Transmission and Distribution Substation Projects

Operating Company: Entergy Gulf States - Texas

Customer: PID 197

Funding Project Number: F4PPTX0001

Facility Study

for

PID 197 Facility Study for 336 MW

Revision History			
No	Date	Description	Author
A	Oct 5, 2007	Final Draft	M Ketterer
B	Oct 7, 2007	Corrections	M Ketterer
C	Oct 8, 2007	PEP review	J Carse
D	Oct 9, 2007	Corrections for relay settings and oneline update	Team
0	Oct 10, 2007	Approved PEP	M. Ketterer
1	Oct 11, 2007	ICT Classified the Upgrades	B. Hentschel

EXECUTIVE SUMMARY

This facility study details the project scope and cost estimate associated with the proposed customer's interconnection request to connect a generation plant to Entergy's system at Cypress Substation. The project is 100% reimbursable by the customer. The customer is proposing to relocate two existing gas turbines to a site adjacent to Cypress Substation and provide peaking power to be transmitted over Entergy's transmission system. The proposed facility will require a connection to an existing position on the 230 kV ring bus.

The customer's requested in-service date is January 31, 2009. The preliminary duration schedule reveals an anticipated in service date of January 31, 2009, if the project is fully funded by January 31, 2008. The full financial cost of this project **(not including tax gross up)** is estimated to be $1,753,212. The tax gross up (30.948%) is estimated to add an additional $ 542,584 bringing the customer contribution to $2,295,796.

Table of Contents

1. INTRODUCTION

The Facility Study will serve as the definition document to seek approved funding for the customer's proposed 230 kV connection to Cypress Substation near Kountze, Texas. Sections and sub-sections not required for this project will be identified as not applicable by the designation NA.

2. PROJECT INITIATION

The Facility Study Agreement ("FSA") serves as the project charter. This charter authorizes the Project Manager to spend financial and human resources to complete the facility study.

2.1. Facility Study Agreement

The FSA for this project was signed by the customer and submitted to Entergy's for execution.

3. GENERAL PROJECT DESCRIPTION AND KEY DATA

3.1. Description of Problem

The customer has requested Entergy to perform a Facility Study to connect two generating units of 75 MVA each to the 230kV buss at Entergy's Cypress Substation. The project is 100% reimbursable by the customer. The customer's original targeted in-service date was January 31, 2010 but has since requested an in service date in January 31, 2009.

3.2. Purpose/Goal of Project

Complete a facility study which defines the scope of work, cost of the project and a duration schedule to complete the work.

3.3. Type of Project and Justification

As defined by the PDCR, this is a 100% reimbursable project.

3.4. In Service Dates ("ISD") and Project Milestones

Requested ISD – Requested ISD by the customer is January 31, 2009.

4. PROJECT STRATEGIC PLANNING

4.1. Assumptions

4.1.1. Budget Approval is expected after acceptance of the facility study.

4.1.2. Customer will complete site work including roads and ground grids.

4.2. Risk Planning

No significant risks were identified. These would normally be categorized and quantified in a risk table. The risk table charts the risk with the anticipated project impact, risk manager and mitigation strategy.

4.3. Funding

Funding approval and payment processes for external projects are summarized here.

4.3.1. Funding Strategy – The customer will fund this project 100%.

4.3.2. Repayments/Reimbursable – Customer has pre-paid for the facility study and will follow a proposed pre-payment schedule at the time of project approval.

******* ***SUBJECT TO CHANGE*** ******

Payment	Due Date	Amount Due	Cumulative Total
1	January, 31, 2008	$ 500,000	$ 500,000
2	April 01, 2008	$ 500,000	$1,000,000
3	August 01, 2008	$ 500,000	$1,500,000
4	November 01, 2008	$ 253,212	$1,753,212
5	January 15, 2009	Tax Gross up	Approximately $ **542,584**
Total Payments		**$ 2,295,796**	

5. SAFETY AWARENESS AND EXECUTION PLAN

5.1. Site Visit Observations/Results

All site visits by EMCC personnel are to be documented with a site visit check list to be archived in eRoom. The following is a list of safety concerns and mitigation strategy.

- **Safety Issue: Industrial area**
  Job site is located close within Cypress Substation, which is energized.

. **Mitigation:**
EMCC Construction supervisors will inform all contractors of potential dangers related to working around energized equipment.

