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July 13, 2016

**Electronic Filing/E-Portal**

Ms. Carlotta Stauffer  
Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

**Re: Docket No. 160106-EI - Petition for Approval of 2016-2018 storm hardening plan,  
pursuant to Rule 25-6.0342, F.A.C., by Florida Public Utilities Company**

Dear Ms. Stauffer:

Attached for filing, please find Florida Public Utilities Company's Responses to Staff's First Data Requests issued to the Company on June 13, 2016.

Thank you for your assistance with this filing. As always, please do not hesitate to contact me if you have any questions or concerns.

Sincerely,



Beth Keating  
Gunster, Yoakley & Stewart, P.A.  
215 South Monroe St., Suite 601  
Tallahassee, FL 32301  
(850) 521-1706

MEK

cc:/Penelope Buys (Engineering Specialist/Division of Engineering)

**FPUC'S RESPONSE TO FLORIDA PUBLIC  
SERVICE COMMISSION'S QUESTIONS  
(2016 – 2018 STORM HARDENING PLAN)**

Please refer to Florida Public Utilities Company's (FPUC) 2016-2018 Storm Hardening Plan filed May 2, 2016.

1. Referring to page 3, Wood Pole Inspection Plan, when a failed pole is replaced, what type of pole (wood, concrete) is the replacement pole?

**Response: Wood**

2. On page 4, Wood Pole Inspection Plan, FPUC reported that it performs all wood pole inspections and strength and loading assessments as contractors are used to perform below ground inspection of poles in concrete or asphalt areas.

- a. Does FPUC use in-house employees for its wood pole inspections?

**Response: No**

- b. Please identify the contractors that perform the below ground inspection of poles in concrete or asphalt areas.

**Response: Osmose Utilities Services, Inc. Located at 635 Highway 74 S, Peachtree City, GA 30269.**

3. On page 6, Joint-Use Pole Attachment Audit, FPUC reported, "Although the agreements allow joint use attachments audits, these audits have not been completed as allowed in the contracts."

- a. When was the last time a joint-use pole attachment audit was performed?

**Response: Prior to the year 2000**

- b. Is the data FPUC reports on page 6 from the last audit?

**Response: No, this joint use data was collected during the facilities audit**

**used in the development of the mapping system. All joint use attachment records are kept in the mapping system.**

- c. Why would FPUC not perform strength and loading assessment based upon the significant length of time since the last audit?

**Response: Currently within the pole inspection program a strength and loading assessment is performed. Therefore, 1/8 of all poles are assessed each year for strength and loading.**

4. Referring to page 7, Inspection Cycle of transmission Structures.

- a. Please provide the actual number of inspections for transmission structures, by year, from 2013 through 2015, and the projected number of inspections, by year, from 2016 through 2018.

**Response: FPUC's transmission system is small compared to other IOU's. Therefore, FPU is able to complete the climbing inspection in a few weeks. This inspection is conducted once every 6 years. The last inspection was completed in 2012. FPUC is planning to perform the next inspection in 2018. For the years in between the climbing inspections, FPUC conducts visual inspections annually in addition to the pole inspections performed bt Osmose.**

- b. Are these inspections performed by in-house employees or a contractor?

**Response: The climbing inspection is performed by a contractor and the visual inspections are conducted by FPUC employees.**

- c. If the inspections are performed by a contractor, please identify the contractor?

**Response: The 2012 inspection was conducted by Pike Electric, Inc. Located at 100 Pike Way, Mount Airy, NC 27030.**

5. Referring to page 7, Storm Hardening Activities for Transmission Structures.

- a. Does FPUC have an estimated number of wood transmission pole replacements for 2016, 2017, and 2018? If no, why not?

**Response: FPUC's current plan is to replace 4 poles per year. However,**

this varies as it is dependent on transmission inspections findings and new projects. For example; at the beginning of 2016 during the rerouting of the 69KV line to Rayonier, FPUC replaced 19 wood poles with concrete poles and added 3 new concrete structures. In addition, before the end of 2016 FPUC plans to replace another 8 transmission wood poles with concrete structures. This would indicate that by the end of 2016 FPUC will have a total of 108 transmission wood poles remaining to be storm hardened.

- b. What is the estimated time until all wooden transmission structures will be replaced?

**Response: FPUC estimates approximately 10 years.**

6. Referring to page 9, Outage Data for Overhead and Underground Systems.

- a. Please explain how FPUC collects outage data for overhead and underground systems.

**Response: FPUC manually assigns all outages to either the overhead or underground system within the OMS from data supplied by our line crews restoring services. This allows easy sorting and filtering of outages based on overhead and/or underground.**

- b. What format is used to store its outage data?

**Response: All outage data is stored within our OMS server**

- c. How does FPUC use its outage data to evaluate the reliability of its overhead and underground systems?

**Response: OH vs. UG Reliability is calculated each year for the annual reliability report to the FPSC.**

7. On page 9, Disaster Preparedness and Recovery Plans, FPUC reported that the information contained in the Emergency Procedures is updated on an annual basis. What were the updates to the Emergency Procedures in 2015 and 2016?

**Response: The overall plans are basically the same except for updated logos, removed the table labeled "Address and Telephone Listing of Active Employees", updated several sections to clarify roles and responsibilities of certain employees and updated the organizational chart to reflect employee changes and new assignments. We also updated emergency numbers and logistic vendor information.**

8. Referring to page 10, Compliance with NESC Overhead Requirements -Distribution.

- a. Please describe in details how FPUC's distribution facilities meet current NESC requirements.

