Susan D. Ritenour
Secretary and Treasurer
and Regulatory Manager

One Energy Place
Pensacola, Florida 32520-0781

Tel 850.444.6231
Fax 850.444.6026
SDRITENO@southernco.com

GULF POWER
A SOUTHERN COMPANY

April 29, 2010

Ms. Ann Cole, Commission Clerk
Office of the Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee FL 32399-0850

100265-EI

Dear Ms. Cole:

In accordance with Rule 25-6.0342 and Order No. PSC-07-1022-FOF-EI, attached are the original and fifteen copies of Gulf Power Company's 2010-2012 Storm Hardening Plan.

Please call me if you have any questions.

Sincerely,

Susan D. Ritenour (lw)

COM ___
APA ___
ECR 12
GCL 1
RAD 1
SSC 1
ADM ___
OPC ___
CLK ___

vm

enclosures

cc w/encl: Beggs & Lane
Jeffrey A. Stone, Esq

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

GULF POWER COMPANY

STORM HARDENING PLAN 2010-2012

May 1, 2010

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

GULF POWER COMPANY

STORM HARDENING PLAN 2010-2012

May 1, 2010

CONTENTS

CONTENTS

APPENDICES

1.0 Overview

Pursuant to FPSC Order No. PSC 07-1022-FOF-EI, Gulf Power Company submits the following Storm Hardening Plan for calendar years 2010-2012. This proposed Storm Hardening Plan is intended to address the requirements set forth in Rule 25-6.0342 F.A.C.

Gulf Power views this plan as an ongoing process to identify ways to minimize future storm damages and customer outages. Gulf plans to build on what works well and to improve in areas that do not work as well as intended. Gulf is committed to continuous improvement by building on its experiences and is supportive of research to address the potential benefits of initiatives, such as hardening transmission and distribution facilities, which could lead to less-frequent outages and improved continuity of service during major storm-related events.

As in Gulf's 2007-2009 Storm Hardening Plan, the proposed 2010-2012 Storm Hardening Plan incorporates the 10-Part Storm Preparedness Plan initiatives in Section 2.0 that were originally approved in Order Nos. PSC-06-0781-PAA-EI and PSC-06-0947-PAA-EI. These initiatives have been updated to reflect approved FPSC changes and the latest company information. In Gulf's Vegetation Management Plan, based on data gathered during the implementation of the 2007 -2009 Storm Hardening Plan, Gulf proposes to shorten the trim-cycle length on lateral lines to four years from the current six-year trim cycle and reduce the emphasis on danger tree removal in residential areas. In the Joint-Use Pole Attachments Audit, Gulf proposes to discontinue the random pole strength pilot project activity.

Section 3.0 incorporates Gulf's 8-year wood pole inspection process approved by the FPSC in Order No. PSC-07-0078-PAA-EU to meet storm hardening requirements. Gulf plans to continue its pole inspection program on an eight-year cycle utilizing the same inspection matrix which received Commission approval in 2007, with one minor exception. Gulf plans to discontinue the 1% sample of non-excavated poles program.

Performance data for Sections 2.0 and 3.0 initiatives are currently filed as a part of the annual March 1st Distribution Reliability Report. These initiatives comprise the foundation of Gulf's Storm Hardening Plan.

Sections 4.0 through 9.0 addresses each of the requirements contained in the Storm Hardening Rules 25-6.0341 and 25-06.0342. Section 5.0 addresses extreme wind loading for distribution facilities. The total actual cost for the 2007 - 2009 Storm Hardening Plan extreme wind loading projects was $1.8 million. Gulf will focus its 2010 - 2012 extreme wind loading efforts on the continued conversion of Gulf's distribution system from Grade C construction standards to

the stronger Grade B construction standards as approved in the 2007-2009 Storm Hardening Plan. Gulf has additional proposed storm hardening initiatives in its 2010-2012 Plan that have the potential to mitigate future storm damages and reduce storm restoration times to both underground and overhead distribution facilities. The identified underground hardening projects are described in Section 6.1 and the overhead hardening projects are described in Section 8.4. Gulf proposes to change its approach to the extreme wind load pilot projects. In order to obtain the most potential cost benefit from this storm hardening option, Gulf proposes to target critical pole lines containing multiple feeders and convert them to Grade B construction with concrete poles from the substations to strategic operational points on the feeders.

Section 10.0 summarizes Gulf's incremental cost estimates and benefits contained in the Plan. The details are provided in Appendix 6. Section 11.0 and 12.0 address storm hardening cost and impacts to Third-Party Attachers.

In summary, although Gulf Power Company continues to believe that the items contained in this Plan may result in some mitigation of major storm damage, analysis of actual storm data collected over time is needed to determine their true effect and resulting benefits. In respect to overhead versus underground construction, Gulf Power Company's position does not favor one over the other as long as Gulf is able to recover associated costs. As data continues to be gathered and research progresses, Gulf will be better able to determine the best approach to storm hardening. Gulf recognizes the need to address the concerns expressed by both its customers and the FPSC to find ways to storm harden its system. At the same time, Gulf is obligated to balance storm hardening with the need to maintain reasonable costs and still achieve the expected results.

2.0 Ten-Part Storm Preparedness Plan Initiatives

2.1 Vegetation Management Plan

Gulf Power has assessed the performance of its vegetation management plan which was approved in FPSC Order No. PSC-06-0351-PAA-EI in 2007. This plan included:

- A three year trim cycle on all main line feeders
- An annual inspection and corrective action program for main line feeders not treated by cyclical or other work types to ensure preparedness for storm season
- A program for removing hazard trees located outside the normally maintained pruning zone
- Lateral distribution lines managed on a reliability-based program to achieve a 6-year trim cycle

This program has been successful in improving system performance with regard to tree-related outages by reducing customer interruptions, as shown in the following tables.

Adjusted Distribution Vegetation Caused Customer Interruptions
(Does not include storm outages)

Year	Feeder CI	Inc / Dec	Lateral CI	Inc / Dec	Total CI	Inc / Dec
2007	45,128	0	51,811	0	96,939	0
2008	27,189	-39.75%	45,402	-12.37%	72,591	-25.12%
2009	28,623	5.27%	36,616	-19.35%	65,239	-10.13%
Total		-36.57%		-29.33%		-32.70%

Unadjusted Distribution Vegetation Caused Customer Interruptions
(Includes storm outages)

Year	Feeder CI	Inc / Dec	Lateral CI	Inc / Dec	Total CI	Inc / Dec
2007	45,128	0	55,409	0	100,537	0
2008	35,434	-21.48%	56,125	1.29%	91,559	-8.93%
2009	34,043	-3.93%	42,230	-24.76%	76,273	-16.70%
Total		-24.56%		-23.78%		-24.13%

The program has also improved system performance with regard to customer minutes of interruption.

Adjusted Distribution Vegetation Caused Customer Minutes of Interruption
(Does not include storm outages)

Year	Feeder CMI	Inc / Dec	Lateral CMI	Inc / Dec	Total CMI	Inc / Dec
2007	3,407,281	0	7,215,548	0	10,622,829	0
2008	1,752,846	-48.56%	7,039,541	-2.44%	8,792,387	-17.23%
2009	1,313,682	-25.05%	5,621,215	-20.15%	6,934,897	-21.13%
Total		-61.44%		-22.10%		-34.72%

Unadjusted Distribution Vegetation Caused Customer Minutes of Interruption
(Does not include storm outages)

Year	Feeder CMI	Inc / Dec	Lateral CMI	Inc / Dec	Total CMI	Inc / Dec
2007	3,407,281	0	7,722,856	0	11,130,137	0
2008	3,193,907	-6.26%	8,613,562	11.53%	11,807,469	6.09%
2009	1,464,054	-54.16%	6,858,856	-20.37%	8,322,910	-29.51%
Total		-57.03%		-11.19%		-25.22%

Gulf set a target of removing 15,000 danger trees as part of its 2007-2009 Storm Hardening Plan. Gulf successfully removed 14,896 danger trees adjacent to its distribution system rights-of-way. These trees were dead,

dying, defective, diseased, or in a state of decline and posed a threat to Gulf's distribution system.

Based on the results of activities included in the 2007-2009 Storm Hardening Plan, Gulf proposes to make certain modifications to its vegetation management plan included in the 2010-2012 Storm Hardening Plan as described in the following paragraphs.

Gulf proposes to continue the following vegetation management practices:

- Three-year trim cycle on all main line feeders
- Annual inspection and corrective action plan on the remaining two-thirds of main line feeders
- Removal of danger trees adjacent to main line feeders
- Increased storm hardening of new distribution lines by continuing emphasis of tree removal during construction
- Continued coordination with local officials
- Forensic forestry following storms
- Public education
- Analyze performance metrics on an annual basis in order to evaluate the on-going effectiveness of the program

Analysis of data shows that 65% of Gulf's tree-related main line outages are now being caused by the failure of large over-hanging limbs. Gulf proposes placing greater emphasis on overhanging limb removal on main line feeders in conjunction with continued danger tree removal during its annual main line inspection.

While lateral performance has improved, the reduction in tree-related unadjusted lateral CMI has improved by a modest 11%. Also, the number of reactive hot spot trims on laterals has increased from 737 in 2007 to 1,341 in 2009. This seems to indicate the six-year cycle on laterals may be too long and needs to be shortened. Establishing a trim back distance which will provide six years of clearance has proven to be extremely difficult. Also, danger tree removal in residential areas served by laterals has proven to be very challenging. Customer acceptance of these practices has not been positive.

In response to this data, Gulf proposes shortening the trim-cycle length on lateral lines to four-years, from the current six-year trim cycle, and to reduce the emphasis on danger tree removal in residential areas. Gulf has

determined that the optimum cost per avoided CMI can be obtained with this cycle.

Program Comparison

Program Elements	FPSC Program (Miles)	2007 Gulf Program (Miles)	2009 Gulf Plan (Miles)
Routine Feeder Trim	281	281	281
Feeder Inspect & Correct	0	562	562
Routine Lateral Trim	1,682	841	1,261
Cost Per Avoided CMI	$5.18	$7.85	$4.53

2.1.1 Program Enhancements

In 2009, Gulf continued to seek improvements in the Company's distribution reliability. The **D**istribution **L**ockout-**O**ut **R**eport (DLOR) was developed and implemented in 2007 to document and track distribution feeder lock-outs, identify root causes of lock-outs, and identify systems and operational modifications that could be implemented to prevent future feeder lock-outs. A 2009 process improvement was implemented called "TreeGulf", which provides a proactive way for any employee to efficiently notify Gulf's Forestry services Department of a potential vegetation problem.

2.2 Joint-Use Pole Attachment Audits

Gulf Power has in its current joint-use contract agreements to conduct a field audit of the joint-use poles every five years. These field audits have been in effect since at least 1991. The field audit includes both poles owned by the electric utility to which other utility attachments are made (i.e., telecommunications and cable) and poles not owned by the electric utility to which the electric utility has attached its electrical equipment. Items collected in the 2006 joint-use field audit included the GPS pole location (identified on Gulf Power map and by county), pole owner, pole type, pole treatment, pole height and class, manufacture date, attachment information, and pole identification numbers. It is anticipated that similar data will be collected or verified in the next field audit scheduled for 2011.

Any dangerous situations identified in the field during the joint-use field audit will be immediately reported to the pole owner. Dangerous

conditions may include buckling, splitting or broken poles, or low hanging conductors or cables.

With completion of the 2006 Joint-Use Field Audit Survey, Gulf Power Company had the capability to extract joint-use attachment data. A random sampling of Gulf Power Company owned joint-use poles with the criteria of three (3) or more third party attachments and a manufacture date of twenty (20) or more years could be obtained and analyzed for sufficient pole strength to adequately support the attached facilities. Gulf Power recommended and received approval from the Commission for a random sampling for Pole Strength/Load Assessment on 5% (approximately 500) joint-use poles meeting the above criteria.

A Pole Strength/Load Assessment pilot program was initiated by Gulf Power in 2007 based on the 2006 Joint-Use Field Audit Survey. Alpine Communication Corporation (Alpine) was the successful bidder to conduct this work. The results of this 3-year program are tabulated below.

Year	Poles Analyzed	# of Pole Failures
2007	500	43
2008	516	1
2009	500	0

Based on the low failure rates of this 3-year pilot project and the fact that all new construction rebuilds are constructed to the stronger Grade B standards, Gulf proposes to discontinue the random pole strength pilot project activity for the 2010-1012 Storm Hardening Plan. Discontinuation of the pole strength pilot project will save approximately $100,000 over the 2010-2012 timeframe.

2.3 Inspection Cycle of Transmission Structures

Gulf Power's current transmission inspection plans meet or exceed the newly-approved 6-year inspection cycle by the FPSC. In 2004, Gulf adopted the Southern Company Transmission Line Inspection Standards as its program. The details of the program have been filed with the Commission as outlined in FPSC Order No. PSC-06-0144-PAA-EI. In general, Gulf contracts ground line inspections and uses a combination of company employees and contractors to perform comprehensive walking and aerial inspections. Gulf's transmission structure inspection program is based on two alternating twelve-year cycles, which results in a structure being inspected at least every six years. Gulf will continue this same transmission inspection program in the 2010-2012 Storm Hardening Plan as approved in the 2007-2009 Plan.

Historically, Gulf has not inspected a set number of poles each year. Annual inspection rates have varied as the Company responded to its various needs. Gulf plans to utilize the same flexible approach in its proposed 2010-2012 Storm Hardening Plan to ensure the Company completes its inspection cycle as required.

Gulf Power currently inspects all of its substations at least once annually. These inspections include visual inspection of all structures, buss work, switches and capacitor banks for defects. Current design standards for new substations include 150 mile per hour wind loading for structures inside the substation. Gulf proposes to continue the same inspection process for the 2010-2012 Storm Hardening Plan.

2.4 Storm Hardening Activities for Transmission Structures

Gulf feels that existing facilities should be governed by the version of the NESC in effect at the time of initial construction; however, to the extent practical and feasible, consideration should be given to upgrading when capital maintenance is performed on existing transmission facilities. It is Gulf's position that the adherence to current design and construction standards using generally accepted engineering practices, in conjunction with the recommended 6-year structure inspection program, will maintain adequate hardening of the system in all areas.

Gulf completed the replacement of 774 wood cross-arms and storm-guyed 700 structures at an annual cost estimated at $600,000 as a part of the Company's 2007-2009 Storm Hardening Plan. Gulf does not breakout the component cost from the overall cost of the job.

Gulf plans to continue the following current activities for "existing" transmission facilities in the 2010-2012 Storm Hardening Plan:

1. Install storm guys on wood H-frame transmission structures not currently guyed.

2. Replace wooden H-frame cross-arms with steel cross-arms.

Gulf will perform an inventory of the transmission system during the 2010-2012 timeframe to obtain a more accurate count of remaining wood cross-arms to be replaced and H-frame structures to receive storm guys.

In addition, Gulf Power will continue the following best practices with respect to storm hardening for "new" transmission facilities in the 2010-2012 Storm Hardening Plan:

1. Design all new transmission construction using extreme wind loading criteria found in the NESC with 1.0 overload factor. Extreme wind loading weather case refers to NESC rule 250C. The load factor for rule 250C as shown on page 197 Table 253-1 in section 25 of the 2007 NESC book is 1.0 for Grade B construction. Gulf Power builds all new transmission lines to Grade B construction. The main objective is to design a structure with capacity greater than the maximum load expected. The combined effect of load factors and strength factors provide an acceptable level of safety and reliability.
2. Ensure bulk power transmission line design standards have "loss of conductor" contingency for all new construction. Bulk power is considered 230kV and above. For these voltages and higher, Gulf Power designs for "loss of conductor" also called broken conductor. For this case, the structures are designed to withstand the impact of one of the conductors/phases breaking without causing structure or insulator failure to the adjacent structures.

2.5 Geographic Information System

Gulf Power's Geographic Information System (GIS) is a database for distribution, transmission, and land records across the service area. The distribution side of the system is using **DistGIS**, which is the abbreviation for the company's Distribution Geographic Information System. The system is designed to be a complete electronic model of Gulf Power's electrical system overlaid on a representation of the land base. DistGIS is actually a system composed of many parts. The base GIS software is ArcGIS/ArcMap from Environmental Systems Research Institute (ESRI). It also provides consistent, high-quality data to other systems. For example, it feeds data to the outage management systems (TCMS) in place at Gulf Power to ensure optimum response to incidents, such as hurricanes. In addition, the ArcGIS platform serves as an enabling technology for addressing future Gulf Power Company business needs.

Transmission uses the same software as distribution to map the GIS data. All data that is mapped on the transmission mapping tools is pulled from the Common Transmission Database (CTDB). Transmission collects data for the CTDB through various means. The method in which the majority of data is collected is through inspections on field computers using the Transmission Lines Inspection System (TLIS). This data is transferred into the CTDB and then extracted into ESRI's ArcGIS program. Transmission uses ESRI Maps, Transview, and TLIS. All updates made to the transmission system are captured in the CTDB and are then available in the GIS format.

Gulf Power's transmission and distribution data essential for its asset management programs and forensic data analysis have been mapped in GIS as a part of the Company's 2007-2009 Storm Hardening Plan. This GIS data will be maintained and updated as needed for the 2010-2012 Storm Hardening Plan.

2.6 Post-Storm Data Collection and Forensic Analysis

To meet the requirements of the 2007-2009 Storm Hardening Plan, Gulf Power worked with Osmose, Inc. and KEMA, Inc. to finalize the post-storm forensic process for the Company. Osmose was chosen as the contractor that will aid Gulf in collecting the data in the field after any major storms. Hand-held computers will be utilized to collect the pertinent field data. These computers contain a copy of Gulf's infrastructure which will aid in collecting the information in the field. Data will only be collected on poles that incurred damage during the storm. To reduce the collection time in the field, general information on the poles is stored in Gulf's GIS database. This general information will be paired with the data collected in the field by using GPS coordinates or by a unique pole number. Osmose will collect information on the damage that occurred and this information will be supplied to KEMA to perform a forensic analysis for Gulf. This analysis will be the basis of a report containing an executive summary, description of the data collected, preliminary storm data, areas affected and the analysis results in tabular and graphical results.

This data collection and transfer process was tested twice during 2007 as a part of the 2007-2009 Storm Hardening Plan. An initial test was performed on a small sample of poles to ensure the process of exchanging information from one contractor to another would not present a problem during a storm situation. Later in the year, a second test was successfully completed on a larger sample of poles.

During 2008, the data collection and transfer process was tested by Gulf's post-storm forensic team contractors in Panama City following Tropical Storm Fay. Damage was insignificant; however the data collection crews that were brought on the system collected information on a sample of poles and transferred this data to the data analysis agent. This test was performed to ensure that there were no problems with the data transfer and that all systems were functioning properly.

The 2009 storm season was non-eventful so there was no need to bring the forensic collection team on the system. The contractor did, however, conduct a refresher training course to make sure the inspectors stay current on the procedures for forensic collection.

