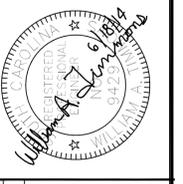


EXISTING UNDERGROUND FUEL TANK AND DISPENSER TO BE CLOSED AND REMOVED AFTER NEW SYSTEM IS OPERATIONAL. CONTRACTOR SHALL REMOVE REMAINING LIQUIDS AND SLUDGE FROM THE TANK, CLEAN AND CAP PIPING AND REMOVE TANK AS REQUIRED BY SCDHEC. FILL TANK VOID WITH APPROVED SAND-CLAY. COMPACT IN 6" LIFTS TO 95% MODIFIED PROCTOR. PLACE 6" CRUSHED STONE BASE, SAW CUT PAVEMENT EDGE AND PLACE 2" TYPE A ASPHALT TO MATCH APRON ELEVATION. SAFELY TERMINATE WIRING AND DISCONNECT CIRCUITS IN OFFICE AS REQUIRED. DISPOSE OF ALL MATERIALS PROPERLY.

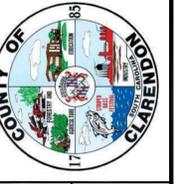
PROPOSED 2 NEW 6,000 GALLON FUEL SELF-SERVE SYSTEMS FOR GENERAL AVIATION AND JET A FUEL. VERIFY FINAL LOCATION IN FIELD WITH ENGINEER AFTER LOCATION OF UNDERGROUND UTILITIES.

- NOTES**
- AIRPORT EXISTING LAYOUT INFORMATION IS TAKEN FROM SANTEE COOPER REGIONAL AIRPORT, AIRPORT LAYOUT PLAN, ALP-1, DATED DECEMBER, 2011 PROVIDED BY ENGINEERING CONSULTANTS, INC.
 - SITE INFORMATION SUPPLEMENTED BY PICTOMETRY 2011 AERIAL PHOTOGRAPHY. AND AIRPORT PERSONNEL INFORMATION.
 - ABOVEGROUND AND UNDERGROUND UTILITIES EXIST IN THE WORK AREA. SOME OF THE UNDERGROUND UTILITIES ARE SHOWN APPROXIMATELY. OTHERS ARE NOT SHOWN. CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

