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**Delivery Assurance –
Design Support**

SUBJECT

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XIII. Safety Six

According to the Bureau of Labor Statistics, workplace accidents kill more than 5,000 U.S. workers every year. We urge our customers and employees to practice safe work habits to prevent serious injuries and save lives! Always follow the Safety 6 rules to prevent the most common mistakes around power lines.

Rule 1: Work a safe distance

This is the most important rule: Work at a safe distance from all power lines. The Occupational Safety and Health Administration (OSHA) requires that equipment be kept at least 10 feet away from power lines from 0-50 kV. For higher voltage lines, the required distance is even greater (see table below). When uncertain of a power line's voltage, stay 20 feet away for voltages up 350 kV and 50 feet away for voltages greater than 350 kV. Cranes and derricks are required to take additional steps before beginning work (see OSHA Standards 29 CFR 1926.1400 effective Nov. 8, 2010). Call FPL at 1-800-375-4375 or your local utility to identify the voltage of power lines before you begin working.

If you witness a violation of the rules, stay away from the equipment and warn the operator to move away from the power line.

FPL Power Line Voltages	OSHA Minimum Approach Distance (OSHA 1926.1408 Table A)
0 – 50 kV	10 feet
Over 50 kV to 200 kV	15 feet
Over 200 kV to 350 kV	20 feet
Over 350 kV to 500 kV	25 feet
Over 500 kV to 750 kV	35 feet

Rule 2: Stay calm - stay away

When operating a piece of equipment that contacts a power line	You should
You are <u>not</u> in danger from a fire or from being struck by a power line	<ul style="list-style-type: none"> Stay where you are. Move the equipment away from the power line, if possible. Warn others not to approach the equipment. Call FPL at 1-800-4OUTAGE (1-800-468-8243) or call 911 to contact FPL or your local utility for assistance.
You are in danger and must get off the equipment	<ul style="list-style-type: none"> Jump as far away from the equipment as you can and land with both feet together. (No part of your body should touch the equipment and the ground at the same time.) Hop or shuffle away from the equipment with your feet together to reduce the risk of electric shock. Once clear, do not return to the equipment until FPL declares it safe. Call 911 and/or call FPL at 1-800-4OUTAGE (1-800-468-8243) or your local utility.



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When operating a piece of equipment that contacts a power line	You should
If a fellow worker is in danger	<ul style="list-style-type: none"> • Stay away. • Warn fellow workers to stay away. • Call 911 and/or call FPL at 1-800-4OUTAGE (1-800-468-8243) or your local utility.

Rule 3: Ladders and lines don't mix

Before you begin working, look up and note the location of power lines. You can be seriously hurt or killed if the object you are holding or standing on contacts a power line.

- Before raising or extending any equipment capable of reaching a power line, check in all directions for power lines.
- Keep a safe distance from any power line, measuring from the end or tip of your own extended reach and including the end or tip of any object you are holding or carrying. Remember to allow even greater distance for safety near higher voltage lines such as transmission lines.
- Even nonmetallic ladders and equipment can conduct electricity.

Rule 4: Call before you dig

- One easy call to 811 starts the process of getting underground utility lines marked for free.
- Utility company locators will mark the approximate location and type of underground utilities with paint and flags.
- To avoid costly repairs and construction delays, be sure to contact Sunshine State One Call of Florida at 811 or 1-800-432-4770 at least two full business days in advance of any excavation work.* Visit www.CallSunshine.com for more information.

** In accordance with the Underground Facility Damage Prevention and Safety Act, Chapter 556, Florida Statutes*

Rule 5: Look up and live

Look up when working around overhead power lines, especially when trees are nearby.

Branches can hide power lines from view.