**Response: All FPUC's distribution facilities meet the applicable NESC requirements at the time of their installation. All new construction and upgrades to our existing distribution facilities meet or exceed the current NESC requirements.**

- b. Please describe in detail what specifications have been developed for future installations to meet the NESC EWL standards.

**Response: All FPUC future installations are required to meet the 2013 edition NESC as it relates to extreme wind loading. To achieve this requirement the normal primary pole size has been increased from class 3 or 4 to class 1. Also the use of extreme wind loading software is being used to determine if these larger poles are sufficient.**

9. Referring to page 11, Transmission.

- a. Please describe in detail how FPUC's transmission facilities meet current NESC requirements.

**Response: FPUC's transmission facilities are designed to meet or exceed the current NESC code requirements. For example; the current NESC code requires structures in Fernandina Beach to be designed to sustain wind loadings of 120 mph. FPU is requiring new transmission pole structures to withstand 130 mph winds.**

- b. Please describe in detail how the concrete poles, used for the replacement of wooden transmission poles, meet current NESC requirements.

**Response: In addition to the loading requirements noted in response 9.a. above, the concrete poles, meet or exceed NESC requirements for conductor sagging, pole grounding, phase to phase spacing and phase to ground clearances.**

10. Referring to page 11, Substation.

- a. Please describe in detail how FPUC's substation facilities meet current NESC requirements.

**Response: New or additions to FPUC substations are designed to meet or exceed NESC requirements for extreme wind loading criteria, bus spacing, phase to ground clearances, and grounding. Our older substations that may not adhere to all current NESC requirements are being scheduled for upgrades in our five (5) year plan.**

- b. What work was completed to reduce the possibility of wind blown debris impacting the substation facilities?

**Response: Substations were cleaned from items that were stored inside their fences and vegetation near the perimeter of the substation was cleared.**

- c. How many substation facilities had this work performed?

**Response: All 9 substations currently on FPUC's system**

- d. What was the cost, per substation facility, to complete this work?

**Response: Costs were not specifically captured as this was part of the general vegetation and substation maintenance expenditures plus some of the work was done as part of our scheduled monthly inspections.**

- e. How many more substation facilities will have this work performed?

**Response: None**

11. Referring to page 11, Extreme Wind Loading for Distribution Facilities.

- a. Please provide an estimated start and completion date for the projects planned for 2016 through 2018.

**Response: All storm hardening projects are scheduled to begin after January 1 of the year planned and to be complete before December 31 of that same year. Status of the 2016 projects is as follows: Mt. Tabor Rd Upgrade – Engineering complete, work order submitted, waiting on tree trimming permission. Hwy 73 South Upgrade – Engineering complete, work order submitted, waiting on FDOT permit to begin tree trimming. Prison Feeder Upgrade – Engineering in progress, 69 KV Pole Replacement – Engineering has been completed poles will be ordered prior to the end of July.**

- b. Please complete the table below describing all distribution feeder hardening projects. Please provide this information for the years 2007 through 2018.

**Response: See attached Appendix C. We have also added the Osmose related replacements table see Appendix D**

12. On page 13, Estimated Cost and Benefits, FPUC reported that because it has not experienced a major storm event since the implementation of its storm hardening, "the supporting data to develop an accurate benefit analysis for these programs is unavailable." Please provide the original 2007 effect of FPUC's electric infrastructure improvements on reducing storm restoration cost and customer outages analysis.

**Response: Post storm forensics and cost benefit analysis in restoration have not been completed at this time. However, FPU has obtained reductions in its 5 year trends in reliability indicators. This has been documented and reported in the Annual Reliability Reports previously submitted to the FPSC. A specific example of this was reported in FPUC's 2015 Annual Reliability Report. In this report, FPUC outlined the substantial improvements achieved in the Northwest Division's 2015 reliability indicators of SAIDI, CAIDI, SAIFI and L-Bar. FPUC reported reductions of 45.37%, 28.45%, 23.49% and 27.81% respectively when compared to 2014.**

13. On page 13, Estimated Cost and Benefits, FPUC provided a list of items that "should have an impact on the reliability and restoration during storms." Please explain the impact on reliability and restoration during storms each item listed provides FPUC's system.

**Response: Pole inspections – Identifies decayed poles for replacement which impact reliability when poles are replaced.**

**Vegetation Management – Clears trees/vegetation from around and over power lines and removes trees that are considered a danger to the electrical system and this reduces the amount of outages related to vegetation. Joint Use Audits – This initiative will help FPU maintain an updated inventory of joint use attachments which in turn increases the accuracy of the GIS.**

**Transmission Inspections – Same as pole inspections above.**

**Post Storm Forensics – At this time, FPUC has no experience in implementing this initiative. However, this process will help with data analysis after a storm impacts FPUC's territory.**

**OH/UG Data – This data helps FPUC to review circuit performance and may justify efforts for undergrounding future projects.**

**Coordination Local Government and Disaster Preparedness – Maintaining proper communications with local officials allows for quicker power restoration**

during disastrous events.

**Collaborative Research - Provides best practice initiatives which can be applied to FPUC's electric system.**

**Extreme Wind Loading – New designs withstand greater loads which can reduce outages to customers.**

**Please also refer to repose to question number 12 above.**

14. On page 14, Attachment Standards and Procedures, FPUC reported, "these contracts are being renegotiated." When will the Joint-Use attachment contracts be finalized?