SITE LAYOUT



REVISIONS	DATE	APPROVED
ZONE	REV	DESCRIPTION



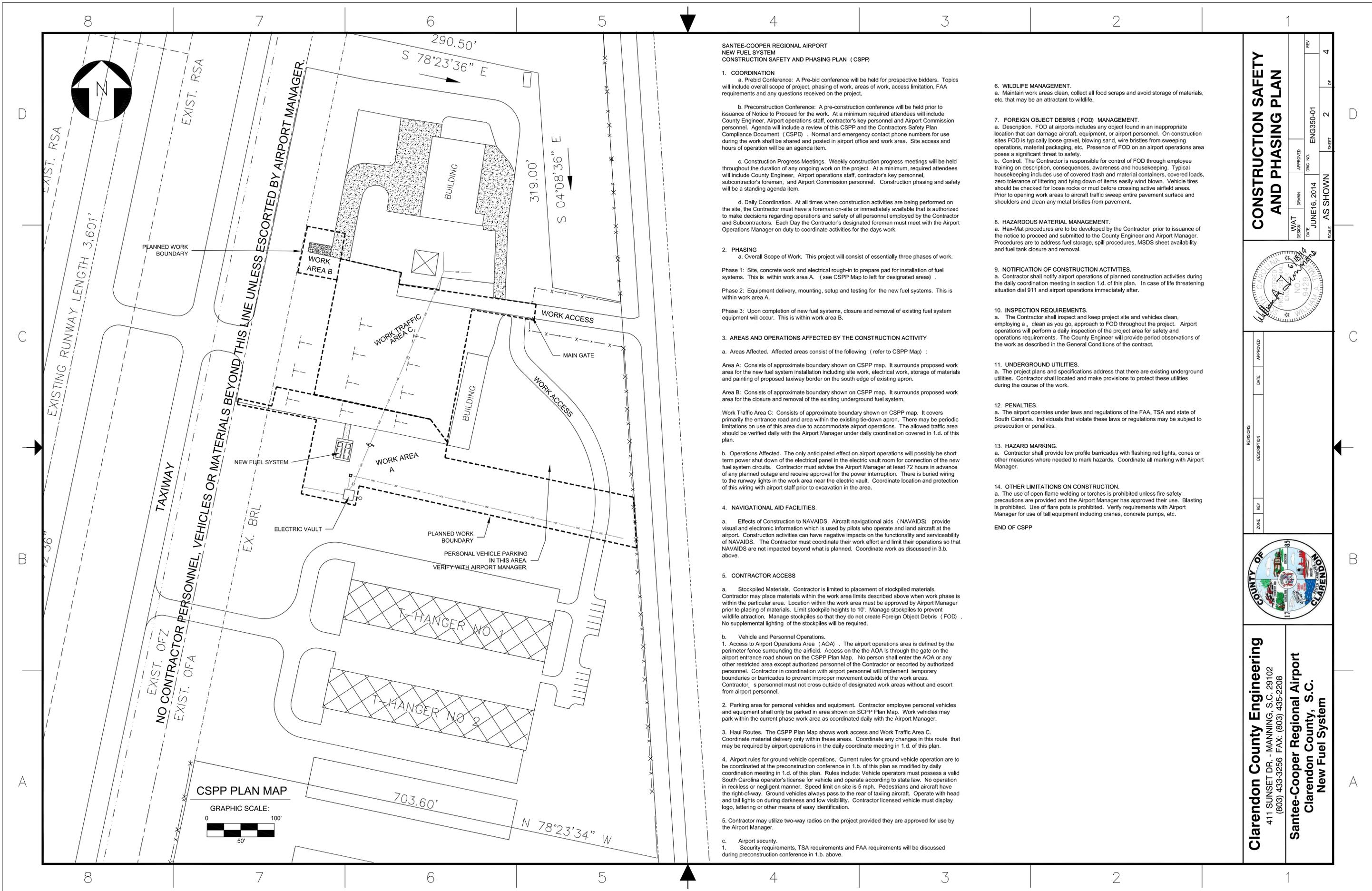
Clarendon County Engineering
 411 SUNSET DR. - MANNING, S.C. 29102
 (803) 433-3256 FAX: (803) 435-2208

Santee-Cooper Regional Airport
 Clarendon County, S.C.
 New Fuel System

WAT	DATE	DESIGN	DATE	DRAWN	APPROVED	DWG NO.	REV
						ENG350-01	4

AS SHOWN

SCALE	SHEET	OF
1" = 1 MILE	1	4



**SANTEE-COOPER REGIONAL AIRPORT
NEW FUEL SYSTEM
CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)**

1. COORDINATION
a. Prebid Conference: A Pre-bid conference will be held for prospective bidders. Topics will include overall scope of project, phasing of work, areas of work, access limitation, FAA requirements and any questions received on the project.

b. Preconstruction Conference: A pre-construction conference will be held prior to issuance of Notice to Proceed for the work. At a minimum required attendees will include County Engineer, Airport operations staff, contractor's key personnel and Airport Commission personnel. Agenda will include a review of this CSPP and the Contractor's Safety Plan Compliance Document (CSPP). Normal and emergency contact phone numbers for use during the work shall be shared and posted in airport office and work area. Site access and hours of operation will be an agenda item.

c. Construction Progress Meetings: Weekly construction progress meetings will be held throughout the duration of any ongoing work on the project. At a minimum, required attendees will include County Engineer, Airport operations staff, contractor's key personnel, subcontractor's foreman, and Airport Commission personnel. Construction phasing and safety will be a standing agenda item.

d. Daily Coordination: At all times when construction activities are being performed on the site, the Contractor must have a foreman on-site or immediately available that is authorized to make decisions regarding operations and safety of all personnel employed by the Contractor and Subcontractors. Each Day the Contractor's designated foreman must meet with the Airport Operations Manager on duty to coordinate activities for the days work.