- Look up for power lines when using tools of any kind. Even nonmetallic tools can conduct electricity.
- Cranes and derricks that approach working distance within 20 feet of power lines with operating voltages up to 350 kV, or within 50 feet of power lines with voltages greater than 350 kV, are mandated to take "encroachment prevention measures." See OSHA Standards 29 CFR 1926.1400.
- Look up for power lines when putting up scaffolding, framing a building, painting, pruning trees or picking fruit.
- Before moving a tree under a power line, look up and determine the maximum height to lift the tree. Keep a safe distance away as required by OSHA. Trees can conduct electricity.
- Look up for power lines when working on top of buildings.



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- Before transporting large boats or large objects, please identify a safe route that avoids power lines. If you cannot avoid power lines, please call 1-800-375-4375 to coordinate transport and temporary removal* or de-energizing of FPL power lines.

** Charges may apply for temporary removal or relocation of power lines. You may need to coordinate transportation of oversized objects with local authorities.*

Rule 6: Downed lines can be deadly

Always assume that any downed power line is energized, and stay away.

- Do not touch or attempt to move any power line.
- Call 911 and 1-800-4OUTAGE (1-800-468-8243) or your local utility immediately.
- If a fellow worker touches a downed line or is handling equipment that contacts a power line, remember that any rescue attempt places you in danger.
- If you must rescue a person in contact with a power line, never use your hands. Use a dry, nonconductive object to move the person to safety.

Important contact information

Call 911 for any emergency.

**Call 1-800-4OUTAGE
(1-800-468-8243)**

to report contact with power lines,
downed power lines or an outage.

Call 811 before you dig.

Call 1-800-375-4375 for identification of
power line voltage or help with safe
transportation of large boats or large objects.



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NOTIFICATION OF FPL FACILITIES

Customer/Agency _____ Date of Meeting/Contact: _____
 Developer/Contractor Name _____ Project Number/Name: _____
 Location of Project _____ City: _____
 FPL Representative _____ Phone: _____
 Developer/Contractor Representative _____ FPL Work Request #/Work Order #: _____

FPL calls your attention to the fact that there may be energized, high voltage electric lines, both overhead and underground, located in the area of this project. It is imperative that you visually survey the area and that you also take the necessary steps to identify all overhead and underground facilities prior to commencing construction to determine whether the construction of any proposed improvements will bring any person, tool, machinery, equipment or object closer to FPL's power lines than the OSHA-prescribed limits. If it will, you must either re-design your project to allow it to be built safely given the pre-existing power line location, or make arrangements with FPL to either deenergize and ground our facilities, or relocate them, possibly at your expense. **You must do this before allowing any construction near the power lines.** It is impossible for FPL to know or predict whether or not the contractors or subcontractors, and their employees, will operate or use cranes, digging apparatus or other mobile equipment, or handle materials or tools, in dangerous proximity to such power lines during the course of construction, and, if so, when and where. Therefore, if it becomes necessary for any contractor or subcontractor, or their employees, to operate or handle cranes, digging apparatus, draglines, mobile equipment, or any other equipment, tools or materials in such a manner that they might come closer to underground or overhead power lines than is permitted by local, state or federal regulations, you and any such contractor or subcontractor must notify FPL in writing of such planned operation prior to the commencement thereof and make all necessary arrangements with FPL in order to carry out the work in a safe manner. **Any work in the vicinity of the electric lines should be suspended until these arrangements are finalized and implemented.**

The National Electrical Safety Code ("NESC") prescribes minimum clearances that must be maintained. If you build your structure so that those clearances cannot be maintained, you may be required to compensate FPL for the relocation of our facilities to comply with those clearances. As such, you should contact FPL prior to commencing construction near pre-existing underground or overhead power lines to make sure that your proposed improvement does not impinge upon the NESC clearances.

