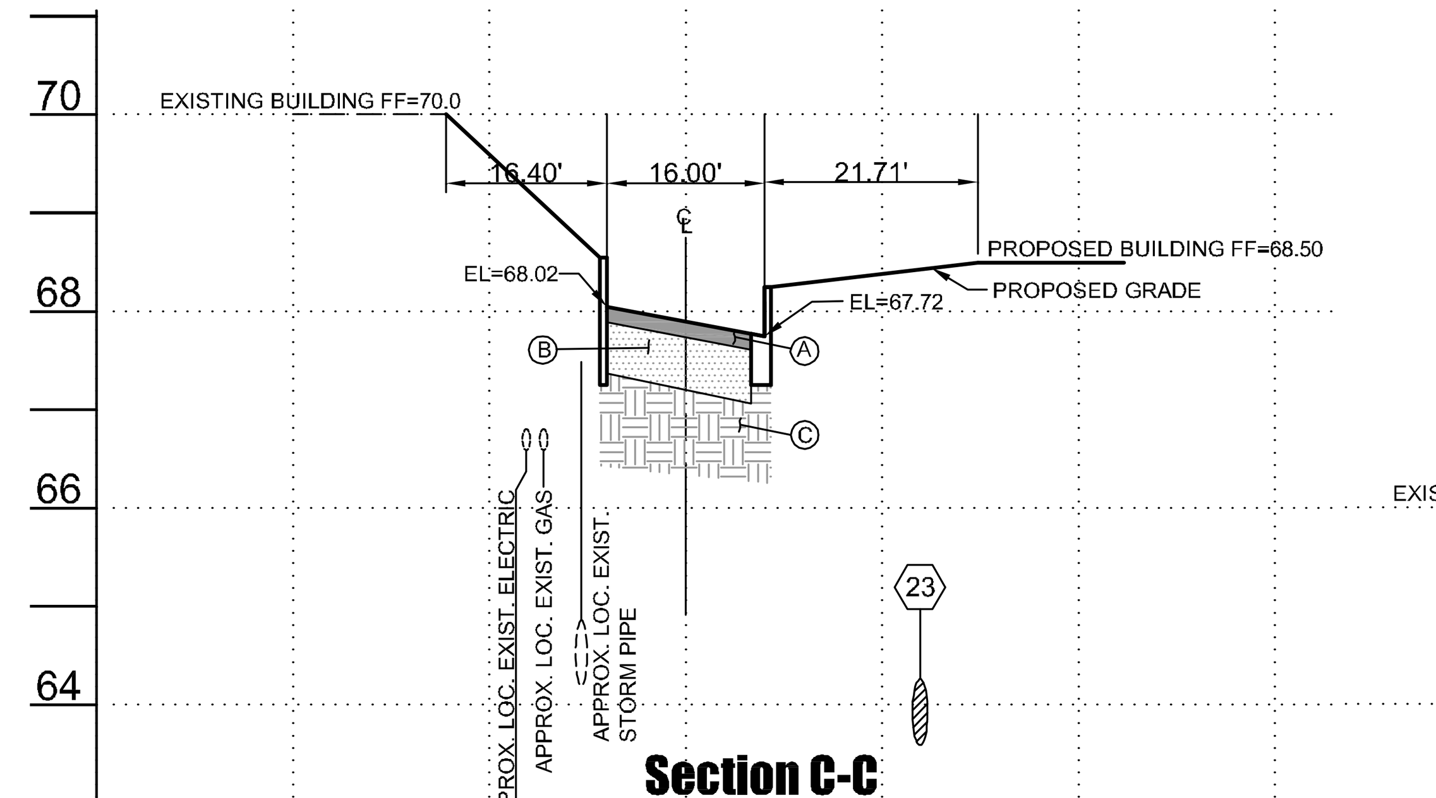
SCHEDULE	
DOWNSPOUT	PVC PIPE WITH BELL FITTING
3" x 4"	8" DIA.

EXTERIOR DOWNSPOUT COLLECTOR WITH CLEAN-OUT
N.T.S.

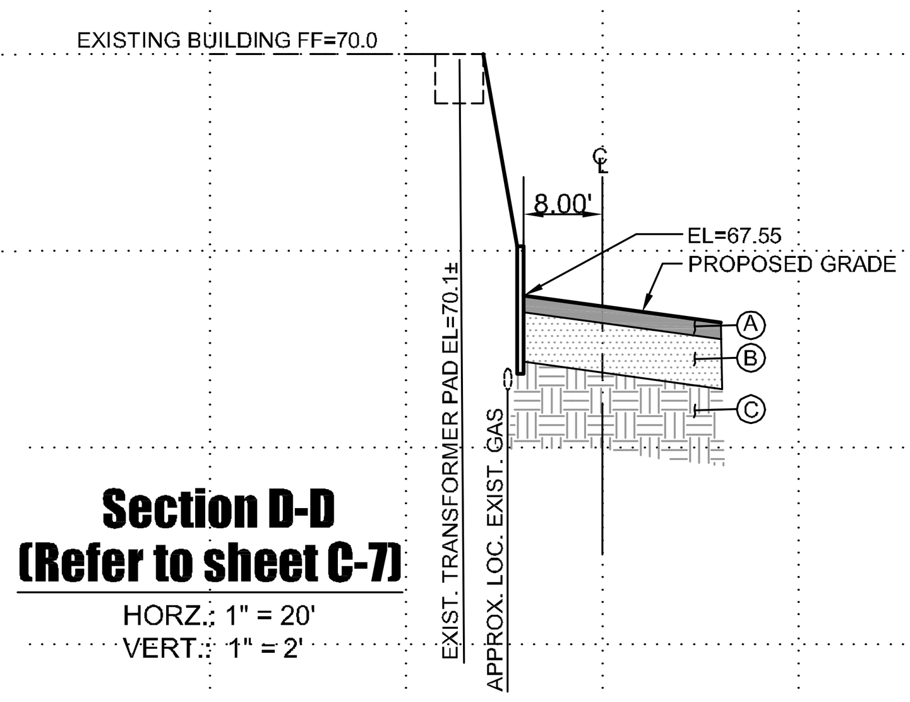


SCHEDULE	
DOWNSPOUT	PVC PIPE WITH BELL FITTING
3" X 4"	8" DIA.

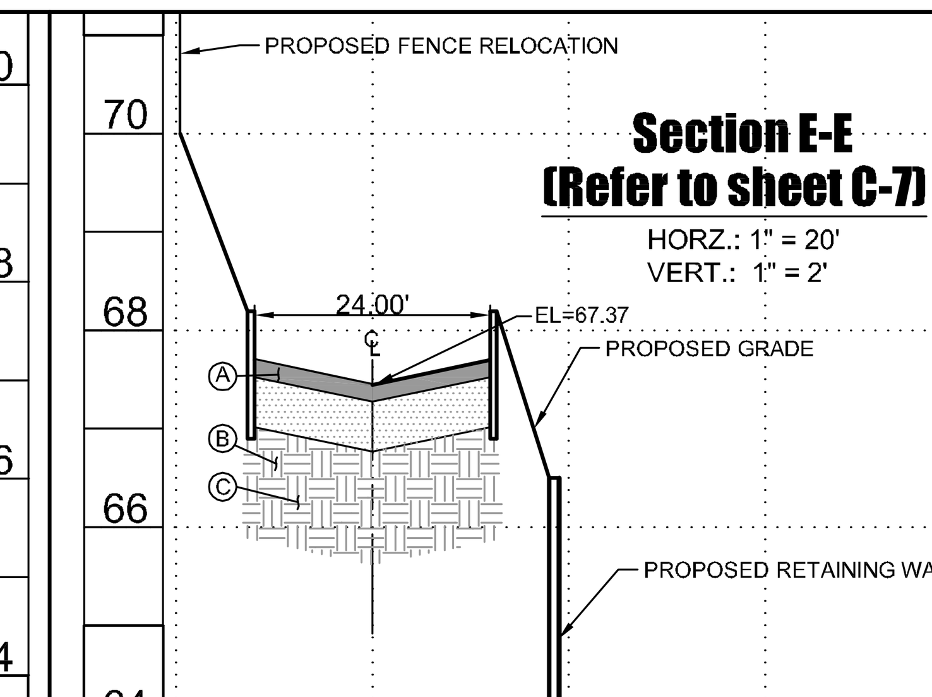
EXTERIOR DOWNSPOUT COLLECTOR
N.T.S.



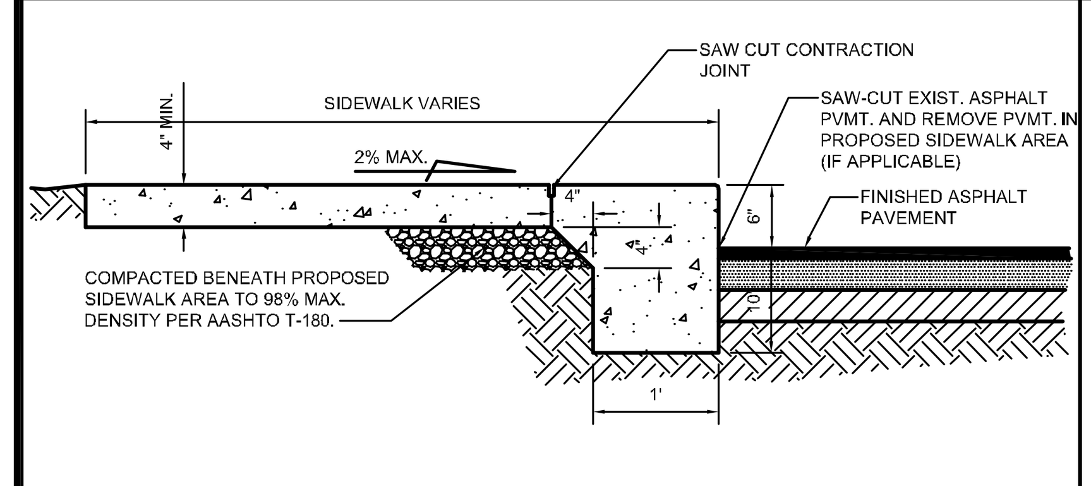
Section C-C (Refer to sheet C-7)
HORZ.: 1" = 20'
VERT.: 1" = 2'



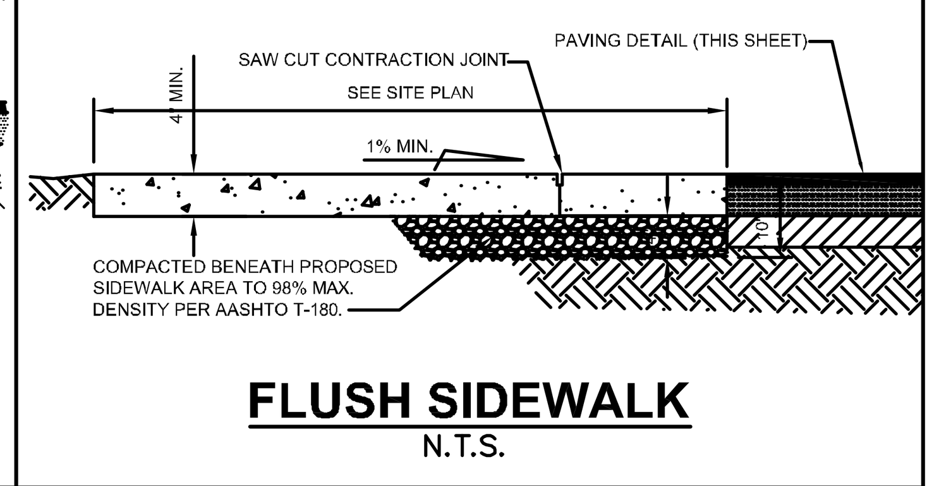
Section D-D (Refer to sheet C-7)
HORZ.: 1" = 20'
VERT.: 1" = 2'