Gulf will continue to utilize this well-established forensic program for its 2010-2012 Storm Hardening Plan. On-going refresher training will be given as needed over the next 3 years to ensure all responsible parties are fully prepared to implement the program.

2.7 Outage Data Differentiating Between Overhead and Underground Systems

Gulf will continue to record the number of overhead (OH) and underground (UG) customers on its system at the end of each year. This will allow Gulf to calculate the SAIDI and SAIFI indices experienced by overhead and underground customers.

Gulf will also continue to collect the following data on outages as they occur:

- UG cable is:
  - Direct Buried
  - Direct Buried but Cable Injected
  - In Conduit
- Pole type is:
  - Concrete
  - Wood
  - Steel

Gulf Power will continue to collect Pole & U/G Cable outage data for future analysis as recommended by the FPSC.

2.8 Coordination with Local Governments

Consistent with its 2007-2009 Storm Hardening Plan, Gulf Power will continue its current local government coordination efforts in NW Florida for the 2010-2012 Storm Hardening Plan.

Gulf Power District Managers are located in Pensacola, Ft. Walton, and Panama City. Local Managers, who report to the District Managers, are located in Milton, Crestview, Niceville, and Chipley. These Company positions interact with city and county personnel on a daily/weekly basis regarding numerous issues, including emergency preparedness as needed. These Gulf Power employees are also actively involved in joint government and business committees that focus on emergency preparedness needs in NW Florida. Examples of those include:

- Member of BRACE (Be Ready Alliance for Coordinating for Emergencies). BRACE is an Escambia County organization unique to Florida but part of a federal government directive that encourages communities to develop more effective preparedness programs for various types of disasters.
- Member of Okaloosa County Emergency Management Committee. This Committee is a coordinated effort between government and business to address emergency preparedness issues on a monthly basis.

Gulf Power's Line Clearance Specialists and Forestry Services Technicians communicate on a daily basis with local governmental officials, community groups, and homeowner associations to ensure local area involvement and communications regarding vegetation management projects are effectively maintained.

Gulf Power representatives are assigned to County Emergency Operations Centers (EOCs) in NW Florida. The EOC representatives assist city and county agencies and officials during emergencies that warrant activation of the County EOCs. Gulf Power provides extensive coverage throughout the duration of the EOC activation.

Gulf Power will provide ongoing communications, pre-storm communications, and post-storm communications through the Corporate Communications Department. Company news releases are delivered to the County EOCs at least twice daily during storm restoration events to keep local government agencies and officials apprised of the latest company restoration activities.

2.9 Collaborative Research

As a part of its 2010-2012 Storm Hardening Plan, Gulf Power will continue collaborative efforts to conduct research and development (R&D) on the effects of major hurricanes on the electrical systems throughout the state of Florida. The Public Utility Research Center (PURC) located at the University of Florida has provided leadership necessary to serve as the R&D coordinator over the last three years. PURC has strong working relationships with Florida's investor-owned utilities, cooperatives and municipals.

Gulf Power, along with the other Florida IOUs recently renewed the Memorandum of Understanding (MOU) with PURC to continue storm hardening research for the 2010-2012 timeframe. Gulf Power will continue

to participate in R&D activities that PURC initiates. These activities involve utility managers and hazard research professionals discussing means to prepare Florida's electrical infrastructure to better withstand and recover from hurricanes. Gulf Power also conducts its own R&D efforts in this and other areas of its business.

2.10 Disaster Preparedness and Recovery Plan

2.10.1 Gulf's Storm Recovery Plan

Gulf Power uses the plans described in its Storm Recovery Plan to respond to any natural disaster that may occur within its service area. These plans proved to be very effective during 2004 and 2005 in recovering from the multiple storms that impacted Gulf Power and its customers. As part of its annual operations, Gulf Power has developed and refined its planning and preparations for the possibility of a natural disaster within Gulf Power's service area. This planning is updated annually to build on what works well and to improve in areas that do not work as well as intended. In these updates, Gulf Power strives for continuous improvement by building on recovery effort experiences within our service area as well as off system when assisting other utilities that have suffered weather-related natural disasters. Gulf Power's plan has been encapsulated within a detailed and proprietary Storm Recovery Procedure Manual. Gulf compiled a summary of this information together in a separate document which forms the basis for its Storm Recovery Plan. The Manual follows the guidelines and philosophy set forth in the Storm Recovery Plan.

2.10.2 Gulf's Storm Recovery Preparations

All Gulf Power employees are given a specific storm assignment as a part of the planning process. The Company Emergency Management Center (CEMC) specialist works with Human Resources to ensure that each restoration area is staffed with the appropriate number of employees and that every employee has the proper skill set to perform their storm assignments. In many cases, employees have a storm assignment which may be significantly different from their normal job. Storm training handbooks are updated and distributed as needed. Additionally, training is conducted to ensure that employees are competent to perform the job to which they are assigned. Prior to the storm season,

informational meetings are held and internal communications focus on storm preparedness.

Members of the CEMC leadership team attend conferences each year in an effort to benefit from lessons learned by others. In the past, these have included: the Southeastern Electric Exchange (SEE) Mutual Assistance meetings, the National Hurricane Conference, and the Governor's Hurricane Conference. Gulf Power also participates in the yearly statewide storm drill under the direction of the State Emergency Operations Center (SEOC).

Contracts are negotiated and confirmed with vendors for services such as food, lodging, materials, transportation, fuel, and other support functions. Staging sites are secured, and if needed, contracts are negotiated and signed. Gulf Power's Supply Chain Management department ensures that materials on hand, along with available supplies from the material vendors, are sufficient to meet the anticipated demands of the storm season.

2.10.3 Gulf Power Company Emergency Management Center (CEMC)

The objective of the CEMC is to provide overall direction in the restoration of electric service to Gulf Power's customers as quickly as possible, while protecting the safety of everyone involved. In order to provide a coordinated response and to maximize the restoration effectiveness, the Company organizes into three major restoration areas headquartered in Pensacola, Fort Walton Beach, and Panama City. The CEMC consists of functional teams which provide support to Power Generation, Transmission, and Distribution as they restore their respective systems. The three primary leaders working in the CEMC are the CEMC Manager, the Human Resource Director, and the Logistics Director, who report directly to the Power Delivery General Manager. These three leaders work with each other to coordinate activities and resources necessary for field restoration efforts. The functional teams that are represented in the CEMC and that report to the CEMC manager are: CEMC Staff; Distribution; Distribution Operations Center; Transmission; System Control; System Protection; Power Generation; Contractor Coordination; Logistics; Aircraft Operations; Supply Chain Management; Customer Service; Emergency Operation Center staff; Corporate Security; Risk Management; Safety and Health; Public Affairs; Human Resources; Fleet Services; Information Technology; Facilities Management; Accounting, Finance and Treasury; and Environmental.

When the National Weather Service announces a tropical storm or hurricane has entered the Gulf of Mexico, the System Operator will notify CEMC leadership, appropriate management and the Company's executives. Private weather services used by Gulf Power also issue notifications to selected Company officials. The storm is monitored as it develops, and if there is a possibility that Gulf Power's service area will be affected, the CEMC is set up and readied for activation at Gulf Power's Pine Forest facility located in Cantonment, Florida. The hurricane is closely monitored when it may threaten Gulf Power's service area within 36 hours.

After evaluation of wind profiles and consultation with private weather services, a decision is made as to when it will be unsafe for employees to travel. At that time, and after consultation with senior Gulf management, the CEMC Manager, the Power Delivery Services Manager, or the CEMC specialist will determine when the CEMC will be formally activated. CEMC leaders are notified of the activation plan and are responsible for ensuring their respective areas are in a state of readiness and are properly staffed.

Once activated, the CEMC is staffed by a core group for the duration of the storm. The CEMC is operational 24 hours a day, 7 days a week, until such time the power is substantially restored to all customers who are able to receive service. Depending on the severity of the storm, repair work on the system may continue after the CEMC is deactivated.

3.0 Wood Pole Inspection Plan

Gulf Power has been evaluating its distribution poles through ground-line inspection since the early 1990's. Gulf's distribution pole inspection program was based on a ten-year cycle, completing its first cycle in 2002. The inspection methodology utilized sound and bore with excavation to a depth of 18 inches. Decayed wood was removed from the outside of the pole, and measurements were taken to determine the pole's remaining strength. The poles were then treated with preservatives. Rejected poles were scheduled for replacement or reinforcement.

Gulf Power's rate of rejection for distribution wood poles has fallen from approximately 15% on its first inspection cycle to approximately 5% on the second inspection cycle.

In 2007, Gulf Power moved from a ten-year cycle to an eight-year cycle as required by Order No. PSC-07-0078-PAA-EU. Historically, Gulf has not inspected

a set number of poles each year. While annual inspection rates have varied as the Company responded to its various needs, Gulf has inspected 37.5% of its total pole population as of the end of the third year of the eight-year cycle. Gulf is on target to achieve the eight-year cycle presented in the Company's 2007-2009 Storm Hardening Plan. Gulf plans to continue this flexible approach to ensure the Company completes its present inspection cycle within eight years, while also insuring other programs meet the needs of our customers each year.

Based on the lessons learned during the first pole inspection cycle, Gulf refined its pole inspection process for distribution wood poles. During its first inspection cycle, Gulf inspected all Creosote and Penta poles, but also excavated and bored a sample of CCA poles to determine if these poles required excavation and boring. Gulf learned that CCA poles provide superior decay resistance when compared to Creosote and Penta poles. Based on the findings of these inspections, Gulf refined its inspection process and developed the inspection matrix based on pole age, treatment type, and condition as shown in the following table. This matrix also brought all CCA poles into the inspection process.

Under this matrix, all poles (Creosote, Penta, and CCA) receive a visual inspection with sounding, boring and excavation as appropriate.

Pole Inspection & Treatment Matrix for Gulf Power Company

	Visual	Sound	Bore Inspection	Partial Excavate	Full Excavate	Type of Treatment
Inaccessible poles	Yes	No	No	No	No	No
Concrete poles	n/a	n/a	n/a	n/a	n/a	n/a
Metal Poles, towers, or structures						
OpCo-owned transmission poles with distribution facilities attached	Yes	Yes	No	No	No	No
CCA 0-14 yrs old	Yes	Yes	Sel	No	No	No
Non-CCA 1-4 yrs since prior treatment	Yes	Yes	Sel	No	No	No
CCA 0-14 yrs old	Yes	Yes	Sel	Yes	If Need	Ex
CCA 15-25 yrs old						
CCA 25 yrs or older with prior treatment						
Non-CCA 1-4 yrs since prior treatment	Yes	Yes	Sel	Yes	If Need	Ex
Non-CCA 5 yrs or greater since prior treatment						
CCA 25 yrs or older with no prior treatment	Yes	Yes	Sel	Yes	If Need	Ex
Non-CCA with no prior external treatment	Yes	Yes	Man	No	Yes	Ex
Non-CCA – relocated						
Riser Pole, CCA 0-14 yrs old	Yes	Yes	Sel	No	No	No
Excavatable Riser Pole, CCA 0-14 yrs old	Yes	Yes	Sel	No	IF Need	Ex
Excavatable Riser Pole, CCA 15 yrs or older	Yes	Yes	Sel	No	No	Fu
Excavatable Riser Pole, Non-CCA	Yes	Yes	Sel	No	If Need	Ex
Non-Excavatable Riser Pole, CCA 0-14 yrs old	Yes	Yes	Sel	No	No	Fu
Non-Excavatable Riser Pole, CCA 15 yrs or older	Yes	Yes	Sel	No	No	Fu
Non-Excavatable Riser Pole, Non-CCA	Yes	Yes	Yes	No	No	Ex, Fu
Non-Excavatable Pole	Yes	Yes	Man	No	No	Fu
Poles unable to excavate minimum 75%	Yes	Yes	Man	Yes	No	Fu
Previously reinforced pole	Yes	Yes	Man	No	Yes	Ex, In, Fu
Pole with obvious internal sapwood decay						
Foreign owned pole	n/a	n/a	n/a	n/a	n/a	n/a

Over the past three years, following Commission approval, Gulf continued to utilize this inspection matrix and also incorporated a sampling on non-excavated poles into its inspection process to insure on-going validity of its inspection matrix. A 1% sample of poles that would not normally qualify for full excavation under the matrix were fully excavated and inspected each year to determine if any modifications needed to be made to the present inspection process. This sample of non-excavated poles did not identify any poles that should have received a full excavation or treatment.

As part of its on-going storm hardening efforts, Gulf plans to continue its pole inspection program on an eight-year cycle utilizing the same inspection matrix approved by the Commission in 2007, with one minor exception. As a result of the findings described in the previous paragraph, Gulf plans to discontinue the 1% sample of non-excavated poles program. Over the past three years, Gulf performed full excavation and treatment on 954 poles that had initially passed the visual inspection. As previously noted, none of the excavated poles were rejected and only minor decay was noted on some of these poles. This sample clearly

indicates that Gulf's inspection matrix is effective in ensuring that no defective poles remain in service. Since this program adds costs without providing additional benefits, Gulf will discontinue the 1% sample program for the 2010-2012 Storm Hardening Plan. This will result in an estimated annual savings of approximately $7,500. Gulf will continue all other elements of the current wood pole inspection program which has been so successful over the past three years.

In addition, to provide proper oversight of its pole inspection program, Gulf hired an Asset Management Coordinator (AMC) to oversee the entire pole inspection program. The AMC ensures program enforcement is accomplished through random spot checks of inspected poles to make sure the inspection process meets Gulf's specifications. The AMC also ensures the annual reporting on pole inspection activities is accurately completed in accordance with FPSC requirements.

4.0 Compliance with the National Electric Safety Code (NESC) in regards to Storm Hardening.

4.1 Distribution

Gulf Power's distribution system complies with all applicable sections of the National Electric Safety Code and exceeds the NESC with the transition to Grade B construction on all new construction, major projects and maintenance work.

4.2 Transmission

Gulf Power's transmission system complies with all applicable sections of the National Electric Safety Code in effect at the time of initial construction.

4.3 Substation

Gulf Power uses the ASCE 7 extreme wind criteria for structure design and selection, which complies with the National Electric Safety Code extreme wind loading requirements for Gulf's service area.

5.0 Adoption of Extreme Wind Loading standards specified by Figure 250-2(d) of the 2007 Edition of the NESC for Distribution Facilities.

Appendix 1 shows the communities within Gulf's service area and the extreme wind loading standards as specified by figure 250-2(d) of the NESC. Appendix 1 also shows the approximate locations of the extreme wind loading projects completed.

Gulf Power's approved 2007-2009 Storm Hardening Plan proposed to exceed the National Electric Safety Code by transitioning to Grade B construction on all new

distribution construction, major projects and maintenance work. Gulf Power plans to continue this transition to Grade B construction standards on all new construction, major projects and maintenance work for the 2010-2012 Storm Hardening Plan.

As a part of its 2007-2009 Storm Hardening Plan, Gulf also performed extreme wind loading pilot projects for distribution facilities serving critical infrastructures such as hospitals, fuel depots, sewage treatment plants, and major roadway crossings across the Florida panhandle. In addition, Gulf installed meteorological wind stations in close proximity to several of these pilot projects to collect granular wind data to help determine the effectiveness of these facility upgrades in future storm events.

Although Gulf has completed the implementation of Grade B construction into its construction practices and completed the extreme wind loading pilot projects outlined in the 2007-2009 Storm Hardening Plan, Gulf still lacks the data to support the benefits associated with the upgrades due to a lack of major storms during this time period to test the construction practices. Gulf feels it is prudent to move cautiously into the further application of the extreme wind loading standards until it is able to determine the cost and outage benefits.

Based on this, Gulf proposes to focus its extreme wind loading efforts for the 2010-2012 Storm Hardening Plan on upgrading all new construction, major projects and maintenance work, including any work performed on critical infrastructure facilities, to Grade B construction standards and not proceed with any additional extreme wind loading pilot projects at this time.

Instead, Gulf proposes to change its approach to the extreme wind load pilot projects by expanding its Grade B initiative to include a storm hardening initiative which has the potential to minimize possible outages both due to a major storm event and routine outage events through the year. In the case of a major storm event, this will support our customer's restoration efforts and their return to pre-storm living conditions by increasing the availability of essential supplies and services.

In order to obtain the most potential cost benefit from this storm hardening option, Gulf proposes to target critical pole lines with multiple feeders on them and convert them to Grade B construction. In addition, the existing wood poles will be replaced with concrete poles, from the substations to strategic operational points on the feeders. The use of concrete poles will provide both uniform pole strength for the entire pole height of the pole and will extend the life of the installation. Gulf has budgeted approximately $2.3 million for this initiative over the 3-year period covered by the Plan.

As part of the first year of the Storm Hardening Plan, Gulf will identify the multiple feeder pole locations using the DistGIS system. They will then be prioritized based on potential storm exposure, critical loads served, and loads served which provide essential needs after a major storm which support our customer's restoration efforts and their return to pre-storm living conditions. Gulf will then do a field review and begin the engineering design and cost estimating for the projects. Based on these estimates, Gulf can determine the extent of the initiative and the work that will be done in each of its Districts. Gulf will report on the progress of this initiative in the annual Reliability and Storm Hardening Initiatives Report.

As relevant storm forensic data is gathered to help determine the benefits and effectiveness of Grade B construction and the targeted extreme wind load pilot projects, Gulf will review its plan for any needed changes.

6.0 Mitigation of Damage to Underground Facilities and Supporting Overhead Transmission and Distribution Facilities due to Flooding and Storm Surges

6.1 Distribution

Gulf Power has developed overhead and underground storm hardening specifications (Appendices 4 and 5) to minimize damage in areas subject to flooding and storm surges. These specifications will continue to evolve as Gulf continues to seek out best practices and learns from the review of gathered forensic data.

Appendix 1 shows projects completed during the 2007-2009 Plan and potential projects during the 2010-2012 Plan. These projects will be helpful in determining the effectiveness of underground with respect to storm hardening and storm surge mitigation. As stated in the past, new underground installations and conversion of overhead facilities to underground facilities are customer driven. Two of these projects are Opal Beach and Fort Pickens which have been cited in past reports.

In addition, Gulf proposes to storm harden the Pensacola downtown underground network which is subject to flooding during major storms due to its proximity to Pensacola Bay. The most vulnerable elements of this system are the network protectors. Gulf proposes to replace these network protectors over three years with the latest technology available. Gulf's total estimated cost is approximately $1 million.

6.2 Transmission

Gulf Power transmission utilizes overload and strength factors greater than or equal to those required in Sections 25 and 26 of the National Electric

Safety Code. Gulf's loading criteria for new line design is derived from Section 25 of the National Electric Safety Code. At this time, Gulf is not designing transmission for any type of storm surge or flooding damage.

All future Gulf Power underground transmission projects located within the possible storm surge area will be engineered to consider the impact of flooding or storm surge from weather events. Gulf Power does not currently have any such new projects planned.