**Response: FPUC has executed contracts with Fairpoint Communications, Southern Light, Brighthouse Network and Crown Castle. However, we are still in the process of finalizing agreements with Comcast and Century Link. We anticipate having these finalized during the third quarter of 2016. AT&T has elected only to amend the current agreement.**

15. Referring to page 14, Soliciting Input from Third Party Attachers.

- a. When did FPUC provide the updated storm hardening plans to the eight third-party attachers that were listed?

**Response: On May 23, 2016.**

- b. Did FPUC receive any comments back from the third-party attachers?

**Response: No**

- c. If yes, please provide a summary of the comments received and any updates to FPUC's plan to address the concerns raised by the attachers.

**Response: Not applicable. Please refer to response to 15.b. above.**

16. Please provide a readable copy of the Joint-Use Attachment Specifications.

**Response: Please see attached Appendix A**

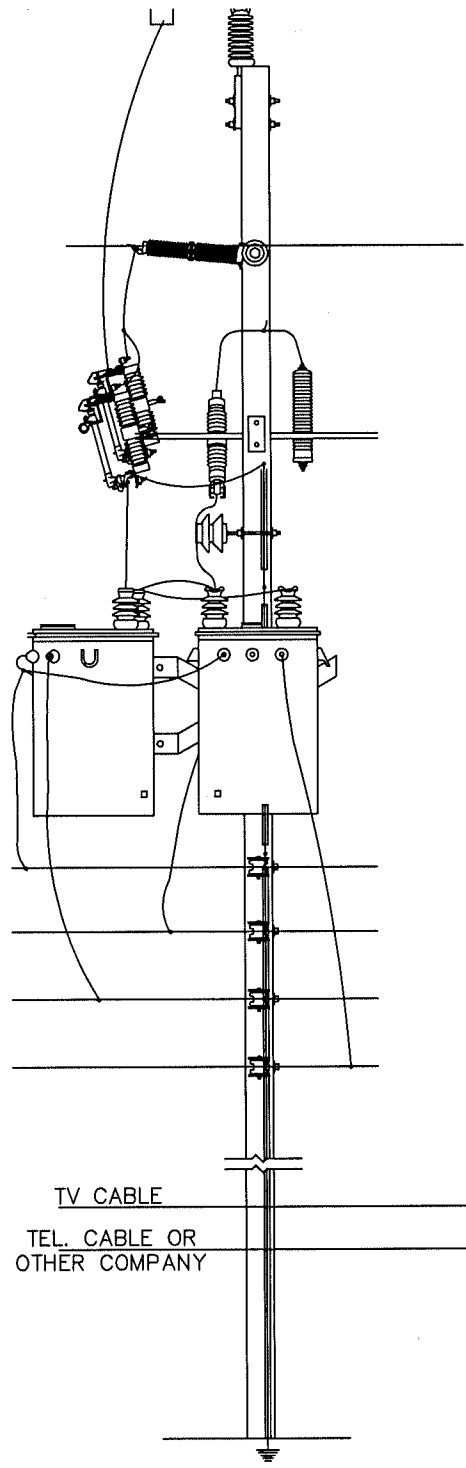
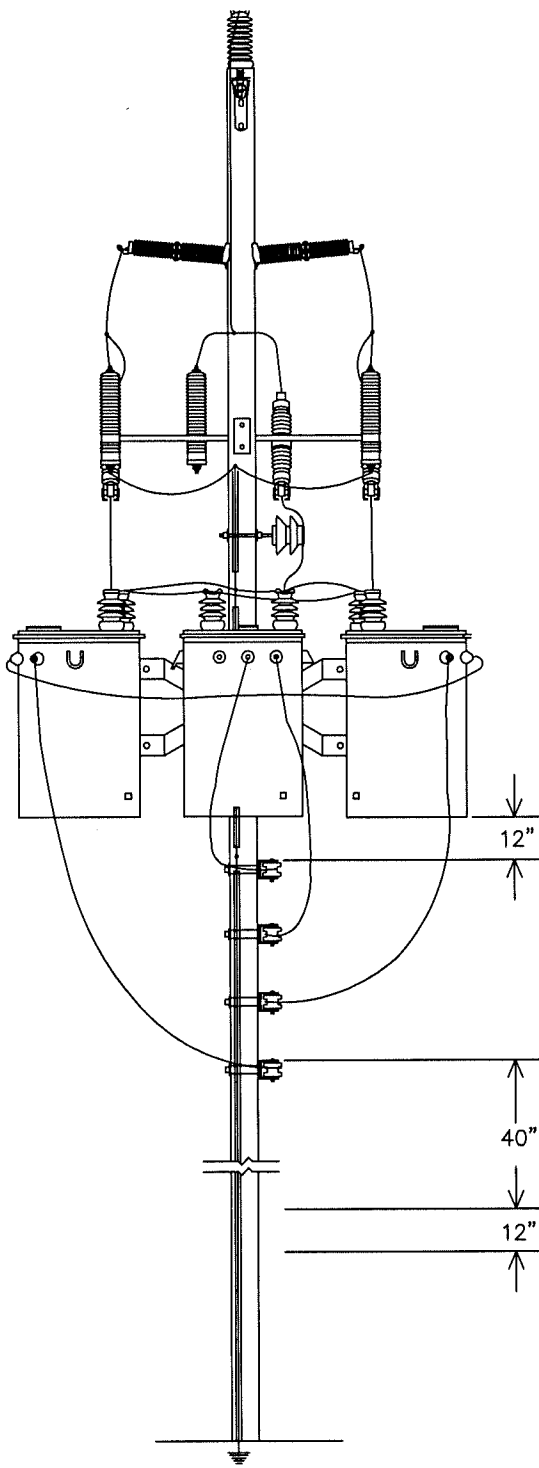
17. Please complete the table below.

