

## Appendix B: Health and Safety Plan (Revision 1)

# <u>Eight Point Wind</u> Towns of Greenwood and West Union, Steuben County, New York

September 2021

## HEALTH AND SAFETY PLAN

Keep Plan Onsite During All Site Activities

Eight Point Wind, New York – Health & Safety Plan

# **HEALTH AND SAFETY PLAN**

### TABLE OF CONTENTS

- 1. HEALTH AND SAFETY PLAN OBJECTIVES
- 2. CORPORATE AND PROJECT SAFETY POLICY
- 3. ENVIRONMENTAL PROTECTION AND HAZARDOUS MATERIALS
- 4. PROJECT INFORMATION AND DESCRIPTION
- 5. TABLE OF TYPICAL WORK TASKS, POTENTIAL SAFETY HAZARDS/ RISKS, & CONTROL PLANS
- 6. STEUBEN COUNTY EMERGENCY CONTACTS
- 7. MAPS TO NEAREST HOSPITALS, POLICE, FIRE DEPARTMENTS, AND GAS STATIONS
- 8. DOCUMENTATION: CORPORATE SAFETY CONTACTS AND CORPORATE SAFETY FORMS
- 9. AREA MAPS AND AERIAL PHOTOS
- **10. LOSS CONTROL MANUAL TEMPLATE**

Eight Point Wind, New York – Health & Safety Plan

# 1. HEALTH AND SAFETY PLAN OBJECTIVE

Eight Point Wind (the Project) is a proposed wind energy center located on land leased and/or purchased from owners of private property in the Towns of Greenwood and West Union, Steuben County, New York. Proposed Project components include up to 25 wind turbines, two meteorological (met) towers, access roads, underground electric collection lines, collection substation, and an Operation and Maintenance (O&M) Building. The Project Area totals approximately 15,295 acres.

Proper safety instruction, training and careful supervision of personnel are essential to the success of this Health and Safety Plan (HASP or the Plan). The objective of this Plan is to prevent the incidence of personal injury to all employees and Project visitors on site during early-stage Project development. Additionally, the Project will require its construction contractors to develop Health and Safety Plans that are specific to construction activities per the Loss Control Manual template provided in Section 10.

The Project is committed to avoiding damage to property caused by accidents and to identify and reduce the hazards that can result in accidents. Accidents can be prevented by the engaged support of this safety program. Project management is dedicated to proper safety training and enforcement of these safety recommendations.

Eight Point Wind, New York - Health & Safety Plan

# 2. <u>CORPORATE AND PROJECT SAFETY POLICY</u>

Eight Point Wind, LLC (the Certificate Holder) is a wholly-owned, indirect subsidiary of NextEra Energy Resources, LLC (NextEra or NEER), which is located in Juno Beach, Florida. Our vision for Nextera Energy Inc. safety is to establish and promote a safety culture based on the principle that ZERO injuries is the only acceptable target. We provide support for business unit activities that clearly identify expectations for all levels of NextEra Energy, Inc. employees, and establish agreed upon consequences for exceeding, meeting, or failing to meet those expectations. We expect each employee to work safely in order to return home at the end of the day, injury free.

The safety policy for this Project is to uphold the highest safety and health standards to ensure the personal protection of all personnel assigned to or visiting this Project. All individuals onsite shall comply with all provisions of this Health and Safety Plan during early-stage development activities. All construction contractors shall comply with health and safety plans that meet the provisions of the Loss Control Manual template in Section 10 during construction activities. In doing so, each contractor shall develop and implement necessary programs and procedures specific to the site to maintain these standards and all Project personnel shall be governed by it. Accident prevention can only be obtained by motivating every site employee to achieve the highest degree of interest and involvement in this Plan.

This Plan assumes every accident is preventable and thus the safety goal for this Project is to have ZERO Today.

# 3. <u>ENVIRONMENTAL PROTECTION AND</u> <u>HAZARDOUS MATERIALS</u>

This Plan and the plans developed in accordance with the Loss Control Manual template in Section 10 will be utilized during onsite activities to ensure environmental protection and identification of hazardous materials exposure on site or in Project equipment brought on site (e.g., field test kits). Refer to the Project SPCC Plan for more details.

# 4. <u>PROJECT INFORMATION AND</u> <u>DESCRIPTION</u>

**OWNER:** Eight Point Wind, LLC

ADDRESS: Eight Point Wind, LLC, 700 Universe Blvd, Juno Beach, FL 33408

**PROJECT / SITE NAME:** Eight Point Wind, Steuben County, New York

**SITE ADDRESS**: See attached maps, no physical address or postal drop. The Project is located in the Towns of Greenwood and West Union, Steuben County, New York. An O&M Building will be constructed on the north side of King Hill Road, between County Road 60 to the west and Cemetery Hill Road to the east, in the Town of Greenwood, Steuben County. Once the Project is constructed and operational, the O&M building will be open during normal business hours. A Project office is located at 24D Park Drive, Hornell, New York, 14843, in the City of Hornell, Steuben County, and is open during normal business hours. The Project Safety Plan and Safety Tailboard forms are located in the office. The Project office has internet access and ATT cell phone coverage via the Office internet. The Certificate Holder will provide a 911 address prior to the start of construction.

Eight Point Wind energy facility is located in the Towns of Hornellsville, Hartsville, Greenwood, and West Union within Steuben County, New York.

LANDOWNERS NAME AND ADDRESS IF KNOWN: Contact Eight Point Wind.

### NEER CONTACTS:

- NextEra Project Developer:
  - o Kris Scornavacca
  - o (561) 319-5399
  - o Kris.scornavacca@nexteraenergy.com
- NextEra Construction (Execution) Project Manager
  - o Joseph Gallagher
  - o **(612) 964-3497**
  - o <u>Joseph.Gallagher@nexteraenergy.com</u>
- NextEra Site Construction Manager
  - o Jason Hunter
  - o **(254) 722-8928**
  - o <u>Jason.Hunter@nexteraenergy.com</u>
- NextEra Engineering & Construction Safety Support Services
  - Eric Munsell
  - Office: (561) 691-2481
  - o Mobile: (913) 626-4065
  - o <u>Eric.Munsell@nexteraenergy.com</u>

### Eight Point Wind, New York – Health & Safety Plan DATES OF SITE WORK: November 2021 through November 2022

**SITE ACCESS POINT(S):** See attached maps. The site is located in southern Steuben County. Access to the Project Area is from local roads, agricultural fields and private driveways.

**SITE DESCRIPTION(S):** The Project as proposed will have up to 25 turbines totaling 118.6 megawatts. The site area is located primarily in forested and agricultural areas. The Project will have two meteorological towers. Field crews must be aware of weather and lightning and should check weather reports and conditions regularly. Winter storms must be carefully monitored, and seasonal road restrictions known. Scheduled call-in checks should be arranged by any project work staff onsite. Remote site access and work at night by individuals is not recommended.

Much of the Project Area consists of agricultural fields requiring landowner and NextEra Energy Resources approval prior to access. Access should minimize, whether driving or walking, field and crop damage. Areas may be wet, muddy, or seasonally frozen. No significant environmental hazards are present but insect repellent and regular checking for ticks is strongly encouraged. There may be cattle or other farm animals grazing at Project Area, so it is important to keep a safe distance from these animals and to keep gates closed after ingress and egress.

Steuben County has a very high deer population. Careful driving, especially at night or dusk, is required due to numerous deer on and along area roads. Drivers must be prepared for collisions, immediately slow down, and should not avoid collision by swerving into oncoming lanes or off the road. NO TEXTING AND DRIVING IS ALLOWED. Any hands-free phone must be used cautiously. Minimal distractions (e.g., coffee drinking, map reading, etc.) should occur. If a deer is struck, the driver should immediately pull over to a safe location. Remove the deer/ animal from the road to prevent other following collisions. Drivers should call 911 to file a police report for use in any insurance claim. Photos of vehicle damages should be documented, and available witnesses identified. The Project Manager should be contacted with the accident information.

The majority of area roads are unpaved requiring focused driving. During dry conditions, dust clouds from traveling vehicles and farm equipment often occur. Absolutely NO cell phone use or texting should be done while driving these roads. Icy/snowy winter road conditions also require careful driving and use of four-wheel drive vehicles is recommended. There are also no gas stations and very limited grocery stores in the vicinity of the Project Area and proper remote site visit provisioning should be made. Personnel and visitors should not drink from streams, other surface waters, or springs and instead bring drinks to prevent dehydration.

There is significant recreational hunting in the Project region and appropriate high visibility clothing shall be worn at all times. Landowners should be contacted for any field work during these periods and field workers must be very alert, aware and avoid, to the extent possible, any tree stands used by hunters.

Steuben County Hunting Season (Southern Zone)

- Early Bear (some Wildlife Management Units): 16 consecutive days beginning the first Saturday after Labor Day.
- Early Bowhunting Deer & Bear: October 1 through the Friday immediately preceding regular season.
- Regular Deer & Bear: 23 days beginning the third Saturday of November.
- Late Bow & Muzzleloading Deer & Bear: 9 consecutive days immediately following the regular season.

# 5. <u>TABLE OF TYPICAL WORK TASKS,</u> <u>POTENTIAL SAFETY HAZARDS/ RISKS, &</u> <u>CONTROL PLANS</u>

TASK	POTENTIAL HAZARD/ RISK	CONTROL PLANS
1. Driving	Distractions Deer/ wildlife collisions	No cell phone or email use. Alert driving, especially at dusk/ night. Call 911 if collision occurs for police report and insurance filing. Remove deer from roadway. Take photos.
	Dusty roads/ obscured vision	Let dust settle when encountered. Do not follow closely behind vehicles causing dust conditions.
	Winter ice/ snow	Use appropriate vehicles (4- wheel drive). Drive slowly. Obey winter closure road signage. Check weather forecasts. Ensure cell coverage.
	Roadside stops	Park only where there is enough room to pull completely off the roadway. Check for soft/ unstable surfaces. Do not leave the vehicle running. Wear high- visibility clothing. Post field survey sign in the vehicle.
	Road flooding	Do not drive through flooded roadways. Report flooded roads to Project Manager and local police.
2. Field Surveys	Ticks and biting/ stinging insects (bees)	Apply good bug spray and seal bottom pants to reduce exposure. Conduct regular checks for ticks. Follow tick removal instructions if bitten. Keep the tick in a plastic bag for later identification. Check area for bee nests and wear light-colored clothing. Avoid wearing cologne/ perfumes and flowering areas. If stung, leave the area immediately. If allergic, carry an epinephrine auto injector/prepare to seek medical attention/know emergency room locations.
	Heat/cold stress	Be aware of weather conditions. Wear appropriate clothing and have necessary hydration. Recognize heat and cold related warning signs. Avoid severe weather. No work during lightning storms. Ensure cell coverage.

<b>Eight Point Wind</b>	, New York –	Health &	Safety Plan
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 Eight Point Wind, New York – Health & Safety Plan				
Hunting season	Check hunting season schedule, area restrictions, landowner hunting plans. Wear appropriate safety vests and hats. Be loud. Post field survey sign in the vehicle.			
Interaction with Public/ Strangers	Be courteous. If threatened, leave the area immediately and contact the appropriate Project Field Manager, NEER Site Construction Manager, NEER Security and police, as appropriate.			
Snakes	Wear boots, leather gloves, long pants and long-sleeved shirts (snake gators if high risk area). Tread heavily so vibrations alert snakes and allow time for them to move away. Avoid putting hands and feet in logs, wood piles, boulders and pipes.			
Water quality/ water safety	Do not drink from streams/springs/surface waters. Extreme caution when working near water bodies, use waders.			
Poisonous plants	Be able to identify plants and likely habitat. Avoid contact. If contacted, wash and soap the area immediately and have lotions available (Technu, Calamine, etc.)			
Remote site/ night work	Create a "float plan" or "check out" process with appropriate contacts on a regular basis. Notify, NEER Site Construction Manager, DPS Staff, and the Town when construction activities will occur past 7:00pm. Contact Sheriff's Office if working at night to alert them of field activity.			
Slips/trip/ fall hazards	Watch for hazards and ground objects. In agricultural areas. Watch for tilled soils, fences, barbed wire, livestock, etc. Wear appropriate footwear, gloves, etc.			
Fires	Report any uncontrolled fires to NEER Project Developer, NEER Construction (Execution) Manager, NEER Site Construction Manager, and local police and fire authorities immediately.			
Gas and oil pipelines	Check for pipelines in the area and report leaks or fumes immediately to pipeline companies and landowners and leave the area until repaired.			