7.0 Placement of New and Replacement Distribution Facilities so as to Facilitate Safe and Efficient Access for Installation and Maintenance

Gulf Power has always recognized that accessibility to distribution facilities is essential to safe and efficient maintenance and storm restoration. Therefore, Gulf continues to strive to promote placement of facilities adjacent to public roads; to use easements, public streets, roads and highways; to obtain easements for underground facilities; and to use road right-of-ways for conversions of overhead to underground.

Gulf will continue these initiatives in the 2010-2012 Storm Hardening Plan.

8.0 Other Key Elements

8.1 Feeder Patrols

By June 1 of every year, all critical lines will be inspected up to the first protective device for loose down guys, slack primary and leaning poles. All problems found will be corrected.

Gulf will continue this initiative in the 2010-2012 Storm Hardening Plan.

8.2 Infrared Patrols

Annually, infrared inspections of critical equipment on main line three phase feeders will be performed by June 1. This data will be utilized in repairing feeder switches, capacitors, regulators and automatic over current protective devices.

Gulf will continue this initiative in the 2010-2012 Storm Hardening Plan.

8.3 Wind Monitors

Gulf Power believes Forensic Data Analysis will be critical to determining the effectiveness of the Storm Hardening Plan. A key part of the data

gathering is obtaining "granular" storm wind speeds at strategic locations that would otherwise be unavailable from the National Weather Service.

Gulf completed the installation of 19 wind monitors as outlined in the 2007-2009 Storm Hardening Plan and will maintain those wind stations as a part of the 2010-2012 Storm Hardening Plan.

These monitors are strategically located at substations nearest to the projects completed for applying the extreme wind loading standards. The wind speed data gathered from these monitors, along with forensic data gathered after a major storm event, will help determine the effectiveness of the storm hardening initiatives.

8.4 Additional Proposed Storm Hardening Initiatives

8.4.1 Conversion of 4 kV Distribution Feeders

Gulf Power proposes to convert its remaining three 4 kV distribution feeders to its standard 12.47 kV distribution voltage. These conversions will reduce potential outages and facilitate improved restoration times by converting this area to Gulf's standard specifications and materials. Gulf plans to convert one feeder per year at an approximate average cost of $300,000.

These conversions to Gulf's 12.47 kV system standard will facilitate storm restoration of the system because standard materials and equipment will be more readily available. In addition, the added clearance requirements and increased insulation levels for 12.47 kV will reduce potential outage causes, and any pole replacements as a result of the conversion would be built to the stronger Grade B construction.

8.4.2 Distribution Automation

Gulf proposes to install reclosers at approximately the mid-way point on distribution feeders. Additional reclosers or automated switches will be deployed on long or critical feeders to further segment the feeder for outage restoration. These devices, which protect downstream from temporary faults, will be controlled remotely by Distribution Control Center personnel and/or placed in an automated restoration scheme. Gulf's average estimated cost per year to implement this is $2,000,000

8.4.3 Strategic installation of Automatic Overhead Faulted Circuit Indicators

Faulted Circuit Indicators (FCIs) are devices designed to indicate the passage of fault current that is greater than a predetermined current magnitude. These devices will reduce customer outage time by expediting the location of outage causes and the isolation of the problem so that service can be restored to some customers while the problem is being corrected. Initially, Gulf proposes to install FCIs at 20 locations on its system. The estimated annual cost is approximately $20,000.

8.4.4 Development of a Distribution Supervisory Control and Data Acquisition (DSCADA) System

In order to reduce storm restoration times, Gulf proposes to develop and begin implementation of the systems and applications that would permit the remote control of distribution line devices such as reclosers and switches and the acquisition of operational data. The estimated annual cost of this activity is $217,000.

9.0 Storm Plan Deployment Strategy for Distribution, Transmission and Substation

9.1 Description of the facilities affected, including technical design specifications, construction standards, and construction methodologies employed

9.1.1 Distribution

Gulf Power developed overhead and underground storm hardening specifications which are contained in Appendices 4 and 5. These specifications continue to evolve as Gulf seeks out best practices and learns from the review of gathered forensic data. Gulf has systematically trained engineering personnel on the application of these new specifications since the implementation of the 2007-2009 Storm Hardening Plan.

As stated in Section 5.0, Adoption of Extreme Wind Loading standards specified by Figure 250-2(d) of the 2007 Edition of the NESC for Distribution Facilities, Gulf will continue transitioning to Grade B construction on all new construction, major projects and maintenance work but Gulf does not propose proceeding with any additional extreme wind loading pilot projects in the 2010-2012 Storm Hardening Plan. Gulf proposes to target critical pole lines containing multiple feeders and convert them to Grade B

construction with concrete poles from the substations to strategic operational points on the feeders.

9.1.2 Transmission

Gulf Power transmission utilizes overload and strength factors greater than or equal to those required in Sections 25 and 26 of the National Electric Safety Code. Gulf's loading criteria for new line design is derived from Section 25 of the National Electric Safety Code. These design criteria are used on all new installation and complete rebuild projects throughout Gulf's service area.

9.1.3 Substation

Coastal Substation Risk Assessments have been completed and hardening measures are not required. As part of this process, a NOAA SLOSH (Sea, Lake and Overland Surges from Hurricanes) model was used for defining the potential maximum surge for each substation location. A risk assessment at each location was completed based on the information provided by the SLOSH model. SLOSH is a computerized model run by the National Hurricane Center (NHC) to estimate storm surge heights and winds resulting from historical, hypothetical, or predicted hurricanes.

An Emergency Response Plan has been established for all substations on Gulf's system.

9.2 Communities and areas affected and critical infrastructure as illustrated by Gulf Power Company Area Territory/DistGIS maps

9.2.1 Distribution

Appendix 1 depicts both overhead and underground projects completed during the 2007-2009 Plan and proposed projects for the 2010-2012 Plan. Gulf proposes to focus its extreme wind loading efforts for the 2010-2012 Storm Hardening Plan on upgrading all new construction, major projects and maintenance work, including any work performed on critical infrastructure facilities, to Grade B construction standards.

9.2.2 Transmission

The storm hardening steps of installing storm guying on un-guyed wood H-frame structures and the replacement of wooden cross arms

with steel cross arms on H-frame structures will be implemented on the entire Gulf Power transmission system.

10.0 Gulf Power Company's Estimate of Incremental Costs and Benefits

The total estimated cost for Gulf Power's 2010-2012 Storm Hardening Plan is approximately $108 million. Increased costs for the 2010-2012 Storm Hardening Plan reflect cost adjustments resulting from construction lessons learned from the 2007-2009 Storm Hardening Plan, along with increased material and labor costs. As discussed in Sections 4.0 and 5.0 of the 2010-2012 Plan, Gulf will continue its transition to Grade B construction and expand upon this storm hardening option. Gulf's actual costs for the extreme wind loading projects completed as a part of the 2007-2009 Storm Hardening Plan totaled approximately $1.8 million. Gulf's 2010-2012 Plan proposes pilot projects totaling approximately $2.3 million.

In addition to the feeder patrols discussed in Section 8.0, Gulf plans to perform new storm hardening initiatives as identified in Sections 6.1 and 8.4 at a cost of approximately $2.9 million from 2010 to 2012.

Gulf Power's 2010-2012 Storm Hardening Plan is designed to include initiatives which have the most potential to meet the intent of storm hardening and provide the most cost-effective approach based on Gulf's years of experience with transmission and distribution construction and storm restoration.

Due to the lack of data at this time, Gulf Power cannot estimate the reductions in storm restoration cost and outages that will result from the proposed storm hardening initiatives. The effectiveness of Grade B construction and the proposed critical infrastructure storm hardening projects will be evaluated following future major storm events.

See Appendix 6 for an itemized summary of Gulf's storm hardening costs.

11.0 Impact to Collocation Facilities

11.1 Distribution

Gulf Power's evaluation of attachments made to its poles, towers, and structures has changed over the last three years in order to provide storm hardening for the future. These changes included:

- Pole Strength and Loading Engineering calculations were performed before attachment to any pole, tower or structure and before any

existing cables were upgraded or overlashed in order to determine if the increase in pole loading would necessitate pole modifications.

- Attachers complied with a new pre-notification process designed to inform Gulf Power of plans to attach, upgrade, or overlash cables to any Gulf Power poles, towers, or structures. This new process included a field pre-inspection with pole measurements, strength and loading calculations, work order preparation (if necessary), and a post inspection of all work. The requesting attacher is responsible for post inspection costs and any corrective actions if needed.
- Specification plates were revised to reflect storm hardening initiatives such as additional guying standards and the use of pole foam in potential flood prone or storm surge areas.
- Gulf is seeking provisions in its agreement with the Florida Cable Telecommunication Association (FCTA) that would require attachers to place an identification tag on the attachers' existing cables if they do not already have one. This retro-fit tagging and labeling of existing cables with the owners' name is for ease of contacting the attachers when supporting poles or facilities are damaged and the attacher is needed to help remove, clear the right-of-way, or transfer their cables to a new pole in emergencies, such as storm restoration.
- Every effort will be made by all pole attachers not to box or bracket a pole, tower, or structure on both sides. This practice ensures that the attachment will not encumber the climbing space or impede the ability to straighten a leaning pole in a timely manner.

11.2 Expansion, Rebuild, or Relocation of Distribution Facilities

See Appendix 3 for Gulf Power Company's Attachment Standards and Procedures Outline and Appendix 2 for information governing safety, reliability, pole loading capacity and engineering standards and procedures for third party attachments. Each attacher should refer to the contract they have with Gulf Power for details on notification protocol for new attachment permits and overlashing projects and any associated construction coordination. Gulf Power uses the National Joint Use Notification System (NJUNS) for joint-use notifications and coordination of construction activities with affected parties.

12.0 Third Party Attachers' Estimate of Costs and Benefits

12.1 Seeking Input from Attachers

Pursuant to Rule 25-6.0342(6), Gulf Power sought input from numerous Third Party Attachers in the development of its Storm Hardening Plan. The following attachers were provided a draft copy of Gulf's 2010-2012 Storm Hardening Plan on March 30, 2010 seeking their input.

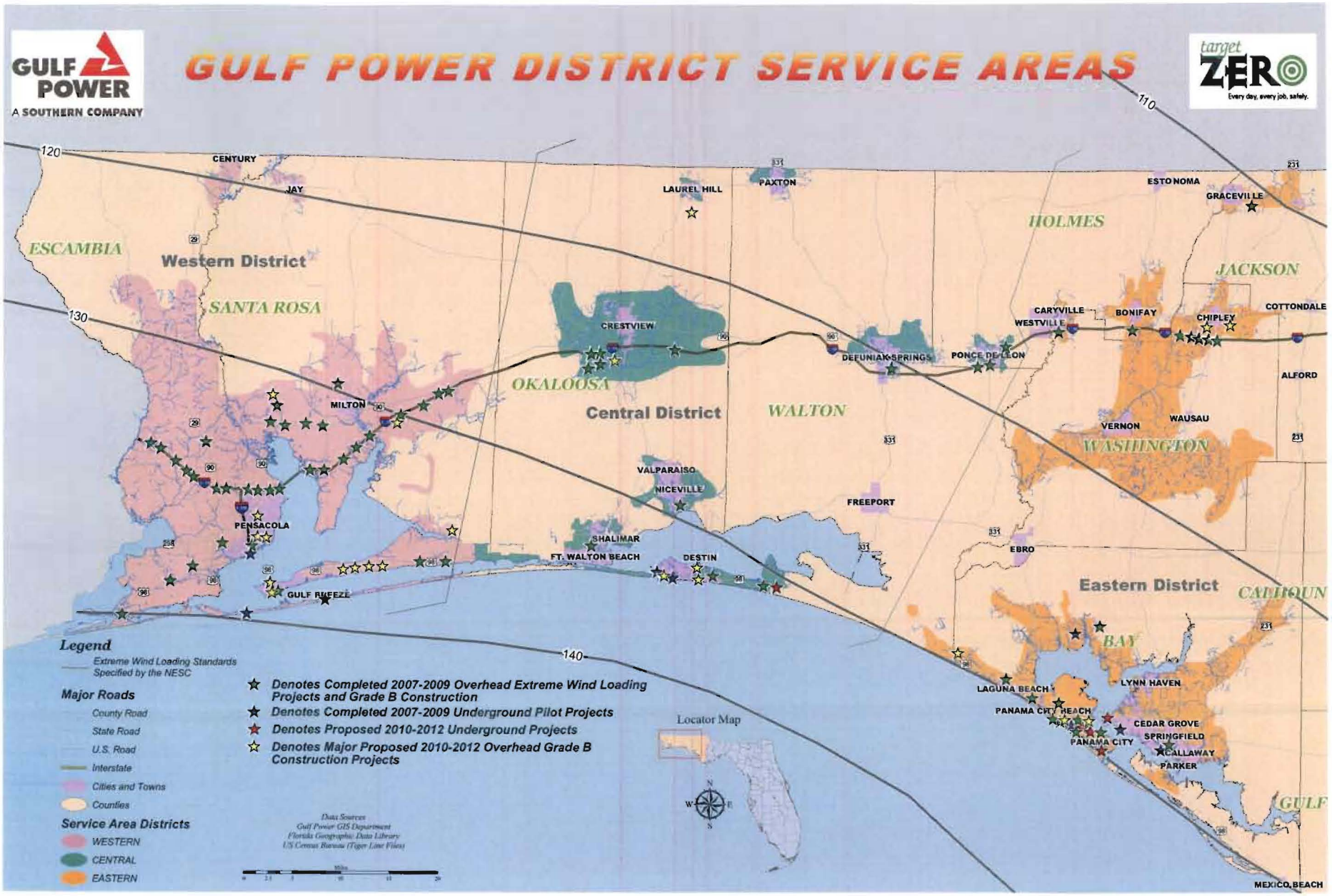
- AT&T
- Cox Communications
- Comcast Cable
- Embarq
- Florida Cable Telecommunications Association (FCTA)
- Bright House Communications
- Knology
- Fairpoint Communications
- Verizon
- Springfield Cable Vision
- Campbellton Cable TV
- Madison River Communications
- Mediacom
- Southern Light
- Escambia County Schools
- Valparaiso Broadband Communications System
- Level 3 Communications
- Kentucky Data Link, Inc.

In addition, Gulf Power coordinated the first series of face-to-face meetings with interested Third Party Attachers to discuss storm hardening initiatives on February 19, 2010 in Pensacola and February 25, 2010 in Panama City. Attendees included:

- AT&T
- Escambia County Schools
- Brighthouse
- Cox Communications
- Mediacom
- Southern Light Fiber
- Century Link
- Alpine Communications Corporation

12.2 Attacher Costs and Benefits

No cost and benefit data was received from Third-Party Attachers prior to the published date of this Storm Hardening Plan. Gulf Power welcomes any such data that the Attachers desire to include at a later date.


GULF POWER
A SOUTHERN COMPANY
GULF POWER DISTRICT SERVICE AREAS
target ZERO
Every day, every job, safely.
120
110
130
140
CENTURY
JAY
LAUREL HILL
PAXTON
ESTO NOMA
GRACEVILLE
HOLMES
ESCAMBIA
Western District
SANTA ROSA
JACKSON
CARYVILLE
WESTVILLE
BONIFAY
CHIPLEY
COTTONDALE
CRESTVIEW
DEFUNIAK SPRINGS
PONCE DE LEON
ALFORD
OKALOOSA
Central District
WALTON
MILTON
VERNON
WAUSAU
WASHINGTON
VALPARAISO
NICEVILLE
FREEPORT
PENSACOLA
SHALIMAR
FT. WALTON BEACH
DESTIN
EBRO
Eastern District
CALHOUN
GULF BREEZE
BAY
LAGUNA BEACH
LYNN HAVEN
PANAMA CITY BEACH
CEDAR GROVE
SPRINGFIELD
PANAMA CITY
CALLAWAY
PARKER
GULF
MEXICO BEACH
Legend
Extreme Wind Loading Standards Specified by the NESC
Major Roads
County Road
State Road
U.S. Road
Interstate
Cities and Towns
Counties
Service Area Districts
WESTERN
CENTRAL
EASTERN
Denotes Completed 2007-2009 Overhead Extreme Wind Loading Projects and Grade B Construction
Denotes Completed 2007-2009 Underground Pilot Projects
Denotes Proposed 2010-2012 Underground Projects
Denotes Major Proposed 2010-2012 Overhead Grade B Construction Projects
Locator Map
Data Sources
Gulf Power GIS Department
Florida Geographic Data Library
US Census Bureau (Tiger Line Files)

Appendix 2

Gulf Power Company
Overlashing Overview

Overlashing is the process of wrapping a new cable or fiber around an existing cable. Attachers who have pole attachment agreements with Gulf Power ("third-party attachers) normally use overlashing to deploy new services faster and /or to avoid vertical clearance problems that may require make-ready with associated costs.

It is imperative to determine if an overlashing project will impair electric safety and reliability or exceed pole loading capacity on existing Gulf Power facilities. For that reason, Gulf Power is requiring thirty (30) days advance notice of all overlashing projects to perform such analysis. The cost of the pole strength and loading analysis will be paid by the company who gives notice of the proposed overlashing.

Gulf Power recognizes the competitive concerns that may arise through advance notification of an existing third party attacher's plans to overlash. To this end, Gulf Power personnel and associated contractors are committed to maintaining strict confidentiality of this advance notice. The information provided by a prospective overlasher will be used solely for the purposes of conducting the necessary pre-engineering (pole strength and loading analysis) and make-ready engineering, if necessary. The identity of the entity providing advance notice of overlashing will be circulated within Gulf Power or among its contractor only on a "need-to-know" basis, and all persons receiving such information will be advised of the importance of maintaining confidentiality.

Appendix 3

Gulf Power Company
Attachment Standards and Procedures
Amended Outline

Gulf Power Company's Attachment Standards and Procedures govern safety, reliability, pole loading capacity, and engineering standards and procedures for third-party attachments and are comprised of, and for storm hardening initiatives will be, a combination of the following:

- Contracts with telephone companies and third party attachers
- Overlashing Overview document
- Attachment Permit & Overlashing Notification Procedure
- Gulf Power joint-use specification plates

Gulf Power Company's managed pole attachment process includes engineered pole strength and loading calculations, make ready inspections, and pre- and post-inspections of all new attachments.

Some of the key items which are currently part of Gulf Power's contracts with third-party attachers that address the attachment process are the following:

- Application and permits for pole attachments and service drops
- Attachment Identification
- No interference provision
- Requirement of following rules and procedures
- Attachment order on the pole
- Process for make ready, substitutions, changes, and rearrangements
- Use of qualified employees and contractors
- Damage to facilities

OVERHEAD STORM HARDENING

Gulf Power Company Electrical Distribution Facilities shall be storm hardened to the extent practical using the methods described or shown in the specification plates in this section.

The definition of "Storm Guying" is as follows and is used throughout this section:

Storm type down guys are additional down guys and anchors, positioned perpendicular to the path of conductors. These storm type down guys are not normally needed for support of the structure but provide support in the event of high winds. They are installed in pairs with as much anchor lead as possible and have the same requirements as any other down guy as far as insulating and grounding.