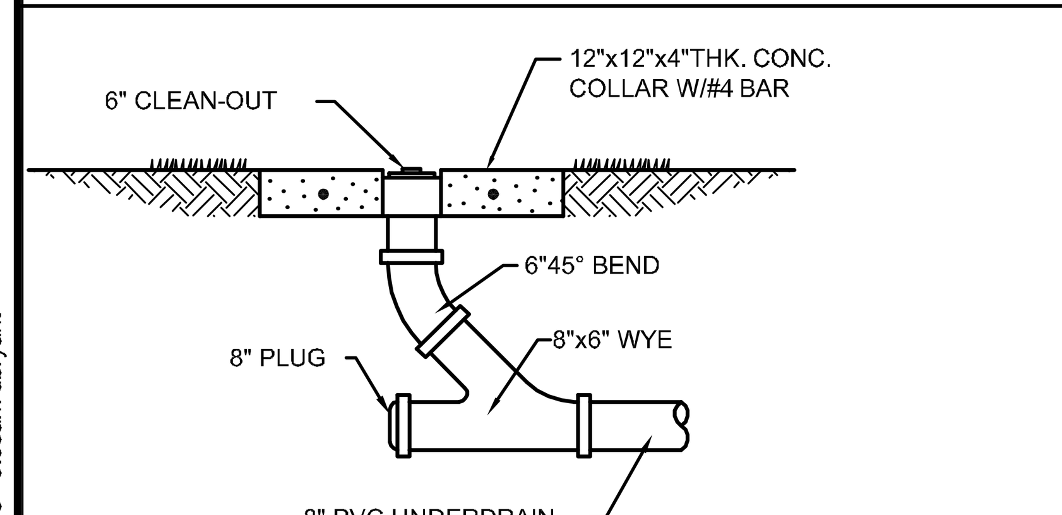
Section E-E (Refer to sheet C-7)
HORZ.: 1" = 20'
VERT.: 1" = 2'



SIDEWALK DETAIL
N.T.S.

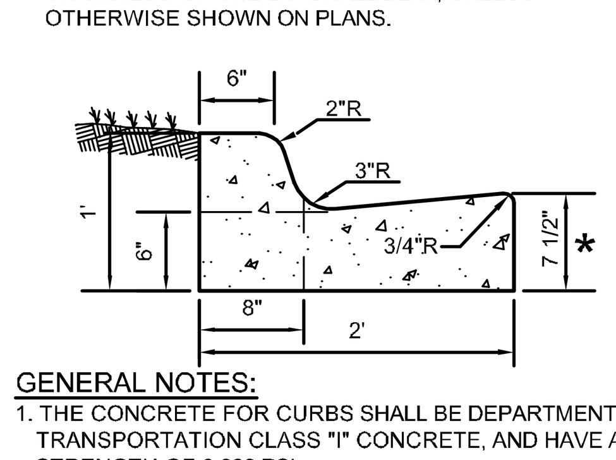


FLUSH SIDEWALK
N.T.S.



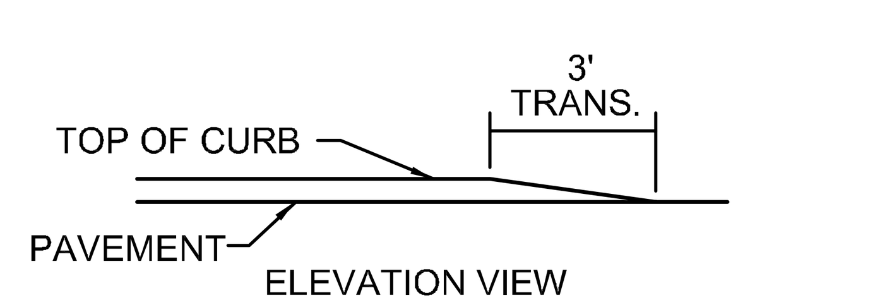
TYPICAL CLEAN-OUT
N.T.S.

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

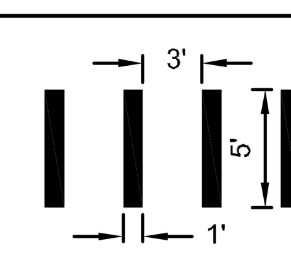


GENERAL NOTES:
1. THE CONCRETE FOR CURBS SHALL BE DEPARTMENT OF TRANSPORTATION CLASS "I" CONCRETE, AND HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI.
2. ALL CURBS SHALL HAVE CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'- 0" ON CENTERS FOR ALL CURBS.

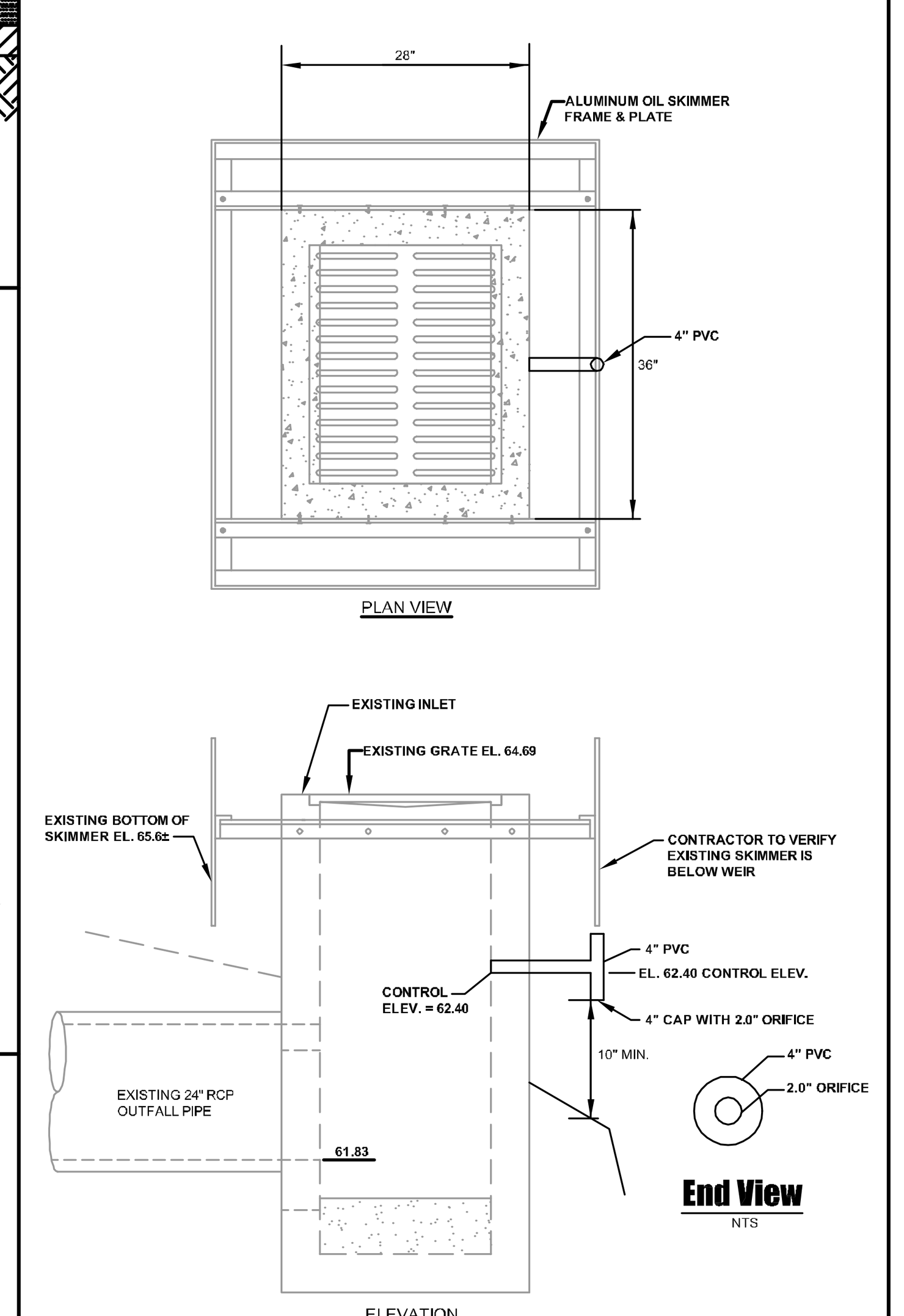
TYPE F CURB & GUTTER
N.T.S.



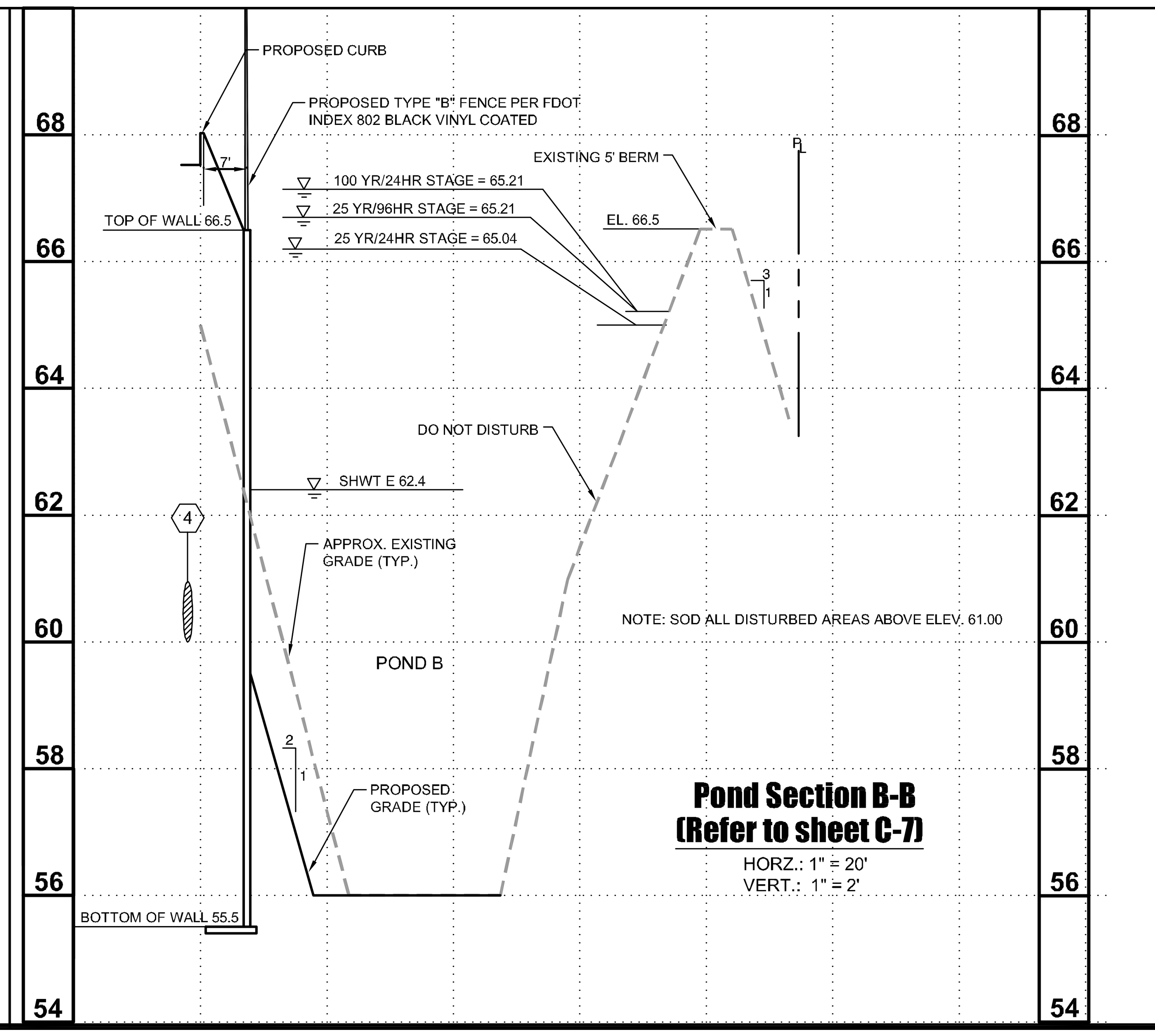
NOSE DOWN CURB DETAIL
N.T.S.