- **Safety Issue: Contractor Coordination**
  Job site will be populated with various contractors, inspectors and construction crews. It is critical work crews are informed as to the tasks being performed by other crews in order to eliminate the possibility of accidents.

Mitigation:

Construction supervisors will ensure all Entergy contractors are briefed prior to the start of each work day as part of the daily safety tailboard.

6. SCOPE

The customer requested Entergy to perform a Facility Study to connect a generation plant to Entergy's system at Cypress Substation. The project is 100% reimbursable by the customer. The customer is proposing to relocate two existing gas turbines to a site adjacent to Cypress Substation and provide peaking power to be transmitted over Entergy's transmission system. The proposed facility will require a connection to an existing position on the 230 kV ring bus. The customer's requested in-service date is January 31, 2009. The preliminary duration schedule reveals an anticipated in service date of January 31, 2009, if the project is funded by January 31, 2008.

Entergy will design, install, maintain, own and operate the 230 kV ring bus. The customer will design, install, maintain, own and operate all equipment from the division of ownership, at the fence, back to their generation units.

Entergy will construct their portion of the station to the substation fence including foundations, grounding, conduits, limestone, fence, steel work, relaying, metering panel, RTU, station service, and telecommunication.

To be considered successful, this project will need to:

- Have all work defined in section 6 completed without incident and free of any loss time accidents or other OSHA recordable events.
- Complete all work identified in section 6 by the baselined project schedule.
- Execute the entirety of the project plan within 20% of the approved baselined cost estimate as identified in section 10.2 plus or minus any approved change orders.

This project is expected to be completed by January 31, 2009 at a full financial cost of $1,753,212 (not including tax gross up).

This project will include the installation of one (1) 230 kV dead tank (gas) Circuit Breaker and all associated Relaying and Equipment including Foundations, Support Structures, Grounding, Conduit, Ridged and Strain Bus, plus any necessary animal mitigation.

Equipment List

To complete the scope the following equipment will be installed:

One (1) 230 kV, 3000 Amp, Circuit Breaker, 63kA, Dead Tank (Gas) w/ 3 CTs per bushing

Two (2) 230 kV, 3000 amp, Vertical Air Break Switches (Bus Disc.)

One (1) 230 kV, 3000 amp, Motor Operated Vertical Break Switch (Line Disc.)

One (1) 230 kV, Ground Switch (Line Grn.)

One (1) 230 kV Substation Line Dead End

Two (2) 230 kV Bus Support, Single-Phase, High-Elevation

Three (3) CT Devices (3 on low bus)

One (1) CVT Device (mounted on the Dead End Structure)

Three (3) PT Devices

Six (6) PT/CCVT Pedestals (Low Bus)

Assumptions

There are no nearby creeks or bodies of water, therefore oil containment will not be needed.

SAFETY Awareness:

Entergy requires safety to be the highest priority for all projects. All Entergy and Contract employees must follow Entergy safety procedures, especially when working on or in the vicinity of energized equipment. Standard Entergy safety practices and requirements can be found in the Entergy Safety Manual.

This project involves connecting to and reconfiguring existing substation facilities that are currently energized. A construction plan was developed to allow for the electrical components to be de-energized during construction prior to making up connections to them so that no hot work will be required.

SCOPE DETAILS:

Site

The South Substation fence will have a 90 feet section adjacent to the work area extended 25 feet south. Fill and compact as required.

Foundations:

Purchase, design and install foundations for the following equipment:

One (1) 230 kV, 3000 Amp, Circuit Breaker, 63kA, Dead Tank (Gas) w/ 3 CTs per bushing

One (1) 230 kV Substation Line Dead End

Two (2) 230 kV Bus Support, Single-Phase, High-Elevation

Six (6) PT/CCVT Pedestals (Low Bus)

Remove foundations for the following equipment:

One (1) 230 kV Bus Support, Three-Phase, Low-Elevation

Electrical Work

This project will include the installation of the following Electrical Equipment:

Purchase and install One (1) 230 kV, 3000 Amp, Circuit Breaker, 63kA, Dead Tank (Gas) w/ 3 CTs per bushing.

Purchase and install Two (2) 230 kV, 3000 amp, Vertical Break Switch (Bus Disc.).