2. PHASING
a. Overall Scope of Work: This project will consist of essentially three phases of work.

Phase 1: Site, concrete work and electrical rough-in to prepare pad for installation of fuel systems. This is within work area A. (see CSPP Map to left for designated areas)

Phase 2: Equipment delivery, mounting, setup and testing for the new fuel systems. This is within work area A.

Phase 3: Upon completion of new fuel systems, closure and removal of existing fuel system equipment will occur. This is within work area B.

3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY

a. Areas Affected: Affected areas consist of the following (refer to CSPP Map):

Area A: Consists of approximate boundary shown on CSPP map. It surrounds proposed work area for the new fuel system installation including site work, electrical work, storage of materials and painting of proposed taxiway border on the south edge of existing apron.

Area B: Consists of approximate boundary shown on CSPP map. It surrounds proposed work area for the closure and removal of the existing underground fuel system.

Work Traffic Area C: Consists of approximate boundary shown on CSPP map. It covers primarily the entrance road and area within the existing tie-down apron. There may be periodic limitations on use of this area due to accommodate airport operations. The allowed traffic area should be verified daily with the Airport Manager under daily coordination covered in 1.d. of this plan.

b. Operations Affected: The only anticipated effect on airport operations will possibly be short term power shut down of the electrical panel in the electric vault room for connection of the new fuel system circuits. Contractor must advise the Airport Manager at least 72 hours in advance of any planned outage and receive approval for the power interruption. There is buried wiring to the runway lights in the work area near the electric vault. Coordinate location and protection of this wiring with airport staff prior to excavation in the area.

4. NAVIGATIONAL AID FACILITIES.

a. Effects of Construction to NAVAIDS: Aircraft navigational aids (NAVAIDS) provide visual and electronic information which is used by pilots who operate and land aircraft at the airport. Construction activities can have negative impacts on the functionality and serviceability of NAVAIDS. The Contractor must coordinate their work effort and limit their operations so that NAVAIDS are not impacted beyond what is planned. Coordinate work as discussed in 3.b. above.

5. CONTRACTOR ACCESS

a. Stockpiled Materials: Contractor is limited to placement of stockpiled materials. Contractor may place materials within the work area limits described above when work phase is within the particular area. Location within the work area must be approved by Airport Manager prior to placing of materials. Limit stockpile heights to 10'. Manage stockpiles to prevent wildlife attraction. Manage stockpiles so that they do not create Foreign Object Debris (FOD). No supplemental lighting of the stockpiles will be required.

b. Vehicle and Personnel Operations
1. Access to Airport Operations Area (AOA): The airport operations area is defined by the perimeter fence surrounding the airfield. Access on the AOA is through the gate on the airport entrance road shown on the CSPP Plan Map. No person shall enter the AOA or any other restricted area except authorized personnel of the Contractor or escorted by authorized personnel. Contractor in coordination with airport personnel will implement temporary boundaries or barricades to prevent improper movement outside of the work areas. Contractor's personnel must not cross outside of designated work areas without and escort from airport personnel.

2. Parking area for personal vehicles and equipment. Contractor employee personal vehicles and equipment shall only be parked in area shown on CSPP Plan Map. Work vehicles may park within the current phase work area as coordinated daily with the Airport Manager.

3. Haul Routes: The CSPP Plan Map shows work access and Work Traffic Area C. Coordinate material delivery only within these areas. Coordinate any changes in this route that may be required by airport operations in the daily coordinate meeting in 1.d. of this plan.