# 6. <u>STEUBEN COUNTY EMERGENCY</u> <u>CONTACTS</u>

### **MEDICAL**

NEER Internal Medical Consultation Contact - 954-579-8612 Medical Emergency – Call **911** Nearest Hospitals:

- University of Rochester/Jones Memorial Hospital 191 N. Main Street, Wellsville, NY 14895 (585) 593-1100
- University of Rochester/St. James Mercy Hospital 7329 Seneca Road North, Hornell, NY,14843 (607) 324-8121

## <u>FIRE</u>

Fire/ Spill Emergency - Call 911

### **Greenwood Volunteer Fire Company**

1574 Andover Street, Greenwood, NY 14839

(607) 225-4570

### West Union Volunteer Fire Department

1395 Sate Route 248, Rexville, NY 14877 (607) 225-4515

### Andover Volunteer Fire Department

60 South Main Street, Andover, NY 14806 (607) 478-8361

New York State Spill Hotline: 1-800-457-7362

## POLICE

Police Emergency – Call 911

### Steuben County Sheriff's Department

7007 Rumsey Street Ext. Bath, NY 14810 Administration: (607) 622-3930 Dispatch: (607) 622-3911 Eight Point Wind, New York – Health & Safety Plan

### New York State Police, Troop E Zone 3

4 West Maplewood Ave. North Hornell, NY 14843

(607) 776-2182

### **Andover Police Department**

4 Main Street, Andover, NY 14806

(607) 478-8448

### **Canisteo Police Department**

35 Main St, Canisteo, NY 14823 (607) 698-4211

### **Hornell Police Department**

110 Broadway, Hornell, NY 14843 (607) 324-2860

## AMBULANCE/EMERGENCY SERVICE

Emergency – Call 911

### Andover Town Ambulance

22 East Greenwood Ave. Andover, NY 14806 (607) 478-8464

### Hornell Fire Department and Ambulance Service

P.O. Box 627 Hornell, NY 14843

Call 911

### **Steuben County Office of Emergency Services**

3 East Pulteney Square, Bath, NY 14810 (607) 664-2910

## **GAS STATION/ AUTO REPAIR STATION**

Shorts Andover, 3 East Chester Street, Andover, NY 14806, (607) 478-8449
Steve's Gas N Grub Hub, 41 South Main, Andover, NY 14806, (607) 478-8770
Jasper Junction Mini Mart, 3857 State Route 417, Jasper, NY 14855, (607) 558-4002
Uni-Mart, 2 East Main Street, Caniesto, NY 14823, (607) 698-2121
Sunoco Gas Station, 33 West Mai Street, Caniesto, NY 14823, (607) 698-2611
Acorn Market/Mobil Gas Station, 12 West Main Street, Canisteo, NY 14823, (607) 698-4217
Hubertus Service Station, 28 West Main Street, Canisteo, NY 14823, (607) 698-4253

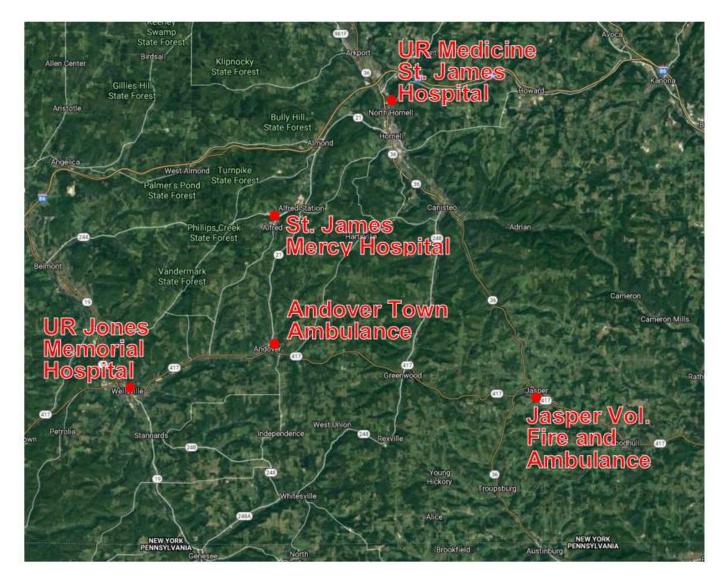
### Eight Point Wind, New York – Health & Safety Plan FOOD/CONVENIENCE STORES

J&J, 17 Main St, Canisteo, NY 14823, (607) 698-5057
Annies, 2 Greenwood St, Canisteo, NY 14823, (607) 698-3026
Acorn Market, 12 W. Main St. Canisteo, NY 14823, (607) 698-4217
Dollar General, 54 B W Main St, Canisteo, NY 14823, (607) 698-0007
Dollar General, 46 E Chestnut Street, Andover, NY 14806, (607) 438-2601
Hilltop Deli, 2377 County Rd 22, Andover, NY 14806, (607) 478-5255
Whitesville Corner Market, 452 Main St, Whitesville, NY 14897, (607) 356-3242
Rexville (Pflumms) Country Store, 1364 State Rte 248, Rexville, NY 14877, (607) 225-3663

# Refer to Site Access Point Directions for Emergency Vehicle Call Information.

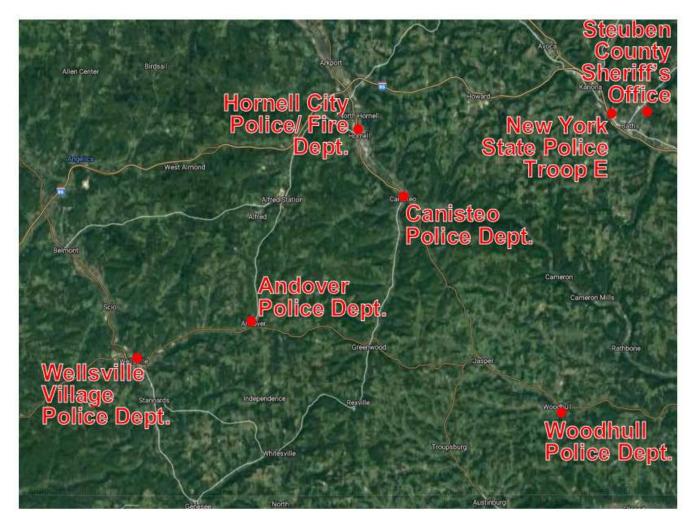
# 7. MAPS TO NEAREST HOSPITALS, POLICE, FIRE DEPARTMENTS, GAS STATIONS, FOOD AND CONVENIENT STORES

# HOSPITALS



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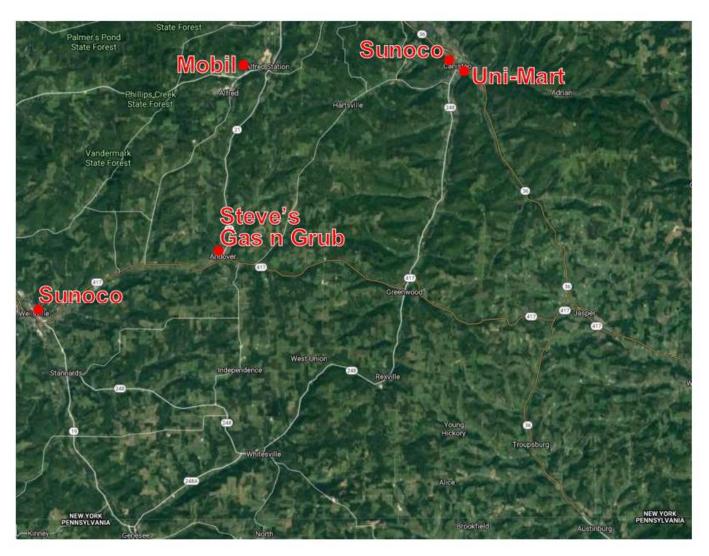
# **POLICE STATIONS**



# FIRE DEPARTMENTS

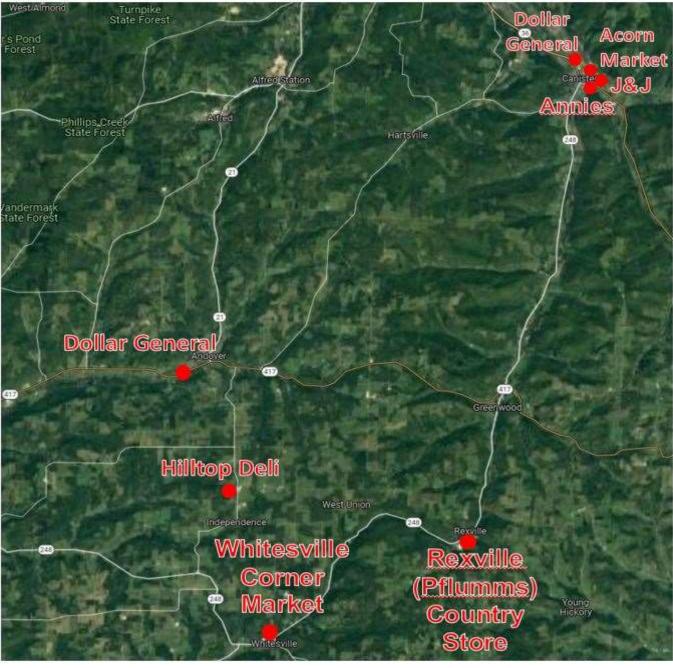


# **GAS AND SERVICE STATIONS**



Eight Point Wind, New York – Health & Safety Plan

# FOOD AND CONVENIENT STORES



# 8. DOCUMENTATION: SAFETY TAILBOARD, CONTACTS AND CORPORATE SAFETY FORMS

The NextEra Energy Resources (NEER)Site Construction Manager is responsible for full implementation of this Health and Safety Plan and the plans developed by the construction contractor using the Loss Control Manual template in Section 10. The Plans must be completed (and updated as needed) prior to any work being initiated. All information including sign-in sheets and checklists must be completed fully. A safety "tailboard" briefing with all staff onsite must be conducted prior to any work being initiated. The Tailboard form shall be completed fully and saved on the Project SharePoint site for documentation.

Any safety questions or concerns by onsite personnel must be resolved by the Site Construction Manager prior to any work being initiated. Personal safety needs and medical conditions should be discussed such as allergies (insect bites), physical limitations (heart conditions), etc. A safety debriefing should occur at the end of the work effort. Any safety issues must be recorded on the Safety Tailboard form. The form must include all individuals visiting the site and receiving the safety briefing. Individuals should sign the form if possible, including landowners, agency staff and any other visitors.

Required Personal Protection Equipment (PPE) during construction on-site includes hard hats, steel toed shoes, safety glasses, and gloves. The Site Construction Manager should provide a safety briefing prior to any site visits being initiated. There are no exceptions to this rule and PPE requirements. Sun protection and winter/ rain gear should be provided as needed. Awareness and periodic checks for ticks, snakes, spiders, etc. should be conducted and discussed. Awareness of the need for adequate liquids and food must be discussed with site personnel. Regularly scheduled work breaks and safety update discussions should be planned.

The following Safety Tailboard must be used for all work. Also attached are key corporate safety forms and corporate safety contacts including:

- Near Miss Event Report
- Safety Activity Management System Incident Reporting Policy
- Employee Injury/Illness Report
- Contractor Injury/Illness Report
- Serious Injury/OSHA Notification Process

The Site Construction Manager must consider any safety incident involving Project staff, contractors, or other visitors for applicable reporting to the Corporate Safety Activity Management (SAM) system. The SAM reporting website link is <u>https://us.airsweb.net/FPL</u>.

### NextEra Energy Resources Corporate Safety Contact

### **Corporate Safety & Workers' Compensation**

Mark L. Morgan, Sr. Manager Office: (561) 694-6472 Cell: (561) 373-6466

### Principal Health & Safety Consultant

Martin St. John, Principal Health & Safety Consultant Office: (561) 691-7576 Cell: (561) 339-0008

### Administrative Support

Alina Tamrakar Administrative Support Office: (561) 691-2608

### NextEra Energy, Engineering & Construction Safety Support Services

Eric Munsell, CSP, Group Manager, Office: (561) 691-2481 Mobile: (913) 626-4065





### Safety Activity Management - Incident Reporting Policy

With the implementation of the Safety Activity Management (SAM), it is important to establish clear expectations for incident reporting throughout the corporation. SAM is designed to capture all information from events of the following types: Injuries/Illness; Unsafe Acts or Unsafe Conditions; Near Miss Events; Property Damage Incidents (including Vehicle Accidents); and Regulatory Items. Although *ZERO Today!* is primarily focused on eliminating injuries and illnesses, the ultimate goal of any health and safety management system is to eliminate events that more likely than not would result in injuries or illnesses. Based on that vision, the following guidelines outline what should be reported in SAM.