**Response: Please see attached Appendix B**



Please submit your responses to the Commission Clerk, Office of Commission Clerk, 2540 Shumard Oak Blvd., Tallahassee, FL 32399-0850, by July 13, 2016. If you have any questions or concerns, please contact me by phone (850) 413-6518 or by email at [pbuys@psc.state.fl.us](mailto:pbuys@psc.state.fl.us).

## **APPENDIX A**



NOTES:

1. THERE MUST NOT BE LESS THAN 12" VERTICAL CLEARANCE BETWEEN ATTACHMENTS OF DIFFERENT COMPANIES.

2. THE DIMENSIONS OF THIS PLATE DO NOT SUPERSEDE ANY APPLICABLE NATIONAL SAFETY CODE REQUIREMENTS.

3. THIS IS A TYPICAL ATTACHMENT AND MAY NOT APPLY IN ALL CASES.

FLORIDA PUBLIC UTILITIES

JOINT USE

DWG. No.

JU-1

DATE

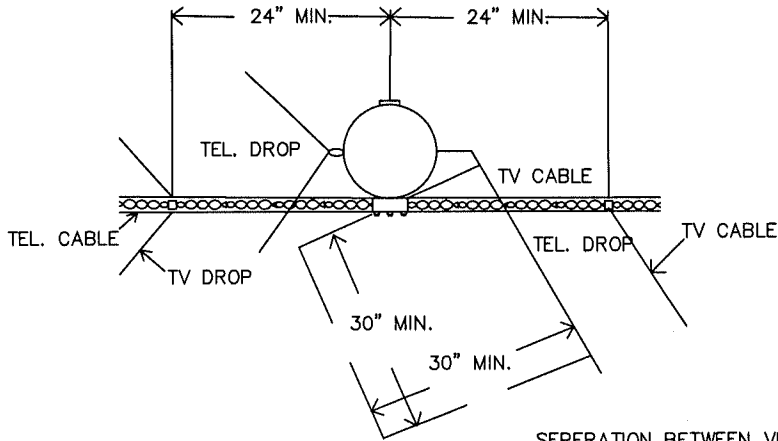
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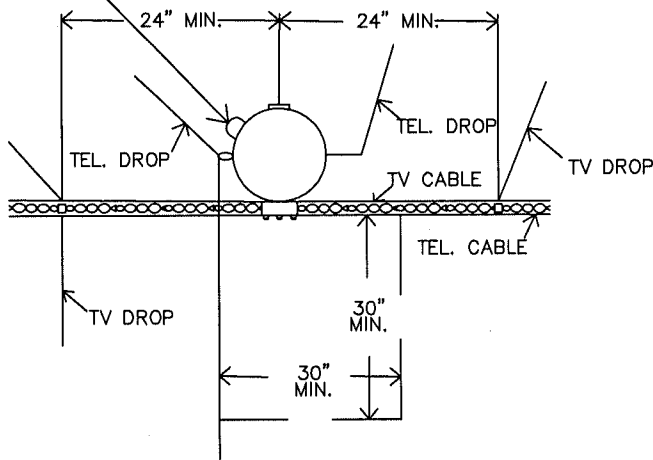
7/13/16

TYPICAL COMPANY ATTACHMENT TO FPU POLE



SEPERATION BETWEEN VERITICAL RUN, INCLUDING STAPLES OR OTHER DEVICES USED TO FASTEN IT TO POLE & COMMUNICATION DRIVE HOOK SHALL BE AT LEAST 2" IN ANY DIRECTION

POWER SYSTEM VERTICAL RUN OR GRND. WIRE



NOTES:

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FLORIDA PUBLIC UTILITES

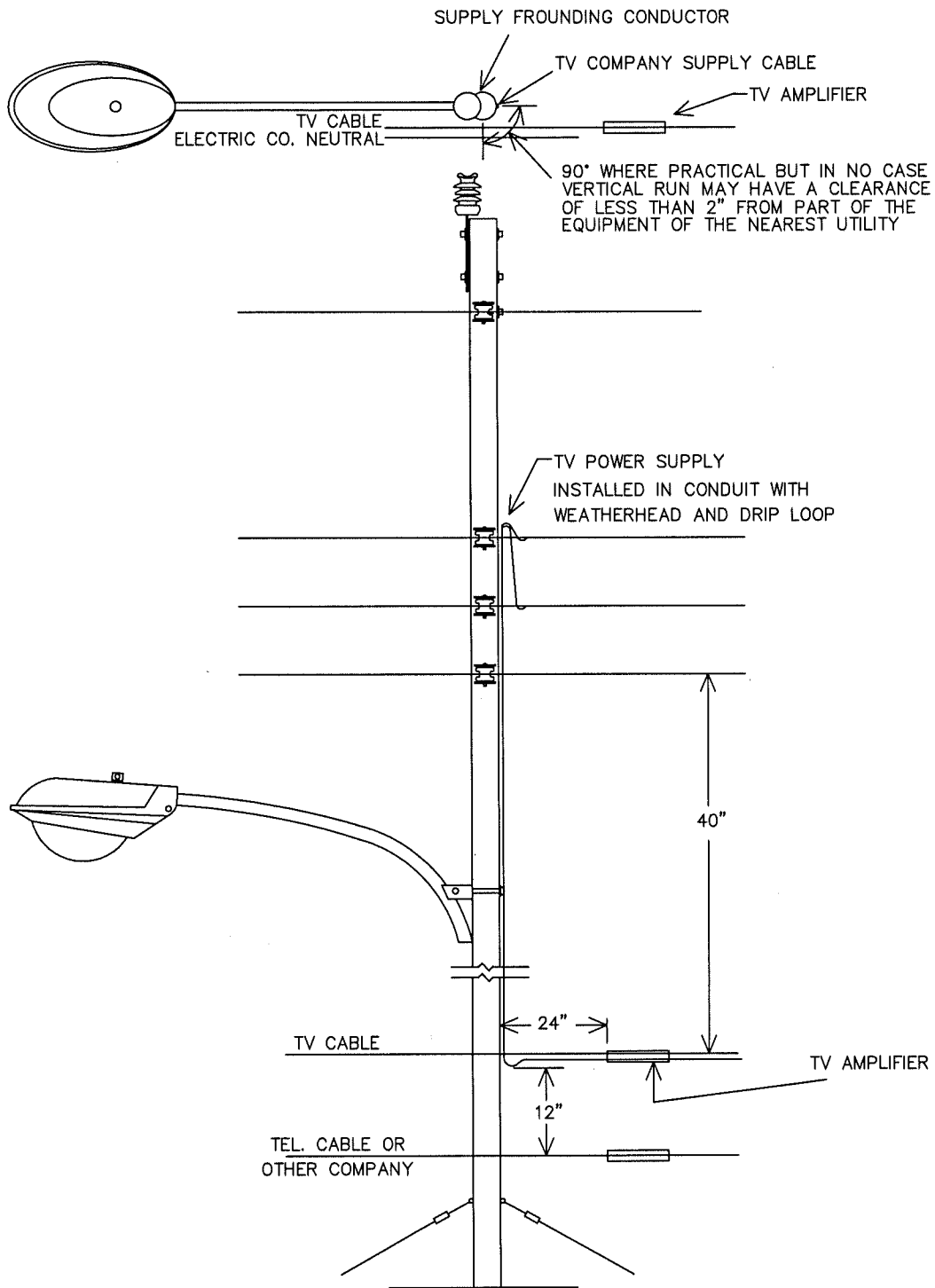
JOINT USE

DWG. No.

JU-2

DATE	REVISION	DATE	REVISION

7/13/16



NOTES:

1. THERE MUST NOT BE LESS THAN 12" VERTICAL CLEARANCE BETWEEN ATTACHMENTS OF DIFFERNT COMPANIES.

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FLORIDA PUBLIC UTILITES

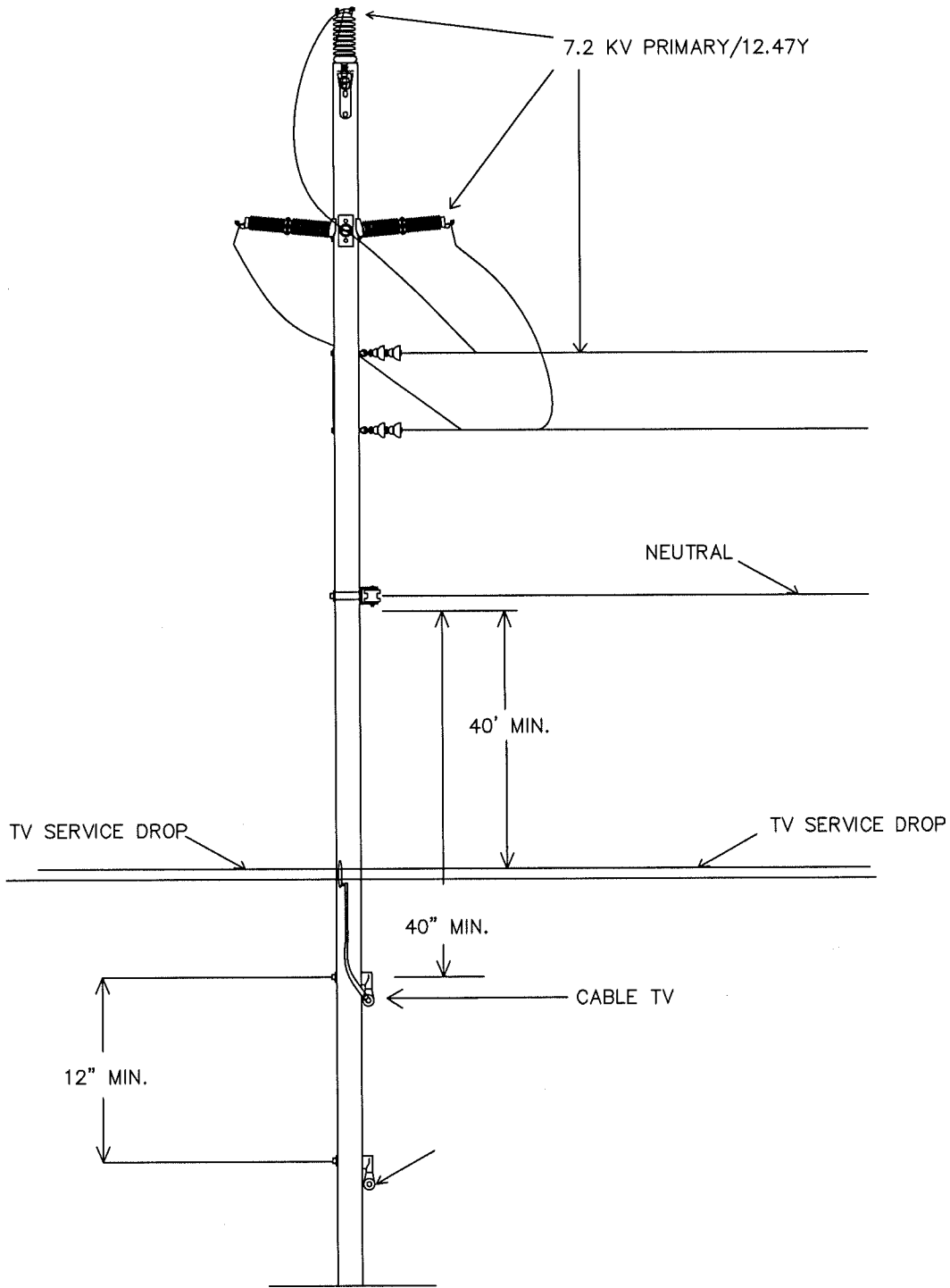
JOINT USE

DWG. No.