4. Airport rules for ground vehicle operations. Current rules for ground vehicle operation are to be coordinated at the preconstruction conference in 1.b. of this plan as modified by daily coordination meeting in 1.d. of this plan. Rules include: Vehicle operators must possess a valid South Carolina operator's license for vehicle and operate according to state law. No operation in reckless or negligent manner. Speed limit on site is 5 mph. Pedestrians and aircraft have the right-of-way. Ground vehicles always pass to the rear of taxiing aircraft. Operate with head and tail lights on during darkness and low visibility. Contractor licensed vehicle must display logo, lettering or other means of easy identification.

5. Contractor may utilize two-way radios on the project provided they are approved for use by the Airport Manager.

c. Airport security.
1. Security requirements, TSA requirements and FAA requirements will be discussed during preconstruction conference in 1.b. above.

6. WILDLIFE MANAGEMENT.
a. Maintain work areas clean, collect all food scraps and avoid storage of materials, etc. that may be an attractant to wildlife.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT.
a. Description: FOD at airports includes any object found in an inappropriate location that can damage aircraft, equipment, or airport personnel. On construction sites FOD is typically loose gravel, blowing sand, wire bristles from sweeping operations, material packaging, etc. Presence of FOD on an airport operations area poses a significant threat to safety.
b. Control: The Contractor is responsible for control of FOD through employee training on description, consequences, awareness and housekeeping. Typical housekeeping includes use of covered trash and material containers, covered loads, zero tolerance of littering and tying down of items easily wind blown. Vehicle tires should be checked for loose rocks or mud before crossing active airfield areas. Prior to opening work areas to aircraft traffic sweep entire pavement surface and shoulders and clean any metal bristles from pavement.

8. HAZARDOUS MATERIAL MANAGEMENT.
a. Hax-Mat procedures are to be developed by the Contractor prior to issuance of the notice to proceed and submitted to the County Engineer and Airport Manager. Procedures are to address fuel storage, spill procedures, MSDS sheet availability and fuel tank closure and removal.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES.
a. Contractor shall notify airport operations of planned construction activities during the daily coordination meeting in section 1.d. of this plan. In case of life threatening situation dial 911 and airport operations immediately after.

10. INSPECTION REQUIREMENTS.
a. The Contractor shall inspect and keep project site and vehicles clean, employing a "clean as you go" approach to FOD throughout the project. Airport operations will perform a daily inspection of the project area for safety and operations requirements. The County Engineer will provide period observations of the work as described in the General Conditions of the contract.

11. UNDERGROUND UTILITIES.
a. The project plans and specifications address that there are existing underground utilities. Contractor shall locate and make provisions to protect these utilities during the course of the work.

12. PENALTIES.
a. The airport operates under laws and regulations of the FAA, TSA and state of South Carolina. Individuals that violate these laws or regulations may be subject to prosecution or penalties.

13. HAZARD MARKING.
a. Contractor shall provide low profile barricades with flashing red lights, cones or other measures where needed to mark hazards. Coordinate all marking with Airport Manager.

14. OTHER LIMITATIONS ON CONSTRUCTION.
a. The use of open flame welding or torches is prohibited unless fire safety precautions are provided and the Airport Manager has approved their use. Blasting is prohibited. Use of flare pots is prohibited. Verify requirements with Airport Manager for use of tall equipment including cranes, concrete pumps, etc.

END OF CSPP

**CONSTRUCTION SAFETY
AND PHASING PLAN**



REVISIONS	DATE	APPROVED



Clarendon County Engineering
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(803) 433-3256 FAX: (803) 435-2208

Santee-Cooper Regional Airport
Clarendon County, S.C.
New Fuel System

WAT DESIGN DATE: JUNE 16, 2014
APPROVED: AS SHOWN
DWC NO.: ENG350-01
SHEET: 2 OF 4

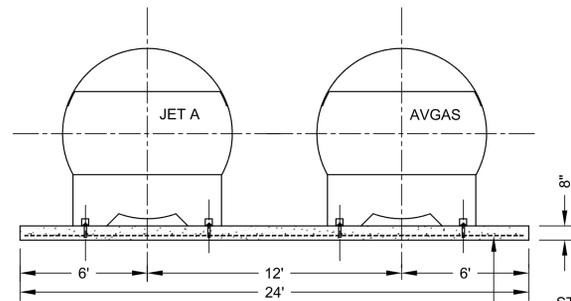
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CONCRETE NOTES