### EXPECTATION: Any event meeting the following criteria is to be entered into SAM.

### <u>Injuries</u>

Injury that occurs to: a NextEra Energy ("NEE") company employee while on company property, while on company business, or as a result of operating any vehicle while on company business; or a contractor while working on behalf of a NEE company; or a member of the public while on company property.

### <u>IIIness</u>

Any unhealthy condition of body occurring in the workplace or resulting from an exposure or potential exposure in the workplace. Illnesses include a hearing loss detected in an annual audiogram. The SAM event is a record of the test and sets the time limit for conducting a retest no sooner than 10 days or later than 30 days from the date of the annual audiogram.

### Unsafe Condition

An unsafe condition is a physical condition that left unabated creates a safety hazard that could result in an injury, illness or property damage.

### <u>Unsafe Act</u>

An unsafe act is an action by an employee or a contractor that created an unsafe condition, caused a safety violation, or caused or could have likely caused an injury or property damage.

### Property Damage

Physical damage to company-owned property or equipment, a private vehicle being used for Company business, a contract car or damage to third party or public vehicle, equipment or property. This includes the following motor vehicle incidents: A NEER employee operating a NEER-owned, rented or leased motor vehicle or a NEER employee operating any motor

vehicle on authorized business

### <u>Near Miss</u>

An occurrence that could have resulted in injury, illness or property damage, but did not. An unsafe condition, in and of itself, does not constitute a near miss until and unless circumstances arise that the unsafe condition exposes a person or equipment to the likely occurrence of injury, illness or property damage.

### **Regulatory**

An item of non-compliance discovered in a state or federal agency inspection or audit that may materially impact safety or operations.

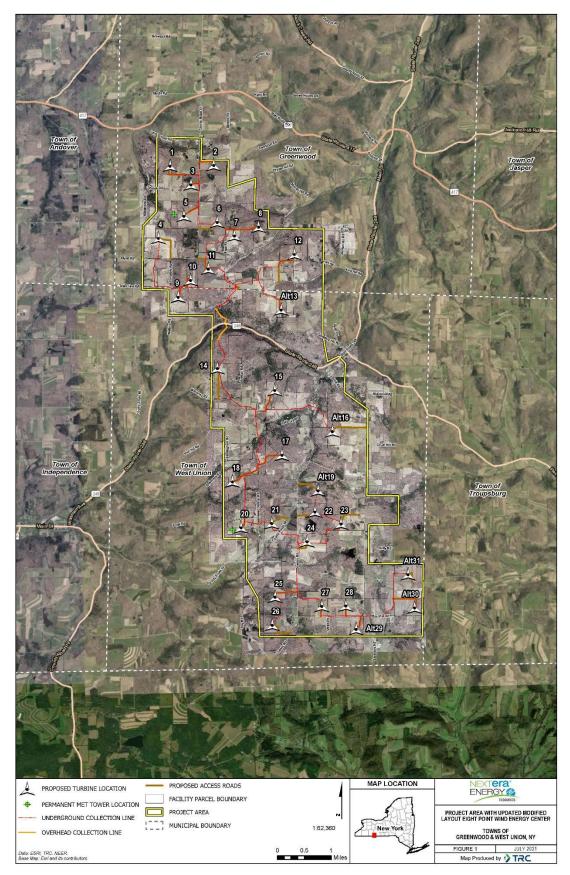


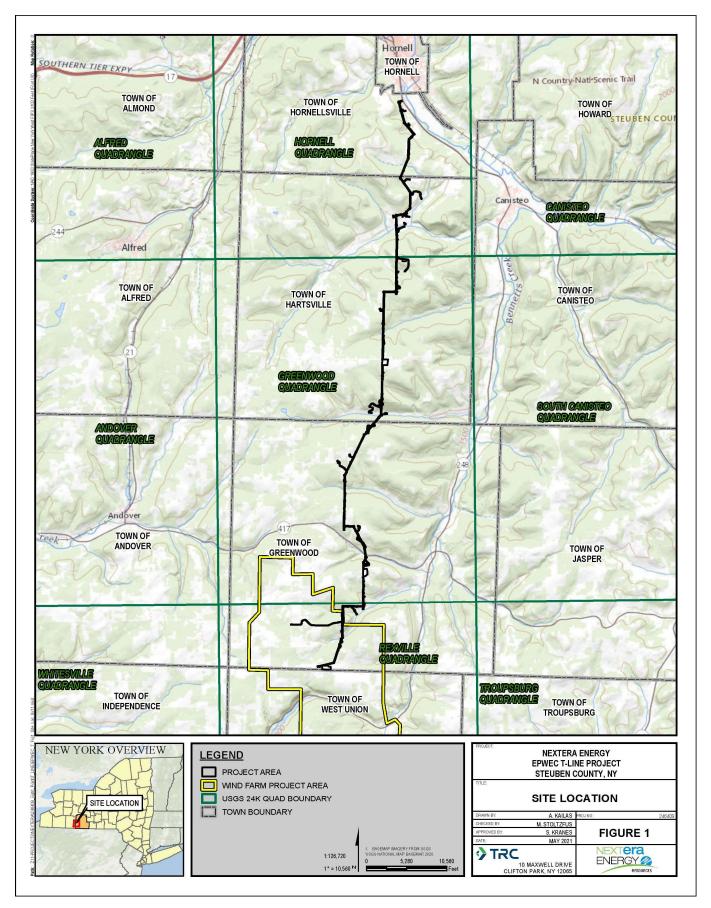
Near Miss Event	Report Form	NextEra Energy, Inc.	
Date form completed:			
Your name and *Business Unit:	(Name - leave blank to remain anonymous)	(Business Unit)	
You are a:	NextEra Energy Employee - enter Employee ID:     Seconded Contractor (Reports to NextEra Energy supervisor)     Non-Seconded Contractor (Independent contractor)		
*Date of event:			
*Did the event occur at a company owned property?	Yes No Jobsite location:		
*Building/Site that will own this near miss:			
Task information:	Workgroup involved:		
	Activity being performed:		
*Event Category: (Such as: Rigging, Housekeeping, Slip)			
*Potential for injury:	No Yes - Name(s) of person the	hat could have been injured:	
		ov. Contractor Ind. Contractor stomer MOP	
*Potential for property damage:	No Yes, specify		
*Detailed account of the	e near miss (use additional page if necessa	ary):	
Action(s) taken to corre	ect any hazardous situation/initial investigati	ion findings/additional notes:	
Novt stops: Log on to	SAM and arooto a new avest record with th	a information from the completed	
<b>Next steps:</b> Log on to SAM and create a new event record with the information from the completed form. At some locations, you can submit this completed form to your supervisor or local safety committee for SAM entry.			

\* Entries required for SAM near miss entry via express.

# 9.AREA MAPS AND AERIAL PHOTOS

## **REGIONAL PROJECT AREA MAP**

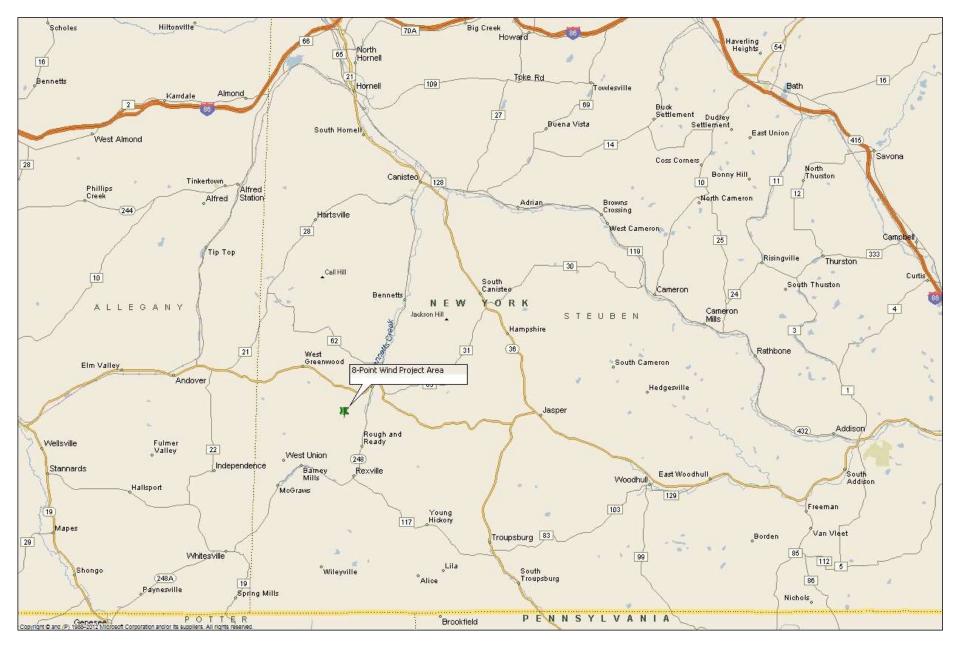




## **Eight Point Wind Transmission Map**

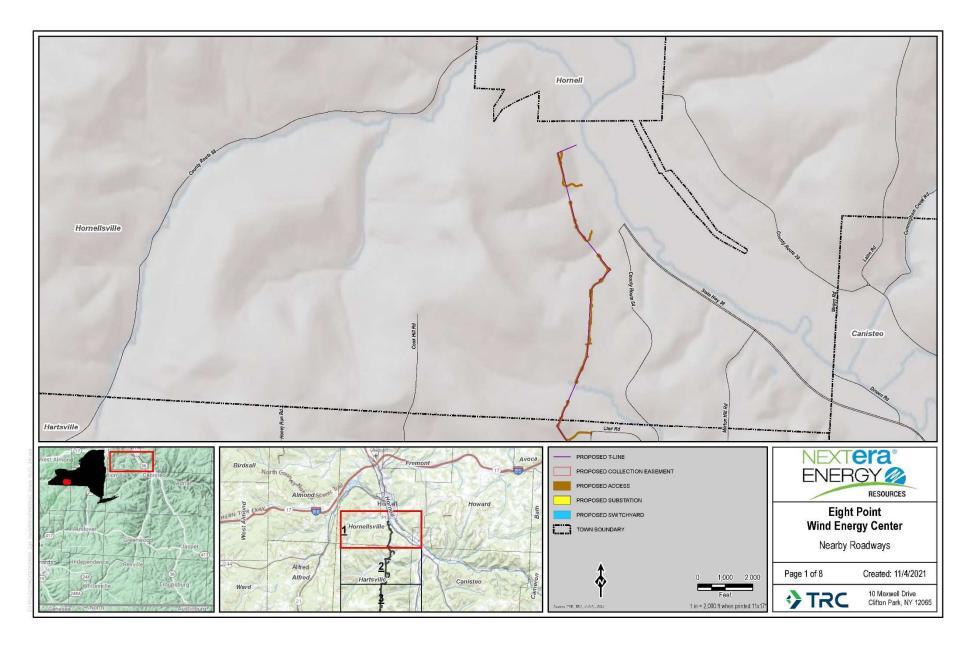
## **PROJECT AREA STATE ROAD MAP – Western NY**