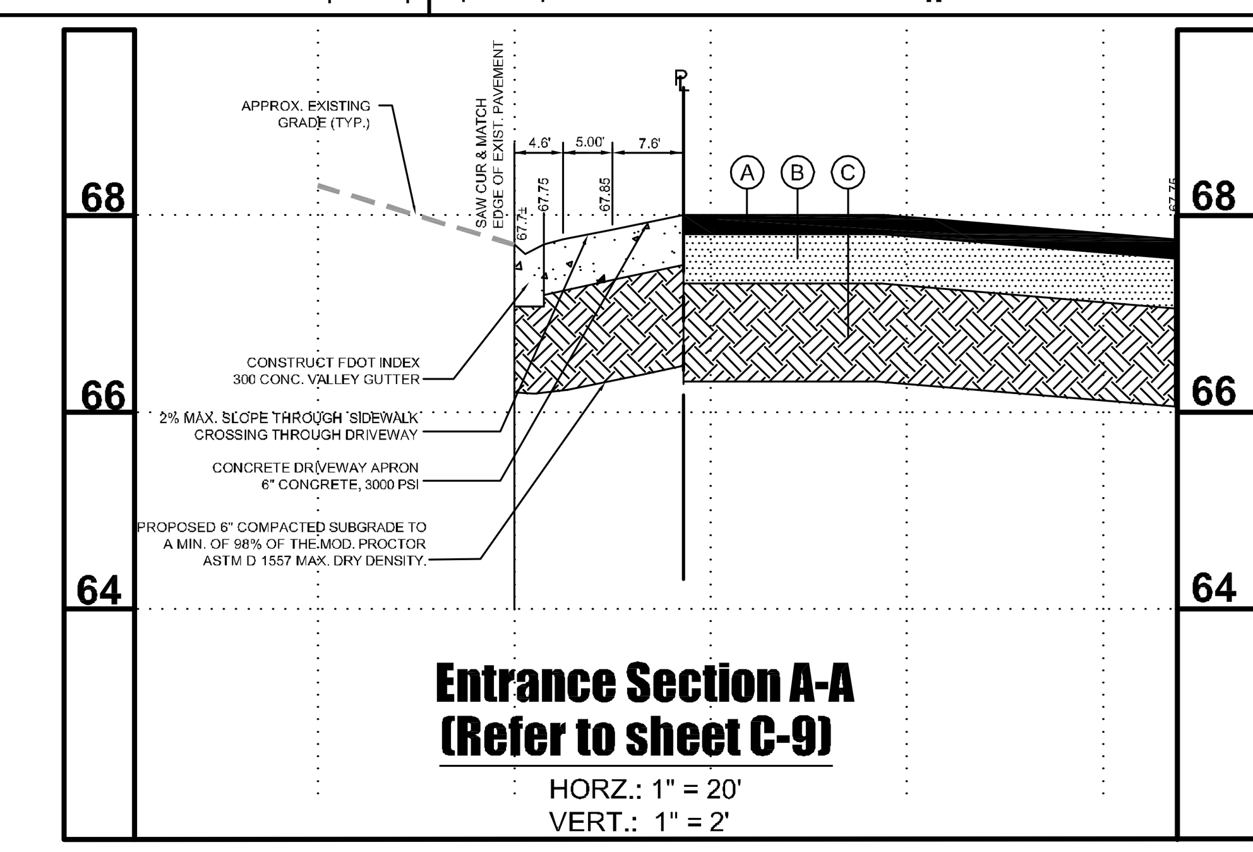
CROSSWALK DETAIL
N.T.S.



Existing Outfall Structure Pond A
N.T.S



Pond Section B-B (Refer to sheet C-7)
HORZ.: 1" = 20'
VERT.: 1" = 2'

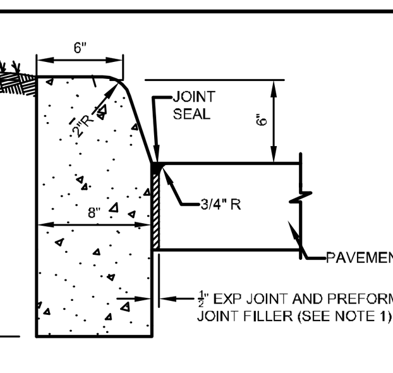


Entrance Section A-A (Refer to sheet C-9)
HORZ.: 1" = 20'
VERT.: 1" = 2'

(A.) 2" TYPE SP STRUCTURAL COURSE 9.5 MM TRAFFIC LEVEL C

(B.) 6" LIMEROCK BASE: MINIMUM PLACED IN 6" MAXIMUM LIFTS, COMPACTED TO A MINIMUM DENSITY OF 98% OF THE MODIFIED PROCTOR DRY DENSITY (AASHTO T-180).

(C.) SUBGRADE: CONSISTS OF NEW 6" COMPACTED THICKNESS GRANULAR FILL OR NATIVE SUBGRADE SOILS MIXED WITH A QUANTITY OF SUITABLE STABILIZATION MATERIAL SUFFICIENT TO ACHIEVE A MINIMUM LBR OF 40. SUBGRADE SHOULD BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% OF THE MATERIAL MODIFIED PROCTOR (ASTM D-1557, AASHTO T-180 LABORATORY MAXIMUM DRY DENSITY.



GENERAL NOTES
1. FOR USE ADJACENT TO CONCRETE OR FLEXIBLE PAVEMENT. EXPANSION JOINT, PREFORMED JOINT FILLER AND JOINT SEAL ARE REQUIRED BETWEEN CURBS AND CONCRETE PAVEMENT ONLY.
2. THE CONCRETE FOR CURBS SHALL BE DEPARTMENT OF TRANSPORTATION CLASS "I" CONCRETE, AND HAVE A COMPRESSIVE STRENGTH OF 3000 PSI.
3. ALL CURBS SHALL HAVE CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'- 0" ON CENTERS FOR ALL CURBS.

TYPE D CURB DETAIL
N.T.S.

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FL. P.E. NO. 65037

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			

Designed by:	JDO
Drawn by:	DRB
Checked by:	JDO
Approved by:	JDO
Scale:	N.T.S.
Date:	10/26/15
Job No.:	D8521
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Lndscp. Lic. No. LC0000298

GENERAL DETAILS

DEBARY PUBLIC SAFETY COMPLEX
FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.
C-8

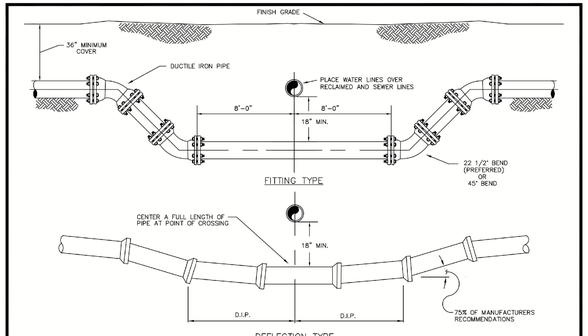
LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

OTHER PIPE	HORIZONTAL SEPARATION	CROSSINGS (1)	JOINT SPACING @ CROSSINGS (FULL JOINT CENTERED
STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER (2)	WATER MAIN, 3 FT MINIMUM	WATER MAIN, 12 INCHES IS THE MINIMUM, EXCEPT FOR GRAVITY SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED	ALTERNATE 3 FT. MINIMUM, WATER MAIN
VACUUM SANITARY SEWER	WATER MAIN, 10 FT PREFERRED, 3 FT MINIMUM	WATER MAIN, 12 INCHES IS PREFERRED, 6 INCHES IS THE MINIMUM	ALTERNATE 3 FT. MINIMUM, WATER MAIN
GRAVITY OR PRESSURE SANITARY SEWER SANITARY SEWER FORCE MAIN, RECLAIMED WATER (4)	WATER MAIN, 10 FT PREFERRED, 6 FT MINIMUM (3)	WATER MAIN, 12 INCHES IS THE MINIMUM, EXCEPT FOR GRAVITY SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED	ALTERNATE 6 FT. MINIMUM, WATER MAIN
ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM	10 FT MINIMUM		

1. WATER MAIN SHOULD CROSS ABOVE OTHER PIPE, WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
2. RECLAIMED WATER REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C.
3. 3 FT. FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.
4. RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

WATER MAIN SEPARATION DETAIL

VOL. UTL. STD. (FIG. 2312)

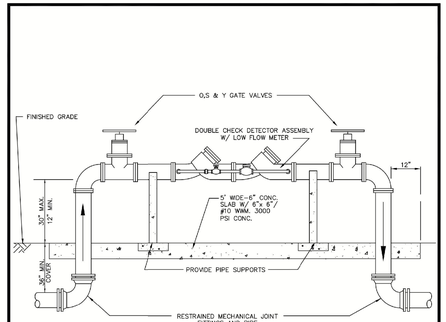


NOTES:
1. ABOVE METHODS ARE TO BE JSED WHEN INSUFFICIENT COVER EXISTS TO ALLOW PRESSURE PIPE TO CROSS
2. ABOVE CONFLICT PIPE WITH 6" MIN. VERTICAL SEPARATION & MAINTAIN 36" COVER TO FINISHED GRADE.
3. FITTINGS SHALL BE RESTRAINED JOINT MEGALUGS.
4. DO NOT EXCEED 75% OF MANUFACTURERS RECOMMENDED MAXIMUM JOINT DEFLECTION.
5. SEE TYPICAL PIPE CROSSING DETAIL

VOL. UTL. STD.