Purchase and install One (1) 230 kV, 3000 amp, Motor Operated Vertical Break Switch (Line Disc.).

Purchase and install One (1) 230 kV, Ground Switch (Line Grn.).

Purchase and install One (1) 230 kV Substation Line Dead End Structure.

Purchase and install Two (2) 230 kV Bus Support, Single-Phase, High-Elevation.

Purchase and install Three (3) CT Devices.

Purchase and install Three (3) PT Devices.

Purchase and install One (1) CVT Device

Purchase and install Six (6) PT/CCVT Pedestals.

Purchase and install necessary grounding upgrades for newly installed equipment.

Purchase and install Approximately 1500 Ft. of conduit and associated fittings.

Purchase and install Approximately 500 ft. of Ridged Bus, 500 ft. of Strain Bus and associated bus fittings for both.

Purchase and install any necessary animal mitigation.

Relay Work

The following relay work is required at Cypress Substation:

Design, purchase, and install one (1) High Voltage Line Dual Primary Panel for HV applications, using the SEL-311L and SEL-421 relays. The SEL-311L will be used for differential protection as well as primary distance line relaying. The SEL-421 will be used for primary distance line relaying. Both relays will protect new transmission line and communicate with the remote end via fiber. This panel will include MOS control for the line switch if required. This panel will be installed in place of the out-of-service line 430 primary panel. *(Reference Entergy standard #PM1803 option C2)*

Design, purchase, and install one (1) High Voltage Breaker Control Panel for HV applications, using the SEL-351 relay. This panel will control new breaker and will be installed immediately adjacent to the 230/138kV Autotransformer #4 primary differential panel. *(Reference Entergy Standard #PM0501 rev4)*

Design, purchase, and install one (1) High Voltage Metering Panel for HV applications. The panel will include one (1) four quadrant three phase meter for the line to the customer. This panel will be installed in place of out-of-service panels that will be removed from the end of panel row B*. (Reference Entergy Standard #MI0301)*

Purchase and install one (1) Coupling Capacitive Voltage Transformer (CCVT) equipped with carrier accessories, dual winding, metering accuracy, dual ratio (67/115 volts secondary) rated for use at the 230kV voltage level. The CCVT will be used for sync potential input to relaying associated with the customer's line and will be located on the line side of the line switch.*(Reference Entergy Standards #PN0201 and PN0202)* Purchase and install one (1) single phase outdoor potential junction box. This box will receive the CVT output for relaying from the line CVT.

Purchase and install three Current Transformers (CTs) for metering the customer's line. The CTs will be located on the bus side of the line switch. *(Reference Entergy Standard #PN0301)* Purchase and install one (1) three phase outdoor current junction box. This box will receive the CT output for metering from the line node CTs.

Purchase and install three (3) Potential Transformers (PTs) for metering and relaying on the customer's line node. The PTs will be used for potential inputs to relaying and metering associated with the customer's line and will be dual winding, metering accuracy, dual ratio (67/115 volts secondary) rated for use at the 230kV voltage level. These PTs will be located on the bus side of the line switch. *(Reference Entergy Standard #PM0701 rev2)*

Purchase and install one (1) three phase outdoor potential junction box. This box will receive the PT output for metering and relaying from the line node PTs. *(Reference Entergy Standard #PM2402)*

In addition, because of the distance from the control house to the substation equipment and the resulting additional burden on the metering instrument transformers, the proper conductor size must be used to ensure that the actual total burden placed on all secondary windings of the metering instrument transformers will be within their specified accuracy ratings.

All substation yard to control house cables will be shielded in accordance with the previous application of shielded cables at Cypress substation. *(Reference Entergy Standard #PB0402)* In addition, because of

the distance from the control house to the substation equipment and the resulting conductor voltage drop, conductor used for trip coil circuits is expected to be at least #6 AWG.

The existing RTU is a GE Harris D20ME RTU. This unit has room for expansion. The existing RTU will not have sufficient status points available for the new equipment. One (1) new status (S)-card will be added to the RTU. The RTU has sufficient control and analog points available for the new equipment. The RTU currently has a data circuit for the TOC. Because of the new external transmission line link to generation at the customer's facility, a new data circuit for the SOC is required. To install this new data circuit one (1) additional RTU modem and loopback system will be required, in addition to any additional equipment dictated by the Telecom group.