Shadigee Beach Troutburg Lake On tario Moon Beach OSWEGO Carley Mills
Appleton Vates Center Cartton Kent Kendal Node Hamin Center Fair Haven Sterling 3 Volney Center Center
Fort Niagara New Tane East Gaines Hilton Heights Duttersoille Lake Martville Square Monroe
Ridgeway Center Brodwille Perine Center Brodwille Perine Center
Wadara-on-the-Lake • Huron • Honoson Huron • Honoson
Barre Center Barrad Wehster Ontario York Wolcott Jacksonville Lysander New Barbard
Lewiston N I A G A R A Gasport Barre Center South Barre Sweden Sweden Center South Barre Sweden Center South Barre Sweden Center South Barre Sweden Center Walworth W A Y N E Rose Butler Cato Meridian Red Rock Syracuse
Marion Fairville Center Van Buren Hill
Fails La Salle Lockport Rapids Alabama East Oakfield Bergen West Chill Chill East Fairport 21 Clyde Hard Point Conquest Conquest Conquest Conquest Conquest Chill
Horther Peridieton Sand Hill Basom Perid Starture Peridieton Sand Hill Basom Perid Syracuse Syracuse
Island Port Gioson Newards Akron Pembroke Scottsville Martin Pennetia Port Gioson Newards
Tonavianda Educod East Amherst Le Roy Wheatland North Mendon Tyre Evaper Throon a Marcellus Manilus
ONTARIO IPine Hill Amherst Newstead Control ON ON DAVA A Bethany Center Fraser Lima Bioomfield (332) Clifton Springs Seneca Waterloo
Castle Seneca Cayuga Meirose Manetta Lords Adden Augusta Adden Avon East Bloomfield Castle Seneca Cayuga Meirose Manetta Lords Adden Adden Avon
Burraio Elma Marilla West Middlebury Create South Lima Bristol Arsenal Canandaigua Geneva Fieming Wyckoff Mandana Bay Shores Fabius
Lackawanna Bennington Covington Pittard Livonia Center ON TARLO Stanley Fayette Farleys CAVUGA Niles Spafford Tully
Date Detesting Seneca Seneca Merifield Omro Canding
Urchard Park Sheldon Celler Warsaw Mount South South South Center Uwasco South Cuvier
Lake view weye Planhung Fails Colegrave W Y O M I N G Proble
E R E E Vointe Viet Sparta Reed Comers Nanjee Italy Hill Kerka Park Lodi Morners Comers Comers
Brant worth Chattee Arcade Diss. Portageville.
Lawtons Eagle Pike Deton Ossian Virvil Freedown
Nashville Gowanda Delevan Canasekara (38) Stickneys Likease Datawisa Stickneys Stickneys Likease Datawisa Stickneys Likease Stickneys
Dayton Hollow Fox
South Persia East otto Machias Rushford Houghton Arkport Fremont Avoca Hammondshort Weston you're Burdett Caroline Killawog
Office Caneadea Uramel Allen Birdsall Matthe Broktondale Lisle
Vitando Vitando Schuy Ler Badwille Angelina Almond Haven
Allieu
Conewango Valley Elicottville India Ischua Cuba violatione Care un control Conewango Valley Valley Valley Valley
Elidate Sugartown Humphrey Center Candor BROOME
Randolph 242 CATTARAUGUS Hinsdale Friendship Scio
Randolph Shengo Salamanca
Carrollton Wellsville West Inion Addison Big-Rists Elmira Chemung Hota Carrollton Owego Endcott 17
Allegany Petrolia Independence Vestal Presho Ceton West Elinica 17 Lockwood Tinga Center August 4 Vestal
280 Invine Mills Limestone Doubling Genesee Bolivar Manes Troupsburg Violonital Lindley Fast Lowman Violonital Barton Michols Little
Lilla Audioburg Julia Audioburg Julia Audioburg Julia Audioburg
Bradford Centra City Eldred Genesee Brookfield Elkland A Millerton Ridgehury Litchnied Vinkand
Hazelton MCKEAN Stilligenouse POTTER Mills Westfield Knoxville Tigga Junction Jackson
Scandia 321 Mills Rew Larabee Annin Creek Clara Lewis Corner PENNSYLVANIA Summit Corryland Corner Vestilicity South Warren Copyright Cand P 1988-2012 Milloroot Conformation and P1 1988-2012 Milloroot Confor

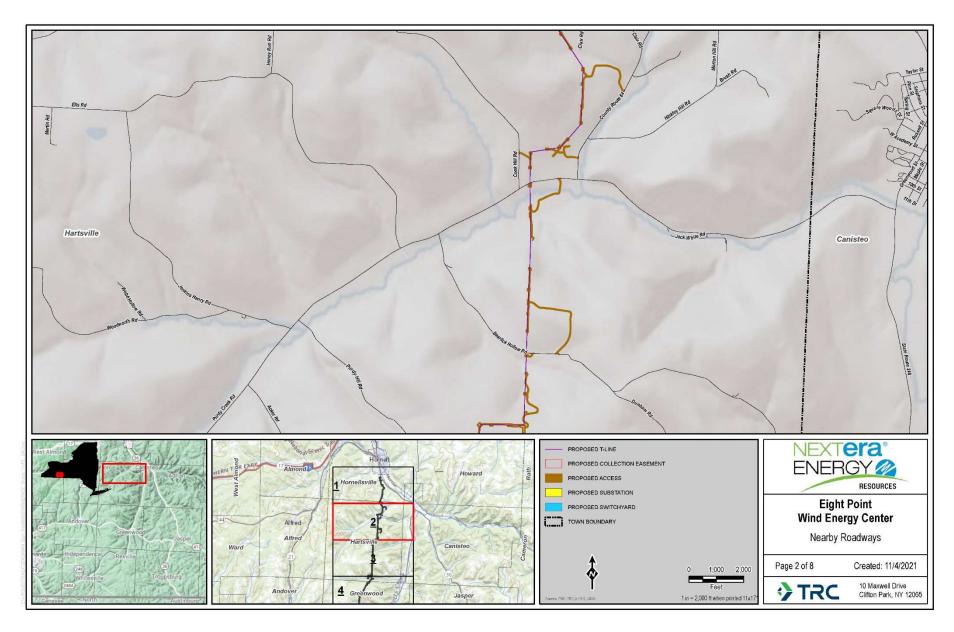


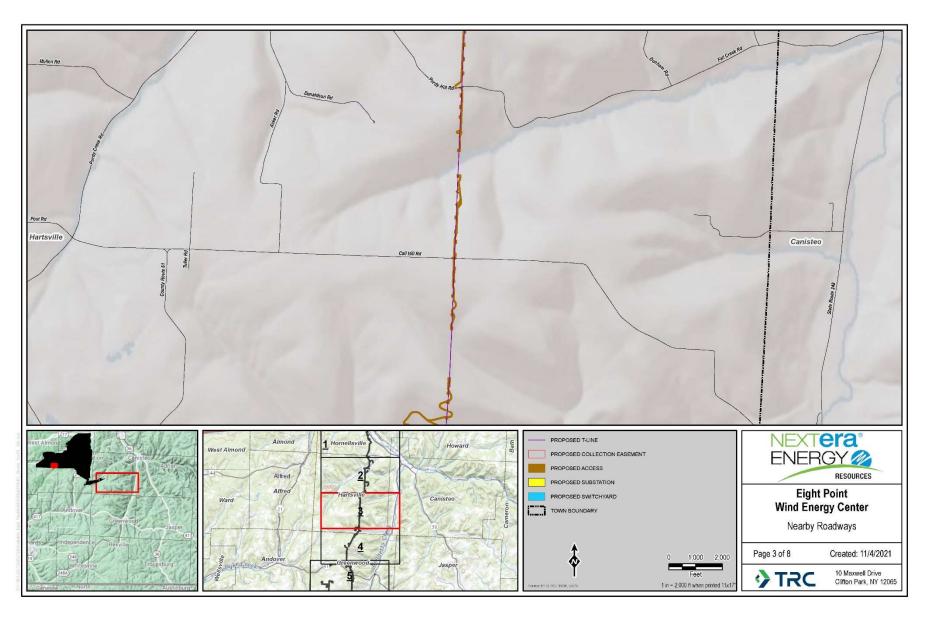
## **PROJECT REGIONAL AREA ROAD MAP – Steuben County, NY**