1. VERIFY SLAB LOCATIONS AND GRADE PRIOR TO BEGINNING FORMWORK AND PRIOR TO POUR ON EACH SLAB.
2. ALL DETAILING, FABRICATION, ERECTION, MIXING AND PLACEMENT OF CONCRETE AND REINFORCING STEEL MUST FOLLOW CRSI MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES, ASTM STANDARD SPECIFICATIONS FOR READY MIX CONCRETE AND ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
3. MINIMUM CONCRETE WALKWAY COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 3000 PSI, TANK SLAB 4,000 PSI. DESIGN SHALL MEET ACI REQUIREMENTS.
4. REINFORCEMENT BARS SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615 GRADE 60. LAP BARS 24" AT SPLICE.
5. 4" WALKWAY CONCRETE IS TO BE FIBER REINFORCED WITH A MINIMUM OF 1.5 POUNDS PER CUBIC YARD POLYESTER FIBERS EQUAL TO MARTIN COLOR-FI HI-TECH BRAND OR AN APPROVED EQUAL. FIBER MIXING AND CONCRETE INSTALLATION SHALL CONFORM TO THE MANUFACTURER'S PUBLISHED INSTRUCTIONS.
6. CONSTRUCT FORMS IN ACCORDANCE WITH ACI 347, TO THE EXACT SIZE SHAPE, LINES AND DIMENSIONS SHOWN.
7. PROVIDE CONTROL JOINTS IN WALKWAY MAX 7' O.C. OR AS SHOWN ON PLAN SAW-CUT OR TOOLED JOINTS ARE ACCEPTABLE. DEPTH TO BE MINIMUM OF 1/3 SLAB THICKNESS. PROVIDE EXPANSION JOINTS AS SHOWN ON PLAN ABOVE AND WHERE IN CONTACT WITH EXISTING SLAB OR STRUCTURE. USE 3/4" PREMOLDED EXPANSION MATERIAL.
8. A MINIMUM OF THREE CONCRETE TEST CYLINDERS SHALL BE TAKEN FROM THE FIRST TRUCK LOAD OF CONCRETE USED IN THE WORK AND EVERY 50 CUBIC YARDS USED THEREAFTER. MARK CYLINDERS TO IDENTIFY DATE, TIME AND LOCATION OF POUR. CONTRACTOR TO PREPARE CYLINDERS. OWNER WILL PROVIDE TESTING SERVICES.
9. BEGINNING IMMEDIATELY AFTER PLACEMENT PROTECT CONCRETE FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES AND MECHANICAL INJURY. FINISH TO BE LIGHT BROOM WITH TOOLED RADIUS EDGE.