JU-3

DATE	REVISION	DATE	REVISION

7/13/16



NOTES:

1. THERE MUST NOT BE LESS THAN 12" VERTICAL CLEARANCE BETWEEN ATTACHMENTS OF DIFFERNT COMPANIES.

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FLORIDA PUBLIC UTILITES

JOINT USE

DWG. No.

JU-4

DATE

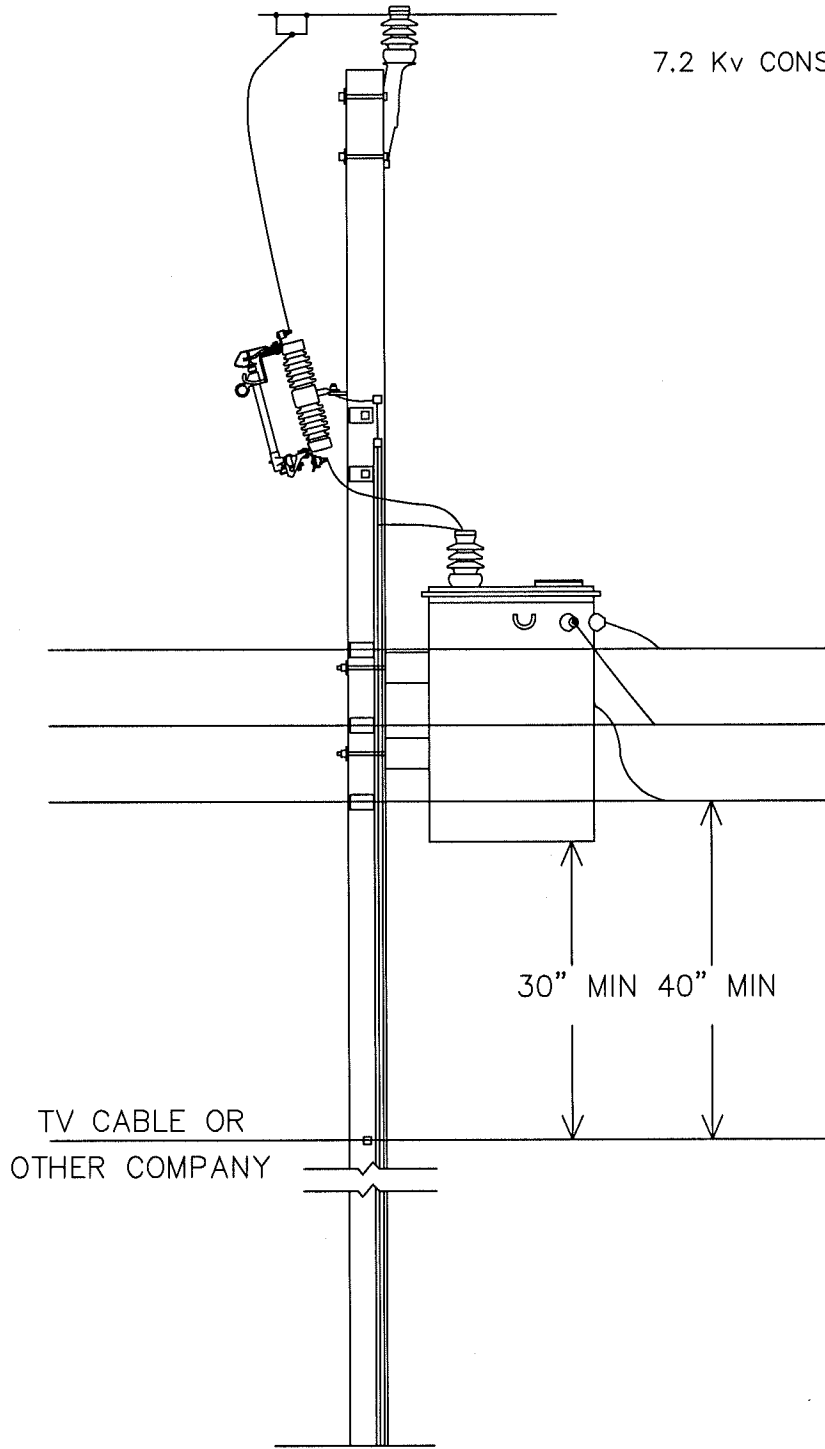
REVISION

DATE

REVISION

7/13/16

7.2 Kv CONSTRUCTION



TV CABLE OR  
OTHER COMPANY

30" MIN 40" MIN

NOTES:

1. THERE MUST NOT BE LESS THAN 12" VERTICAL CLEARANCE BETWEEN ATTACHMENTS OF DIFFERENT COMPANIES.

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FLORIDA PUBLIC UTILITIES

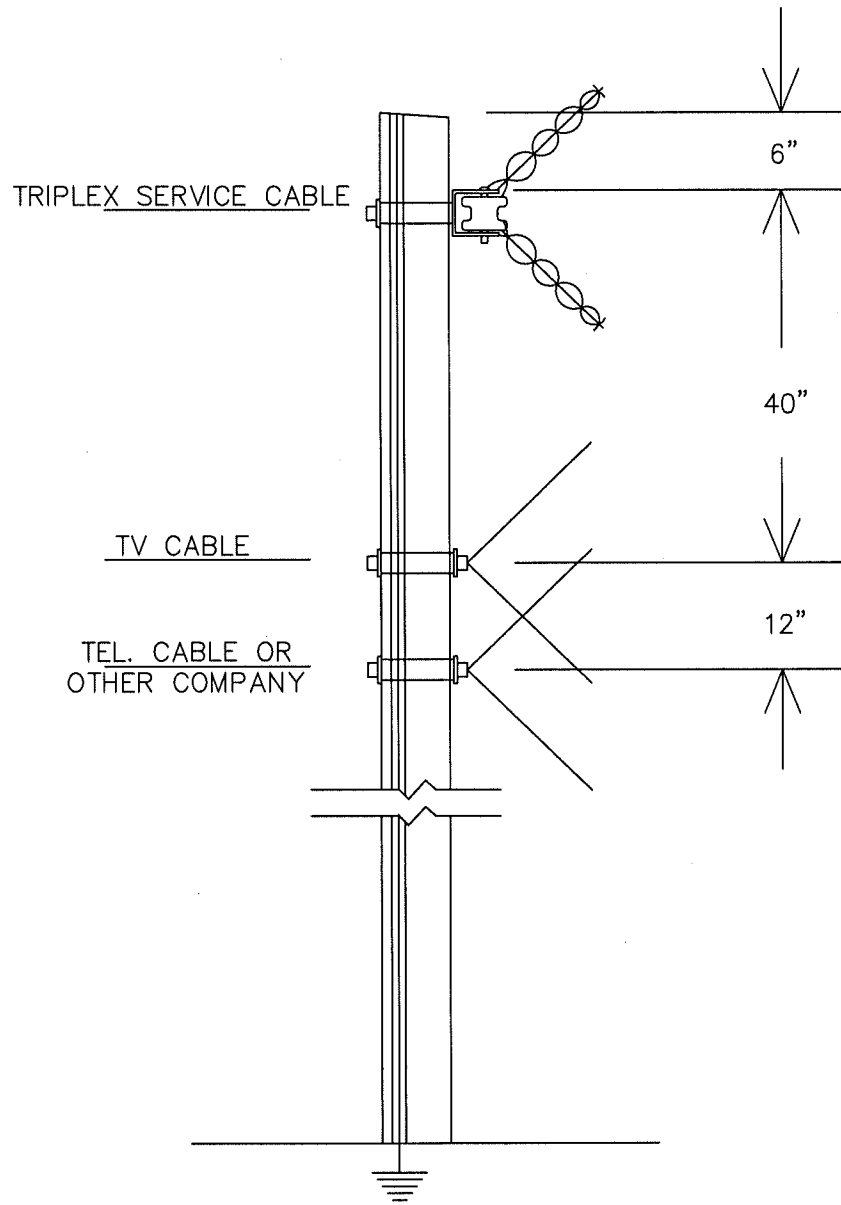
JOINT USE

DWG. No.

JU-5

DATE	REVISION	DATE	REVISION

7/13/16



NOTES:

1. THERE MUST NOT BE LESS THAN 12" VERTICAL CLEARANCE BETWEEN ATTACHMENTS OF DIFFERENT COMPANIES.

2. THE DIMENSIONS OF THIS PLATE DO NOT SUPERSEDE ANY APPLICABLE NATIONAL SAFETY CODE REQUIREMENTS.

3. THIS IS A TYPICAL ATTACHMENT AND MAY NOT APPLY IN ALL CASES.

7/13/16

FLORIDA PUBLIC UTILITIES

JOINT USE

DWG. No.

JU-6

DATE	REVISION	DATE	REVISION



ATTACHMENT OF TV DISTRIBUTION

SYSTEM TO POLES

ADDITIONAL REQUIREMENTS

1. CLEARANCE TO GROUND AS PER NATIONAL ELECTRIC SAFETY CODE:  
     18' MINIMUM OVER STREETS OR ALLEYS  
     27' MINIMUM OVER RAILROAD TRACKS
  
2. ATTACHMENT OF TELEPHONE AND TELEVISION FACILITIES TO BE ON SAME SIDE OF POLE.
  
3. METAL CASE ON AMPLIFIER AND TERMINAL BOXES AND METAL CASE OF SERVICE SWITCH TO BE EFFECTIVELY GROUNDED.
  
4. NO AMPLIFIERS, DISTRIBUTION TERMINALS AND/OR FUSED DISCONNECT SWITCHES MAY BE MOUNTED DIRECTLY TO POLE, BUT SHALL BE INSTALLED UPON A SUITABLE CROSSARM IN APPROVED MANNER.
  
5. TELEPHONE AND TELEVISION CONTACTS SHALL MAINTAIN SAME RELATIVE POSTITION ON POLE.
  
6. UNDERGROUND CABLE RISERS SHALL BE INSTALLED ON ROAD QUARTER OF POLE BUT SHALL NOT CONFLICT WITH TELEPHONE ATTACHMENTS.
  