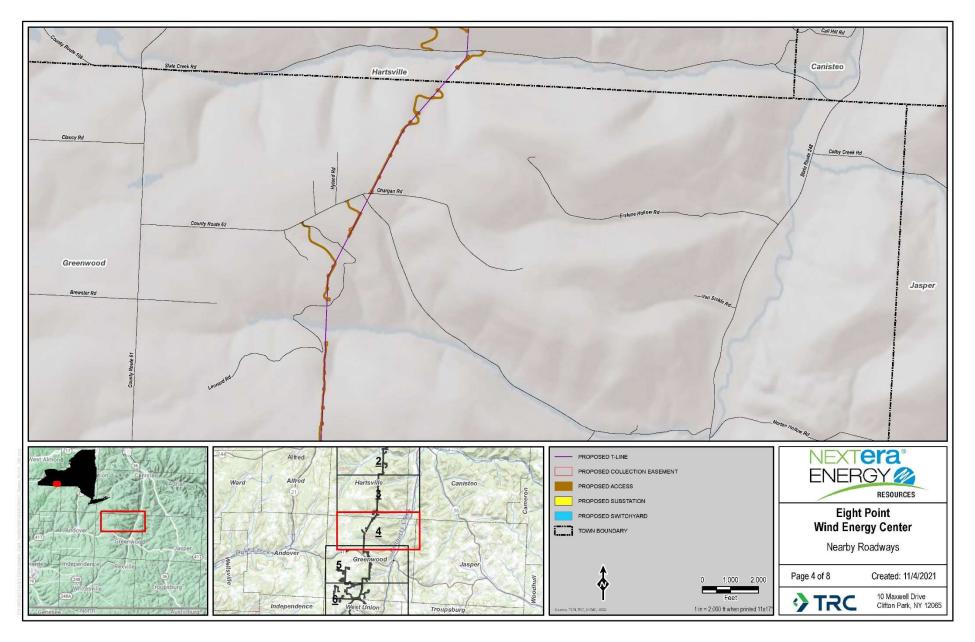
PROJECT AREA ROAD MAP – Hartsville, NY

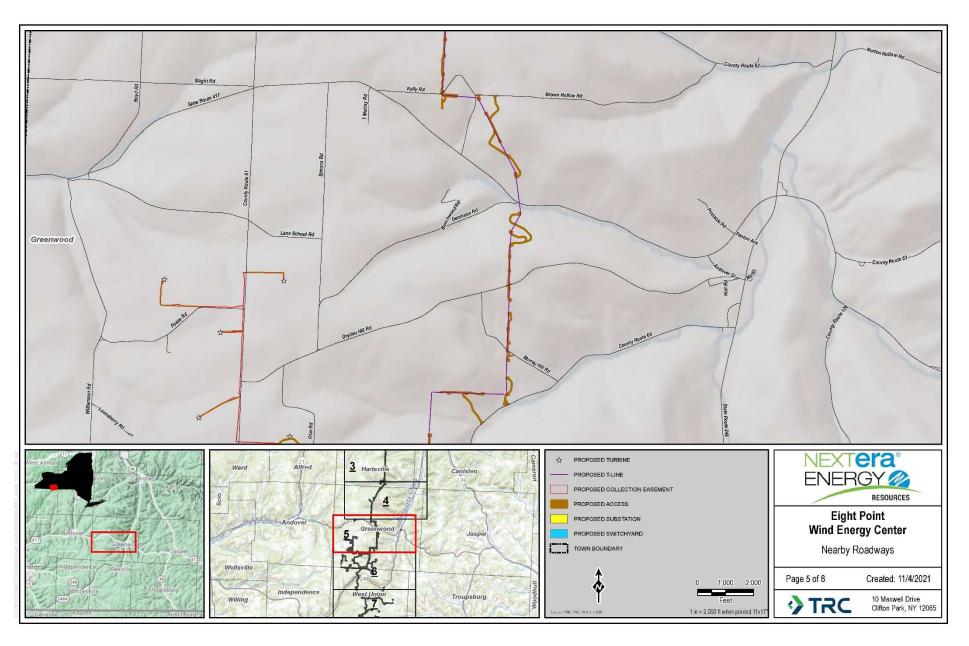




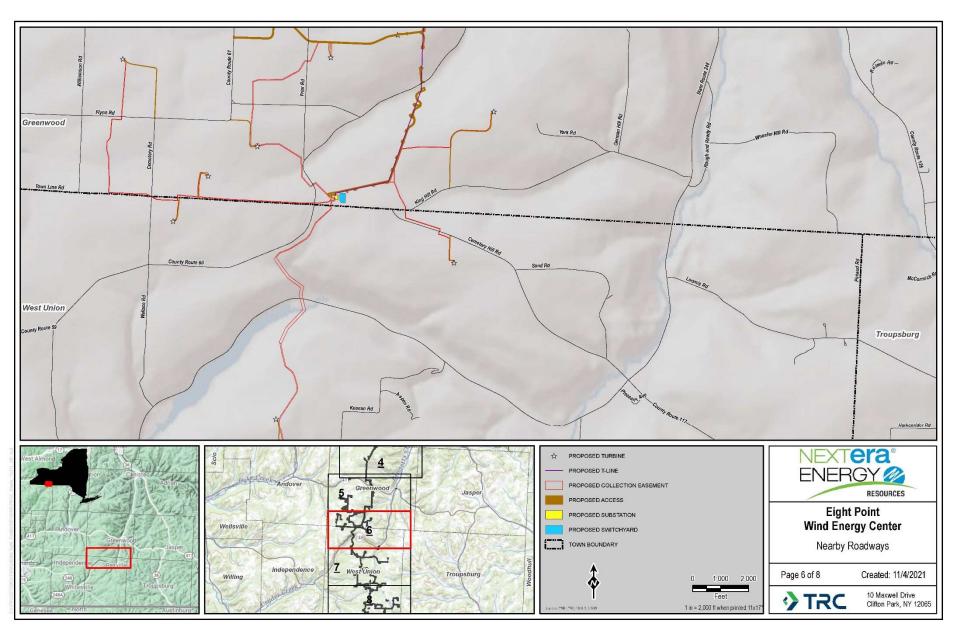
PROJECT AREA ROAD MAP – Hartsville, NY





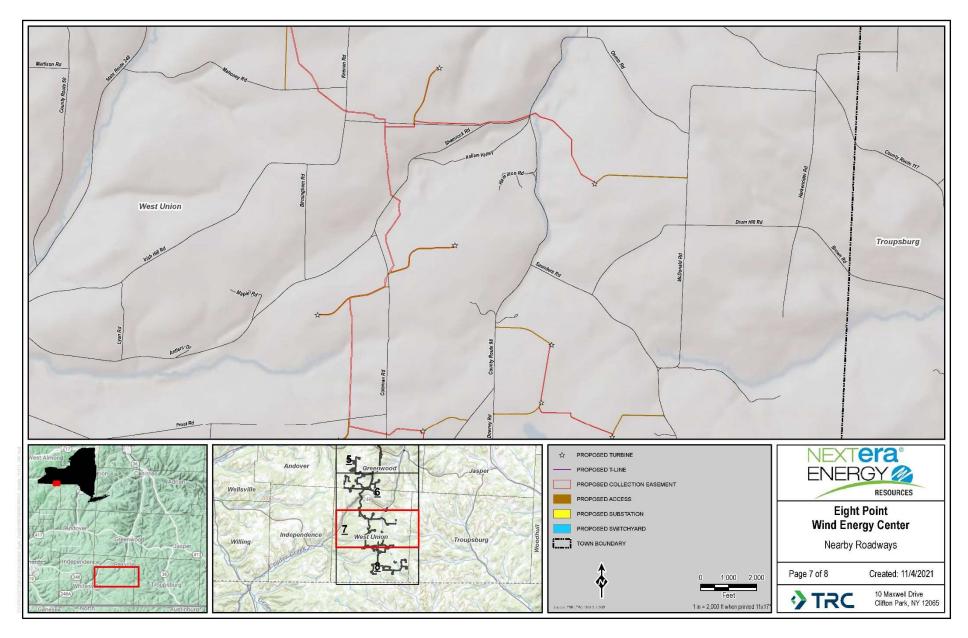


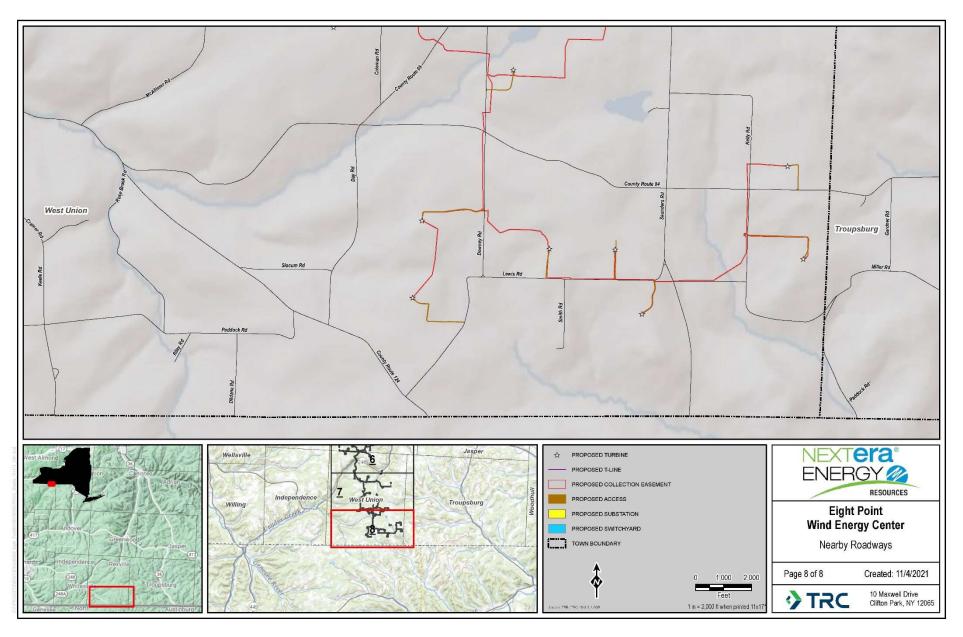
PROJECT AREA ROAD MAP – Greenwood, NY



## PROJECT AREA ROAD MAP – Greenwood, West Union, NY

PROJECT AREA ROAD MAP – West Union, NY





## PROJECT AREA ROAD MAP – West Union, NY

## **10. LOSS CONTROL MANUAL TEMPLATE**

# NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. PROJECT LOSS CONTROL MANUAL

**Client Name Here** 

PROJECT NO. DATE REV. NUMBER



## 1.0 Policy

At NextEra Energy Engineering & Construction, LLC. safety is a core value and is recognized as the cornerstone of sustaining operational excellence. It is this philosophy that serves to guide our employees in pursuing their responsibilities, shared with the company, to safeguard the health and well-being of all employees, contractors and members of the public involved with our operations.

NextEra Energy Engineering & Construction, LLC's. vision for its employees is to establish and promote a safety culture based on the principle that zero injures at work and home is an achievable result.

NextEra Energy Engineering & Construction, LLC. is committed to providing a safe and healthy work environment for all employees and requires that safety should not be compromised for any other business priority. We expect contractors and vendors providing services to the company to have the high standards of safety and health as we do.

It is the responsibility of the company to company along with our contractors and vendors to provide the facilities, equipment, tools, procedures, safety programs and training for employees to work injury-free. It is the responsibility of every employee to work safely for the benefit of the individual as well as their co-workers and the company. This responsibility includes following appropriate safety rules and planning each work activity using appropriate risk assessment, good judgment and skills, along with a sincere dedication to work safely.

No activity is to be regarded as so urgent that time cannot be taken to do it in a safe manner. Employees should not start work until they understand what work is to be done and how to do it safely. Employees are encouraged and expected to not proceed with any activity that they deem unsafe until the concern can be evaluated and resolved. All employees are expected to be engaged in the company's safety management process. Engagement includes communicating with all parties involved about safety related behaviors, conditions and hazards, and bringing to management's attention those issues which require their involvement and support.

All employees in leadership positions are responsible for deploying and actively supporting the Company's overall Safety Program. Included in this responsibility are monitoring, observing and enforcing the use of safe work practices and safety rules.

All of us together through our leadership, commitment and engagement must accept the challenge to work safely and to actively pursue injury and illness prevention. Our employees, contractors, vendors, communities and customers will benefit. NextEra Energy Engineering & Construction, LLC. encourages all employees to carry this strong health and safety value beyond the workplace to all of their activities.

## 2.0 General Safety

## 2.1 Project Loss Control Program

This Project Loss Control Program provides an administrative structure within which Contractors present on the project site shall provide both for the safety and health of their employees and other individuals affected by their activities and for the protection of the environment and property.

The Project Loss Control Program does not relieve Contractors of any of their traditional or specific legal responsibilities with respect to occupational safety and health or the protection of the environment or property.

Instead, the Project Loss Control Program provides for consistency among the various Contractors' individual programs; monitoring of Contractors' conformance with their individual programs, the

Note: The requirements set forth in this manual are to be passed down to all Contractors' lower tier subcontractors. The term "Contractor" identifies Contractors with employees working on the project. The rules in this Project Loss Control Manual apply regardless of whether the terms used in the Contract are Contractor, Subcontractor, Supplier, Vendor, or other similar terms.

NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. will distribute copies of the Project Loss Control Manual to all Contractors.

• Contractors shall ensure that all their employees and subcontractors are familiar with, and abide by, the contents of this manual, including any changes distributed by NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC..

NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. Will periodically issue safety memorandum. Memorandum are considered to be contract binding.

• Contractors shall ensure that contents of the memorandum are communicated and implemented on NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC projects.

NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. will schedule project construction coordination meetings daily, weekly and at any other time deemed necessary.

- The purpose of the meetings, among other things, will be to discuss safety and health concerns as they relate to the project, provide for two-way communication between Contractors' safety representatives and Nextera Energy Resources and, in general, further the Project Loss Control Program.
- All Contractors are required to be in attendance.
- Contractor personnel will be required to attend additional meetings such as Safety Walk downs, Safety Managers' meetings, Joint Craft Management Safety Representative Meetings and others as determined by NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC..

## 2.2 Contractor Responsibilities

Contractors' shall implement a Loss Control Program that shall meet the minimum applicable requirements of the Occupational Safety and Health Act of 1970. In addition the Contractors' program shall meet the minimum requirements found within this document.

Contractors' shall be responsible for the safety and health of all persons, the environment, and property affected by the Contractors' performance of the work, including work performed by their subcontractors.

If a Contractor brings an additional subcontractor to the project, the Environmental, Safety, Health, and Security (ESH&S) Manager must be notified in advance so that the subcontractor can be approved.

Contractors' shall be responsible for implementation of a written Loss Control Program (Contractors' Loss Control Program) to prevent their employees from working under conditions that are unsanitary or dangerous to their safety and health or to the environment. Contractors' conformance with the requirement to initiate and maintain such a program is mandatory under the provisions of their construction contract.

Contractors' shall appoint a qualified and experienced Safety and Health (S&H) Representative who will maintain a current certification from the Board of Certified Safety Professionals or NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. approved equivalent certification in construction safety and/or risk evaluation. Before assigning the S&H Representative to the jobsite, Contractor' shall submit the training and experience record to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. for review and acceptance.

The S&H Representative will administer Contractor's Safety, Health, and Accident Prevention Program; attend all safety and health meetings at the jobsite.

The S&H Representative must have authority to correct unsafe conditions and to stop work in the area of an unsafe condition. This representative shall be appointed as the lead S&H Representative for the Contractor, shall have no other duties, and shall be assigned full-time to the jobsite.

## 2.3 Project Loss Control Program Requirements

#### 2.3.1 Drug Testing

NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. will enforce strict requirements for a drug free workforce. Failure to require drug and alcohol tests will be considered a breach of contract and could subject the Contractor to expulsion from the jobsite and contract termination. Employees entering, working at, or leaving the jobsite are subject to search and inspection.

Key elements of the NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. Drug Screening Policy are as follows:

• NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. pre-employment, postaccident, reasonable suspicion and random drug tests test for amphetamines, cocaine, marijuana, opiates and phencyclidine and the metabolites – or synthetic counterparts – of these drugs.

- Alcohol testing, with a cut-off level of 0.02 percent is included in all drug tests.
- NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. does not recognize the use of medical marijuana, even if state law provides for its use. For anyone who advises NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. that they are taking prescription Marinol (and can demonstrate this with a prescription), either prior to or after a non-negative test result, additional testing will be conducted to validate that the presence of THC is because of Marinol and not because of ingesting marijuana.

All Contractor employees shall submit to drug and alcohol screening tests before reporting at the project jobsite or immediately upon reporting to the jobsite. Only employees who are certified drug free and alcohol free shall be permitted by the Contractor to work at the project.

• Any employee who refuses a test or fails a test is to be immediately removed from the project site and is not permitted to be assigned/reassigned to any NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. project.

Any person performing construction activities at the site, regardless of their length of visit, must show evidence of passing a pre-access drug and/or alcohol screen prior to being allowed to work. Supplier representatives, home office employees, and field technical representatives who visit the jobsite on a short-term basis are not subject to pre-employment drug testing, although such persons are subject to the search procedures for drugs set forth in this manual.

#### 2.3.2 Surveillance

Contractors' are responsible for the enforcement of their respective Contractor Loss Control Programs and the Project Loss Control Program. NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. will provide surveillance of Contractors' activities to observe whether such activities are in compliance requirements outline in each document.

If an apparent violation of a safety or health requirement occurs, NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. will advise the Contractor of the violation and direct that the violation be corrected. If there is a conflict between the requirements outlined in the documents the most restrictive shall apply.