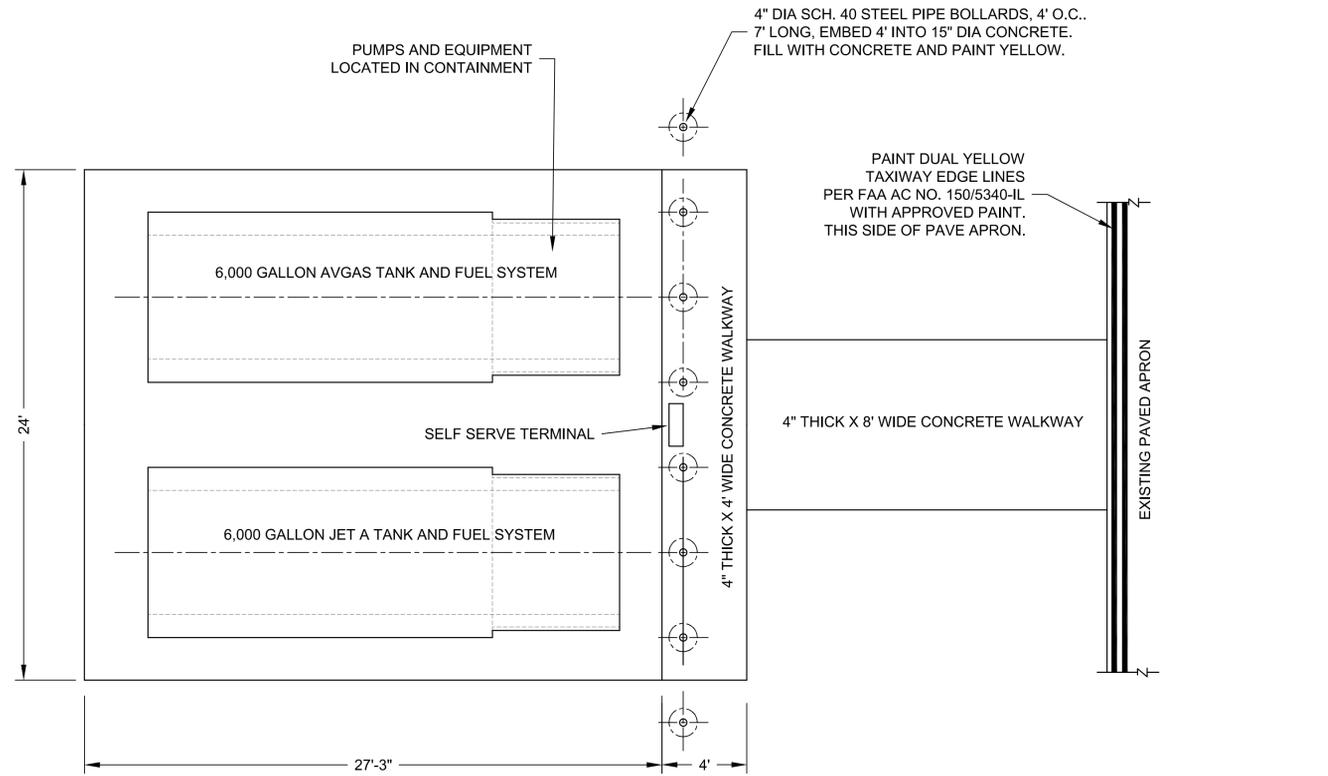
SUBGRADE PREPARATION NOTES

1. REMOVE TOPSOIL AND UNSUITABLE MATERIAL PREPARE AND COMPACT SUBGRADE.
2. PROVIDE A MINIMUM 12" THICK COMPACTED SAND-CLAY PAD. COMPACT TO 95% MODIFIED PROCTOR.
3. GRADE FOR SLOPE TO REAR AS SPECIFIED BY TANK SUPPLIER. VERIFY GRADE IN FIELD WITH ENGINEER.