The following storm hardening methods shall be utilized:

Main feeder lines shall be located as far away as practical from the source of any storm surge and shall have storm guys on every pole where practical. The use of laterals from the main feeder to the coastline is highly encouraged.

Any controls for OCRs, capacitor banks, voltage regulators shall be placed as high as practical to avoid flooding with a storm surge. The use of wireless accessing is encouraged.

Any poles with OCRs, voltage regulators, capacitor banks, and underground riser poles shall be storm guyed where practical.

Pole Foreman shall be utilized to determine proper pole selection and proper anchoring. Emphasis needs to be placed upon the correct lead lengths for anchoring.

SUBJECT OVERHEAD DISTRIBUTION				
DETAIL STORM HARDENING				
Date 10-18-2007	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-I A

OVERHEAD STORM HARDENING

Continued from plate OZZ-1.

Poles set in our coastal areas or storm surge areas should be set using Pole Foam to strengthen the base to lessen leaning after flooding. This is commodity number 05-5014-8 and is located in JETS under Misc. UG. Generally, one package of pole foam is used for each pole and each package comes with instructions for use.

These areas are generally defined as areas within 1 mile of the Gulf or large bays. Spec plates OSZ-1,2,3,4,5,6 & 7 illustrate these areas. Of course there are other areas where this may be useful as well.

In these areas, shorter spans should be utilized to strengthen the system. This involves the use of more poles especially in main line construction.

As a means to strengthen existing poles, Osmose or equivalent pole bracing can be used.

In a flood/storm surge prone area, customers should install meters and metering equipment above the expected maximum flood level. Where this results in meters or metering equipment being above the standard specified heights above the ground, the customer will need to build permanent platforms and stairs to allow reading and servicing of the meters and equipment, unless the location of the equipment coincides with existing porches or platforms with ready access by Gulf Power employees. The platform must extend at least three feet out from the wall and at least 18" to either side of the metering equipment. Refer the customer to the local building inspector for other requirements for the platform and stairs.Gulf' metering handbook is another source of information.

Under normal circumstances, rear lot line construction shall be avoided and metering equipment shall not be placed on the rear of buildings.

SUBJECT OVERHEAD DISTRIBUTION				
DETAIL STORM HARDENING				
Date 10-18-2007	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-2 A

OVERHEAD STORM HARDENING

Joint-Use attachments

Third party attachers shall use proper anchoring and guying techniques to ensure that strength and integrity of the system is maintained.

Proper installation techniques shall be used. EX. Stringing of messengers shall be done between anchors.

Third party anchors shall be no closer than 4' from Gulf Power Company anchors to ensure integrity of the soil surrounding the anchors.

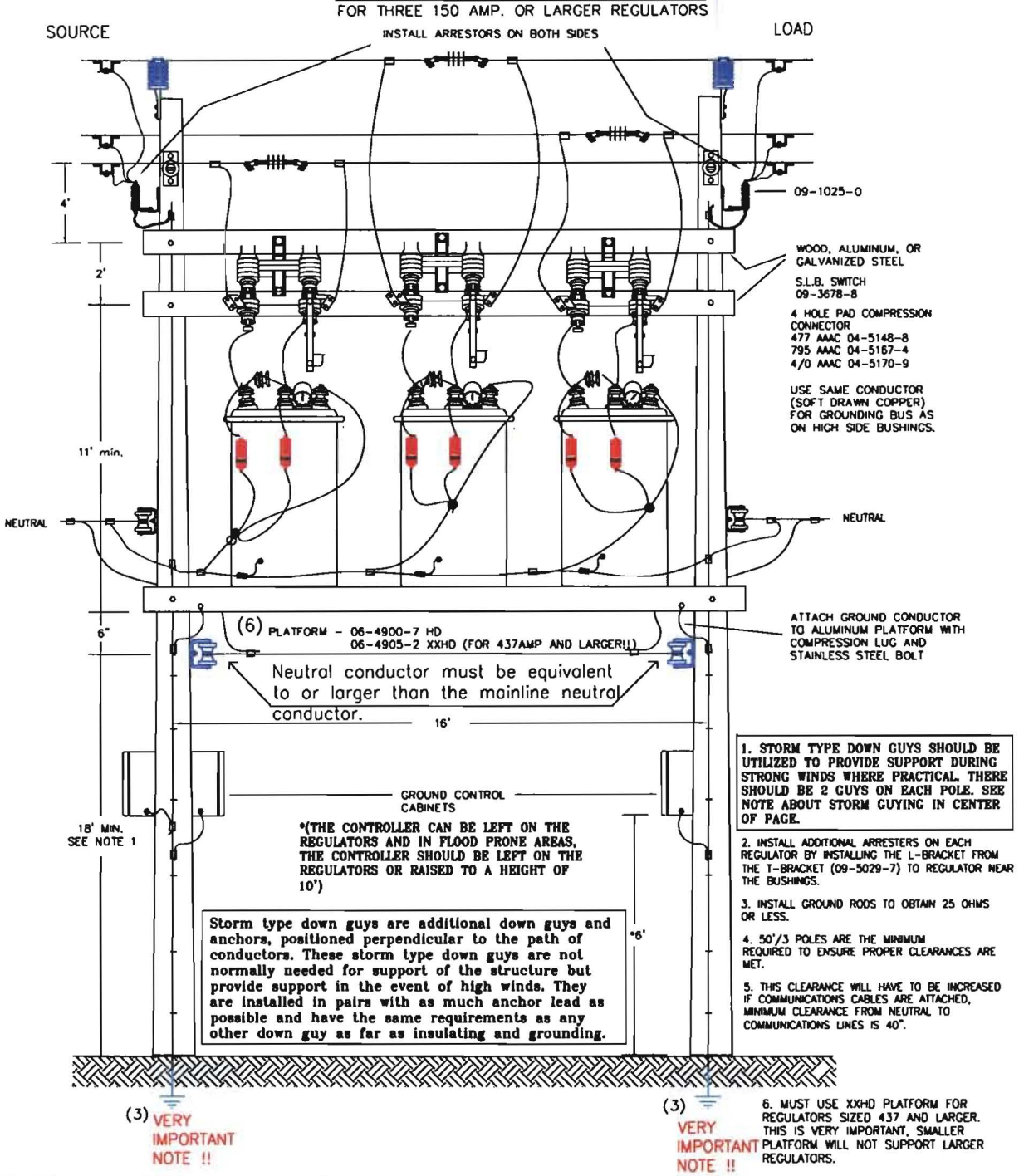
Third parties setting poles in flood prone or storm surge areas should utilize pole setting foam while setting poles to avoid leaning poles. These areas are generally defind as areas within 1 mile of the Gulf of Mexico or large bays.

SUBJECT OVERHEAD DISTRIBUTION				
DETAIL STORM HARDENING				
Date 10-18-2007	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-3 A

Overhead Storm Hardening

12 KV REGULATOR PLATFORM

FOR THREE 150 AMP. OR LARGER REGULATORS



*(THE CONTROLLER CAN BE LEFT ON THE REGULATORS AND IN FLOOD PRONE AREAS, THE CONTROLLER SHOULD BE LEFT ON THE REGULATORS OR RAISED TO A HEIGHT OF 10')

Storm type down guys are additional down guys and anchors, positioned perpendicular to the path of conductors. These storm type down guys are not normally needed for support of the structure but provide support in the event of high winds. They are installed in pairs with as much anchor lead as possible and have the same requirements as any other down guy as far as insulating and grounding.

1. STORM TYPE DOWN GUYS SHOULD BE UTILIZED TO PROVIDE SUPPORT DURING STRONG WINDS WHERE PRACTICAL. THERE SHOULD BE 2 GUYS ON EACH POLE. SEE NOTE ABOUT STORM GUYING IN CENTER OF PAGE.

2. INSTALL ADDITIONAL ARRESTERS ON EACH REGULATOR BY INSTALLING THE L-BRACKET FROM THE T-BRACKET (09-5029-7) TO REGULATOR NEAR THE BUSHINGS.

3. INSTALL GROUND RODS TO OBTAIN 25 OHMS OR LESS.

4. 50'/3 POLES ARE THE MINIMUM REQUIRED TO ENSURE PROPER CLEARANCES ARE MET.

5. THIS CLEARANCE WILL HAVE TO BE INCREASED IF COMMUNICATIONS CABLES ARE ATTACHED, MINIMUM CLEARANCE FROM NEUTRAL TO COMMUNICATIONS LINES IS 40".

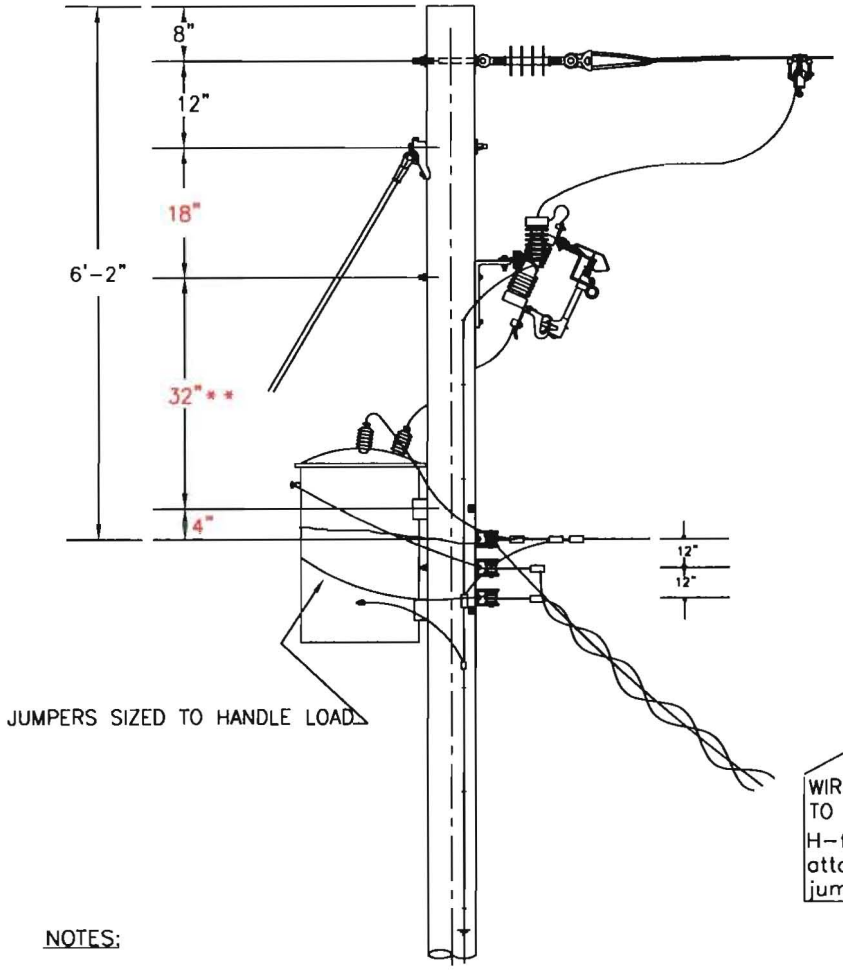
6. MUST USE XXHD PLATFORM FOR REGULATORS SIZED 437 AND LARGER. THIS IS VERY IMPORTANT, SMALLER PLATFORM WILL NOT SUPPORT LARGER REGULATORS.

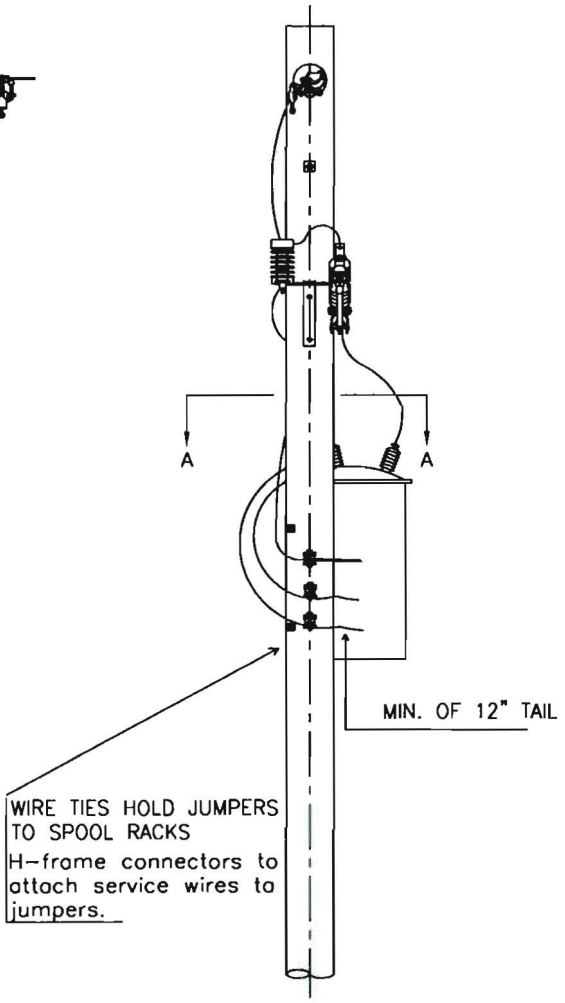
SUBJECT 12KV REGULATOR PLATFORM

DETAIL STORM HARDENING

Date 10-18-2007	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-4 A

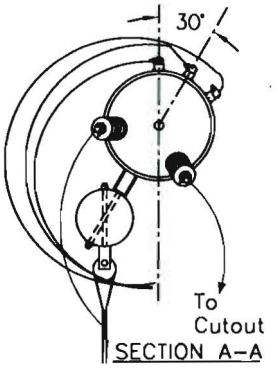
Overhead Storm Hardening





NOTES:

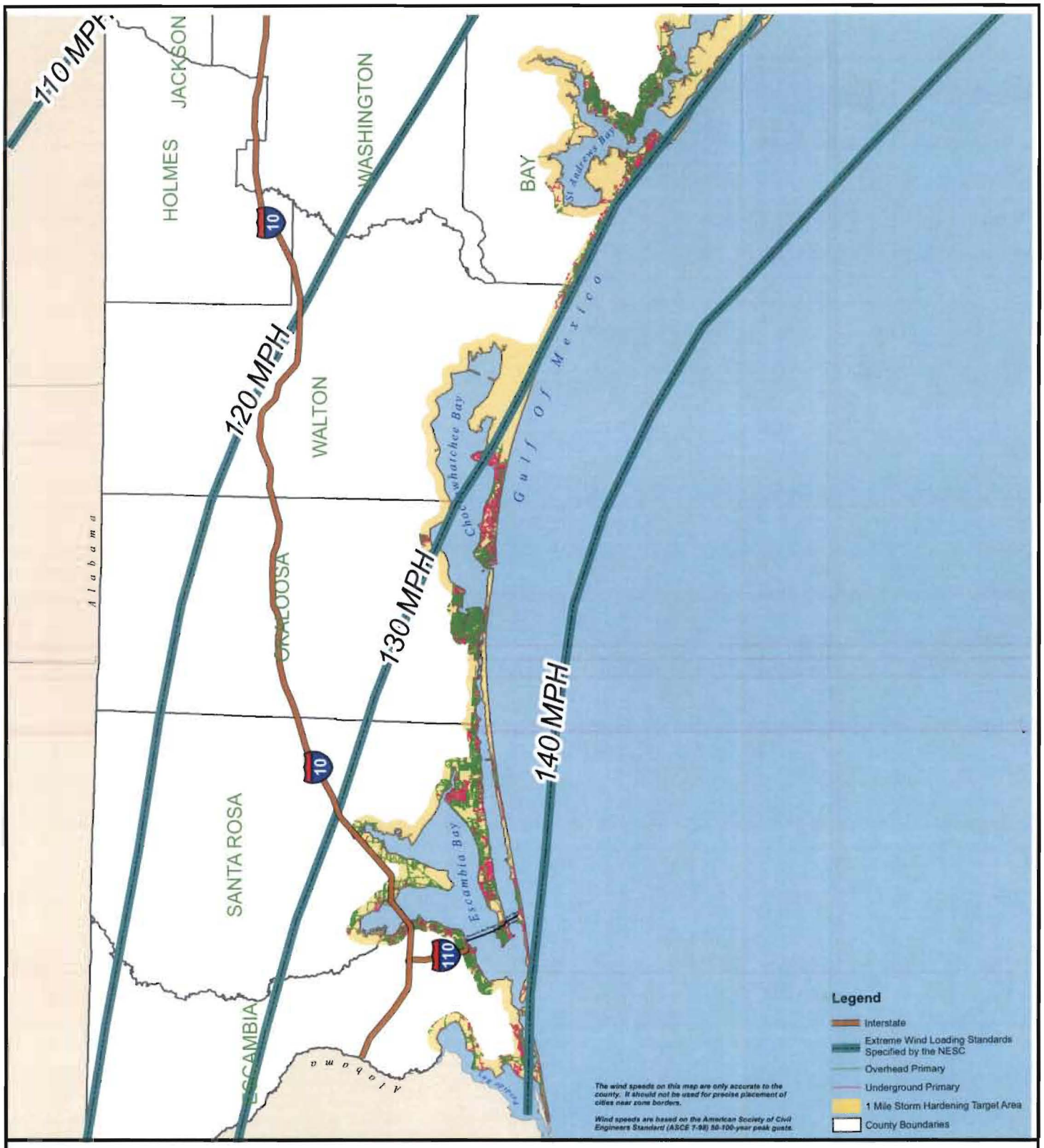
1. This example shows a one phase transformer. The same method is to be used for three phase installations as well.
2. Connect transformer secondary neutral lead to system neutral and leave approximately 12 inch tail for service neutral connections.
3. Use wildlife guards and covered riser wire in areas where wildlife is expected.
4. Avoid placing cutout directly above transformer.
5. If secondary is to extend in line, extend primary wire if practical to eliminate conflict between secondary and anchor guy.
6. "FLAG" connectors may be used instead of pin-type connectors at the transformer.