PIPE CONFLICT DETAIL

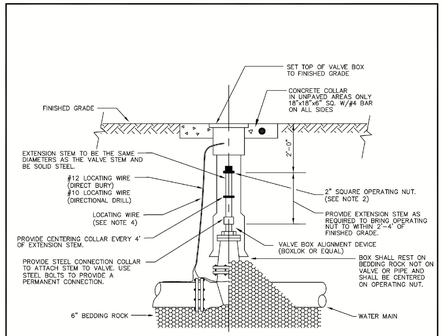
(FIG 1014)



NOTES:
1. ALL PIPE & FITTINGS ABOVE GRADE SHALL BE FLANGED
2. ALL PIPING, FITTINGS AND SUPPORTS TO BE PAINTED. COLOR TO BE SELECTED BY COUNTY.
3. DOUBLE CHECK DECTETOR ASSEMBLY SHALL HAVE A FUSED EPOXY COATED CAST IRON BODY.
4. ASSEMBLY SHALL BE EQUIPPED WITH A LOW FLOW METERING DEVICE TO DETECTED LEAKS.

DOUBLE DETECTOR CHECK ASSEMBLY

VOL. UTL. STD. (FIG. 2309)



NOTES:
1. PVC EXTENSIONS SHALL BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO COME UP TO BETWEEN 2' & 4' DEPTH BELOW FINISHED GRADE. EXTENSION STEM SHALL BE PERMANENTLY ATTACHED TO VALVE ACTUATOR.
3. VALVE BOXES SHALL BE EITHER 2 OR 3 PIECES, DEPENDING ON DEPTH. THERE SHALL BE A TOP SECTION WITH A COVER APPROPRIATELY LABELED FOR THE SERVICE USE AND A BOTTOM BELL SECTION WHICH FITS OVER THE ACTUATOR NUT ON BEDDING ROCK. IF REQUIRED FOR EXTENSION CAST IRON SOIL PIPE MAY BE USED.
4. LOCATING WIRE SHALL BE CONTINUOUS INSIDE THE VALVE BOX AND SHOULD EXTEND 12" ABOVE TOP OF COLLAR. WIRE SHALL BE COLOR CODED TO MATCH THE UTILITY INSTALLED

VALVE AND BOX DETAIL

UPDATED MARCH 2014

VALVES 14" AND SMALLER

VOL. UTL. STD. (FIG. 2307)

SEPARATION REQUIREMENTS:

1. A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET OUTSIDE SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY GRAVITY SEWER OR STORM SEWER LINES. (SEE DETAIL"A")
2. A MINIMUM HORIZONTAL SEPARATION OF THREE (3) FEET OUTSIDE TO OUTSIDE SHALL BE MAINTAINED BETWEEN WATER MAINS AND RECLAIMED WATER LINES CARRYING UNRESTRICTED PUBLIC ACCESS REUSE WATER OR WELL SUPPLY MAINS.
3. THERE SHALL BE AT LEAST A TEN (10) FOOT SEPARATION BETWEEN NEW WATER MAINS AND NEW SANITARY SEWER FORCE MAINS WITHOUT EXCEPTION. FIELD PROBLEMS SHALL BE REPORTED TO THE ENGINEER. SPECIAL SOLUTIONS MUST BE ACCEPTED BY D.E.P. PRIOR TO IMPLEMENTATION.
4. A MINIMUM VERTICAL SEPARTION OF EIGHTEEN (18) INCHES OUTSIDE TO OUTSIDE SHALL BE MAINTAINED BETWEEN WATER MAIN AND THE HAZARD LINES (I.E. SANITARY GRAVITY SEWER, STORM SEWER OR RECLAIMED WATER LINES). ONE FULL LENGTH OF PIPE SHALL BE CENTERED AT THE POINTOF CROSSING FOR BOTH PIPES.
5. THERE SHALL BE AN EIGHTEEN (18) INCH VERTICAL SEPARATION BETWEEN NEW WATER MAINS AND NEW SANITARY SEWER FORCE MAINS AT CROSSING WITHOUT EXCEPTION. WHERE IT IS NOT POSSIBLE TO MAINTAIN THE REQUIRED SEPARATION, CONFLICTS WITH EXISTING LINES SHALL BE REPORTED TO THE ENGINEER, SPECIAL SOLUTIONS MUST BE ACCEPTED BY D.E.P. PRIOR TO IMPLEMENTATION. AT PIPE CROSSINGS,THE PIPES SHALL BE SITUATED SUCH THAT THE JOINTS ARE AS FAR AS POSSIBLE FROM EACH OTHER.
6. NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE OR STORM SEWER STRUCTURE.

SOLUTIONS TO SEPARATION CONFLICTS

1. IN AREAS WHERE IT IS NOT PRACTICAL TO MAINTAIN THE REQUIRED SEPARATION. THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SANITARY GRAVITY SEWER, STORM SEWER OR RECLAIMED WATER LINE AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE OTHER LINE. (SEE DETAIL"B")
2. IF THE MINIMUM ALLOWABLE (10') HORIZONTAL SEPARATION OR 18" VERTICAL IN A SEPARATE TRENCH CANNOT BE MAINTAINED, UPGRADE THE WATER MAIN TO DUCTILE IRON IF THE OTHER LINE IS A STORM SEWER OR AN EXISTING SANITARY GRAVITY SEWER.
3. IF THE NON-CONFORMING LINE IS A NEW GRAVITY SANITARY SEWER, AND 10' HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION IN A SEPARATE TRENCH CANNOT BE MAINTAINED, THEN:
   A. PLACE THE HAZARD LINE WITHIN A CONCRETE SEALED PVC SDR 35 CARRIER PIPE. (SEE DETAIL"C")
   B. ENCASE THE HAZARD PIPE IN CONCRETE ENCASEMENT. DETAIL THIS SHEET
   C. UPGRADE THE NEW GRAVITY SANITARY SEWER TO AWWA C-900, D.R. 18 PVC AND HYDROSTATICALLY TEST IT TO 150 PSI. AT PIPE CROSSINGS, THE PIPES SHALL BE SITUATED SUCH THAT THE JOINTS ARE AS FAR AS POSSIBLE FROM EACH OTHER.
4. IF THE HAZARD LINE IS A RECLAIMED WATER LINE AND THE ABOVE SEPARATION REQUIREMENTS ARE NOT MET, UPGRADE THE RECLAIMED WATER LINE MATERIAL TO DUCTILE IRON OR ENCASED PIPE IN CONCRETE.
5. WHEN THERE IS LESS THAN 18" OF VERTICAL CLEARANCE BETWEEN THE WATER MAIN AND STORM SEWER, AT THE POINT OF CROSSING. (SEE DETAIL"D")
6. WHEN THE WATER MAIN CROSSES BELOW THE HAZARD LINE, THE WATER MAIN SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 18" FROM THE HAZARD LINE. ONE FULL LENGTH OF PIPE SHALL BE CENTERED AT THE POINT OF CROSSING (FOR BOTH PIPES WHEN CROSSING SANITARY SEWER). (SEE DETAIL"E")
7. SPECIAL STRUCTURAL SUPPORT OR CONCRETE SADDLES MAY BE NECESSARY AT THE CROSSING LOCATION.
8. IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE CROSSING HAZARD. RECEIVE SPECIFIC APPROVAL BY D.E.P. PRIOR TO IMPLEMENTATION.

WATER MAIN SEPARATION NOTES

VOL. UTL. STD. (FIG. 2311)

SINGLE SET, METER SET FOR 5/8", 3/4" AND 1" METERS

SINGLE SERVICE SET (WATER AND RECLAIM)

NO POLYTUBING UNDER ROAD ALLOWED WITHOUT 2" CASING
1. 1" TAPPING SADDLE CC THREAD, EPOXY COATED WITH STAINLESS STEEL STRAP, SMITH BLAIR, FORD, JCM, MUELLER
2. 1" CORPORATION STOP FORD FB1000-4-Q (1" BALLVALVE, INLET, OUTLET) MUELLER EQUAL
3. 1" CURB STOP, FORD B43-342W-Q (3/4" VALVE, 1" INLET PE END WITH GRIPPER, MUELLER EQUAL (THIS IS FOR 5/8" AND 3/4" METER SET) IF 1" METER SET USE FORD CURB STOP B41-344W-Q.
4. 1" 200 PSI, SDR 9 ENDOT ENOPURE BLUE WATER SERVICE TUBING (POTABLE), PURPLE (RECLAIMED)
5. 2" PVC SCHEDULE 40, CASING PIPE WHITE, IF INSTALLATION UNDER ROAD. (PAVED OR DIRT)

DOUBLE SET OR DUAL SET

METER SET FOR 5/8" AND 3/4" METERS (WATER ONLY)

NO POLYTUBING UNDER ROAD ALLOWED WITHOUT 2" CASING
1. 1" TAPPING SADDLE CC THREAD, EPOXY COATED WITH STAINLESS STEEL STRAP, SMITH BLAIR, FORD, JCM, MUELLER
2. 1" CORPORATION STOP FORD FB1000-4-Q (1" BALLVALVE, INLET, OUTLET) MUELLER EQUAL
3. 1" X 3/4" U BRANCH WITH GRIPPER FORD U48-436 7.5 OR MUELLER H1460
4. 3/4" CURB STOP, FORD B13-332-W OR MUELLER EQUAL
5. 1" 200 PSI, SDR 9 ENDOT ENOPURE BLUE WATER SERVICE TUBING (POTABLE), PURPLE (RECLAIMED)
6. 2" PVC SCHEDULE 40, CASING PIPE WHITE, IF INSTALLATION UNDER ROAD. (PAVED OR DIRT)

2" WATER SERVICE CONNECTION FOR 1 1/2" AND 2" METER SETS

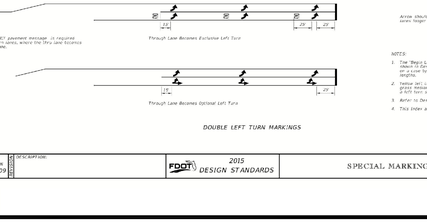
(WATER AND RECLAIM)

NO POLYTUBING UNDER ROAD ALLOWED WITHOUT 2" CASING
1. 2" TAPPING SADDLE CC THREAD, EPOXY COATED WITH STAINLESS STEEL STRAP,
2. 2" CORPORATION STOP FORD FB1101-7-G (2" BALLVALVE X IPT X CTS) MUELLER EQUAL
3. 2" CURB STOP, BF43-777-WG (2" VALVE, 2" CTS X 2" FLANGE) FLANGE WILL FIT 1 1/2" OR 2" FLANGE WATER METER
4. 1" 200 PSI, SDR 9 ENDOT ENOPURE BLUE WATER SERVICE TUBING (POTABLE), PURPLE (RECLAIMED)
5. 3" PVC SCHEDULE 40, CASING PIPE WHITE, IF INSTALLATION UNDER ROAD. (PAVED OR DIRT)

WATER & RECLAIMED SERVICE DETAIL

UPDATED MARCH 2014

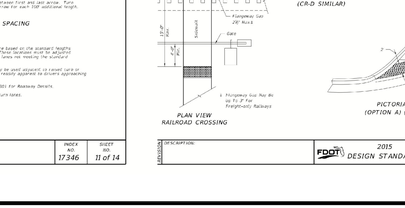
VOL. UTL. STD. (FIG. 1011)



NOTES
1. STORM DRAIN MAY BE LOCATED ON EITHER SIDE OF ROAD.
2. SANITARY SEWER SERVICES ARE TO BE LAID OVER OR UNDER STORM DRAINS AS REQUIRED.
3. SANITARY SERVICE LATERAL SHALL HAVE A MINIMUM SLOPE OF 0.01%.
4. SANITARY SEVICE IS TO BE A MINIMUM OF 6" DIA.
5. 18" SEPARATION SHALL BE MAINTAINED BETWEEN ALL PIPES WHEN POSSIBLE.