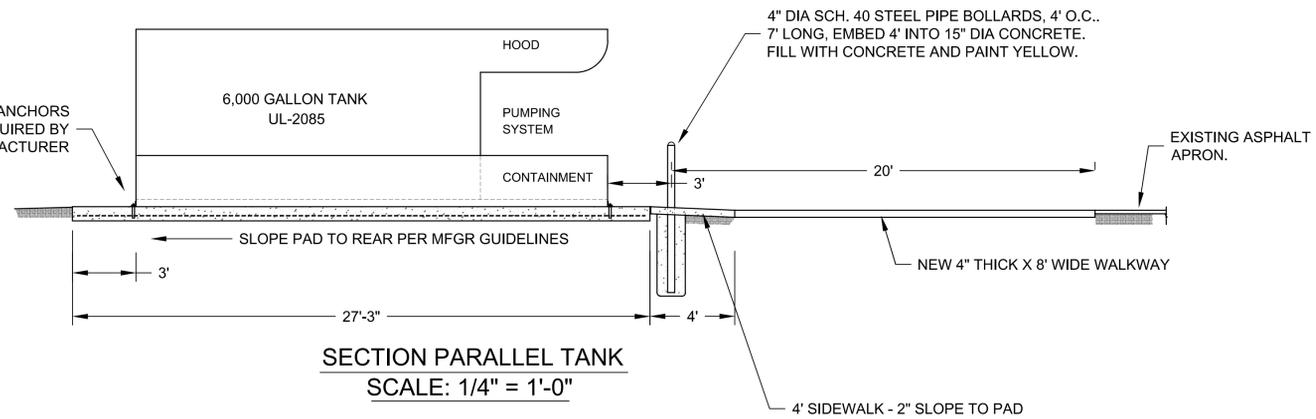


SECTION THROUGH TANKS
SCALE: 1/4" = 1'-0"

STEEL REINFORCEMENT:
MIN. OF #5 BARS 16" O.C.
EACH WAY. VERIFY WITH
TANK SYSTEM SUPPLIER.



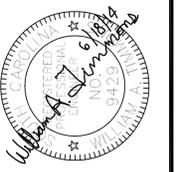
TANKS AND PAD PLAN VIEW
SCALE: 1/4" = 1'-0"



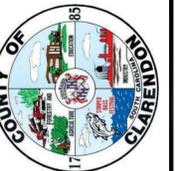
SECTION PARALLEL TANK
SCALE: 1/4" = 1'-0"

**FUEL TANKS
PLAN AND SECTIONS**

WAT	DESIGN	DATE	JUNE 16, 2014	DWG NO.	ENG350-01	REV	
AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN
SCALE							
SHEET	3	OF	4				



REVISIONS	DATE	APPROVED
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ELECTRICAL NOTES

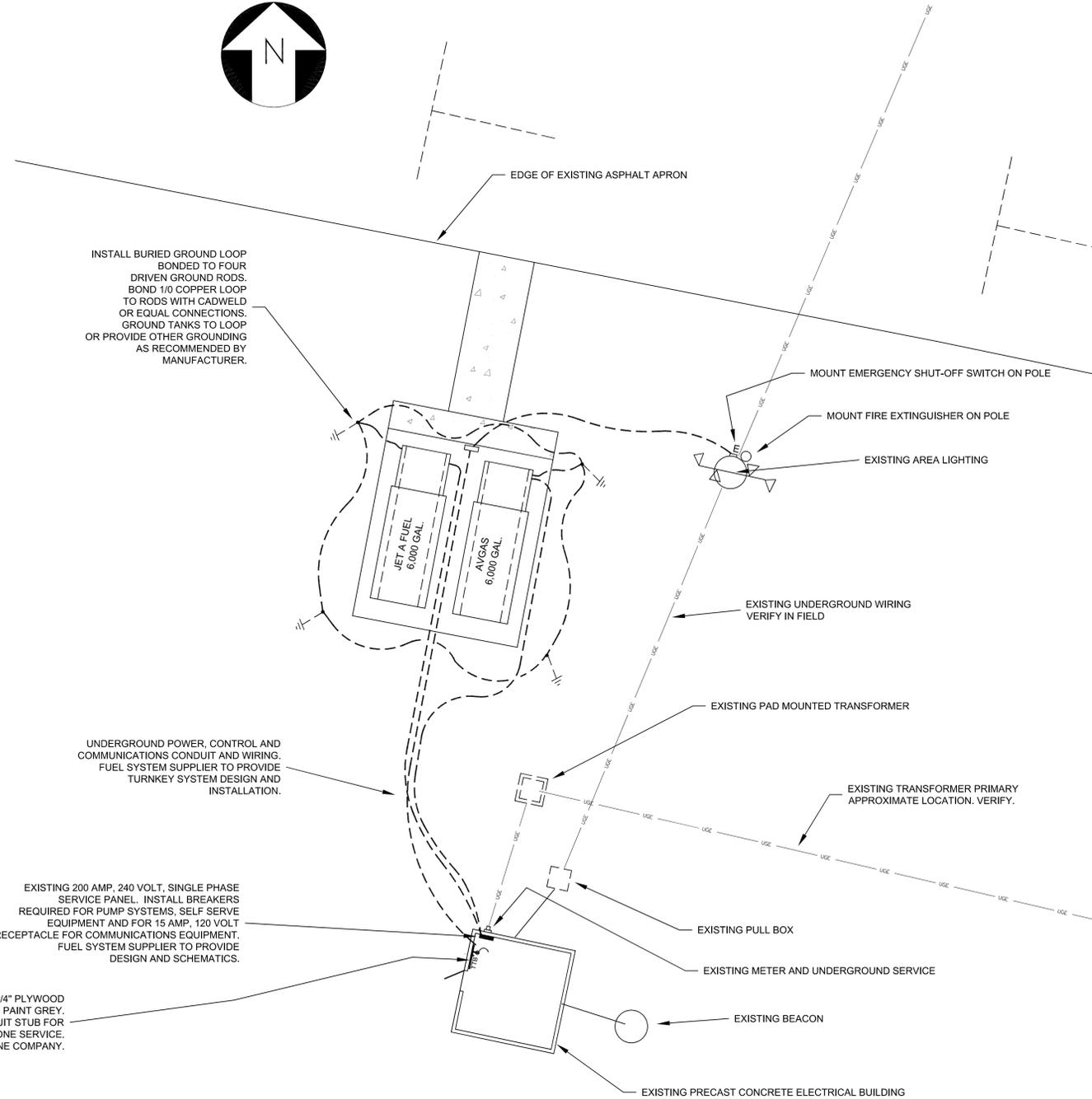
1. FUEL SYSTEM SUPPLIER TO PROVIDE WIRING DESIGN AND SCHEMATICS FOR POWER, CONTROLS, AND COMMUNICATIONS.
2. ALL UNDERGROUND WIRING TO BE A MINIMUM OF 24" BELOW GRADE OR AS REQUIRED BY THE NEC.
3. UNDERGROUND UTILITIES EXIST IN THE AREA. LOCATE AND PROTECT PRIOR TO BEGINNING WORK.
4. COORDINATE WORK WITH OTHER TRADES.
5. VERIFY TELEPHONE DATA SERVICE ENTRANCE REQUIREMENTS WITH FARMERS TELEPHONE PRIOR TO BEGINNING CONSTRUCTION.