SUBJECT OVERHEAD DISTRIBUTION

DETAIL STORM HARDENING

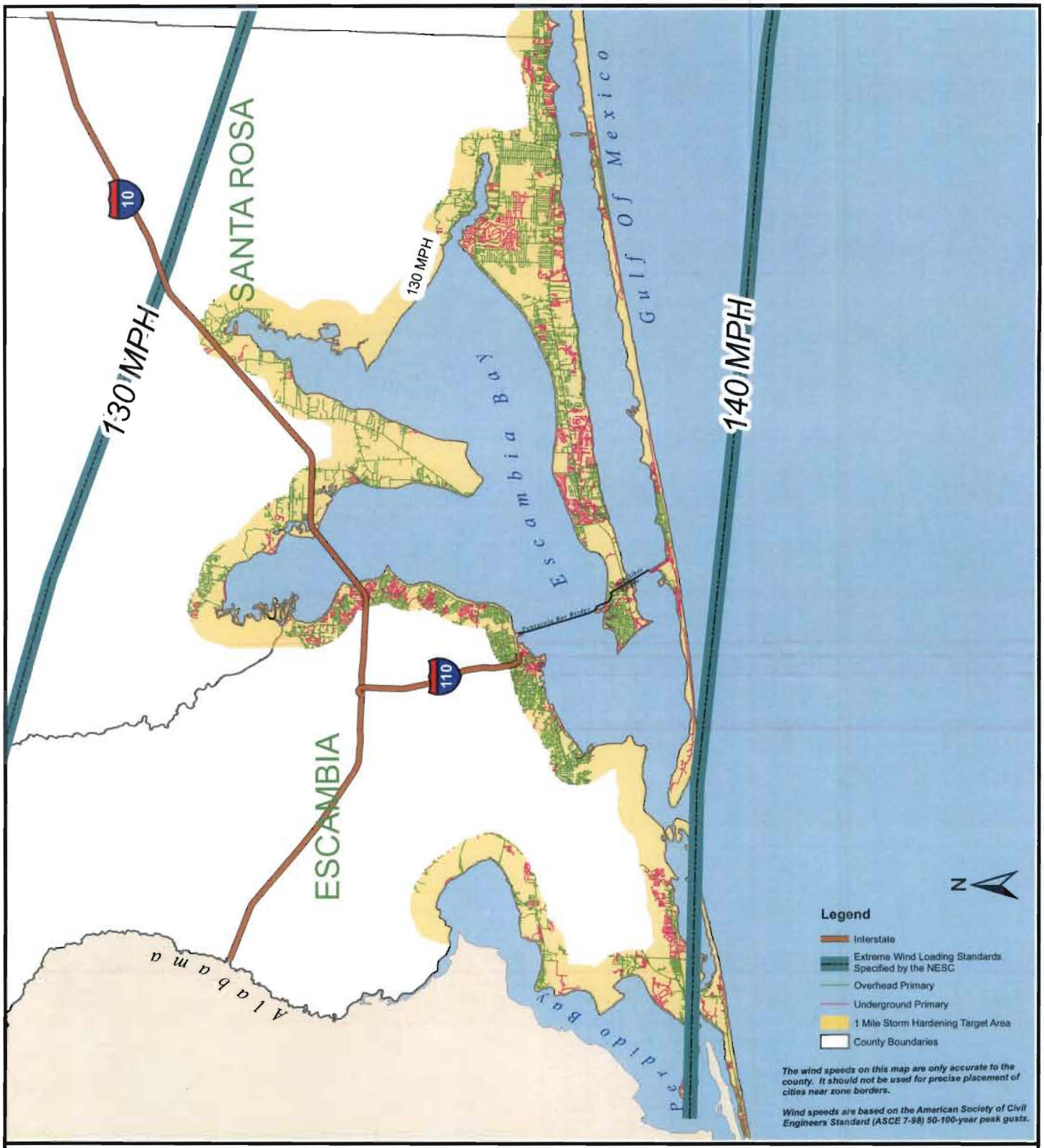
Date 10-18-2007	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-5



SUBJECT OVERHEAD DISTRIBUTION

DETAIL GULF POWER STORM HARDENING AREAS

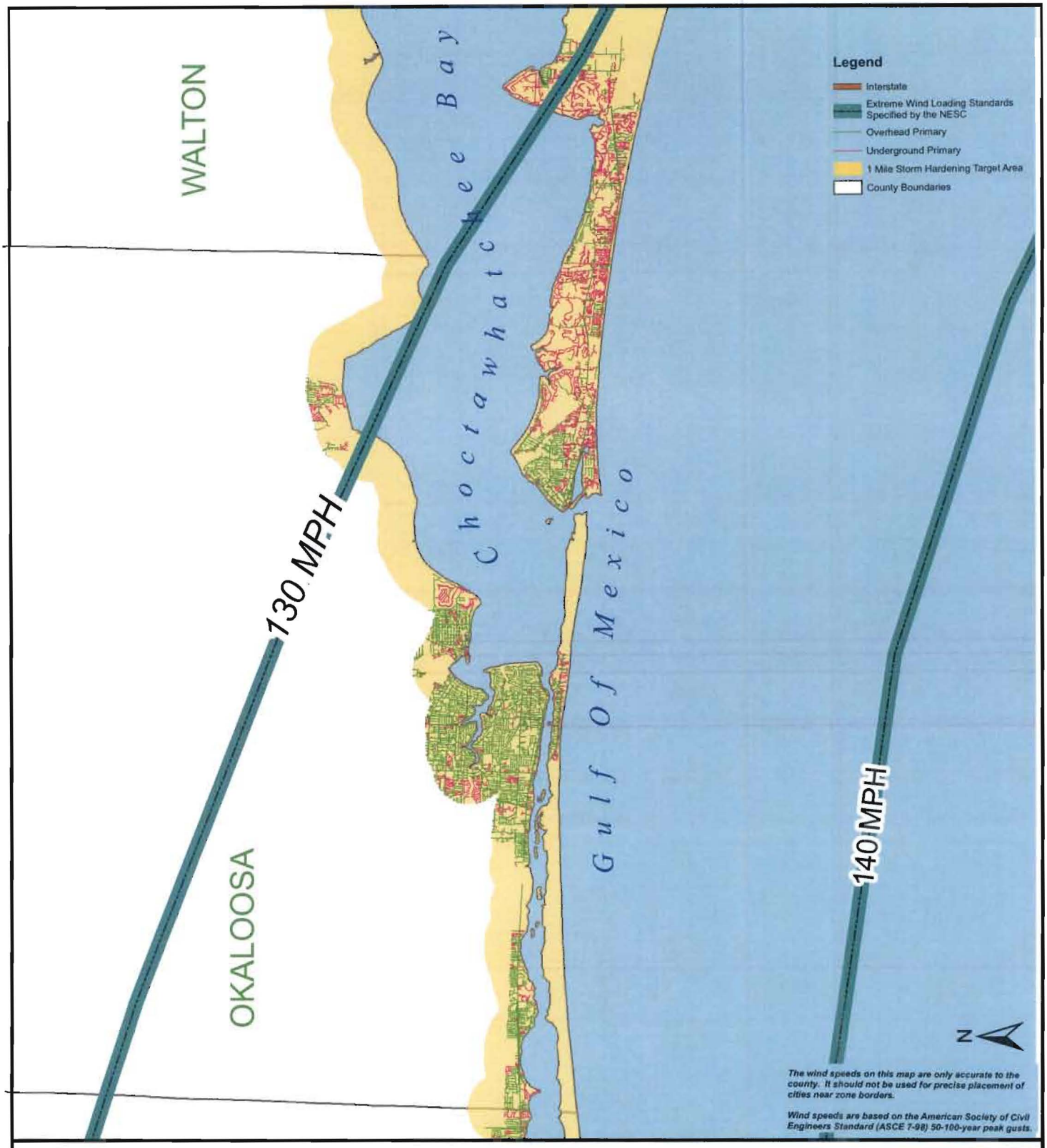
Date 3/23/07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-6



SUBJECT OVERHEAD DISTRIBUTION

DETAIL WESTERN STORM HARDENING AREAS

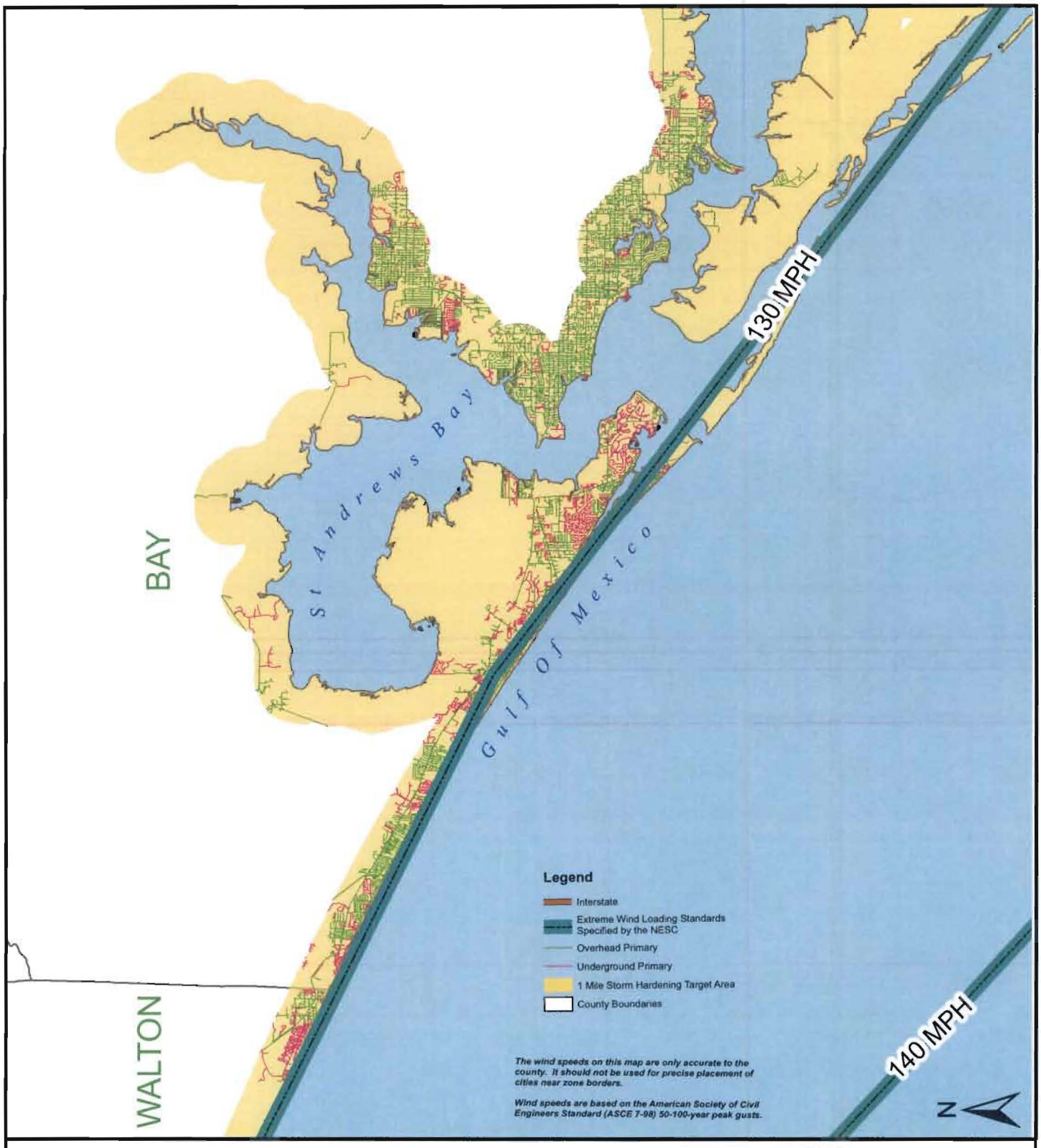
Date 3/23/07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-7



SUBJECT OVERHEAD DISTRIBUTION

DETAIL CENTRAL STORM HARDENING AREAS

Date 3/23/07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-8

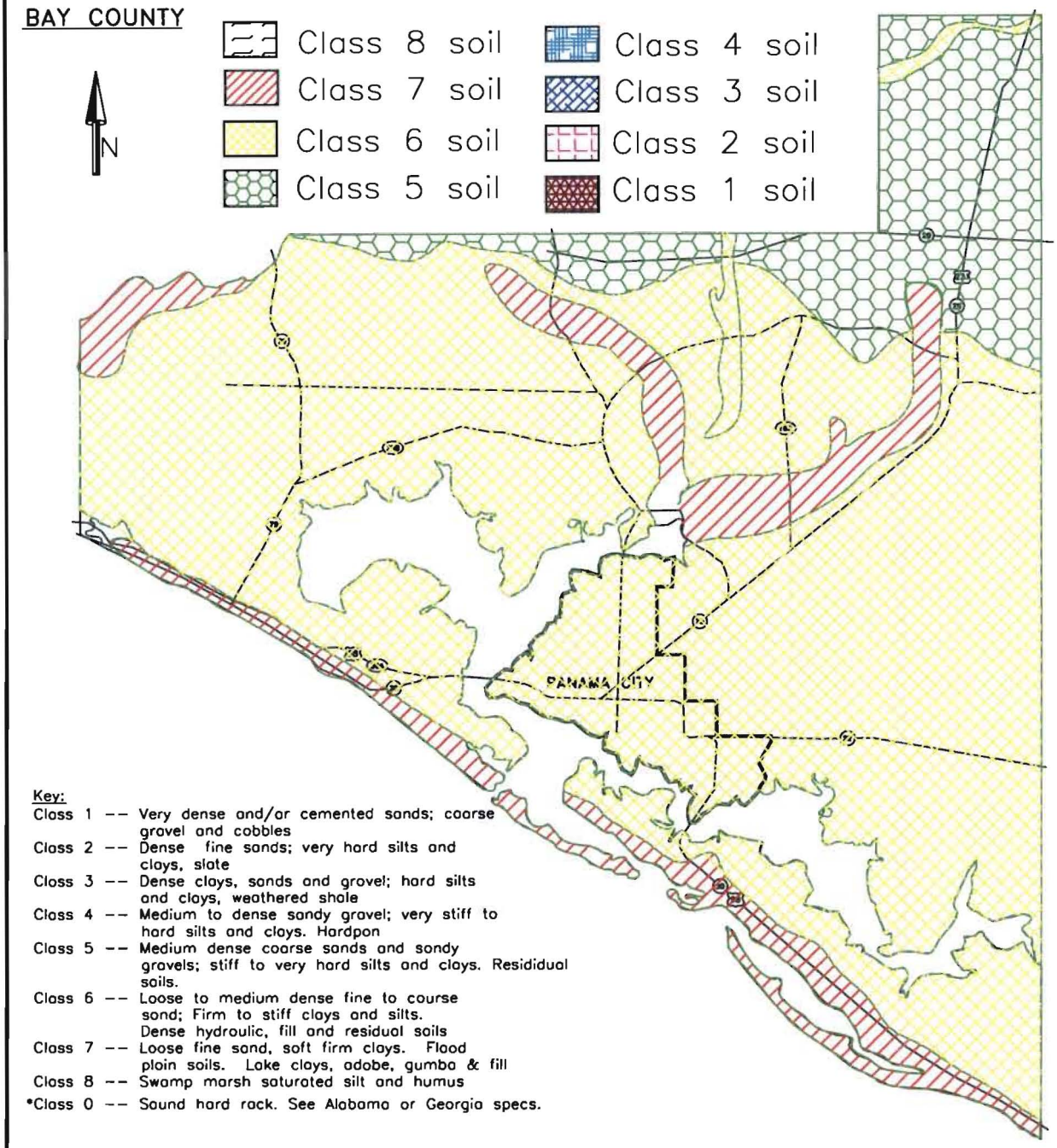


SUBJECT OVERHEAD DISTRIBUTION

DETAIL EASTERN STORM HARDENING AREAS

Date 3/23/07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-9

BAY COUNTY



Key:

Class 1 -- Very dense and/or cemented sands; coarse gravel and cobbles

Class 2 -- Dense fine sands; very hard silts and clays, slate

Class 3 -- Dense clays, sands and gravel; hard silts and clays, weathered shale

Class 4 -- Medium to dense sandy gravel; very stiff to hard silts and clays. Hardpon

Class 5 -- Medium dense coarse sands and sondy gravels; stiff to very hard silts and clays. Resididual soils.

Class 6 -- Loose to medium dense fine to course sond; Firm to stiff clays and silts. Dense hydroulic, fill and residual soils

Class 7 -- Loose fine sand, soft firm clays. Flood ploin soils. Lake clays, adobe, gumbo & fill

Class 8 -- Swamp marsh saturated silt and humus

*Class 0 -- Sound hard rock. See Alabama or Georgia specs.

*Class 0 soil is not typically in the Gulf Power service area. If encountered, refer to Georgia Power or Alabama Power specifications.

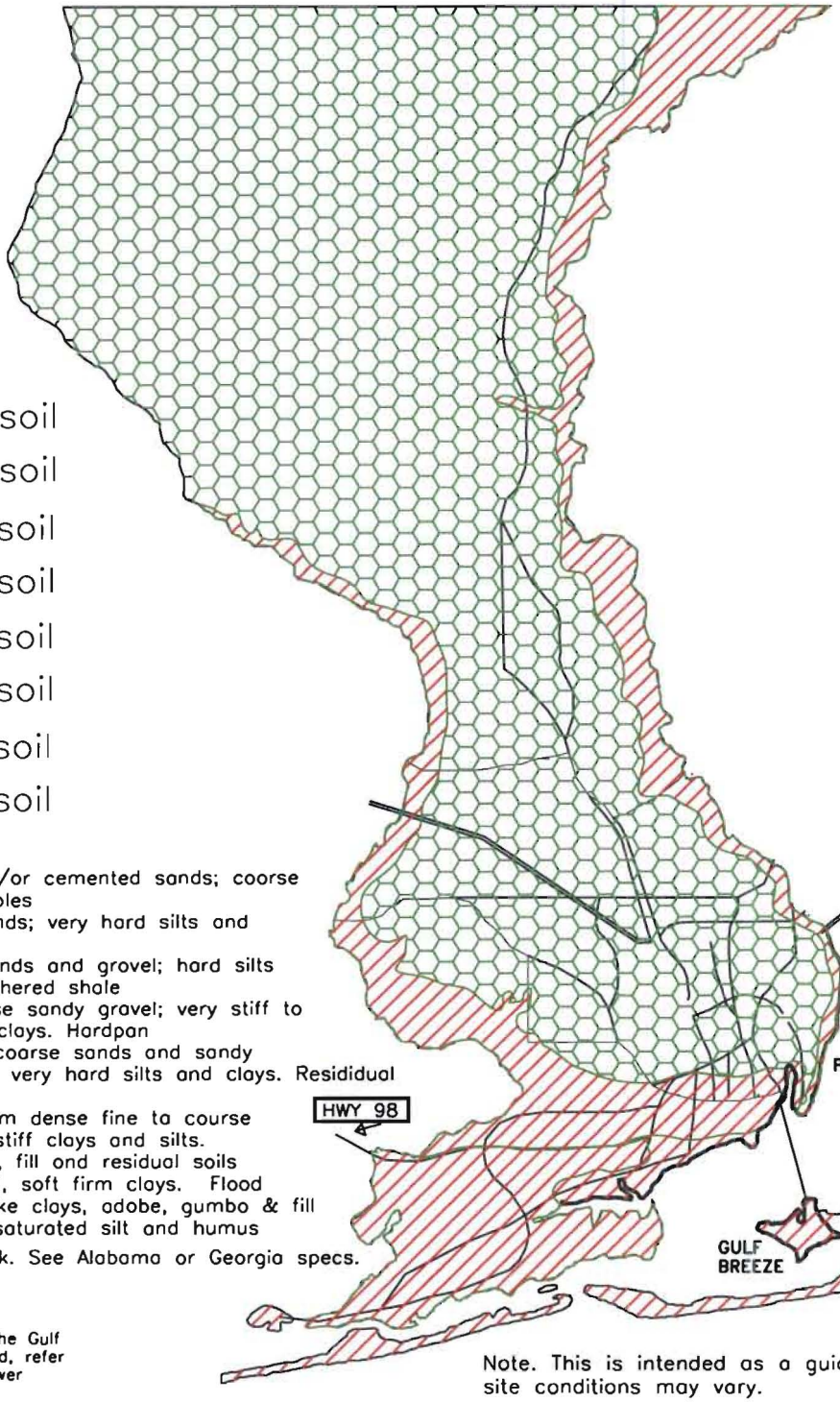
Note: This is a guide. Individuol site conditions may vary.