The substation already uses two SEL communications processors that are completely utilized and no additional ports are available. Communication between the RTU and new SEL relays is required. Purchase and install one (1) SEL-2032 Communications Processor to interface between the new SEL relays and the D20 RTU. The new SEL-2032 will be added to the communication processor panel.

Purchase and install fiber equipment as dictated by the Telecom group needed to interface with fiber optic cables and relaying circuits.

Modify trip, close, and breaker failure schemes for existing 230kV breakers 22945 and 22935 and the autotransformer #4 differential.

Entergy will install ADSS fiber optic cable from the final line splice box on the line termination tower and the fiber optic termination panel in the control house.

Install one (1) fiber optic patch panel for communications with the customer.

Assumptions:

The point of demarcation for the fiber optic cables between the Cypress substation control house and the customer's facility will be the fiber optic patch panels located in the Cypress substation control house.

The customer shall own and maintain the fiber optic communication lines.

The customer shall supply and install one (1) standard RTU (or other data collection device) and termination cabinet in their Control House. This RTU or data collection device shall meet Entergy's specifications and communicate with Entergy's communication device for the exchange of data such as circuit breaker/disconnect switch status.

The customer shall supply Interconnection Line Panels in their control house to match the High Voltage Line Dual Primary Panel at the Cypress substation. The panel shall communicate with the Entergy Interconnection Line Panel located in the Cypress substation Control House via fiber optic cable to provide relay protection for the 230kV interconnecting line. Each panel shall include one (1) Schweitzer SEL-311L differential relay with primary distance relaying and one (1) Schweitzer SEL-421 with primary distance relaying. The current Entergy standard firmware shall be used in all relays for this project.

The metering point was selected in accordance with Entergy standard # MI0301. Deviation from the standard requires approval from Entergy's manager of Transmission Protection, Controls and Metering Reliability. Funds for the metering installation have been included in the estimate. However, in some circumstances, these funds are handled with a separate work order or funding vehicle.

Relay Settings

The following relay settings will need to be implemented due to the addition of the new generation that will be added at Cypress 230kV Substation.

Cypress 230kV:

Settings will need to be generated for one primary line panel that incorporates a SEL 311-L and a SEL 421 for dual primary relay purposes, and for a SEL 351 for breaker control. Settings changes will need to be revised for trip, close, and breaker failure schemes for breakers 22945 and 22935 and the autotransformer #4 differential. When ordering the CTs for the new circuit breaker at Cypress near switch 22937, the CT characteristics of the new CTs need to match the characteristics of the existing CTs on breaker 22935. If this is not done, then an impedance supervision scheme will need to be introduced to mitigate the issue in order to prevent a miss-operation of the differential element.

Settings time estimate for Cypress 230kV is 180 manhours.

Customer's 230kV:

Settings will need to be generated for the customers SEL 311-L and SEL 421 for the dual primary line protection panel.

Settings time estimate for the customer's 230kV is 57 manhours.

Adjoining Stations:

Due to the increased fault current from the new generation relay settings will need to be reviewed for at the following stations: Cypress 230, Cypress 500, Amelia 230, Cypress 138, Lumberton 138. Settings time estimate is 127 manhours.

6.1.1. SCADA

Modify system SCADA to reflect the addition of the new 230 kV connection for the customer and add switch numbers to appropriate one-lines of Cypress.