If the violation is not abated within the time period specified and no acceptable alternate solution has been proposed by the Contractor, NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. will initiate steps to correct the violation and back charge such expenses to the Contractor.

Contractors' who knowingly violate the project's loss control rules will be issued a Violation Notice a contractor that knowingly or willfully violates project loss control rules shall be subject to discharge.

#### 2.3.3 Designation of Authorized, Qualified, Competent Person(s)

Contractors' are responsible for designation of employees as authorized, qualified, competent persons in accordance with OSHA CFR 1926.

• An Authorized Person is defined as a person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the jobsite. OSHA CFR 1926.32(d)

- A Competent Person is defined as a person who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them. OSHA CFR 1926.32(f)
- A Qualified Person is defined as a person who by possession of a recognized degree certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work or the project. OSHA CFR 1926.32(m)

Contractors' are responsible for maintaining a list that identifies site employees defined as competent persons for the following OSHA standards if applicable to awarded scopes of work. Contractors' are to furnish this list to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. upon request.

#### 2.3.4 Training

Contractors' are responsible for ensuring that employees are properly trained and if applicable deemed qualified or competent to safely perform assigned task. Contractors' are to maintain documented training records and certifications and make them available to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. upon request.

- Contractors' are to facilitate project onboarding/new hire training with new employees and site visitors. The training is to be completed upon arrival to the site. The training is to provide instruction on the Contractors' safety rules, policies and practices and any additional requirements outlined in this document.
- Contractors' are to facilitate additional task specific training required to deem employees qualified or competent to perform assigned task as required by government regulations, consensus standards and manufacture requirements.
- Contractors' are to provide field surveillance to ensure comprehension and adherence to the safe work requirements conveyed in Contractor provided training. Retraining is to take place if employees are observed not conforming to safe work requirements.

#### 2.3.5 Safe Work Planning

Contractors' are responsible for ensuring that safe work practices are planned into procedures and work practices required to complete work related task. These safe work practices are to be reviewed with employees prior to executing the assigned task. Employees are to be directed, monitored and held accountable to performing the assigned task in accordance with safe work practice.

• Contractors' are responsible for completing a Master Job Hazard Analysis (JHA) for awarded scopes of work. The JHA is to outline the necessary steps required to complete the awarded scopes, identify known risk/hazards and provided engineering and administrative controls

along with personal protective equipment that will be used to protect employees from that hazard. This document is to be maintained onsite and be reviewed by management and supervisory team members prior to commencing the scope of work. The document is to be made available to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. upon request.

- Contractors' are responsible for ensuring that field supervision completes a daily preshift hazard analysis with employees prior to performing assigned work task for the shift. This analysis is to be documented and is to outline the necessary steps required to complete the assigned daily task, identify known risk and site specific hazards and provided engineering and administrative controls along with personal protective equipment that will be used to protect employees from that hazard. This document is to be signed by employees to demonstrate acknowledgement. The document is to be maintained in the field while the work activities are being performed and made available to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. upon request.
- Contractors' are responsible for ensuring that equipment and tools are inspected to ensure their safe work condition. Inspections are to be performed daily prior to each work shift/prior to use. Unsafe conditions or defects noted during inspection are to be cause for discontinuation of use. Inspections are to be documented for the following items; these documents are to be made available to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. upon request.
  - Mobile Equipment including but not limited to job site vehicles, UTV/ATV's, fork lifts, aerial lifts, excavators, front loaders, skid steers, pile drivers, cranes, directional drills, trenchers, graders, rollers.
- Contractors' are responsible for ensuring that high risk task associated with awarded scopes of work is planned for prior to executing the task. These tasks are to be reviewed with NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. prior to commencement supportive planning documentation is to be provided to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. for review and acceptance. Task include but are not limited to:
  - Critical Lifting/Hoisting Operations
  - Hazardous Energy Control/LOTO Operations
  - Commissioning Operations
  - Energized/Hot Work Operations

### 2.3.6 Monthly Performance Reporting

Contractors are responsible for providing NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. with a monthly safety performance report by the 5<sup>th</sup> of each month. Reports are to provide NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. with staff counts, manhours worked, behavioral observation data, substance abuse screening data, enforcement data for Contractors' and any subcontractors'.

#### 2.3.7 Labor & Management Committee

Contractors' are responsible for implementing a joint labor and management committee that is to meet weekly. The committee is to be made up of Contractor management team members and craft representatives from each trade. The purpose of the committee is to promote proactive ownership and engagement by craft representatives.

• Weekly all hands/toolbox meetings are to be held to review committee findings, safe work planning initiatives and trends.

#### 2.3.8 Behavioral Observation

Contractors' are responsible for implementing a behavior based observation program. The program is to focus on the promotion of safe work behaviors and elimination of unsafe behaviors through proactive observations and employee engagement.

#### 2.3.9 Government Agency Inspection

Contractors' are responsible for immediately notifying NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. of the presence of a government agency inspection official on site.

- At all times while on-site, the government agency inspection official shall be treated courteously and given full cooperation.
- Contractors shall ensure that government agency inspection official is provided with appropriate safety related training and protective equipment prior to performing site inspections.
- Contractors shall select one or more of their representative(s) to accompany the government agency inspection official officer during site inspections.
- In the event of any violation of EHS laws arising from the Contractor's and/or Contractors employee's action or failure to act, the Contractor shall take immediate action to resolve the violation with the appropriate regulatory authority; pay any and all fines, penalties, or other cost that are levied by a regulatory authority; and reimburse NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. directly for all cost expended to resolve the violation.
- Contractors are to provide NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. with inspection findings and formal reports issued by the inspection agency.

#### 2.3.10 Incident Reporting & Investigation

Contractors' are responsible for reporting an occupational injury, illnesses, near miss property damage, security (theft/vandalism/violence) or environmental event to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. immediately after the occurrence regardless of day or hour.

• Within 24 hours following the event Contractors shall complete and submit to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. a Preliminary Accident/Illness Incident Investigation.

• Within 5 days following the event Contractors shall complete and submit to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. a Final Accident/Illness Incident Investigation.

The following supportive documentation shall be included with the Final Accident/Illness Incident Investigation submittal to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC..

- Witness statements.
- Accident Photos / Reenactment Photos.
- The crews STA/JSA for the task being performed at the time of the accident.
- Applicable tool/equipment inspection records.
- Applicable safe work planning forms/documents associated/required for the task being completed for the crew.
- A root cause analysis
- Corrective actions and a timeline for implementation.
- Disciplinary records.
- Post accident substance abuse testing verification records.

#### 2.3.11 Hazardous Materials

Contractors' are responsible for implementing and maintaining a written Hazardous Communication Program that will comply with the Globally Harmonized System for Classification and Labeling of Chemicals as stated in OSHA Standard 29 CFR 1910.1200.

- Contractors' shall maintain Safety Data Sheets (SDS) for any and all hazardous material they bring on-site or for which they are responsible for onsite and make them available to NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. upon request.
- If a Contractors' work with a hazardous material could affect the safety and health of other Contractors or site employees the Contractor shall coordinate the work with other Contractors to ensure the safety and health of the Contractors employees.
- Contractors' shall be responsible for the safe storage, use and disposal of all hazardous material they bring on site, or for which they are responsible.
- Contractors' shall conspicuously label with their company name all containers of hazardous material for which they are responsible for utilizing a recognized Globally Harmonized System (GHS) marking.

#### 2.3.12 Security

Contractors' are responsible for developing and implementing a site security control plan that provides detail on the controls that will be used on site. The plan is to provide detail on the following items at a minimum.

- Performing criminal background screening of project site employees
- Monitoring construction gate access to the project site
- Preventing unauthorized entry to the project site
  - Vehicle Identification
  - Employee Identification
- Preventing theft from the project site
  - Security monitoring services
  - Physical barriers/fencing
  - Screening/inspection practices

The following items are specifically prohibited on the project site. Contractors' are to implement controls to discourage and screen employees.

- Firearms or other deadly weapons
- Explosive or fireworks
- Alcoholic beverages
- Any drugs (whether prescription or nonprescription) which impair physical or mental faculties, or any prescription drugs without a valid prescription
- Animals/Pets
- Unauthorized vending devices
- Unauthorized sale of food, tickets, beverages, or other merchandise
- Unauthorized open fires including barrels and fire rings
- Unauthorized site postings

• Any substance that creates a hazard and is not related to a work related task

Contractors are responsible for immediately and permenantly removing/dismissing any employee from the site if he or she:

- Violates any local, state or federal law on the project site
- Fights, creates a disturbance, or engages in any negligent act which could result in injury or death
- Conspires or participates in placing a threat or any type to disrupt any work effort
- Destroys or attempts to destroy any property
- Intentionally engages in conduct constituting a substantial step toward the commission of any criminal offenses
- Possesses firearms or other deadly weapons oh his/her person or within a vehicle under his/her control on the project site
- Enters without authorization into an area which is not his/her assigned work area
- Commits any act which constitutes moral misconduct
- Assaults or molests a site employee, visitor or community member
- Drives any vehicle in a manner which may result in injury to a site employee, visitor or community member

Any employee removed/dismissed for the items mentioned above are not to be assigned to any other NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. project site.

#### 2.3.13 Emergency Planning & Response

Contractors' are responsible for developing and implementing an emergency response plan that will facilitate a prompt and orderly response to site emergencies. The plan is to provide detail on the following items at a minimum.

- Medical Emergency Response Plan
  - Onsite Evaluation & Care
  - Telephonic Evaluation & Care
  - Offsite Occupational Clinic Evaluation & Care

- Emergency Care
- Fire and Hazardous Material Response Plan
  - Site Controls
  - Coordination with Offsite Emergency Service Providers
- Inclement Weather Response Plan
  - Thunderstorm/Lightning Monitoring & Sheltering
  - Tornado Plan Monitoring & Sheltering
  - Heat Illness Monitoring & Prevention Controls
  - Cold/Freezing Temperatures
- Threats or Acts of Violence Response Plan
  - Onsite Response
  - o Coordination with Offsite Emergency Service Providers
- Site Evacuation Plan
  - Muster/Evacuation Point
  - Notification of Evacuation
  - Accounting for employees/visitors

#### 2.3.14 General Safe Work Requirements

Contractors' are responsible for ensuring the following general safe work requirements are implemented as part of their Loss Control Program.

#### **Mobile Devices**

- Personal cell/mobile phones/mobile device use is prohibited during work hours on-site.
- Personal cell/mobile phones/mobile devices may be kept in designated break areas for use during lunches and breaks at office trailers and designated break areas.
- Contractor supervisors may carry and utilize company phones if required to perform their job duties.

#### **Housekeeping**

- Leads, hoses, and extension cords shall be hung up (approximately 7 feet) with a nonconductive material, off all floors, stairways, and walkways in a manner such that they are not in contact with the building steel structure.
- Leads, hoses, and cords are to be removed from the work area when the work is completed or when they are no longer intended to be used.
- Lead, hose, and cord "roll-ups" will be required if an excessive amount of equipment accumulates in a work area creating housekeeping or trip hazards.
- Trash such as drinking cups, cans, and scraps from lunch are not to be thrown down, but should be disposed of properly in marked containers.
- Available material, equipment, concrete forms, pipe, etc., are to be orderly and stacked out of walkways and from in front of doors, stairways, and ladders.
- Oil, grease, and other such liquid spills shall be cleaned up at the time of the spill and are not to be left unattended.
- Each crew is responsible for housekeeping in its respective work areas.
- Where such items as protruding rebar and anchor bolts create impalement or tripping hazard, they shall be properly protected and conspicuously marked.
- Trash barrels and 55 gallon drums shall not be hoisted by holes cut in the sides; adequate means of support shall be used.

#### **Electrical Safety**

- Only qualified employee shall work within 10' of exposed energized equipment.
- Unqualifed personnel shall be kept outside of the Limited Approach Boundry.
- Employees shall not approach any exposed, undgrounded lines or equipment unles they insulate themselves from the conducting surfaces using approved rubber gloves.
- For electrical operations performed by qualified employees, minimum approach boundaries\* for shock protection shall be:
  - 3'6" Limited Approch Boundary
  - 1'0" Restricted Approach Boundary
  - 0'1" Prohibited Approach Boundary
     \* The Approach Boundaries are a function of the Circuit Voltage. Therefore, the appropriate Tables in the NFPE 70E or the OSHA 29 CFR 1910.269 (whichever is applicable) shall be consulted.

For electrical operations performed by quailed employees, the Flash Proteciton Boundary shall be identified by the warning lable that appears on the equipment.