SUBJECT OVERHEAD DISTRIBUTION

DETAIL SOIL CLASS ACCORDING TO HOLDING STRENGTH. DATA OBTAINED FROM THE FLORIDA GEOLOGICAL SURVEY.

Date 11-09-07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-10 A

ESCAMBIA COUNTY



Legend

- Class 8 soil
- Class 7 soil
- Class 6 soil
- Class 5 soil
- Class 4 soil
- Class 3 soil
- Class 2 soil
- Class 1 soil

Key:

Class 1 -- Very dense and/or cemented sands; coorse gravel and cobbles

Class 2 -- Dense fine sands; very hard silts and clays, slate

Class 3 -- Dense clays, sands and grovel; hard silts ond clays, weathered shale

Class 4 -- Medium to dense sandy gravel; very stiff to hard silts and clays. Hardpan

Class 5 -- Medium dense coarse sands and sandy gravels; stiff to very hard silts and clays. Resididual soils.

Class 6 -- Loose to medium dense fine to course sand; Firm to stiff clays and silts. Dense hydraulic, fill ond residual soils

Class 7 -- Loose fine sand, soft firm clays. Flood plain soils. Lake clays, adobe, gumbo & fill

Class 8 -- Swamp marsh saturated silt and humus

*Class 0 -- Sound hard rock. See Alabama or Georgia specs.

*Class 0 soil is not typically in the Gulf Power service oreo. If encountered, refer to Georgia Power or Alabama Power specificotions.

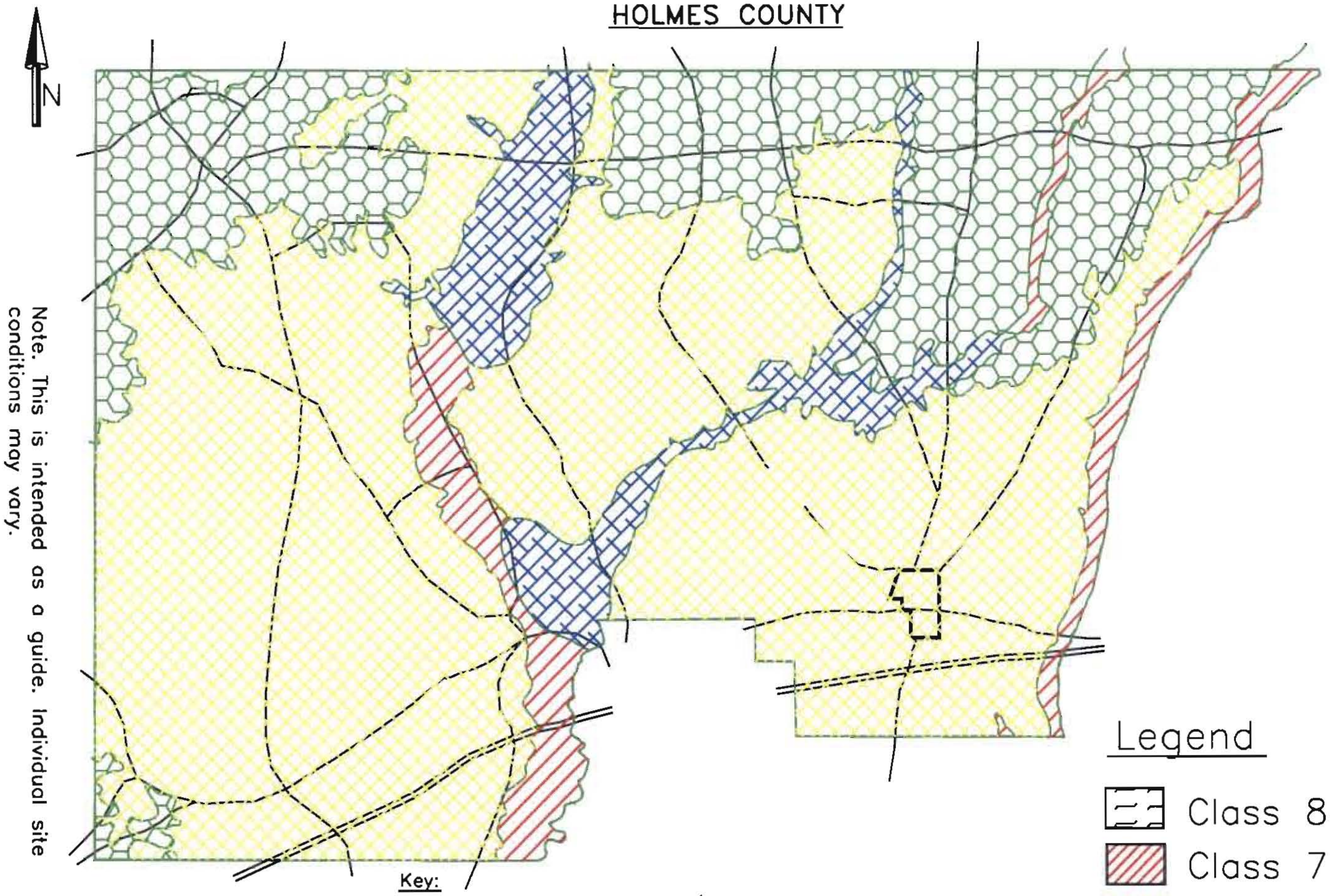
Note. This is intended as a guide. Individual site conditions may vary.

SUBJECT OVERHEAD DISTRIBUTION

DETAIL SOIL CLASS ACCORDING TO HOLDING STRENGTH. DATA OBTAINED FROM THE FLORIDA GEOLOGICAL SURVEY.

Date 10/19/2007	SUPERSEDES DATE 10/19/2007	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-11 A

HOLMES COUNTY



Note. This is intended as a guide. Individual site conditions may vary.

Legend

- Class 8 soil
- Class 7 soil
- Class 6 soil
- Class 5 soil
- Class 4 soil
- Class 3 soil
- Class 2 soil
- Class 1 soil

Key:

Class 1 -- Very dense and/or cemented sands; coarse gravel and cobbles
Class 2 -- Dense fine sands; very hard silts and clays, slate
Class 3 -- Dense clays, sands and gravel; hard silts and clays, weathered shale
Class 4 -- Medium to dense sandy gravel; very stiff to hard silts and clays. Hordpan
Class 5 -- Medium dense coarse sands and sandy gravels; stiff to very hard silts and clays. Residiual soils.
Class 6 -- Loose to medium dense fine to course sand; Firm to stiff clays and silts. Dense hydraulic, fill and residual soils
Class 7 -- Loose fine sand, soft firm clays. Flood plain soils. Lake clays, adobe, gumbo & fill
Class 8 -- Swamp marsh saturated silt and humus
*Class 0 -- Sound hard rock. See Alabama or Georgia specs.

*Class 0 soil is not typically in the Gulf Power service area. If encountered, refer to Georgia Power or Alabama Power specifications.

SUBJECT OVERHEAD DISTRIBUTION

DETAIL SOIL CLASS ACCORDING TO HOLDING STRENGTH. DATA OBTAINED FROM THE FLORIDA GEOLOGICAL SURVEY.

Date 11-27-2007

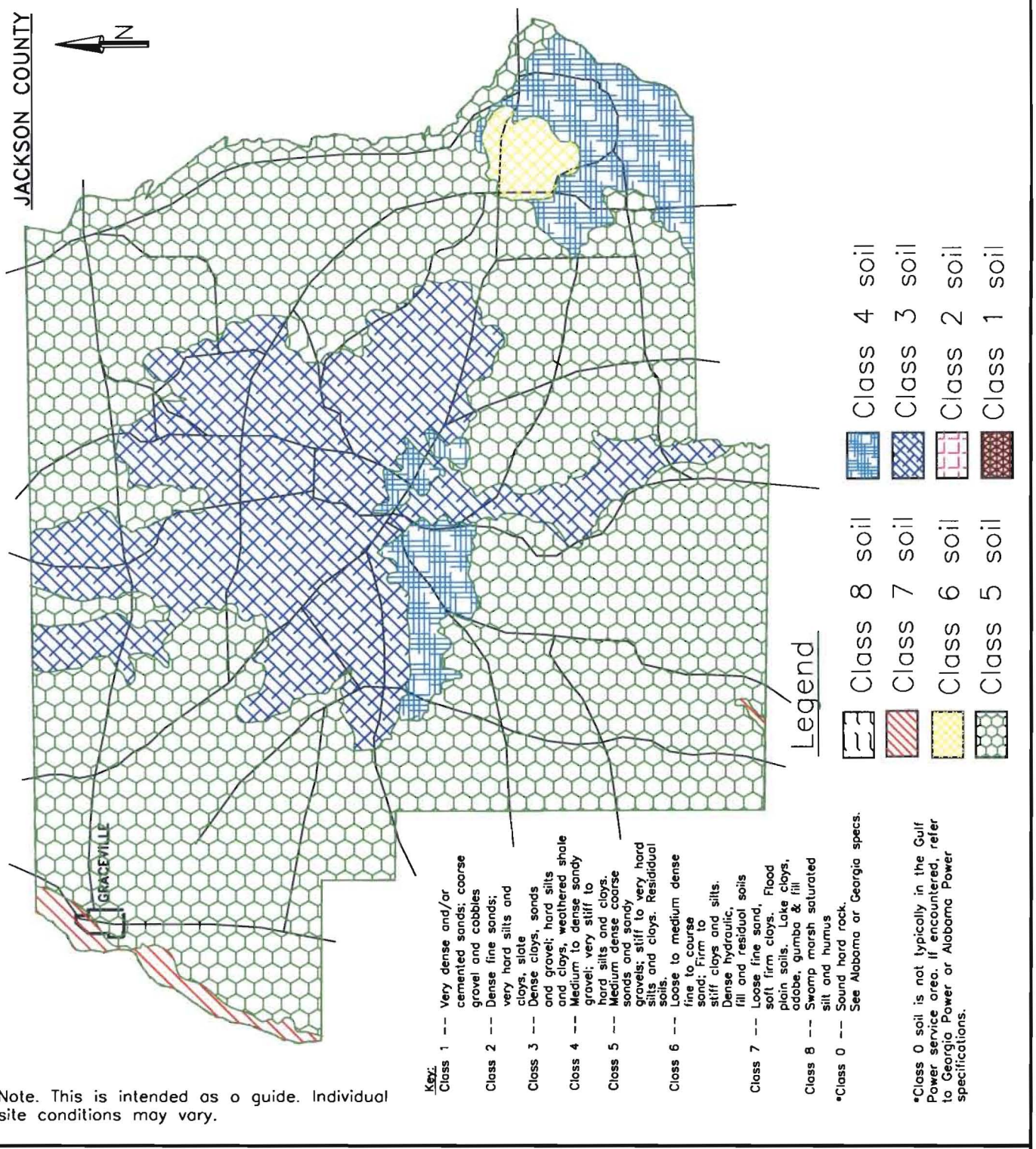
SUPERSEDES
DATE

SHEET 1 OF 1 SHEETS

Gulf Power
A SOUTHERN COMPANY

A- OZZ-12

OZZ-12

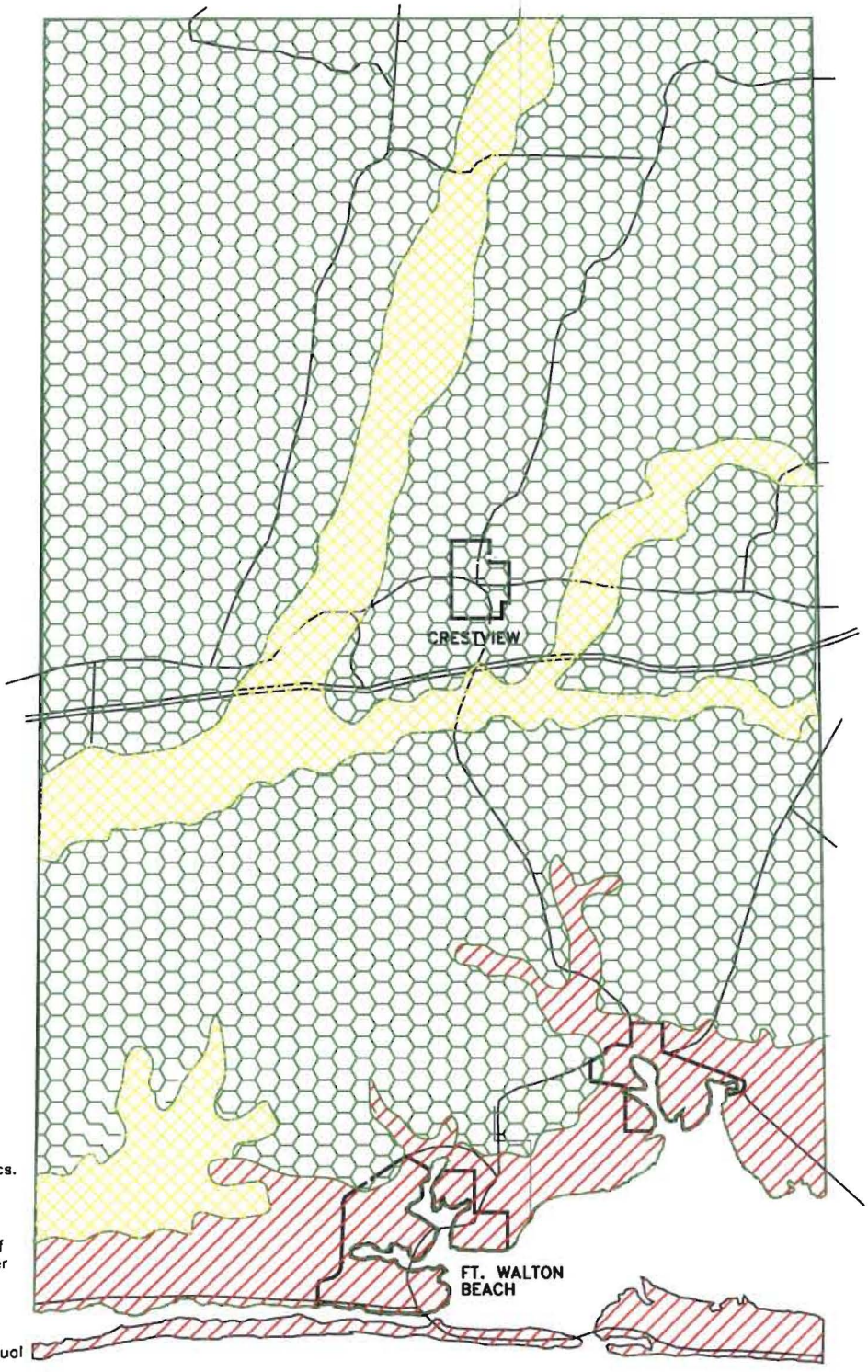


SUBJECT OVERHEAD DISTRIBUTION

DETAIL SOIL CLASS ACCORDING TO HOLDING STRENGTH. DATA OBTAINED FROM THE FLORIDA GEOLOGICAL SURVEY.

Date 11-16-2007	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-13 A

OKALOOSA COUNTY



Legend

- Class 8 soil
- Class 7 soil
- Class 6 soil
- Class 5 soil
- Class 4 soil
- Class 3 soil
- Class 2 soil
- Class 1 soil

Key:

- Class 1 -- Very dense and/or cemented sands; coarse gravel and cobbles
- Class 2 -- Dense fine sands; very hard silts and clays, slate
- Class 3 -- Dense clays, sands and gravel; hard silts and clays, weathered shale
- Class 4 -- Medium to dense sandy gravel; very stiff to hard silts and clays.
- Class 5 -- Medium dense coarse sands and sandy gravels; stiff to very hard silts and clays. Resididuol soils.
- Class 6 -- Loose to medium dense fine to course sand; Firm to stiff clays and silts. Dense hydraulic, fill and residual soils
- Class 7 -- Loose fine sand, soft firm clays. Flood ploin soils. Lake clays, odobe, gumbo & fill
- Class 8 -- Swamp marsh saturated silt and humus
- *Class 0 -- Sound hard rock. See Alabama or Georgia specs.

*Class 0 soil is not typically in the Gulf Power service area. If encountered, refer to Georgia Power or Alabama Power specifications.

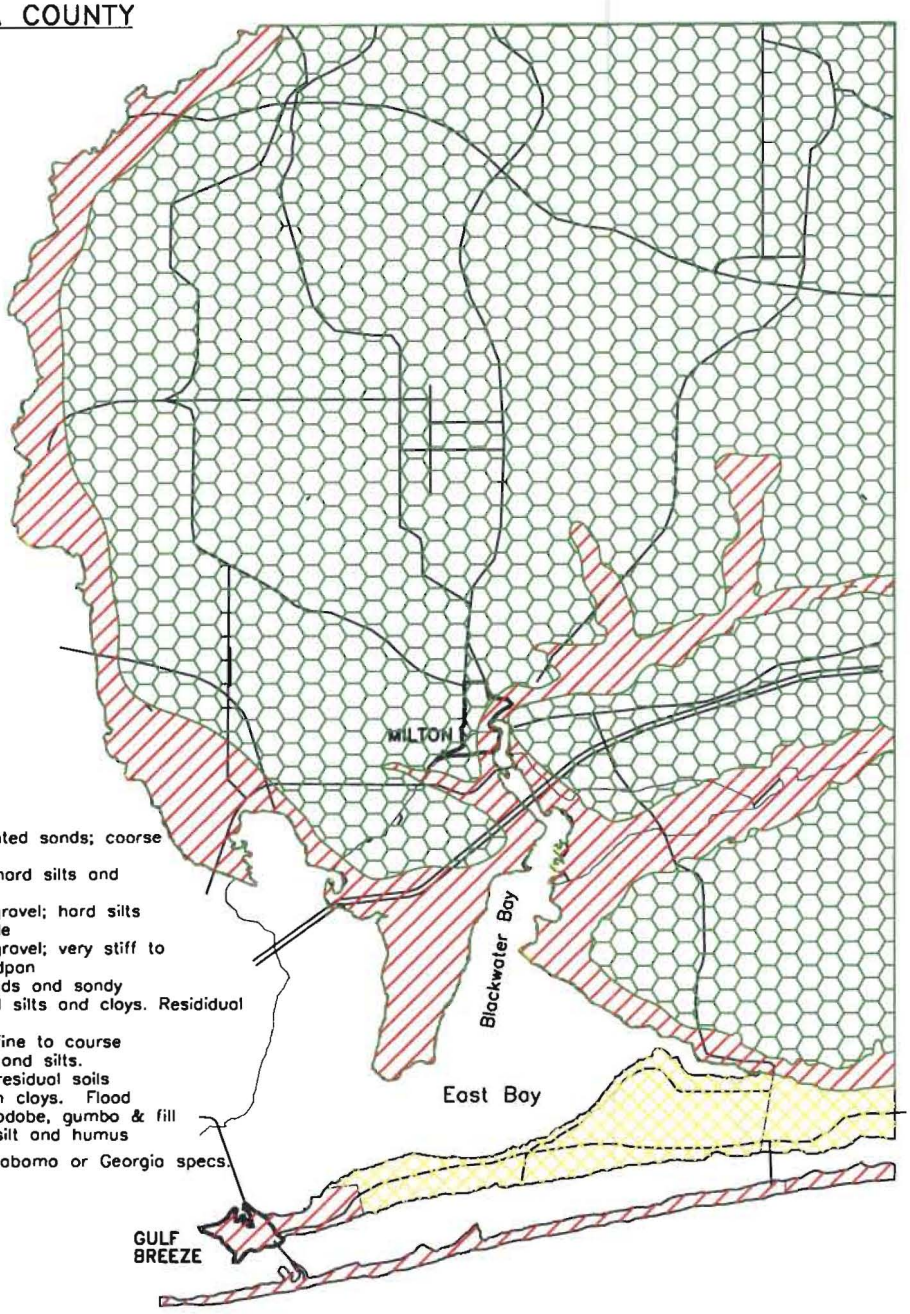
Note. This is intended as a guide. Individual site conditions may vary.