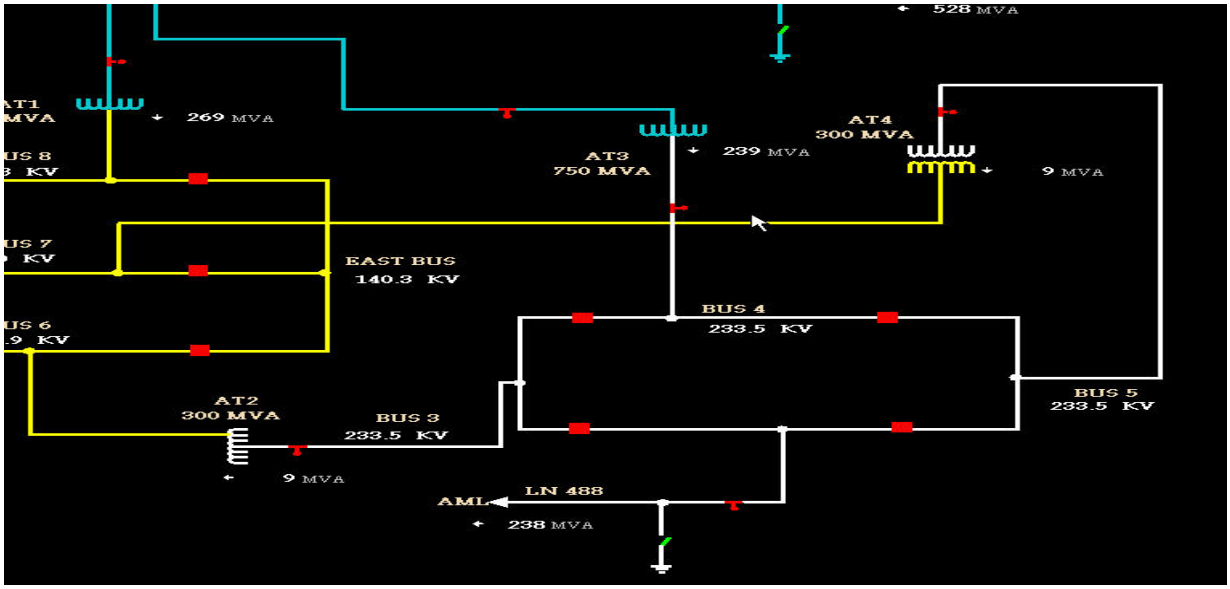


Figure 7
Existing Cypress 230kV Buss SCADA Display

7. MATERIALS MANAGEMENT PLAN

7.1. MAJOR EQUIPMENT REQUIRED

Quantity	Material Description	Lead Time (weeks)
1	230 kV 3000A circuit breaker, 63kA, dead tank (gas) w/3 CTs per bushing	24-26
2	230 kV 3000A vertical air break switches (bus disc.)	16-18
1	230kV, 3000A motor operated vertical break switch (line disc.)	16-18
1	230kV, ground switch (line grn.)	16-18
1	230kV, substation line dead end structure	16-18
2	230kV, bus support, single-phase, high-elevation	16-18
3	CT devices	28-30
1	CCVT device (mounted on the dead end structure)	28-30
3	PT devices	28-30
6	PT/CCVT pedestals	16-18
1	High Voltage Line Dual Primary Panel for HV applications, using the SEL-311L and SEL-421 relays	16
1	High Voltage Breaker Control Panel for HV applications, using the SEL-351 relay	16
1	High Voltage Metering Panel for HV applications. The panel will include one (1) four quadrant three phase meter	18
1	RTU status (S)-card	10-12
1	RTU loopback system	10-12
1	SEL-2032 Communications Processor	6-8

8. UPGRADE CLASSIFICATION

The ICT has reviewed the projects identified and have determined that all projects are classified as Supplemental Upgrades. For more information on cost responsibility for Base Plan and Supplemental Upgrades, see Attachment T to Entergy's OATT.

9. RESOURCE PLAN

This PEP proposes to use internal resources for engineering, project management and construction management. The field and installation work will be completed by Entergy approved sub-contractors or alternatively Entergy personnel. All commissioning will be conducted by Entergy's Texas Asset Management group.

10. PROJECT CONTROLS AND FINANCES

This Facility Study is intended to be a definitive action plan. This section defines the proposed line item project budgets and assigns financial responsibilities to the appropriate project team members. Additionally a project duration schedule is included in this section. The specific baselined schedule will be approved and finalized with the approval and official start of this project. A properly

documented, processed and approved ***Project Issue Form*** (PIF) will be required for any deviation from the stated plan that results in:

- A change in the scope of work
- A change in the cost of the project
- A change in the scheduled milestone dates
- Occurrence of identified or unidentified Risk Events
- Deviation from established EMCC Capital Projects Work Management Process

10.1. CHANGE CONTROL

In the event a PIF is required as identified above, the project team member who has identified the change event trigger should create a PIF in the current year's PIF database in e-room and forward a notice to the project manager for processing. All project team members are responsible to comment on ALL PIF without exception. The PIFs approval level is defined at the following default process level.