7. NO AMPLIFIFER, DISTRIBUTION TERMINAL OR FUSED DISCONNECT SWITCH TO BE INSTALLED UPON TRANSFORMER POLES.

EXHIBIT V

NOTES:	FLORIDA PUBLIC UTILITES			
1. THERE MUST NOT BE LESS THAN 12" VERTICAL CLEARANCE BETWEEN ATTACHMENTS OF DIFFERNT COMPANIES.	JOINT USE			
2. THE DIMENTIONS OF THIS PLATE DO NOT SUPERSEDE ANY APPLICABLE NATIONAL SAFETY CODE REQUIREMENTS.				DWG. No.  JU-7
3. THIS IS A TYPICAL ATTACHMENT AND MAY NOT APPLY IN ALL CASES.				
7/13/16	DATE	REVISION	DATE	REVISION

**APPENDIX B**

Activity	Any change from current plan (Y/N)	Actual Cost									Estimated Cost									
		2013			2014			2015			2016			2017			2018			
		O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total	
8 - Year Wood Pole Inspection Program	N	\$116,738.08		\$116,738.08	\$95,533.08		\$95,533.08	\$55,601.19		\$55,601.19	\$130,000.00		\$130,000.00	\$135,000.00		\$135,000.00	\$140,000.00		\$140,000.00	
<b>10 Storm Hardening Initiatives</b>																				
1	A Three-Year Vegetation Management Cycle for Distribution Circuits	N	\$858,222.00	\$0.00	\$858,222.00	\$900,562.00	\$0.00	\$900,562.00	\$959,359.00	\$0.00	\$959,359.00	\$970,000.00	\$0.00	\$970,000.00	\$980,000.00	\$0.00	\$980,000.00	\$990,000.00	\$0.00	\$990,000.00
2	An Audit of Joint Use Attachment Agreements	N	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$90,000.00	\$0.00	\$90,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
3	A Six-Year Transmission Structure Inspection Program *	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$28,000.00	\$0.00	\$28,000.00	\$28,800.00	\$0.00	\$28,800.00	\$29,600.00	\$0.00	\$29,600.00
4	Hardening of Existing Transmission Structures	N		\$1,132,260.00	\$1,132,260.00		\$1,260,256.00	\$1,260,256.00		\$0.00	\$0.00	\$0.00	\$650,000.00	\$650,000.00	\$0.00	\$50,000.00	\$50,000.00	\$0.00	\$50,000.00	\$50,000.00
5	Transmission and Distribution GIS **	N	\$20,000.00		\$20,000.00	\$20,000.00		\$20,000.00	\$20,000.00		\$20,000.00	\$20,000.00	\$0.00	\$20,000.00	\$20,600.00	\$0.00	\$20,600.00	\$21,500.00	\$0.00	\$21,500.00
6	Post-Storm Data Collection and Forensic Analysis	N	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	n/a	n/a	\$0.00
7	Collection of Detailed Outage data Differentiating Between Overhead Systems and Underground Systems	N	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
8	Increased Utility Coordination with Local Governments	N	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
9	Collaborative Research on Effects of Hurricane Winds and Storm Surge	N	\$1,000.00	\$0.00	\$1,000.00	\$1,000.00	\$0.00	\$1,000.00	\$1,000.00	\$0.00	\$1,000.00	\$1,000.00	\$0.00	\$1,000.00	\$1,000.00	\$0.00	\$1,000.00	\$1,000.00	\$0.00	\$1,000.00
10	A Natural Disaster Preparedness and Recovery Program	N	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Totals</b>			<b>\$995,960.08</b>	<b>\$1,132,260.00</b>	<b>\$2,128,220.08</b>	<b>\$1,017,095.08</b>	<b>\$1,260,256.00</b>	<b>\$2,277,351.08</b>	<b>\$1,035,960.19</b>	<b>\$0.00</b>	<b>\$1,035,960.19</b>	<b>\$1,239,000.00</b>	<b>\$650,000.00</b>	<b>\$1,889,000.00</b>	<b>\$1,165,400.00</b>	<b>\$50,000.00</b>	<b>\$1,215,400.00</b>	<b>\$1,182,100.00</b>	<b>\$50,000.00</b>	<b>\$1,232,100.00</b>



**APPENDIX D - Florida Public Utilities Company  
(Storm Hardening Osmost Pole Replacement)**

Year	Total Poles Hardened	O & M*	Capital	Total
2007	584**	not tracked	n/a***	n/a
2008	478	not tracked	n/a***	n/a
2009	541	not tracked	n/a***	n/a
2010	436	not tracked	\$477,964.65	\$477,964.65
2011	509	not tracked	\$592,092.39	\$592,092.39
2012	480	not tracked	\$809,701.87	\$809,701.87
2013****	448	not tracked	\$832,401.50	\$832,401.50
2014****	656	not tracked	\$1,395,600.83	\$1,395,600.83
2015	375	not tracked	\$660,527.63	\$660,527.63
2016	400 est	not tracked	\$656,789.10	\$656,789.10
2017	400 est	not tracked	\$689,628.56	\$689,628.56
2018	400 est	not tracked	\$724,109.98	\$724,109.98
<b>TOTALS</b>	<b>5707</b>		<b>\$6,838,816.51</b>	<b>\$6,838,816.51</b>

\* O & M expenses are not tracked with the installation and replacement of poles and are a small portion of the overall costs.

\*\* In 2007, not all poles were installed to new storm hardening specifications. Full utilization of storm hardening was not available until 2008.

\*\*\* During 2007 thru 2009, capital data is not readily available.

\*\*\*\* During the end of 2013 and most 2014 utility contractors were used to replace the most difficult decayed poles.