- A clear work sapace of at least 36" shall be kept clear in fron of any electrical equipment.
- The covering on a conductor shall not be relied-upon for protection from shock.
- An employee shall not startle another employee who is working within reaching distance of energized equipment.
- When working in one section of a compartment adjacent to other sections containing energized equipment, the compartment being worked on shall be adequately barricaded to isolate the work area.
- When special hazars exist, such as restoring service after an unplanned outae, all conductors and equipment shall be considered as being energized to the highest voltage to which the equipment is subjected. Approved rubber gloves shall be used when approaching such equipment.
- Electrical Equipment
  - Electrical equipment shall be free from recognized hazards that are likely to cause death or serious physical harm to employees.
- Rubber Protective Equipment
  - Employees working on or within the Restricted Approach Boundary of equipment energized at 50 volts or more shall use protective equipment that provides them with the best protection including rubber insulated gloves, blankets and sleeves.
  - All grounded surfaces shall be convered with rubber protective equipment if they are in the work area and could reasonably be contacted while working within the Trestricted Approach Boundary of equipment energized at more than 50 volts.
  - Rubber protective equipment shall be worn when handling neutral or equipment grounding conductors on circuits that are energized or have not been properly locked-out.
  - Rubber protective equipment shall be inspected before each job and shall be properly stored in a rubber glove bag with the cuffs-down.
  - Rubber gloves shall be given an air test prior to each job.
  - Rubber gloves shall be electrically tested every six months by an approved electrical testing laboratory.

- Rubber blankets shall be electrically tested every twelve months by an approved electrical testing laboratory.
- Use of Low Voltage Rubber Gloves
  - Rubber gloves shall be worn anytime a worker is within the Restricted Approach Boundary of parts energized to 50 volts or more.
  - Rubber gloves shall not be worn without protectors and rubber gove protectors shall not be worn without rubber gloves.
  - On equipment energized at 50 volts and up to 690 volts, rubber gloves with a test rating of 1,000 volts (class 0) shall be worn.
- Working on Energized Equipment
  - Work on energized equipment is normally prohibited. Work on energized equipment can only be performed in such work introduces additional hazards or is infeasible in a deenergized state. This needs to be reviewed with and authorized by NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC.
- Voltage Testing
  - Only approved meters and proximity testers shall be used on energized equipment.
  - All voltage testing equipment shall be rated for the appropriate voltage level for the system. Dependent upno the circuit under test.
  - Meters and testers must be given a thourogh visual inspection prior to each use.
  - A "three point test" is required for determing if a Zero Energy State exists on electrical equipment. (Test known source-test targe ciricuit-retest known source)
  - When proximity testers indicate the presence of voltage, a subsequent test using a direct reading volt meter is required to ascertain the precise level of voltage present.
  - Protective fuses in meters shall ony be replaced with the identical fuse recommended by the meter manufacturer.
  - For LOTO or 3-point testing, a proxmimity tester should be used.
  - For troubleshooting operations, a direct-reading meter (voltmeter or phasing stick) should be used.)

- Apparel for Electrical Operations
  - All conductive objects shall be removed before working within the Flash Protection Boundary of equipment energized to more than 50 volts.
  - The outermost layer of clothing must be Arc-Rated.
  - All inner layers of clothing must be made of 100% cotton, wool, silk, or linen.
  - Up until the point of entry and upon exiting an energized or testing area, standard PPE shall be worn.
- Hazardous Energy Control (LOTO)
  - Electrical LOTO shall be required whenever the nature of the job witll require workers to contact parts that are normally energized.
  - •
  - If work is required to be performed on a previously energized system that is under the control of an operating entitiy, it is critical that the operationg entitiy is contacted and work is performed in accordance with their policies and procedures.
  - The site LOTO plan shall be developed by the Contractor and be technology/equipment specific. The plan shall provided detailed steps on the controls and steps used to isolate, test and lockout/tagout all equipment associated with awarded scopes of work. The plan needs to be reviewed with and authorized by NEXTERA ENERGY ENGINEERING & CONSTRUCTION, LLC. Prior to implementation.
- Barricading
  - Barricading procedures apply to work that does not have effective means for guarding exposed energized components from incidental access or contact.
  - A barricade is a physical obstruction, i.e. tape or cones that are intended to proived warning or limited access (NFPA 70E).
  - Barricades and LOTO must be in place for test voltages over 50 volts.
  - Barricades shall extend fifteen feet from any exposed energized compontes, 50 volts to 50 kilovolts. For voltages of 50 kilovolts or greater, an increased clearance zone of four inches for every 10 kilovolts of additional exposure is required.
  - Barricades extend vertically indefinitely and it shall be communicated to all employees working within the vicinity that barricades are never permitted to be crossed horizontally or vertically.
  - Anytime a barricade is not in use, all potential sources of energy and exposed parts must be removed or protected before leaving the area to ensure locations

are suitable for unqualified employees to enter. Locations are required to be left in a zero energy state upon departure.

- Yellow candlestick cones shall only be utilized for barricading of enegized live parts and are not permitted to be used with any other type of hazard.
- Crossing a barricade requires two (2) employees; employees must be NFPA trained and signed onto the EHA. Those without NFPA must be accompanied by someone with NFPA training that has been signed onto the EHA. One (1) person crossing must be CPR/First Aid/AED certified.
- Personal Protective Grounding
  - Installation of Personal Protective Grounds (PPG) shall only be performed by a qualified electrical worker.
  - All activites associated with installation of PPG, including voltage testing, wirebrushing and installation of the grounding cables shall be done with an approed FRP shotgut stick. Installation of PPG by hand is strictly prohibited. Class 2 (20,000 volt) rubber gloves shall be worn on circuits normally energized to up to 765kV.
  - Voltage checks for PPG should be done with a Proximaty Tester. Only if the Proximity Tester indicates the presence of voltage should a direct-reading meter be used.
  - All grounding cables must be considered as energized until the last ground is installed. Therefore, grounding cables shall be kept away from the body until the final ground head is installed.
  - Equipotential Grounding/Bonding techniques shall be used whenever possible.
  - All grounding cables shall be the same wire size.
  - The minimum sized grounding cable shall be 4/0 AWG Copper.
  - All components of the groundgin set shall be rated for the available Short Circuit Current and the fault duration.
  - Grounding cable sets should be tested for continuity on an annual basis.
- Overhead Lines
  - If work is to be performed near overhead lines, the lines shall be de-energized and grounded, or other protective measures shall be provided.
  - If the lines are to be de-energized, arrangements shall be made with the person or organization that operates or controls the electric circuits involved to deenergize and ground them.

- If protective measures, such as guarding, isolationg, or insulating, are provided, these precaustions shall prevent employees from contacting such lines directly with any part of their body or indirectly through conductive materials, tools, or equipment.
- Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines with voltages up to 50kv, shall be operated so that a clearance of 10 ft. is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in for eery 10kV over that voltage.
- If the vehicle is in transit with its structure lowered, travelling beneath overhead lines with voltages up to 50kV, the clearance will be reduced to 4 ft. If the voltage is higher htan 50kV, the clearance shall be increased 4 in for every 10kV over that voltage.

#### **Personal Protective Equipment**

- Eye Protection--ANSI approved safety glasses with side shields shall be worn at all times except while employees are in vehicles with enclosed cabs or where additional eye protection is required.
  - Welders are required to wear safety glasses under their welding hoods unless approval is obtained from Nextera Energy Resources.
  - Safety goggles shall be worn when possible liquid chemical eye hazards are present.
- Full face shields shall be worn while employees are grinding, chipping concrete, or when possible eye and face hazards are present.
  - Safety glasses are required to be worn under the face shields.
- Hearing protection shall be worn when employees are working in excessively noisy areas.
- Respiratory protection shall be worn when employees are exposed to hazardous levels of gas, vapor, or particulate contaminants in the atmosphere.
- Hard hats shall be worn at all times in the construction area that are not defined as PPE free zones.
  - Hard hats shall be labeled with employee name or employee.
- Good leather work boots with a hard sole and 6 inch tops that support the ankle are required to worn at all times in the construction area.
  - Tennis shoes, sandals, "flip-flops," and other open-toed footwear shall not be allowed on the jobsite.

- Shirts covering the full trunk and shoulders are required. Tank tops or midriff shirts are not allowed. The shirtsleeve shall be a minimum of 4 inches (10 cm) in length.
  - Cutoff jeans or shorts shall not be worn on the jobsite.
  - Pants shall cover the top of the boot when a person is standing.
  - Shirts or other items of clothing shall not have offensive language or images.
  - All employees exposed to vehicular traffic or mobile equipment, including surveyors, inspectors, spotters, signalmen, flagmen, and other construction trades, must wear high visibility fluorescent red, lime green, or orange in accordance with ANSI/ISEA 107-2010.
- Seat belts shall be worn by all personnel riding in vehicles, as well as heavy equipment operators and forklift operators.
  - Passengers riding in school buses not equipped with seat belts are permitted to do so.
- No riders other than the operator shall be allowed on any piece of mobile equipment unless designed for that purpose.
- Personnel are not allowed to ride in the back of pick-up trucks, on flat-bed trailers, or on any piece of mobile equipment not designed for that purpose.
- Gloves suitable for the task shall be worn when handling material or contacting anything with the hand that could potentially cause a hand injury.
  - Cut resistant gloves and sleeves are required while performing work on or around sharp edges/objects.

#### **Fall Protection**

- Fall protection is required 100 percent of the time when employees are exposed to a fall in excess of 6 feet from where their feet are located or when required by additional rules.
  - One hundred percent fall protection is required whether the employee is climbing, traveling from Point A to Point B, connecting structural steel, or erecting scaffolds or other temporary platforms.
  - No employee or work operation is exempt from the 100 percent fall protection requirement.
- When not protected by any other means of fall protection, such as safety nets or scaffold with proper guardrails, employees shall use full body harnesses, shock absorbing lanyards with double locking snap hooks, and an adequate anchorage (fall arrest equipment).

- To achieve 100 percent fall protection, employees may need to use a double lanyard system and/or vertical or horizontal lifelines, retractable lifelines, or other such approved devices.
- Fall arrest equipment shall be rigged so that employees can neither free fall more than neither 6 feet nor contact any lower object.
  - Anchorage points for fall arrest equipment shall be capable of supporting 5,000 pounds per employee and be located above the employee's body harness attachment point where practicable.
  - Anchorage points shall be independent of any anchorage being used to support or suspend scaffolds or other platforms.
  - Rigging shall not be used for anchorage devices or be included within a Personal Fall Arrest System.
- When vertical lifelines are used, each employee shall be protected by a separate lifeline.
  - The lifeline shall be properly weighted at the bottom and terminated to preclude a device such as a rope grab from falling off the line.
- Horizontal lifelines should be limited to two persons at one time between supports. Horizontal lifelines shall be designed, installed, and used under the supervision of a qualified person.
  - The horizontal lifeline shall be designed to maintain a safety factor of at least two.
  - Horizontal lifelines shall be designed by a qualified person (Professional Engineer) that shall provide design and use limitations.
  - The lifeline shall be used in accordance with the design or manufacturer's requirement.
- Before each use, employees shall visually inspect all fall arrest equipment for cuts, cracks, tears or abrasions, undue stretching, overall deterioration, mildew, operational defects, heat damage, or acid or other corrosion.
  - Equipment showing any defect shall be withdrawn from service and measures shall be taken to prevent the equipment from being used.
- All fall arrest equipment subjected to impacts caused by a free fall or by testing shall be removed from service and destroyed or managed so that it cannot be utilized.
- Employees shall store all fall arrest equipment in a cool dry place not subjected to direct sunlight.
  - Storage areas shall be free from chemicals, potential sharp edges, etc. This includes temporary storage such as lunch and breaks.