Type of Issue	Level of Impact	Required Input	Approving Authority
Scope Change	Resulting in increased cost to Funding Project, out of process work, delayed ISD	Project Team Members comments and approval, Comments from Departmental Supervisors and Project Sponsor	Director if within financial limitations otherwise upper management including VP, COO and or OCE
Scope Change	Not Resulting in increased cost to Funding Project, out of process work or delayed ISD	Project Team Members	Program Manager
Schedule Change	Resulting in milestone date changes but not a delay in ISD	Project Team Members comments	Project Manager
Risk Event	Identified and mitigated according to Risk Plan of PEP	Project Team comments	Project Manager

	or minor event capable of mitigation without schedule delay or Funding Project Increase		
Risk Event	Major event either identified or not which has the potential to impact project execution	Project Team comments	Program Manager or at their discretion director and/or upper management

10.2. FINANCES

10.2.1. FUNDING PROJECT TOTALS* (TAX GROSS UP NOT INCLUDED)

CAPITAL PROJECTS	Baseline Estimates	2008 Total	2009 Total
Contract Construction	$441,191	$441,191	$0
Expense	$26,000	$26,000	$0
Material	$514,229	$514,229	$0
ROW, Environmental and Legal	$0	$0	$0
Payroll	$174,591	$135,591	$39,001
TOTAL DIRECT	$1,156,011	$1,117,010	$39,001
Indirect Responsibility Costs	$597,201	$447,352	$149,849
TOTAL FULL FINANCIAL	$1,753,212	$1,564,363	$188,850

- Totals may not add due to rounding.

10.3. PRELIMINARY SCHEDULE*

Task Name	Duration	Start	Finish
Project Approval	1 day	1/31/08	1/31/08
Design	137 days	2/1/08	8/1/08
Procurement	150 days	4/14/08	10/14/08
Construction	80 days	9/15/08	1/15/09

*This schedule is subject to change. Assumes a funding date of January 31, 2008.

11. QUALITY ASSURANCE PLAN

This plan proposes to use internal processes to validate project management, engineering design, and construction as follows:

PMO

- Compile and process for approval an accurate detailed Facility Study.
- Complete gate review process at the end of initiation, definition and completion.
- Complete accurate monthly status reporting to upper management to ensure compliance with proposed project plan.

Design

- Create and compile accurate approved scope and estimate.
- Conduct Constructability reviews at 60% and 100% of design completion.
- Complete peer review of design packages.
- Fully complete internal “QUALITY ASSURANCE CHECKLIST”

Construction

- Create and compile accurate approved scope and estimate.
- Participate in Constructability reviews at 60% and 100% of design completion.
- Conduct thorough contractor bid meeting with a review of the entire package by line item.
- Use EMCC construction vendor selection guidelines to select appropriate contractors.
- Daily supervision of contract crews to assure compliance with quality and accuracy of the design packages

Commissioning

- Conduct commissioning of installed equipment with AM representatives.
- Conduct verification of TOC & SCADA controls and accuracy of database.
- Complete and distribute ISD letter.

12. CONSTRUCTION MANAGEMENT PLAN

12.1. CONTRACTING STRATEGY

The grounding, conduit, control cable runs and electrical construction will be bid out as a fix-cost contract, if AM is to perform this work. AM resources will be utilized to do switching, termination of control cables and commissioning of the breaker. If AM resource is not available, a relaying contractor may be used.

12.2. ORGANIZATION

The Texas Entergy Transmission EMCC and AM groups will both be involved in this project.

12.3. CONSTRUCTION STANDARDS

The Entergy construction standards relating to these breaker change outs are mentioned below and can be read in their entirety at the following link
http://emcc.entergy.com/transtds/substation_standards.htm

SL020500 Conduit and Duct banks construction guide
SD120600 EHV SF6 Breaker acceptance and installation
SL020600 High voltage electrical connections

12.4. PROJECT EXECUTION

12.4.1. Construction Estimate

The estimate will be reviewed amongst the construction group for any adjustments that need to be implemented into the cost of construction. These results are captured on a estimating worksheet and then reviewed for consistency by the project team

12.4.2. Constructability Reviews

Throughout the duration of the planning and designing process, frequent reviews will be made of the project as it matures. Any changes in construction strategy that will in turn affect the design are relayed between the groups to adjust as needed.