SUBJECT OVERHEAD DISTRIBUTION

DETAIL SOIL CLASS ACCORDING TO HOLDING STRENGTH. DATA OBTAINED FROM THE FLORIDA GEOLOGICAL SURVEY.

Date 10-30-07	SUPERSEDES DATE 10-30-07	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-14

SANTA ROSA COUNTY



Legend

- Class 8 soil
- Class 7 soil
- Class 6 soil
- Class 5 soil
- Class 4 soil
- Class 3 soil
- Class 2 soil
- Class 1 soil

Key:

Class 1 -- Very dense and/or cemented sands; coarse gravel and cobbles

Class 2 -- Dense fine sands; very hard silts and clays, slate

Class 3 -- Dense clays, sands and gravel; hard silts and clays, weathered shale

Class 4 -- Medium to dense sandy gravel; very stiff to hard silts and clays. Hardpan

Class 5 -- Medium dense coarse sands and sandy gravels; stiff to very hard silts and clays. Resididual soils.

Class 6 -- Loose to medium dense fine to course sand; Firm to stiff clays and silts. Dense hydraulic, fill and residual soils

Class 7 -- Loose fine sand, soft firm clays. Flood plain soils. Lake clays, adobe, gumbo & fill

Class 8 -- Swamp marsh saturated silt and humus

*Class 0 -- Sound hard rock. See Alabama or Georgia specs.

*Class 0 soil is not typically in the Gulf Power service area. If encountered, refer to Georgia Power or Alabama Power specifications.

Note. This is intended as a guide. Individual site conditions may vary.

SUBJECT OVERHEAD DISTRIBUTION

DETAIL SOIL CLASS ACCORDING TO HOLDING STRENGTH. DATA OBTAINED FROM THE FLORIDA GEOLOGICAL SURVEY.

Date 10-26-07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-15

WALTON COUNTY

Key:

Class 1 -- Very dense and/or cemented sands; coarse gravel and cobbles

Class 2 -- Dense fine sands; very hard silts and clays, slate

Class 3 -- Dense clays, sands and gravel; hard silts and clays, weathered shale

Class 4 -- Medium to dense sandy gravel; very stiff to hard silts and clays.

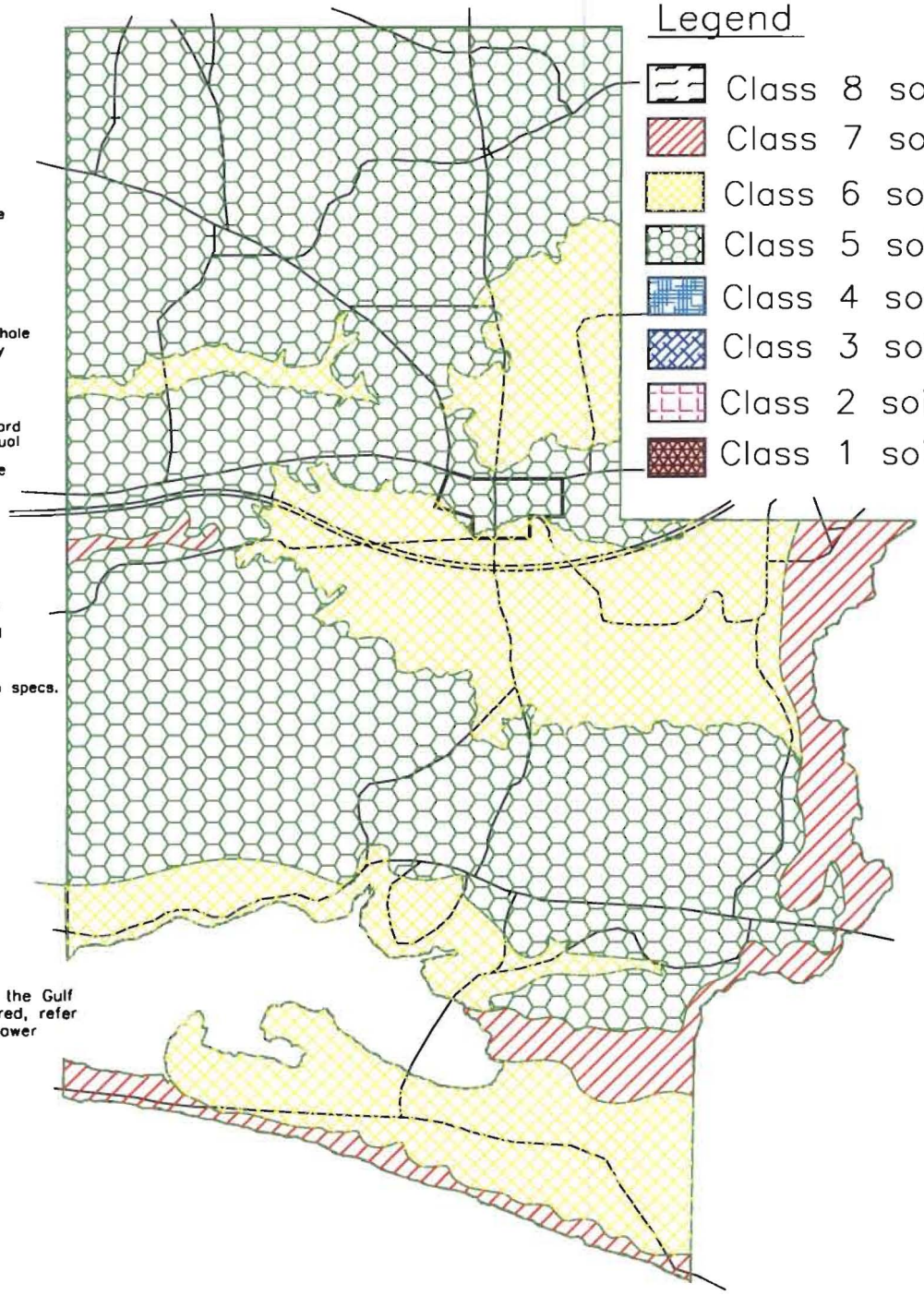
Class 5 -- Medium dense coarse sands and sandy gravels; stiff to very hard silts and clays. Resididual soils.

Class 6 -- Loose to medium dense fine to course sand; Firm to stiff clays and silts. Dense hydraulic, fill and residual soils

Class 7 -- Loose fine sand, soft firm clays. Flood plain soils. Lake clays, adobe, gumbo & fill

Class 8 -- Swamp marsh saturated silt and humus

*Class 0 -- Sound hard rock. See Alabama or Georgia specs.



*Class 0 soil is not typically in the Gulf Power service area. If encountered, refer to Georgia Power or Alabama Power specifications.

Note. This is intended as a guide. Individual site conditions may vary.

SUBJECT OVERHEAD DISTRIBUTION

DETAIL SOIL CLASS ACCORDING TO HOLDING STRENGTH. DATA OBTAINED FROM THE FLORIDA GEOLOGICAL SURVEY.

Date 11-02-2007	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- OZZ-16

Underground Storm Hardening

Gulf Power's Underground Distribution Facilities shall, where practical, be storm hardened to the extent practical using the methods described in this section if they are to be installed within One Mile of the Gulf of Mexico or any other large body of salt water (Pensacola Bay, Escambia Bay, Intercoastal Waterway, Choctawhatchee Bay, St Andrew Bay, etc). See Plates UZZ-2, UZZ-3, UZZ-4, and UZZ-5.

Underground circuits and feeders shall, where practical, be designed and built in the road right-of-way. In a flood/storm surge prone area, customers must install meters and metering equipment above the expected maximum flood level. Where this results in meters or metering equipment being above the standard specified heights above the ground, the customer will need to build permanent platforms and stairs to allow reading and servicing of the meters and equipment, unless the location of the equipment coincides with existing porches or platforms with ready access by Gulf Power employees. The platform must extend at least three feet out from the wall and at least 18" to either side of the metering equipment. Refer the customer to the local building inspector for other requirements for the platform and stairs.

Under normal circumstances, rear lot line construction shall be avoided and metering equipment shall not be placed on the rear of buildings.

Padmounted equipment that utilize (primary) live front connections and/or air break switches shall not be used in areas prone to flooding.

Consideration should be given to anchoring below grade boxes or vaults with pilings. See Plate UZZ-8.

Consideration should also be given to using transformer box pad in sandy or in storm surge areas. See Plate UZZ-9.

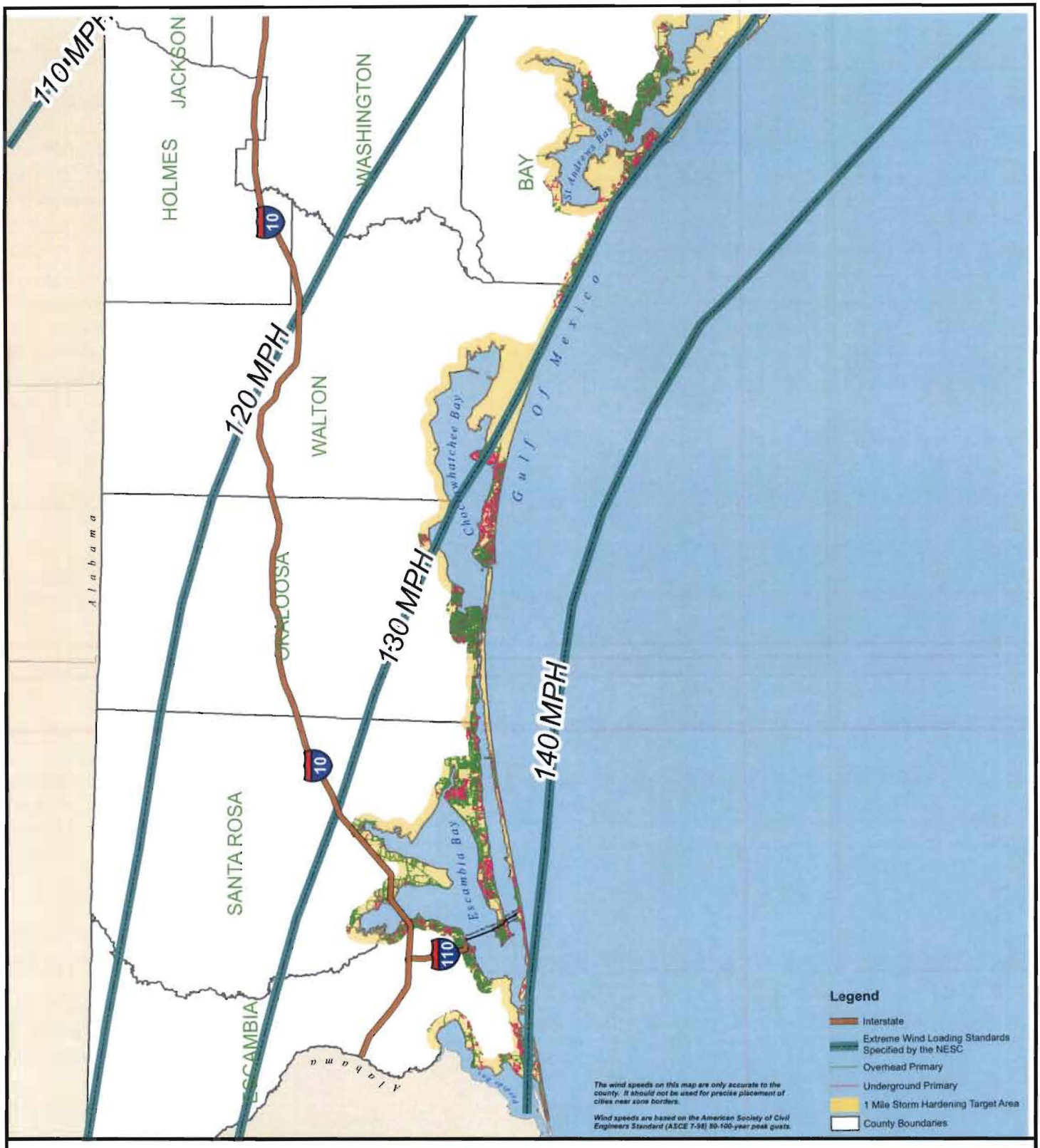
Underground feeders, especially those with large conductors (600 amp or 900 amp systems), utilizing a duct system, should be concrete encased and should be installed as far as practical from seacoasts, lakes, rivers, bays and other low lying areas to protect them from washouts and flooding. If possible the feeder should be built several blocks from these areas and the use of laterals, from the main feeder, should be used to serve the seacoast.

Padmounted equipment (such as transformers, pedestals, feed-thru cabinets, etc) should be located in places that naturally provide storm surge protection. Examples include: behind buildings, behind trees, high areas, etc.

3Ø transformers serving Gulf Front condo's, motels, restaurants, etc., shall, where practical, be installed on the opposite side of the building to the Gulf and as close to the center of the building as practical. The transformer should never be installed between two buildings, due to the extreme erosion of sand during a storm surge.

Where practical, underground circuits should be looped.

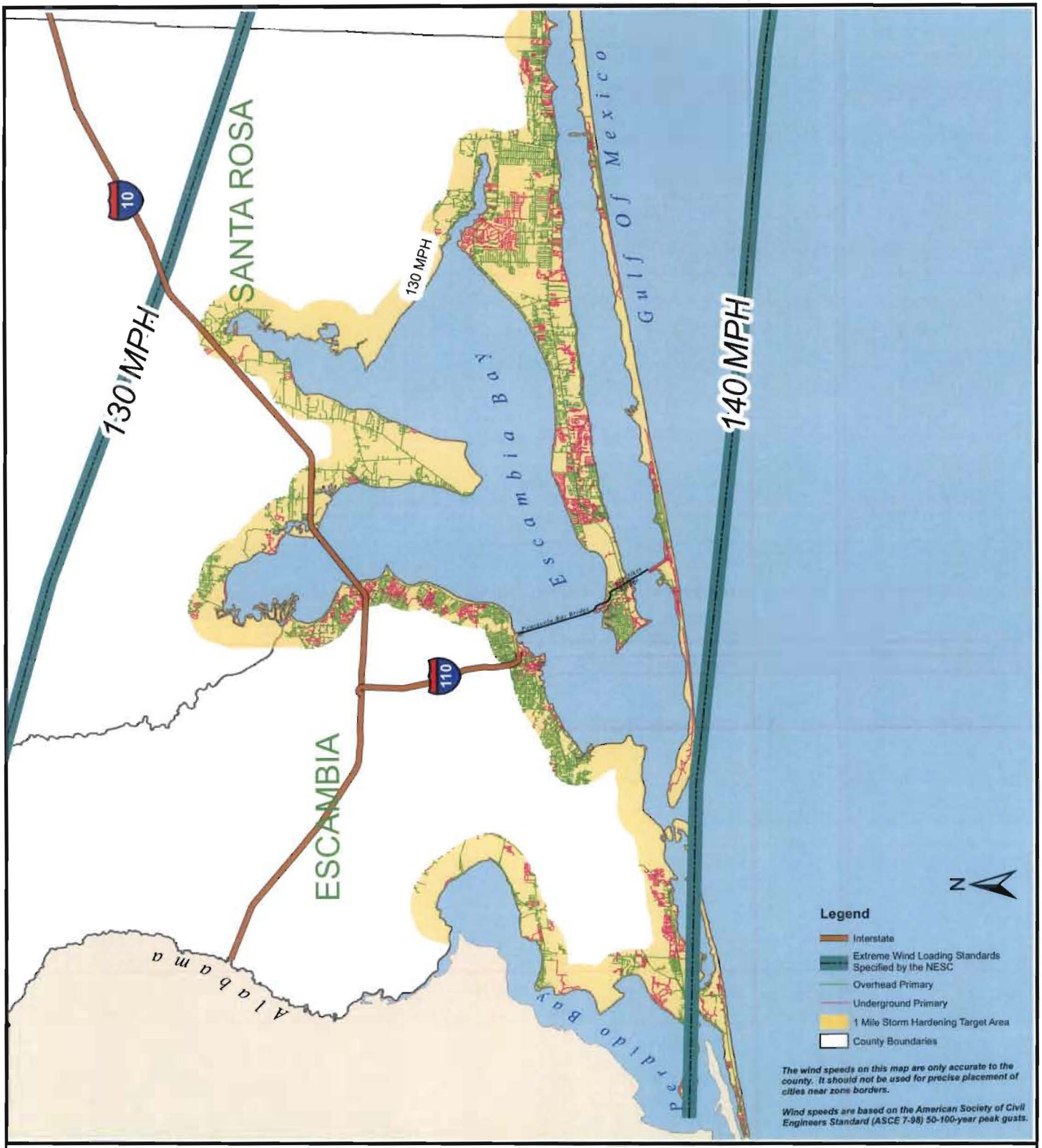
SUBJECT UNDERGROUND STORM HARDENING				
DETAIL GENERAL STATEMENTS				
Date 12-16-08	SUPERSEDES 03-14-07 DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- UZZ-1