TYPICAL UNDERGROUND UTILITIES LOCATION

VOL. UTL. STD. (FIG. 2008)



NOTES:
1. HOME BUILDING SHALL INSTALL A CLEANOUT TO THEIR CONNECTION POINT.
2. LOCATE SINGLE LATERAL AS CLOSE TO LOT AS POSSIBLE, 25' MAXIMUM.
3. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN.

SERVICE LATERAL DEVICE

SANITARY SERVICE LATERAL DETAIL

UPDATED MARCH 2014

VOL. UTL. STD. (FIG. 2007)

Revised 3/27/2014

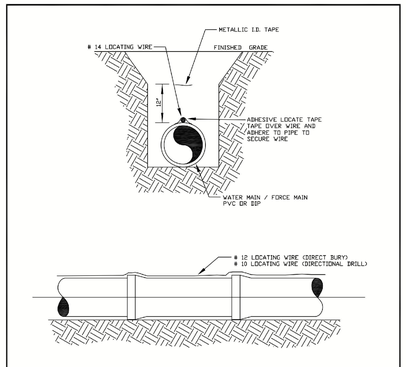
UTILITY RECORD DRAWING REQUIREMENTS

ord drawings shall be provided by the Contractor to Volusia County Utilities. record drawings shall be signed and sealed by the engineer of record with the provided by a Florida licensed surveyor. Record drawing information tive to all constructed utilities and structures shall include, but not be limited he following items:

a. Drawings shall depict actual location of all underground and above ground water, wastewater, and reclaimed water improvements and related appurtenances.
b. Drawings shall clearly depict all details not on the original contract drawings, but constructed in the field. The location of all equipment and piping relocation shall be accurately depicted to scale
c. The location of existing utilities where crossed or uncovered during the course of the work shall be depicted.
d. Dimensions between all manholes shall be field verified and depicted. The inverts and grade elevations of all lines entering and leaving manholes shall be depicted. Sewer laterals shall be accurately located and depicted.
e. The depth from finish grade to the top of potable water mains, reclaimed water mains and sewer force mains shall be indicated at all valve and fitting locations.
f. The record drawings shall consist of all sheets included in the construction plans.

record drawings shall be submitted in the following format:

a. Five (5) sets of signed and sealed blue-line prints.
b. One (1) CD or DVD provided in AutoCAD 2004 (or later version) .dwg format and in Adobe PDF format. This data will be referenced by a minimum of three (3) coordinates in the Florida State Plane Coordinate System, East Zone in US Survey Feet. The horizontal datum is NAD83/(1990) HARN and the vertical datum is NAVD 88 Feet, in accordance with Florida Statutes, Chapter 177.151.



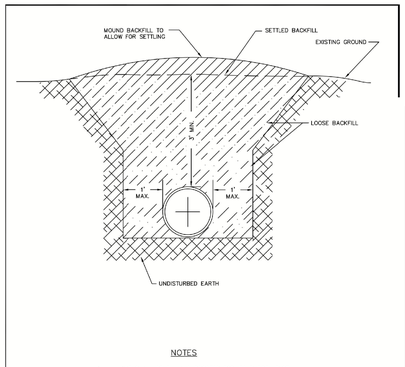
NOTES:
1. ALL PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (12 GAUGE COPPER) CAPABLE OF DETECTION BY A CABLE LOCATOR AND SHALL BE BURIED DIRECTLY ABOVE CENTERLINE OF PIPE.
2. LOCATING WIRE SHALL TERMINATE AT THE TOP OF EACH VALVE BOX AND BE CAPABLE OF EXTENDING 12" ABOVE TOP OF BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION (SEE GATE VALVE AND BOX DETAIL, FIGURE 2307).
3. ADHESIVE I.D. TAPE AS NECESSARY TO HOLD WIRE DIRECTLY ON THE TOP OF THE PIPE.
4. LOCATE WIRE AND LOCATE TAPE (TWO TYPES) SHALL BE ON ALL PIPES.

PVC PIPE LOCATING WIRE DETAIL

N.T.S.

UPDATED MARCH 2014

VOL. UTL. STD. (FIG. 1005)



NOTES
1. PIPE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH BY UNDISTURBED EARTH. DIG OUT HOLLOW AT PIPE BELL.
2. TRENCH SHALL BE DRY DURING PLACEMENT
3. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, STICKS, ROOTS & OTHER DEBRIS.
4. ALL BACKFILL SHALL BE COMPACTED TO 95R DENSITY OF AASHTO T-180 MODIFIED PROCTOR.

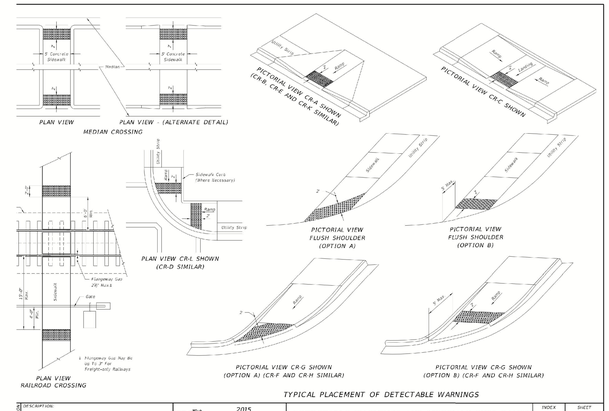
TYPICAL TYPE I TRENCH DETAIL

(GRANULAR SOILS)

UPDATED MARCH 2014

VOL. UTL. STD. (FIG. 10C

LAST REVISION	DESCRIPTION:	FDOT 2015 DESIGN STANDARDS	SPECIAL MARKING AREAS	INDEX NO.	SHEET NO.
07/01/09				17346	11 of 14



TYPICAL PLACEMENT OF DETECTABLE WARNINGS

LAST REVISION	DESCRIPTION:	FDOT 2015 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX NO.	SHEET NO.
				304	6 of 7

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JEREMIAH D. OWENS, P.E. FL. P.E. NO. 65037

No.	Date	Revision	By

Designed by:	JDO
Drawn by:	DRB
Checked by:	JDO
Approved by:	JDO
Scale:	N.T.S.
Date:	10/26/15
Job No.:	D8521

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VOLUSIA COUNTY DETAILS

DEBARY PUBLIC SAFETY COMPLEX
FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.
C-9

LANDSCAPE NOTES:

1. The landscape Contractor shall be responsible for all materials and all work as called for on the Landscape Plans and in the Landscape Specifications. In the event of variation between quantities shown on plant list and the plans, the plans shall control. The Landscape Contractor shall verify all quantities and report any discrepancies at the time of bidding.
2. The Landscape Contractor shall review architectural/engineering plans and become thoroughly familiar with surface and subsurface utilities.
3. Prior to construction, the contractor shall be responsible for locating all underground utilities and shall avoid damage to all utilities during the course of the work. Locations of existing buried utility lines shown on the plans are based upon best available information and are considered to be approximate. It shall be the responsibility of the contractor 1) to verify the locations of utility lines within and adjacent to the work area 2) to protect all utility lines during the construction period 3) to repair any and all damage to utilities, structures, site appurtenances, etc. which occurs as a result of the construction 4) To field adjust the location of proposed trees and palms 10' off the center of the utility lines. Notify the Landscape Architect if a 10' offset does not function.
4. The work shall be coordinated with other trades to prevent conflicts. Coordinate the planting with the irrigation work to assure availability and proper location of irrigation items and plants.
5. Contractor shall ensure that there are no visual obstructions to vehicle lines of sight and traffic controls. Contractor shall field adjust tree and/or large shrub locations to avoid any such obstructions.
6. Trees shall be maintained by the owner to avoid future such obstructions by pruning trees and/or shrubs as necessary utilizing horticulturally sound techniques.
7. All planting shall be performed by personnel familiar with planting procedure and under the supervision of a qualified planting foreman.
8. All plant material shall be graded Florida No. 1 or better as outlined under Grades and Standards for Nursery Stock, Part I and II, published by the Florida Department of Agriculture and Consumer Services.
9. The Landscape Architect or Owner shall have the right, at any stage of the operations, to reject any and all work and materials which, in his opinion, do not meet with the requirements of these specifications.
10. Except as otherwise specified, the Landscape Contractor's work shall conform to accepted horticultural practices as used in the trade.
11. The minimum acceptable size of all plants, measured after pruning, with branches in normal positions, shall conform to the measurements specified on the plant list or as indicated on the landscape drawing. Height and spread dimensions refer to main body of the plant and not extreme branch tip to tip. Trunk caliper (trunk diameter) is measured 6 inches from the ground on trees up to and including 4 inches in caliper, and 12 inches from the ground for larger trees. Since trunks are seldom round, the average of the largest diameter and that perpendicular to it is referred to as caliper.
12. Plants shall be protected upon arrival at the site, by being thoroughly watered and properly maintained until planted.
13. All tree pits shall be excavated to size and depth in accordance with the Florida Grades & Standards for Nursery Stock, unless shown otherwise on the drawings, and backfilled with the specified planting soil. The Landscape Contractor shall test fill all tree pits with water before planting to assure proper drainage percolation is available.
14. The Landscape Contractor shall be responsible for proper watering of all plants. All plants shall be thoroughly watered at time of planting and kept adequately watered until time of acceptance. It shall be the Landscape Contractor's responsibility to assure that plants are not over watered.
15. It shall be the Landscape Contractor's responsibility to prevent plants from falling or being blown over, to re-straighten and replant all plants which lean or fall and to replace all plants which are damaged due to lack of proper guying or staking. The Landscape Contractor shall be legally liable for any damage caused by instability of any plant material.
16. All Palms to be staked as indicated per Palm staking details. All other trees to be stabilized utilizing 8' lodge poles per tree planting details.
17. Plants blown over by high winds, within the guaranteed period, shall not be cause for additional expense to the Owner, but shall be the responsibility of the Landscape Contractor. Damaged plants shall be replaced by the Landscape Contractor at no additional cost to the Owner.
18. Sod shall be certified to be free of the imported fire ant. Sod shall have a clean growth of acceptable grass, reasonably free of weeds with not less than 1 1/2" of soil firmly adhering to roots. It shall be the responsibility of the Landscape Contractor to measure and determine the exact amount required. This amount shall be verified with the Owner or Landscape Architect before installation.
19. The Landscape Contractor shall insure adequate vertical drainage in all plant beds, planters, and sod areas. Vertical drilling through any compacted fill to native soil shall be accomplished to insure drainage. If well drained fill is necessary to assure positive drainage, this issue shall be brought up by the Landscape Contractor at time of bidding.
20. The Landscape Contractor shall insure that his work does not interrupt established or projected drainage patterns.
21. The Landscape Contractor shall prune, shape and remove dead foliage/limbs from existing plant material to remain. Confirm with the Landscape Architect or Owner the extent of work required at time of Bidding.
22. Mulch - All plant beds shall be top dressed with 4" shredded hardwood mulch (or approved equal).
23. Transplanted Material - The Landscape Contractor shall be responsible for determining and evaluating which plant materials are suitable for transplanting and shall verify this with the Landscape Architect or Owner. The Landscape Contractor shall take all reasonable, horticulturally acceptable measures to assure the successful transplanting of determined plant materials. The Landscape Contractor shall be responsible for replacing any relocated plant materials which die if such measures are not taken, as determined by the Landscape Architect or Owner. Replacement plants shall be of identical species and size if required.
24. MAINTENANCE PRIOR TO FINAL INSPECTION AND ACCEPTANCE:

    Maintenance shall commence after each plant is planted and the maintenance period shall continue until the job or specific phase of the job is accepted by the Landscape Architect or Owner. Extreme care shall be taken to instruct the Owner or his representatives in general maintenance procedures.