12.4.3. Sequenced Construction Plan

This job will involve the expansion of an existing substation to accommodate additional equipment. Some of the durations were extended due to the substation being a far drive for material delivery. The work will be sequenced as followed:

Cypress Substation Work

Non-Outage work

1) The first task will be to extend the substation fence out to allow room for the A-frame dead end installation. (1 week)
    a. There may be some clearing needed depending on the timing with the customer's ROW clearing
    b. Some dirt may be needed to bring soil up to grade in areas that are cleared

2) All foundations will be formed and poured (1 week)
    a. There are twelve foundations to be poured

3) Following the completion all foundations, ground grid additions, conduit and cable installations will be performed (2 weeks)
    a. These installations can begin while the foundations are curing
    b. As conduit is installed control cable will be pulled to its proper termination point

4) Material will be moved to site which includes (3 days):
    a. Breaker
    b. Switches
    c. A-frame dead end
    d. Bus supports
    e. CTs
    f. PTs

5) The A-frame dead end can then be installed (1 weeks)
    a. Line switch, ground switch and CVT can also be installed on the dead end once it is in place

Outage Work (Note: AM will be asked to do the switching)

6) Install breaker foundation (2 days)
    a. Two bus supports and foundations must be removed before the breaker foundation can be formed and poured

7) Install bus supports and make bus adjustments (3 days)
    a. The bus must be extended toward the Line dead end to attach the switches
    b. The bus must be altered at the breaker location in order to make room for the bus disconnect switches

8) Install PT's and CT's (2 days)
    a. Includes connecting them to the bus

9) Install Breaker and disconnect switches (1 week)
    a. Once installed, the jumpers will be made up connecting the breaker and switches
    b. After breaker is installed and wired, it will be gassed and tested

10) The AM relay group will also need to come out and terminate all cables do required testing i.e. Secondary test, set PT/CT ratios (1 week).

11) After everything is installed, the site will then be rocked and any clean up needed can take place (3 days)

Cypress Relay Work

All relay work involved with this project will be worked in conjunction with the substation work including outage work.

12.5. LAY-DOWN AREA/STORAGE REQUIREMENTS

Everything will be stored at the West End material yard. Once the extended substation site is fenced in the contractor may be able to spot some of the material on-site.

12.6. SITE SECURITY

Once the job begins the contractor will be responsible for all material. Because all material will be brought in as needed, there shouldn't be any need for site security.