SUBJECT UNDERGROUND DISTRIBUTION

DETAIL STORM HARDENING AREAS

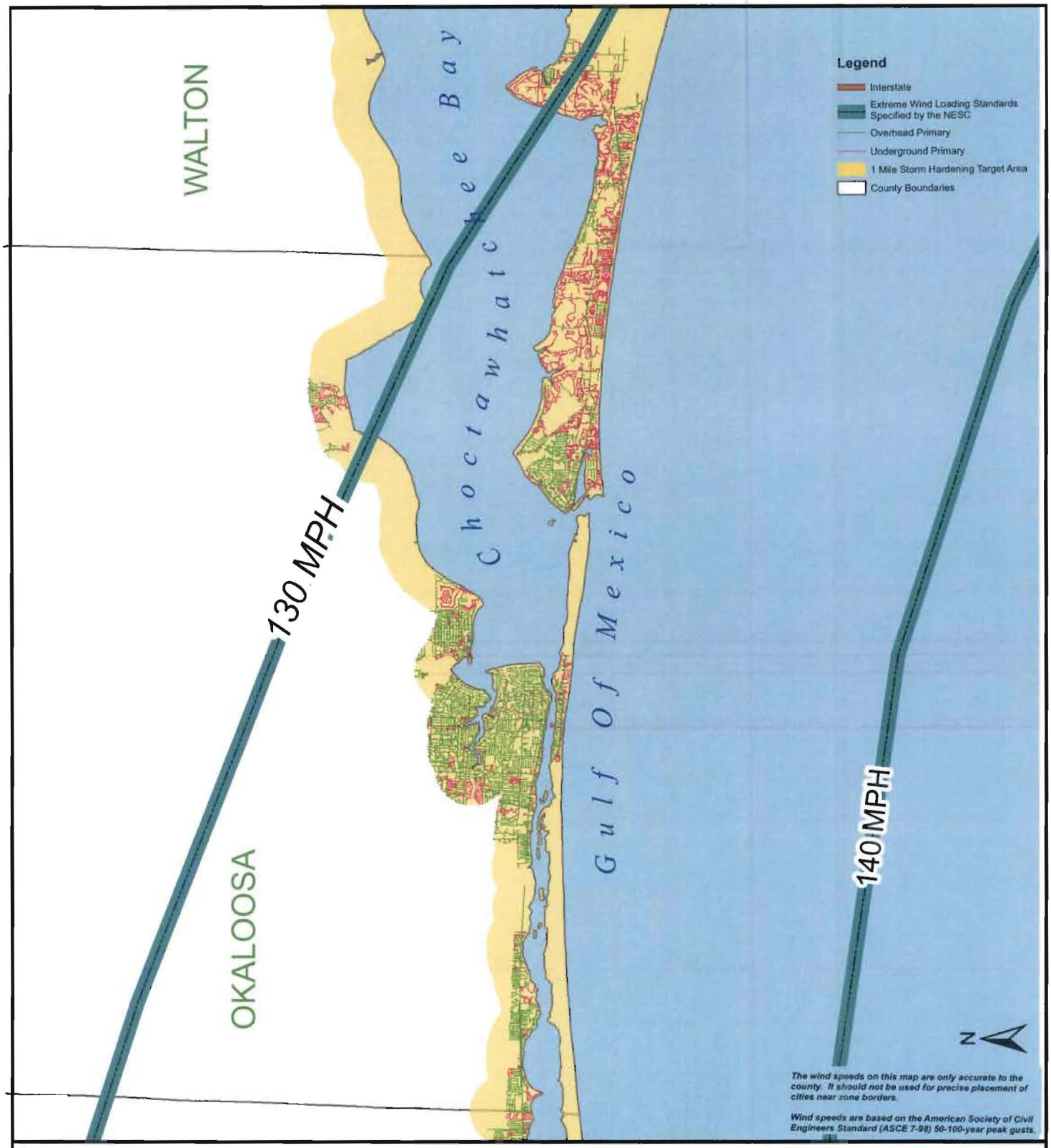
Date 3/23/07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- UZZ-2



SUBJECT UNDERGROUND DISTRIBUTION

DETAIL WESTERN STORM HARDENING AREAS

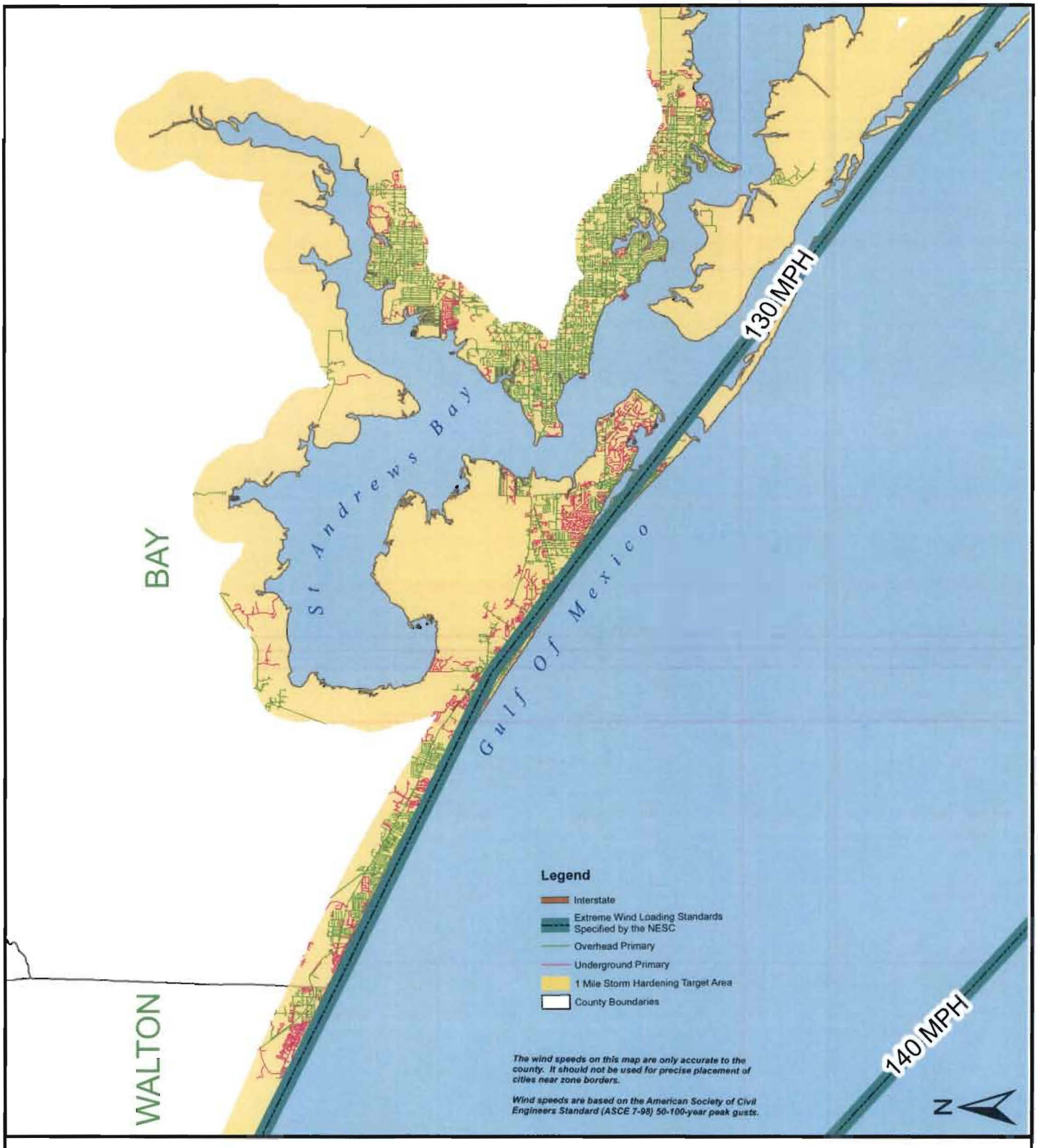
Date 3/23/07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- UZZ-3



SUBJECT UNDERGROUND DISTRIBUTION

DETAIL CENTRAL STORM HARDENING AREAS

Date 3/23/07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- UZZ-4



SUBJECT UNDERGROUND DISTRIBUTION

DETAIL EASTERN STORM HARDENING AREAS

Date 3/23/07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A-UZZ-5

Concrete Duct Banks

600/900 amp circuits shall be designed with concrete encased duct banks in order to better protect these circuits from storm surges.

The concrete used should be 1:3:5 mix with 1/2 inch or smaller gravel or crushed stone aggregate. This mix should have a nominal compressive strength of 3000 psi. All concrete should be poured within 1-1/2 hours of mixing.

When placing concrete around the conduit adjust the delivery chute so that the fall of the concrete into the trench is as short as possible. Use a splash board to divert the flow of the concrete away from the trench sides to avoid dislodging soil.

(Con't on next sheet)

SUBJECT UNDERGROUND STORM HARDENING

DETAIL CONCRETE DUCT BANKS

Date 03-14-07	SUPERSEDES DATE	SHEET 1 OF 2 SHEETS	Gulf Power A SOUTHERN COMPANY	A- UZZ-6 A

Concrete Duct Banks (con't)

Use a vibrator (one inch maximum), slicing bar or equivalent to work the concrete down the sides of the conduit bank and between the conduits. It should be possible to see the concrete flowing along the of the trench just ahead of the point where the concrete falls from the chute.

The trench can be back filled any time after the concrete has been poured and leveled. The concrete should be covered with a minimum of six inches of selected backfill. Spoils from the trench can be used for the remaining backfill.

On warm sunny days, if the concrete can not be covered immediately after leveling, one or two inches of fine soil or sand should be placed over the concrete. This cover prevents rapid evaporation of water from the surface of the concrete, allowing the concrete to cure properly.

When necessary to stop construction, plastic plugs should be used to temporarily seal the conduit end against mud, dirt, and debris. If conduit is to be left uncovered over night, tie down only at one end.

Duct banks should be inspected by an operating Company representative before being covered with backfill or encased in concrete.

SUBJECT UNDERGROUND STORM HARDENING

DETAIL CONCRETE DUCT BANKS

Date 03-14-07	SUPERSEDES DATE	SHEET 2 OF 2 SHEETS	Gulf Power A SOUTHERN COMPANY	A- UZZ-7 A

Anchoring Vaults

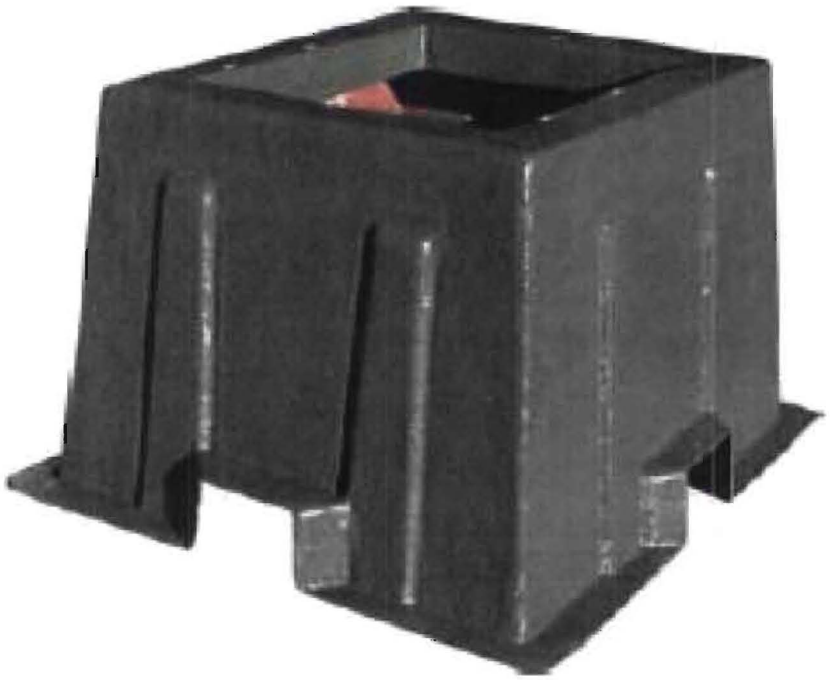
Consideration should be given to anchoring vaults/boxes with two 10' pilings.

These pilings should be installed on the front left and back right corners of the vault/box.

Pilings shall be 10' long and can be made out of 10" conduit filled with concrete or any preformed circular or square concrete at least 10" in diameter or square. After piling has been installed the area around the piling shall be filled with concrete to unitize the structure and vault/box.

SUBJECT UNDERGROUND STORM HARDENING				
DETAIL ANCHORING VAULTS/BOXES				
Date 03-14-07	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- UZZ-8

1Ø Transformer Box Pad



The use of a transformer box pad instead of the traditional transformer pad should be considered in loose sandy soils that are subject to storm surges or flooding.

The use of these in subdivisions automatically makes the subdivision a 'Non-Typical Subdivision' and an Overhead to Underground Differential must be calculated.

SUBJECT UNDERGROUND STORM HARDENING				
DETAIL 1Ø TRANSFORMER BOX PAD				
Date 12-08-08	SUPERSEDES DATE	SHEET 1 OF 1 SHEETS	Gulf Power A SOUTHERN COMPANY	A- UZZ-9 A

Rule 25-6.0342 - Gulf Power Company Storm Hardening Plan

			Actual/Estimated Utility Costs						Estimated Benefits to Utility Customers									Estimated Benefits to Third Party Attachers					
									Impact on Storm Restoration Costs			Impact on Storm Caused Outages - avoided CMI			Other Estimated Company Benefits			Impact on Storm Restoration Costs			Impact on Storm Caused Outages		
	Activity	Docket No.	2007	2008	2009	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
	Wooden Pole Inspections.	060078-EI	$998,239	$1,397,010	$2,612,080	$2,500,000	$2,500,000	$2,500,000	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
	Ten Storm Hardening Initiatives.	060198-EI																					
1	A Three-Year Vegetation Management Cycle for Distribution Circuits		$4,548,612	$3,662,875	$3,907,030	$4,962,350	$5,053,876	$5,051,508	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
2	An Audit of Joint-Use Attachment Agreements, 2011 is cost for Pole Count	Note 6	$251,818	$44,161	$38,346	$0	$400,000	$0	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
3	A Six-Year Transmission Structure Inspection Program		$260,240	$171,081	$331,130	$350,000	$350,000	$350,000	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 12	Note 12	Note 12	Note 12	Note 12	Note 12
4	Hardening of Existing Transmission Structures		$3,800,106	$2,535,525	$4,960,523	$3,000,000	$3,000,000	$3,000,000	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 12	Note 12	Note 12	Note 12	Note 12	Note 12
5	Transmission and Distribution GIS		$75,000	$75,000	$75,000	$0	$0	$0	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
6	Post-Storm Data Collection and Forensic Analysis	Note 5	$109,480	$6,468	$0	Note 5	Note 5	Note 5	Note 5	Note 5	Note 5	Note 7	Note 7	Note 7	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
7	Collection of Detailed Outage Data Differentiating Between the Reliability Performance of Overhead and Underground Systems		$0	$0	$0	$0	$0	$0	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
8	Increased Utility Coordination with Local Governments		$0	$0	$0	$0	$0	$0	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
9	Collaborative Research on Effects of Hurricane Winds and Storm Surge		$24,130	$21,245	$2,516	Note 13	Note 13	Note 13	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
10	A Natural Disaster Preparedness and Recovery Program		$0	$0	$0	$0	$0	$0	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
	Compliance with National Electric Safety Code's adoption of Extreme Wind Loading Standards.	070xxx-EI																					
1	New Distribution Facilities - incremental	Note 8	$154,014	$131,493	$107,449	$125,000	$141,125	$145,350	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
	Base amount		$6,160,538	$5,259,728	$4,297,955	$5,000,000	$5,645,000	$5,806,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Major planned expansion, rebuild, or relocation of distribution facilities - incremental	Note 8	$136,912	$178,372	$374,124	$283,650	$326,025	$352,875	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
	Base amount		$5,476,458	$7,134,868	$14,964,954	$11,346,000	$13,041,000	$14,115,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	Critical infrastructure and major thoroughfares	Note 10	$719,111	$357,337	$679,082	$700,000	$811,000	$821,000	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
	Mitigating flood and storm surge damage to underground and supporting overhead facilities.	070xxx-EI																					
1	Transmission		Note 3																				
2	Distribution - piloted project costs	Note 4	$2,572,661	$3,967,566	$1,507,850	$3,360,393	Note 13	Note 13	Note 4	Note 4	Note 4	Note 4	Note 4	Note 4	Note 4	Note 4	Note 4	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
3	Distribution - use of SS equipment	Note 9	$1,143,733	$1,143,733	$1,143,733	$1,166,608	$1,166,608	$1,166,608	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 4	Note 4	Note 4	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
4	Distribution - Underground Network Improvements		$0	$0	$213,052	$330,000	$380,000	$330,000	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 4	Note 4	Note 4	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
	Placement of new and replacement distribution facilities to facilitate safe and efficient access for installation and maintenance.	070xxx-EI	Note 1																				
	Other Key Elements																						
1	Feeder Patrols prior to the start of storm season		$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
2	Infrared Patrols prior to the start of storm season		$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
3	Wind Monitors to provide needed wind data		$52,951	$98,383	$39,199	$3,694	$3,523	$7,445	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
	Additional Proposed Storm Hardening Initiatives																						
1	Conversion of 4kV Distribution Feeders		$0	$0	$0	$300,000	$300,000	$300,000	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
2	Distribution Automation		$0	$0	$0	$2,000,000	$2,000,000	$2,000,000	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
3	Automated Overhead Faulted Circuit Indicators		$0	$0	$0	$20,000	$20,000	$20,000	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
4	Distribution Supervisory Control and Data Acquisition		$0	$0	$0	$217,000	$217,000	$217,000	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 7	Note 11	Note 11	Note 11	Note 11	Note 11	Note 11
	TOTALS		$26,633,997	$26,334,845	$35,404,023	$35,814,695	$35,455,157	$36,332,586															
	SH Cost per customer using 2009 YE customers of 428,154		$107,602,438		$84 per customer																		

Notes:

1 Gulf has always recognized that accessibility to distribution facilities is essential to safe and efficient maintenance and storm restoration.
Since this activity is already integral to our construction practices, there is no added cost impact nor can these costs be determined.
There is no incremental cost impact or benefits associated with this activity.

2 Until the program is complete and a storm hits it is not possible to estimate benefits resulting from this activity.

3 Gulf does not have underground transmission/substation facilities.

4 Gulf recognized and piloted underground system storm hardening design changes in response to lessons learned from Ivan in 2004.
Gulf has not determined a methodology at this time for determining the benefits of undergrounding in coastal areas as a storm hardening technique.

5 Cost for 2007 includes setting up the computer code, the database, and testing.
Post storm forensic data collection and analysis will initially increase the cost of the storm due to cost associated with collection and analysis of data.
System storm hardening improvements identified through data analysis will not occur until improvements can be budgeted the year after the storm strikes
and implemented during the year in which they are budgeted. This time lag for initiating system improvements will be approximately two years after a storm strike.
Cost of Forensic data collection will vary greatly, ranging from zero in non-storm years to $100,000+ in storm years, depending on the size of the storm and extent of storm damage.

6 Gulf performs these audits every five years across the system, therefore, no dollars are shown for 2010 and 2012. 2007 to 2009 costs are for pole strength analysis and replacements.

7 It is not possible to estimate benefits at this time.

8 Transitioning to Grade B construction.

9 Gulf has historically used stainless steel transformers within coastal areas which mitigates damage after a storm surge.

10 2007 to 2009 are actuals for applying Extreme Wind Loading to targeted projects. 2010 to 2012 represents revised initiative.

11 Estimates to be determined and provided by Third Party Attachers.

12 There are no Third Party Attachers on transmission structures.

13 Costs cannot be determined at this time.