    Plant maintenance shall include watering, pruning, weeding, cultivating, mulching, tightening, and repairing of guys, replacement of sick or dead plants, resetting plants to proper grades or upright positions and restoration of the planting saucer and all other care needed for proper growth of the plants.

    During the maintenance period and up to the date of final acceptance, the Landscape Contractor shall do all seasonal spraying and/or dusting of trees and shrubs. Upon completion of all planting, an inspection for acceptance of work will be held. The Landscape Contractor shall notify the Landscape Architect or Owner for scheduling of the inspection 10 days prior to the anticipated date.

    At the time of the inspection, if all of the materials are acceptable, a written notice will be given by the Landscape Architect or Owner to the Landscape Contractor Stating the date when the Maintenance Period ends.

    GUARANTEE AND REPLACEMENT:

    All plant materials shall be guaranteed for one (1) year from the time of final inspection and interim acceptance shall be alive and in satisfactory growth for each specific kind of plant at the end of the guaranteed period.

    At the end of the guarantee period, any plant required under this contract that is dead or not in satisfactory growth, as determined by the Owner or the Landscape Architect, shall be removed and replaced. Replacement plants shall have an extended guarantee, as noted above, from time of replacement.

    All replacements shall be planted of the same kind and size as specified on the plant list. They shall be the responsibility of the Landscape Contractor.
25. TOPSOIL

    Topsoil shall be natural, friable, fertile, fine loamy soil possessing characteristics of representative topsoil in the vicinity that produces heavy growth. Topsoil shall have a pH range of 5.5 to 7.4, free from subsoil, objectionable weeds, litter, sods, stiff clay, stones larger than 1-inch in diameter, stumps, roots, trash, toxic substances, or any other material which may be harmful to plant growth or hinder planting operations. Top soil shall contain a minimum of three percent organic material.
26. UNSUITABLE SUBSOILS

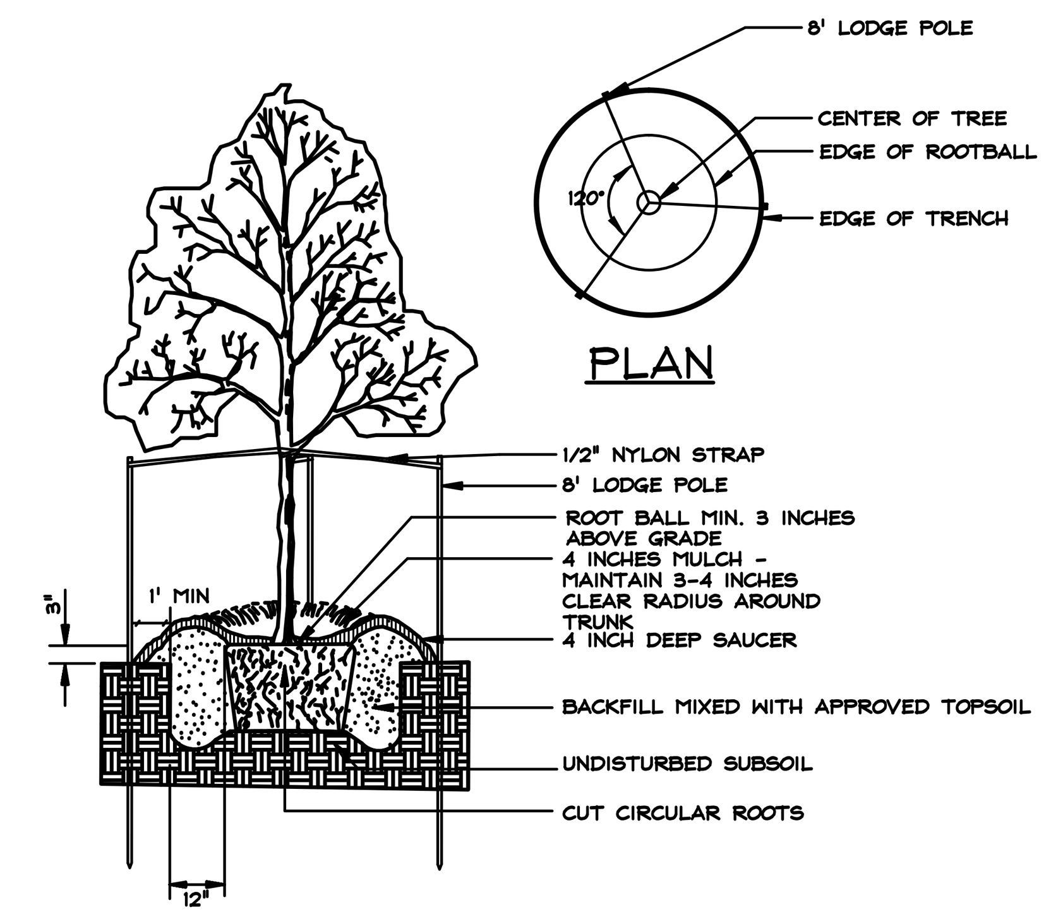
    Locations containing unsuitable subsoil shall be treated by one or more of the following:

    A. Where unsuitability is deemed by Owner or Owner's Representative to be due to excessive compaction caused by heavy equipment and where natural subsoil is other than AASHTO classification of A6 or A7, loosen such areas with spikes, discing, or other means to loosen soil to condition acceptable to Owner. Loosen soil to minimum depth of 12 inches with additional loosening as required to obtain adequate drainage. Contractor may introduce peat moss, sand, or organic matter into the subsoil to obtain adequate measures shall be considered as incidental, without additional cost to Owner.

    B. Where unsuitability is deemed by Owner or Owner's Representative to be due to presence of boards, mortar, concrete, graded aggregate base, or other construction materials in sub grade and where natural subsoil is other than AASHTO classification of A6 or A7, remove debris and objectionable material. Such remedial measures shall be considered as incidental, without additional cost to Owner.

    C. Where unsuitability is deemed by Owner to be because natural subsoil falls into AASHTO classification of A6 or A7 and contains moisture in excess of 30 percent, then installation of sub drainage system or other means described elsewhere in Specifications shall be used. Where such conditions have not been known or revealed prior to planting time and they have not been recognized in preparation of The Drawings and Specifications, then Owner shall issue pricing order to install proper remedial measures.

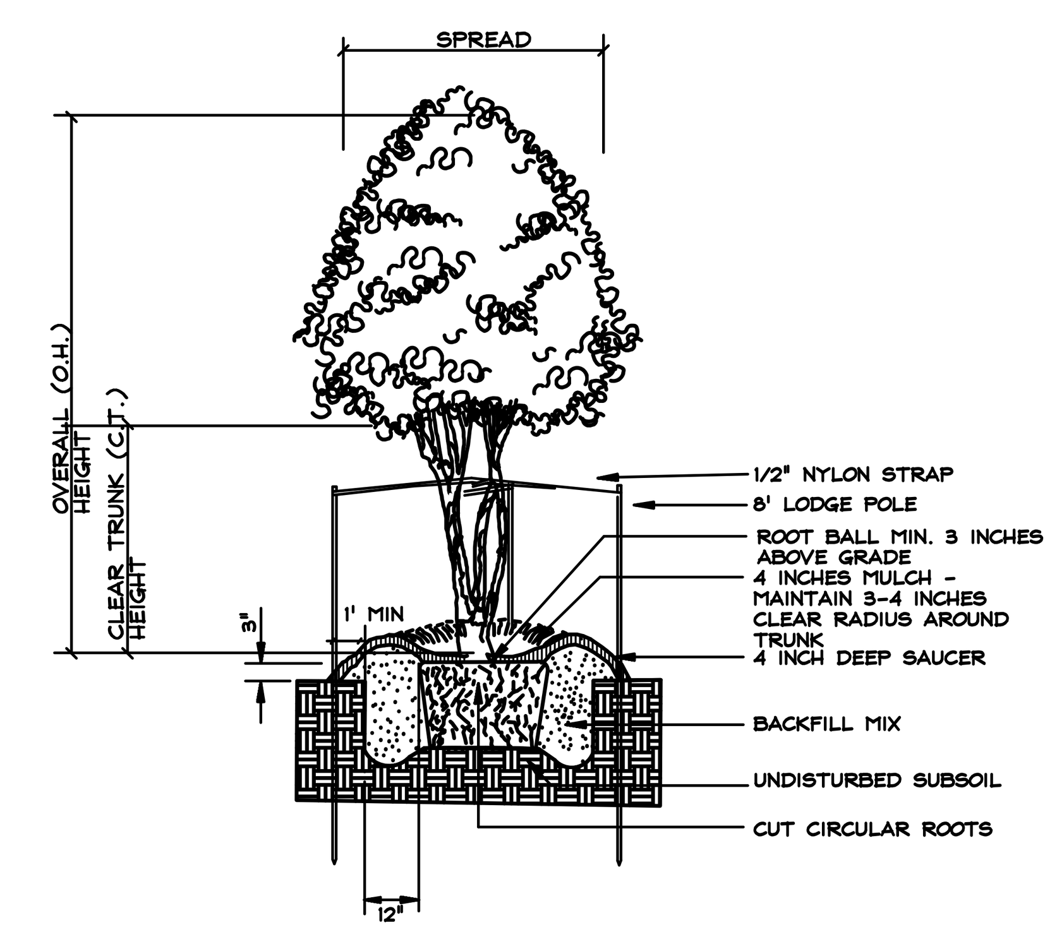
    D. Planting beds where existing subsoil is determined by Owner to be unsuitable for plant growth in accordance paragraph Unsuitable Subsoil herein shall be excavated to a depth of 12 inches or as needed to provide adequate drainage. Replace excavated soil with planting soil.



NOTE: SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.