12.7. SITE TRAFFIC CONTROL

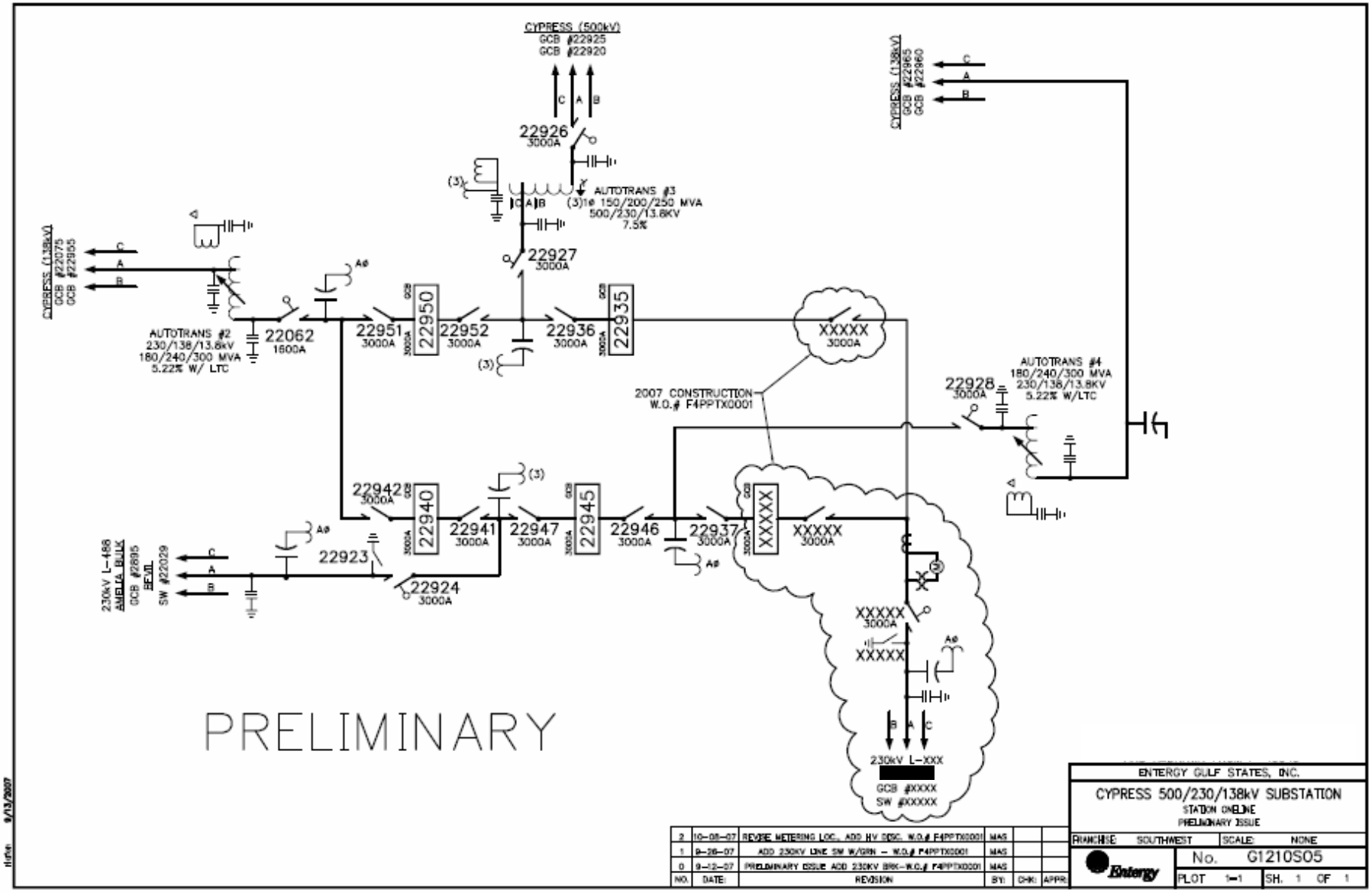
The contractor will be responsible for any traffic control that is needed throughout the duration of the job. All involved work takes place inside of the substation, so the only traffic control that may be involved with these projects will be needed during material delivery

13. REGULATORY, ROW, LEGAL, AND ENVIRONMENTAL COMPLIANCE PLANS

13.1. No Right-Of-Way will be necessary.

13.2. No permits needed (for Entergy's work) since construction is occurring within Entergy's substation.

14. ATTACHMENTS


CYPRESS (500kV)
GCB #22925
GCB #22920
22926
3000A
AUTOTRANS #3
(3)1ø 150/200/250 MVA
500/230/13.8KV
7.5%
22927
3000A
CYPRESS (138kV)
GCB #22965
GCB #22960
CYPRESS (138kV)
GCB #22075
GCB #22955
AUTOTRANS #2
230/138/13.8kV
180/240/300 MVA
5.22% W/ LTC
22062
1600A
22951
3000A
22950
22952
3000A
22936
3000A
22935
XXXXX
3000A
2007 CONSTRUCTION
W.O.# F4PPTX0001
AUTOTRANS #4
180/240/300 MVA
230/138/13.8KV
5.22% W/LTC
22928
3000A
22942
3000A
22940
22941
3000A
22947
3000A
22945
22946
3000A
22937
3000A
XXXXX
3000A
230kV L-488
AMBLA BUK
GCB #2695
BFWL
SW #22029
22923
22924
3000A
XXXXX
3000A
XXXXX
230kV L-XXX
GCB #XXXX
SW #XXXXX
PRELIMINARY
ENTERGY GULF STATES, INC.
CYPRESS 500/230/138kV SUBSTATION
STATION ONELINE
PRELIMINARY ISSUE
FRANCHISE: SOUTHWEST
SCALE: NONE
No. G1210S05
PLOT 1=1
SH. 1 OF 1
2 10-05-07 REVISE METERING LOC., ADD HV DISC. W.O.# F4PPTX0001 MAS
1 9-26-07 ADD 230KV LINE SW W/GRN — W.O.# F4PPTX0001 MAS
0 9-12-07 PRELIMINARY ISSUE ADD 230KV BRK-W.O.# F4PPTX0001 MAS
NO. DATE: REVISION BY: CHK: APPR.