INSTALL BURIED GROUND LOOP BONDED TO FOUR DRIVEN GROUND RODS. BOND 110 COPPER LOOP TO RODS WITH CADWELDED OR EQUAL CONNECTIONS. GROUND TANKS TO LOOP OR PROVIDE OTHER GROUNDING AS RECOMMENDED BY MANUFACTURER.

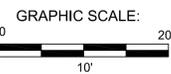
UNDERGROUND POWER, CONTROL AND COMMUNICATIONS CONDUIT AND WIRING. FUEL SYSTEM SUPPLIER TO PROVIDE TURNKEY SYSTEM DESIGN AND INSTALLATION.

EXISTING 200 AMP, 240 VOLT, SINGLE PHASE SERVICE PANEL. INSTALL BREAKERS REQUIRED FOR PUMP SYSTEMS, SELF SERVE EQUIPMENT AND FOR 15 AMP, 120 VOLT RECEPTACLE FOR COMMUNICATIONS EQUIPMENT. FUEL SYSTEM SUPPLIER TO PROVIDE DESIGN AND SCHEMATICS.

INSTALL 2'X2'X3/4" PLYWOOD TERMINAL BOARD. PAINT GREY. PROVIDE 1.5" CONDUIT STUB FOR TELEPHONE SERVICE. VERIFY WITH PHONE COMPANY.

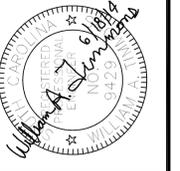


ELECTRICAL PLAN



ELECTRICAL

WAT	DESIGN	DATE	JUNE 16, 2014	APPROVED	DWG NO.	ENG350-01	REV	
SCALE	AS SHOWN	SHEET	4	OF	4			



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