It is your responsibility and the responsibility of your contractors and subcontractors on this project to diligently fulfill the following obligations:

1. Make absolutely certain that all persons responsible for operating or handling cranes, digging apparatus, draglines, mobile equipment or any equipment, tool, or material capable of contacting a power line, are in compliance with all applicable state and federal regulations, including but not limited to U.S. Department of Labor OSHA Regulations, while performing their work.
2. Make sure that all cranes, digging apparatus, draglines, mobile equipment, and all other equipment or materials capable of contacting a power line have attached to them any warning signs required by U.S. Department of Labor OSHA Regulations.
3. Post and maintain proper warning signs and advise all employees, new and old alike, of their obligation to keep themselves, their tools, materials and equipment away from power lines per the following OSHA minimum approach distances (refer to OSHA regulations for restrictions):

<u>*Power Line Voltages</u>	<u>**Personnel and Equipment</u> (29 CFR 1910.333 and 1926.600)	<u>Cranes and Derricks</u> (29 CFR 1926.1407, 1408)	<u>Travel under or near Power Lines (on construction sites, no load)</u>	
			<u>(29 CFR 1926.600 – Equipment)</u>	<u>(1926.1411 – Cranes and Derricks)</u>
0 - 750 volts	10 Feet	10 Feet	4 Feet	4 Feet
751 - 50,000 volts	10 Feet	10 Feet	4 Feet	6 Feet
69,000 volts	11 Feet	15 Feet	10 Feet	10 Feet
115,000 volts	13 Feet	15 Feet	10 Feet	10 Feet
138,000 volts	13 Feet	15 Feet	10 Feet	10 Feet
230,000 volts	16 Feet	20 Feet	10 Feet	10 Feet
500,000 volts	25 Feet	25 Feet	16 Feet	16 Feet

***When uncertain of the voltage, maintain a distance of 20 feet for voltages up to 350,000 volts and 50 feet for voltages greater than 350,000 volts.**

****For personnel approaching insulated secondary conductors less than 750 volts, avoid contact (Maintain 10 Feet to bare energized conductors less than 750 volts). For qualified personnel and insulated aerial lift equipment meeting requirements of 29 CFR 1910.333, distances may be reduced to those shown in 29 CFR 1910.333 Table S-5.**

4. All excavators are required to contact the Sunshine State One Call of Florida, phone number 1-800-432-4770 or 811 a minimum of two working days (excluding weekends) in advance of commencement of excavation to ensure facilities are located accurately.
5. Conduct all locations and excavations in accordance with the Florida Statute 556 of the Underground Facilities Damage Prevention & Safety Act and all local city and county ordinances that may apply.
6. When an excavation is to take place within a tolerance zone, an excavator shall use increased caution to protect underground facilities. The protection requires hand digging, pot holing, soft digging, vacuum methods, or similar procedures to identify underground facilities.

A copy of this notification must be provided by you to each contractor and subcontractor on this project, to be shared with their supervision and employees prior to commencing work on this project.

Means by which this notification was provided to customer and/or contractor

Address

FPL Representative Signature

Date

Customer/Developer/Contractor Representative Signature

Date



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XIII. UNDERGROUND UTILITY LOCATING INFORMATION

CALL 2 BUSINESS DAYS BEFORE YOU DIG, IT'S THE LAW, CALL SUNSHINE 1-800-432-4770 (or simply dial 811)

Or visit www.callsunshine.com

A. Information needed when you call:

- Company Name & Address
- Contact Person's Name
- Phone Number
- Call-Back Hours








B. Dig site location information:

- County & City
- Location Address (or from where to where)
- Nearest Cross Street

C. Other:

- Machinery to be Used
- Permit Needed
- Work Done For
- Type of Work

D. Color Codes for Marking Underground Utility Lines:

- | | | |
|---|---------------|---------------------------|
|  | RED | ELECTRIC |
|  | YELLOW | GAS - OIL - STEAM |
|  | ORANGE | COMMUNICATION CATV |
|  | BLUE | WATER |
|  | GREEN | SEWER |
|  | PINK | TEMPORARY SURVEY MARKINGS |
|  | WHITE | PROPOSED EXCAVATION |