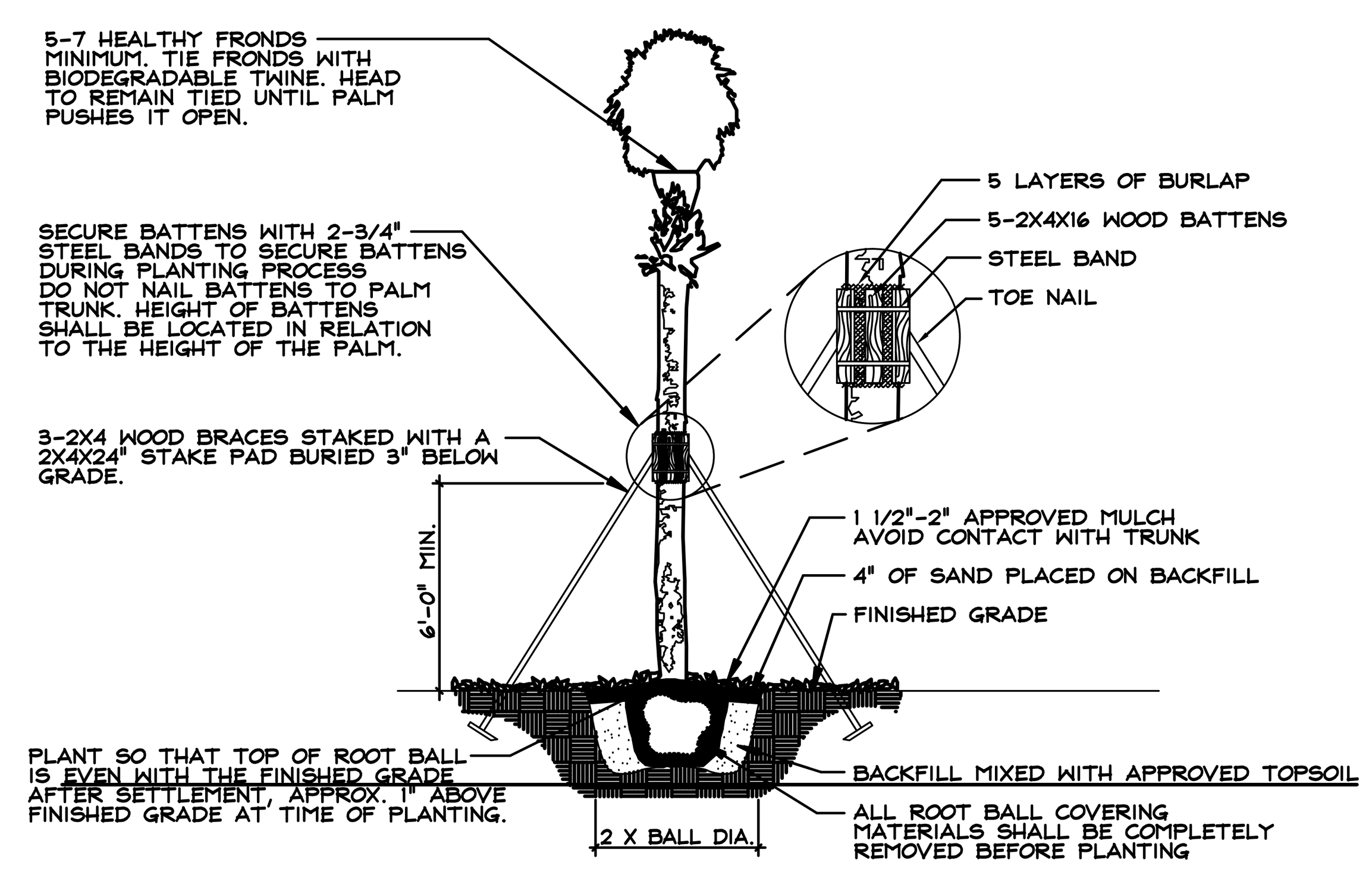
CONTAINER TREE PLANTING DETAIL

N.T.S.



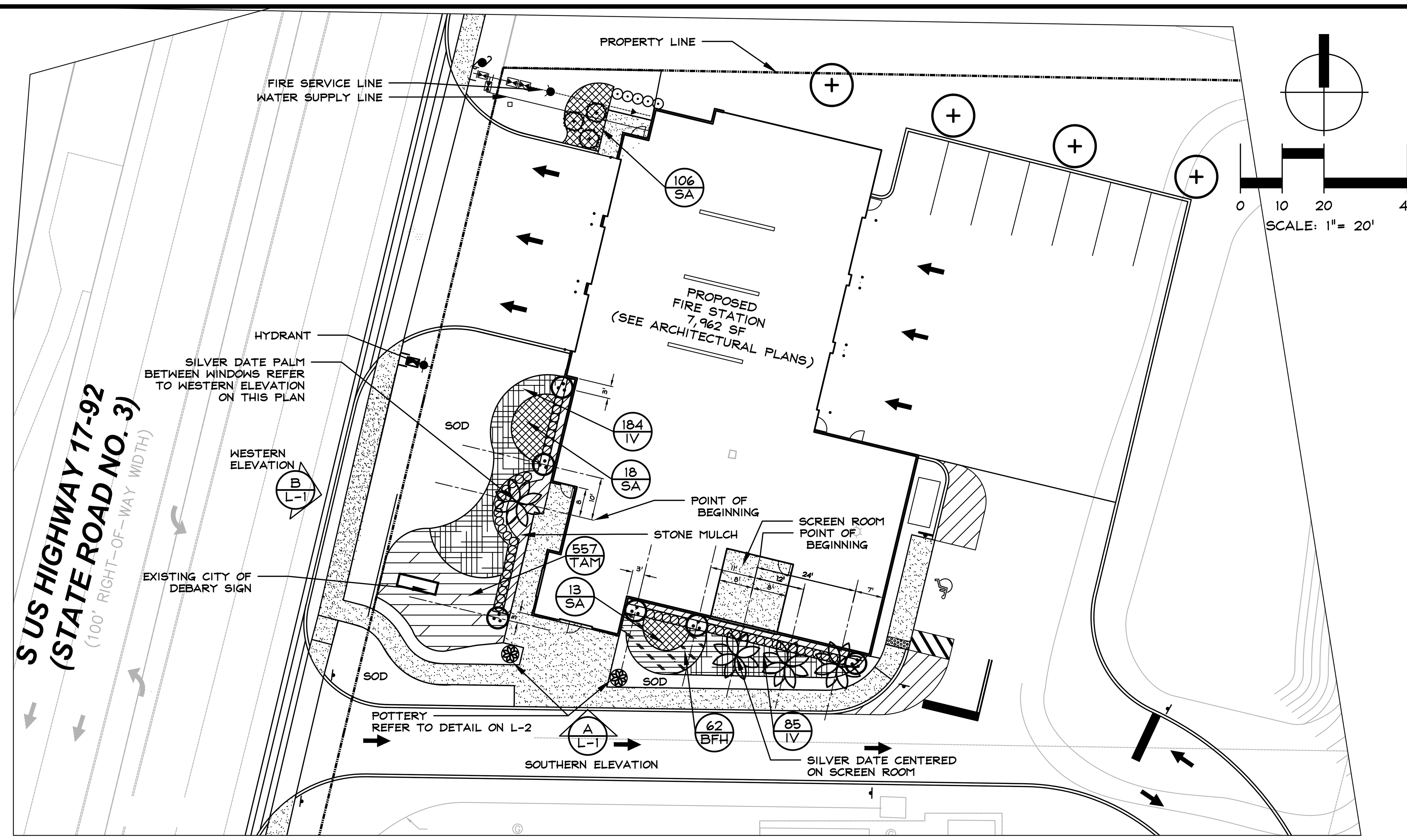
MULTI-TRUNK CONTAINER TREE PLANTING DETAIL

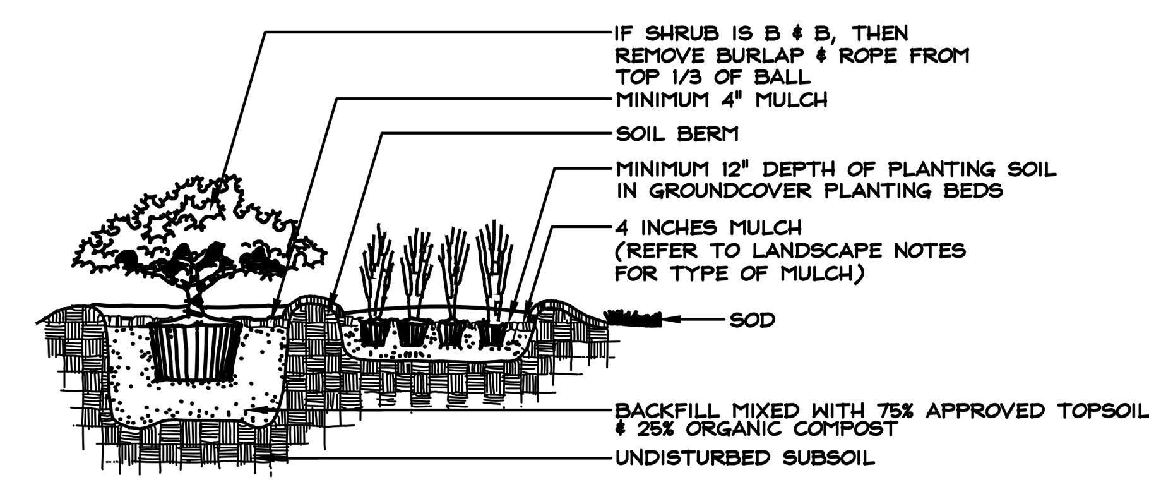
NTS



PALM STAKING DETAIL

N.T.S.

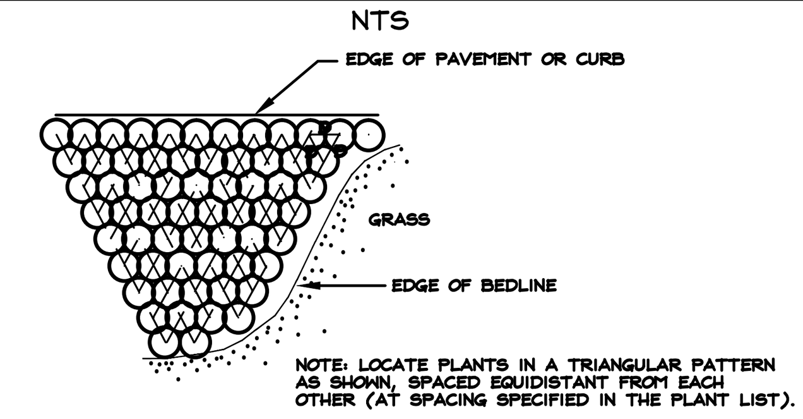




-PROVIDE MINIMUM PIT CLEARANCE AROUND ROOT BALL OF 6" SIDES AND BOTTOM.
-MAINTAIN 3"-4" MULCH FREE ZONE AROUND BASE OF PLANT.

SHRUB AND GROUNDCOVER PLANTING DETAIL

NTS



SHRUB/GROUNDCOVER SPACING PLAN

N.T.S.

PLANT LIST

SYM.	COMMON NAME	BOTANICAL NAME	DESCRIPTION	QTY
TREES				
ED	JAPANESE BLUEBERRY	ELAEOCARPUS DECIPIENS	FULL TO BOTTOM, NO GAPS, 8' MIN. HT.	6
LJ	TREE LIGUSTRUM	LIGUSTRUM JAPONICUM	100 GAL., TREE FORM.	3
PC	SILVER DATE PALM	PHOENIX SYLVERSTIS	16' CT. DIAMOND CUT MATCHING HEIGHTS	4
QV	LIVE OAK	QUERCUS VIRGINIANA	18' MIN. HT., 10' SPRD	4
SHRUBS & ACCENTS				
IG	DWARF BURFORD HOLLY	ILEX CORNUTA 'BURFORDII NANA'	3 GAL., 24" O.C., FULL	51
VO	SWEET VIBURNUM	VIBURNUM ODORATISSIMUM	3 GAL., 30" O.C., FULL	5
YF	ADAM'S NEEDLE	YUCCA FILAMENTOSA 'VARIEGATA'	7 GAL.	2
GROUNDCOVER				
TAM	ASIATIC JASMINE	TRACHELOSPERMUM ASIATICUM 'MINIMA'	1 GAL., 12" O.C., FULL & TRAILING	557
IV	DWARF YAUPON HOLLY	ILEX VOMITORIA 'NANA'	3 GAL., 18" O.C., FULL	269
SA	DWARF SCHEFFLERA	SCHEFFLERA ARBORICOLA 'TRINETTE'	3 GAL., 30" O.C. FULL	137
BFH	HALLMARK BULBINE	BULBINE FRUTESCENS 'HALLMARK'	1 GAL.,18" O.C. FULL	62
MULCH				
	SEMINOLE CHIPS (SMALL)		3/8" DECORATIVE GRAVEL	252 SQFT
BAHIA	ARGENTINE BAHIA SOD	PASPALUM NOTATUM 'ARGENTINE'	SOLID SOD	1906 SQFT
			CONTACT PEBBLE JUNCTION (407) 323-3838 CONTACT REP SERVICE.COM (407) 831-9658	

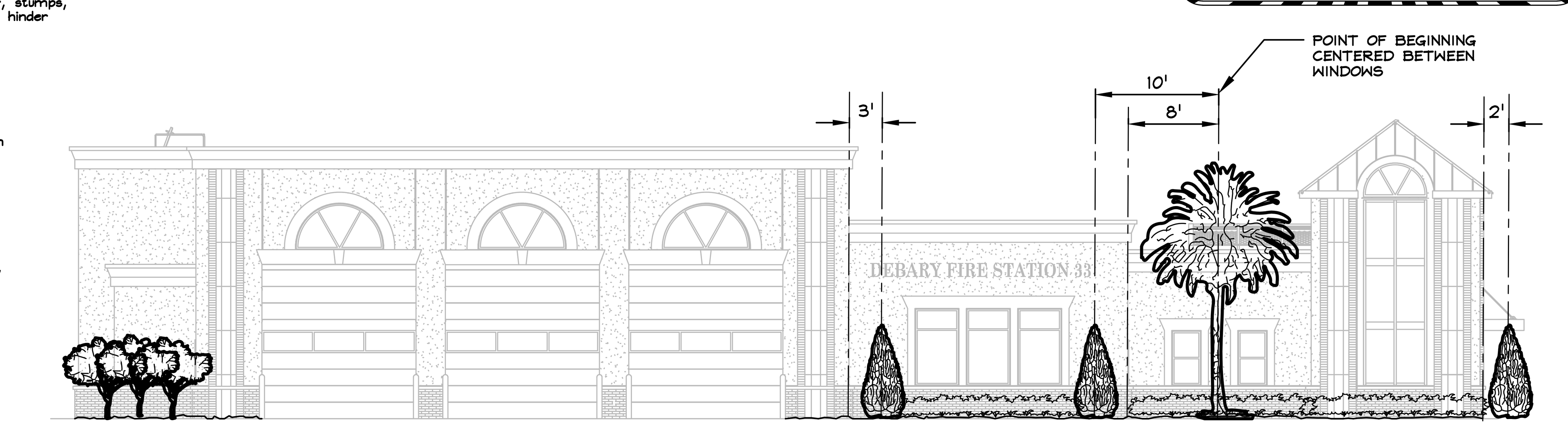
NOTE:

PLANT DESCRIPTIONS ARE FOR MINIMUM ACCEPTABLE SPECIFICATIONS. ALL CRITERIA LISTED FOR CONTAINER SIZE, CALIPER, HEIGHT, SPREAD, ETC. MUST BE MET FOR PLANT MATERIAL ACCEPTANCE. FOR EXAMPLE, IF A THREE GALLON SHRUB DOES NOT MEET THE HEIGHT OR SPREAD SPECIFICATION, IT WILL NOT BE ACCEPTED.

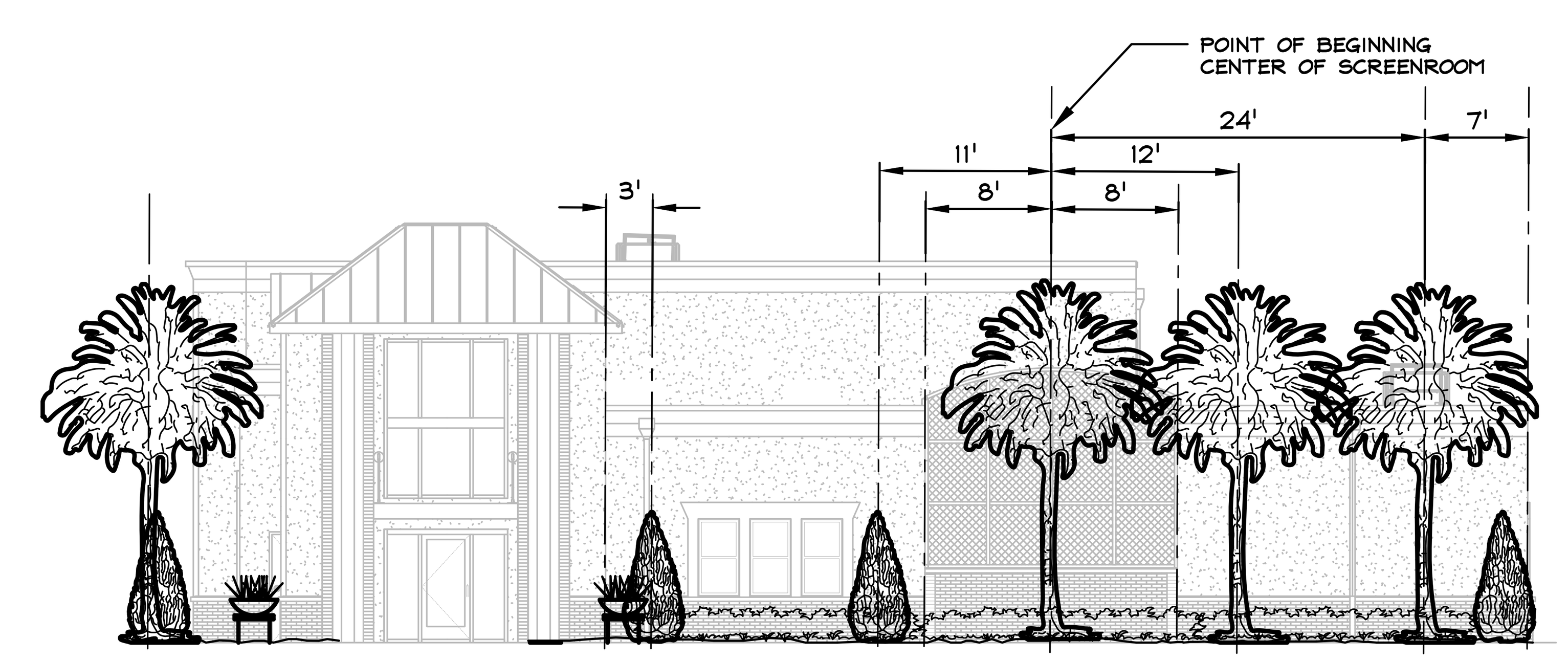
IF SPECIFIED PLANTS ARE UNAVAILABLE AT TIME OF CONSTRUCTION, CONTRACTOR MAY REPLACE SPECIFIED PLANTS WITH PLANTS APPROVED BY LANDSCAPE ARCHITECT AND CITY STAFF.

ALL OPEN SPACE AREAS WITHIN THE PROPERTY SHALL BE SODDED UNLESS PAVED, SEEDED AND MULCHED OR PLANTED WITH SHRUBS AND GROUND COVER.

ALL LANDSCAPED AREAS WILL BE 100% IRRIGATED WITH A CENTRAL AUTOMATIC IRRIGATION SYSTEM INCLUDING A RAIN SENSOR.



B L-1 WESTERN ELEVATION
ESC. 1"=10'



A L-1 SOUTHERN ELEVATION
ESC. 1"=10'

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FL. LA6667082

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			

Designed by:	AGW
Drawn by:	JM
Checked by:	AGW
Approved by:	AGW
Scale:	AS SHOWN
Date:	10/2/15
Job No.:	D8521

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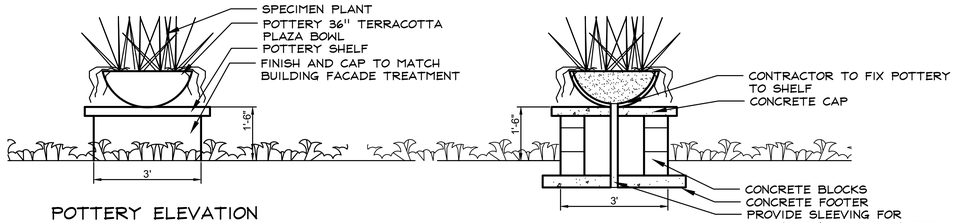
Lndscp. Lic. No. LC0000298

LANDSCAPE PLAN AND DETAILS

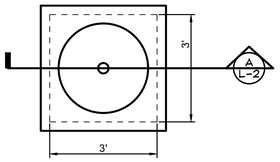
DEBARY FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.
L-1



POTTERY ELEVATION

SC. 1/2"=1'



POTTERY PLAN VIEW

SC. 1/2"=1'

A
L-2
POTTERY SECTION

SC. 1/2"=1'

CONTACT:

DISTRIBUTOR

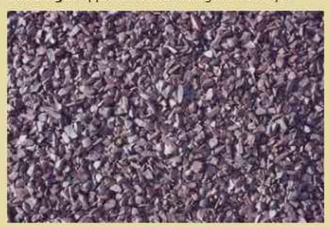
JA-LU POTTERY
136 CANDACE DRIVE MAITLAND, FL 32751.
(800) 330-1478

Gravelscape® Decorative Gravel

SEMINOLE CHIPS® (SMALL)

Stock Number 2125-T

Coloration: Deep brownish red
Style: Crushed
Size: 3/8" minus
Coverage: Approximate Coverage is 100 sq ft



SEMINOLE CHIPS DETAIL

N.T.S.

CONTACT:

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Designed by: SAW
Drawn by: JM
Checked by: SAW
Approved by: SAW
Scale: AS SHOWN
Date: 10/2/15
Job No.: D8521

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Arch. Lic. No. AA2600926
Lndscp. Lic. No. LC0000298

HARDSCAPE DETAILS

DEBARY FIRE STATION
75 S. U.S. HIGHWAY 17-92
DEBARY/ VOLUSIA/ FLORIDA

Sheet No.

L-2