- Employees shall not use fall arrest equipment until they have been properly trained in its use.
- Fall arrest equipment shall not be used for any other purpose, such as tow ropes or hoist lines.
- Proper guardrails shall be installed on open sides of all walkways and runways where the fall distance exceeds 6 feet.
  - An assessment shall be made to determine if a guardrail is needed at a distance less than 6 feet.
- Proper guardrails shall be installed on all open sided floors where the fall distance exceeds 6 feet.
- All floor openings or floor holes shall be protected by guardrails or hole covers.
  - If hole covers are used, they shall be strong enough to support the maximum intended load, secured against displacement, and properly labeled.
  - If the cover is subject to vehicular traffic, it shall be capable of supporting at least two times the axle load of the largest vehicle expected to cross over it.
  - On projects where multiple languages are spoken, symbols may be used to identify floor openings.
- When an employee is operating a scissor lift work platform, the lift shall have guardrails on all open sides and the door access chains or rails in place. If the lift has designed anchorage points, the employee(s) shall utilize a Personal Fall Arrest System.
- Employees operating aerial lifts shall wear a body harness and lanyard attached to the aerial lift.
  - Employees shall not attach the lanyard to an independent structure.
- Employees riding in a crane-suspended work platform shall wear a body harness and lanyard attached to the grab rail of the platform or designed anchorage point.
- Employees working on wall forms or rebar shall wear a body harness and lanyard, in addition to a positioning device, when exposed to a fall in excess of 6 feet.
  - Positioning devices shall be rigged to prevent a free fall greater than 24 inches.
- Stairs, ladders, or ramps shall be provided for all access ways where there is a change in elevation greater than 19 inches.
- When guardrails are used for fall protection, they shall consist of a top rail, intermediate rail, and toe board.

- The top rail shall have a vertical height of 42 inches plus or minus 3 inches, the midrail shall be at 21 inches, and the toe board must be at least 4 inches high. Guardrail systems shall be constructed so that there are no openings greater than 19 inches.
- When wood railings are used, the post shall be of at least 2 inch by 4 inch stock spaced not to exceed 8 feet, the top rail shall be of at least 2 inch by 4 inch stock, and the intermediate rail shall be of at least 1 inch by 6 inch stock.
- If pipe is used, it shall be at least 1-1/2 inch nominal diameter. If structural steel is used, it shall be 2 inch by 2 inch by 3/8 inch angles or equivalent.
- If wire rope is used for railings, it shall have a diameter of at least 1/2 inch and be stretched taut to allow no more than a 3 inch deflection.
- Guardrail systems shall be capable of supporting a force of at least 200 pounds applied within 2 inches of the top edge.
- Guardrail systems shall be constructed so that when a 200 pound force is applied in a downward direction, it will not deflect to a height less than 39 inches.
- If wire rope is used for top rails, it shall be flagged at no more than 6 foot intervals with high visibility material.
- Manila or synthetic rope shall not be used as guardrails.
- Employees shall not stand or sit on guardrails.
- Contractor shall comply with 29 CFR 1926.500-.503 Subpart M requirements.

#### **Compressed Gases**

- Care shall be exercised in handling all compressed gas cylinders. They shall not be dropped, jarred, or exposed to temperature extremes.
- Cylinders shall have the valve cap or valve protection device in place at all times, except when in actual use or connected to a welding set.
- Cylinders shall not be rolled and shall not be lifted by the valve or valve cap; a suitable cradle or other device shall be used.
- Cylinder contents shall be properly identified.
- Cylinders not having fixed handwheels shall have keys, handles, or nonadjustable wrenches on the valve stems while the cylinders are in service.
- Compressed gas cylinders, whether full or empty, shall be stored and transported in an upright position and chained or otherwise secured so they cannot fall or be upset.

- Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease) a minimum distance of 20 feet or by a 5 foot high noncombustible barrier with at least a 30 minute fire rating.
- Cylinders shall not be placed where they might become part of an electric circuit or within 5 feet of an electrical outlet.
- Employees shall never force connections that do not fit, nor shall they tamper with the safety relief devices of cylinder valves.
- Before the regulator is removed from a cylinder, the valve shall be closed and all pressure released from the regulator.
- A leaking cylinder shall not be used. Such cylinders shall be taken outdoors away from sources of ignition. The supervisor shall be notified.
- A flame shall never be used to detect gas leaks.
- The recessed top of cylinders shall not be used as a place for tools.
- Oil, grease, or similar materials shall not be allowed to come in contact with any valve, fitting, regulator, or gauge of oxygen cylinders:
- Oxygen shall never be used as a substitute for compressed air.
- When an oxygen cylinder is in use, the valve should be opened fully in order to prevent leakage around the valve stem.
- Acetylene--Acetylene cylinders shall be properly secured and always used, transported, or stored in a vertical position. Cylinders shall be protected from sparks, flames, and contact with energized electrical equipment:
- An acetylene cylinder valve shall not be opened more than 1-1/2 turns of the spindle and preferably no more than 3/4 of a turn.
- Employees shall not use acetylene in a free state at pressures higher than 15 psi.
- Flashback arrestors are required on all oxygen/acetylene fuel burning rigs. Arrestors are to be placed between the regulator and the hose connections and the torch-hose connections (if not already built into the torch assembly).

#### Welding and Cutting--General

- Before performing welding, cutting, grinding, or any other "hot work" in a hazardous area, employees shall obtain a Welding, Cutting, and Heating Permit (Figure 24) from their Contractor. Hazardous areas are those areas where there is the presence or the potential of the presence of flammable or combustible materials, liquids, gases, vapors, or dusts.
- Welding and cutting shall be performed only by experienced and properly trained persons. Before welding or cutting is started, the area shall be inspected for potential fire hazards.

- When welding or cutting in elevated positions, employees shall take precautions to prevent sparks or hot metal from falling onto people or flammable material below.
- Suitable fire extinguishing equipment shall be immediately available at all locations where welding and cutting equipment is used.
- Matches shall not be carried by welders or their helpers when they are engaged in welding or cutting operations.
- A fire watch shall be maintained whenever welding or cutting is performed in locations where combustible materials present a fire hazard. A fire check shall be made of the area not more than 1/2 hour after completion of welding.
- Where combustible materials such as paper clippings, coal, or wood shavings are present, the floor shall be swept clean for a radius of 35 feet before welding is performed. Combustible floors shall be kept wet or protected by fire-resistant shields. Where floors have been wetted down, personnel operating arc welding or cutting equipment shall be protected from possible shock.
- To protect his/her eyes, face, and body during welding, cutting, and grinding operations, the employee shall wear safety glasses, appropriate hearing protection, an approved helmet with proper fitted welding helmet or face shield, protective gloves, and protective clothing. Welding leathers shall be worn during all arc gouging operations and when oxygen/acetylene or plasma cutting overhead. Helpers or attendants shall wear proper eye protection and protective clothing as required. Other employees shall not observe welding operations unless approved eye protection is used.
- Proper eye protection shall be worn to guard against flying particles when the helmet or goggles are raised.
- Machinery, tanks, equipment, shafts, or pipes that could contain explosive or highly flammable materials shall be thoroughly cleaned and decontaminated before heat is applied.
- In dusty or gaseous spaces where there is a possibility of an explosion, welding or cutting equipment shall not be used until the space is adequately ventilated.
- Welders shall place welding cable, hoses, and other equipment so that it is clear of passageways, ladders, and stairways.
- Where the work permits, the welder should be enclosed in an individual booth or shall be enclosed with noncombustible screens. Workers or other persons adjacent to the welding areas shall be protected from rays by shields or shall be required to wear appropriate eye and face protection.
- After welding or cutting operations are completed, the welder shall mark the hot metal or provide other means of warning other workers.

- Potentially hazardous materials used in fluxes, coatings, and covering, and filler metals used in welding and cutting are released to the atmosphere during welding or cutting operations. While welding or cutting, employees shall use adequate ventilation or approved respiratory protection equipment. Employees shall take special precautions when using materials that contain cadmium, fluorides, mercury, chlorinated hydrocarbons, stainless steel, zinc, galvanized materials, beryllium, and lead. Employees shall refer to their company's Hazard Communication Program for specific requirements pertaining to the above listed hazardous materials. Compliance with the OSHA hexavalent chromium standard is mandatory.
- Gas Welding and Cutting--Only approved gas welding or cutting equipment shall be used.
- Approved backflow check valves shall be used on gas welding rigs in both gas and oxygen lines.
- Welding hose shall not be repaired with tape.
- Matches shall not be used to light a torch; a torch shall not be lighted on hot work. A friction lighter or other approved device shall be used.
- Oxygen or fuel gas cylinders shall not be taken into confined spaces.
- Electric Welding--Only approved electric welding equipment shall be used.
- The electric welding machine shall be grounded in accordance with the manufacturer's specifications before use.
- Rules and instructions supplied by the manufacturer or affixed to the machine shall be followed.
- Welders shall not strike an arc with an electrode whenever there are persons nearby who might be affected by the arc.
- When electrode holders are to be left unattended, the electrodes shall be removed and the holders shall be so placed or protected that they cannot make electrical contacts with employees or conducting objects.
- When the welder must leave his or her work or stop work for more than an hour, or when the welding machine is to be moved, the power supply switch to the equipment shall be opened.
- Grounding shall be provided to the piece being welded.

#### **Rigging Equipment**

- All rigging equipment shall be of sufficient strength and of proper type and shall be safe for its intended use.
- Rigging equipment shall not be loaded beyond its rated capacity.

- Before each use, all slings, fastenings, and attachments shall be inspected for damage or defects. Damaged or defective equipment shall be immediately removed from service. Periodic, documented inspections on such equipment are also required.
- Makeshift lifting devices formed from bolts, rods, or reinforcing steel shall not be used.
- Slings shall not be shortened with knots, bolts, or other makeshift devices.
- Slings used in a basket hitch shall have the load balanced to prevent slippage.
- Slings shall be securely attached to the load by the use of hooks with retaining devices or the use of shackles or other positive latching device.
- Slings shall be padded or protected from the sharp edges of their loads.
- A sling shall not be pulled from under a load when the load is resting on the sling.
- Slings shall be long enough to provide the maximum practical angle between the sling leg and the horizontal plane of the load.
- Shackle pins shall never be replaced with bolts or other non-approved devices.
- Only hooks with approved retaining devices shall be used. Hooks shall never be rigged so
  that they are point loaded at the tip of the hook unless they are designed for that purpose.
  The load shall be securely seated in the saddle of the hook.
- When eye bolts are used, care shall be taken to ensure that the bolt is not side loaded.
- Chain falls, come-alongs, and other such devices shall not be loaded beyond their rated capacities.
- Chain falls, come-alongs, and other such devices shall always be rigged for a straight pull.
- The chain or hoist cable for chain falls, come-alongs, or other such devices shall not be wrapped around a load and used in place of a sling unless specifically designed for that purpose.
- Special rigging devices and equipment such as spreader beams, clamps, etc., shall be designed, proof tested prior to use to 125 percent of their rated load, and marked with the safe working load.

#### **Excavations**

- All excavations 5 feet or deeper or less than 5 feet in unstable soil shall be sloped, shored, or shielded to prevent cave-ins.
- All excavations 4 feet or deeper shall have a ladder for access into the excavation with no more than 25 feet of travel in any direction.

- All excavated and available material shall be retained 2 feet or more from the edge of the excavation.
- All excavations shall be barricaded with the appropriate barrier tape and other protective devices as required.
- When employees enter an excavation that may be considered a hazardous environment by site safety representatives, they must wear proper personal protective equipment.
- All drilled pier operations 6 feet or greater in depth shall be guarded by a hard barricade or guardrail system to prevent the access to the hole.
- Spotters must be used while performing any trenching or excavating with powered mechanical excavating equipment. The spotter must be stationed adjacent to the excavation to avoid the operations of the equipment. The spotter is responsible for visually identifying any obstruction while the equipment is excavating and for alerting the operator immediately if any obstructions are observed. If the spotter leaves the excavation area, excavation efforts must be stopped immediately until the spotter returns. Spotters must immediately stop work if an unknown utility is discovered during powered mechanical excavating.

#### Safe Supports and Scaffolds

- No employee, nor any material or equipment, shall be supported or permitted to be supported on any portion of a pole structure, scaffold, ladder, walkway, or other elevated structure, crane or derrick, etc., without its first being determined that such support is adequately strong and properly secured in place.
- Employees shall check all scaffolding before use to ensure that it is of sufficient strength and rigidity to safely support the weight of persons and material to which it will be subjected.
- Employees shall not use a scaffold over 6 feet in height unless a standard guardrail, with mid-rail and toe-board, is present to provide adequate employee protection.
- Scaffold planks shall be secured in place and shall extend over their end supports by not less than 6 inches (unless cleated) nor more than 12 inches.
- Scaffolds shall not be moved without first removing all loose tools, materials, and equipment resting on the scaffold deck.
- The footing or anchorage points for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.
- Scaffolds shall be erected level and plumb and rigidly braced to prevent swaying and displacement.

- Scaffolds shall not be altered or moved horizontally while being used or occupied except when specifically designed for such use. Movable scaffolds shall have the casters or wheels locked to prevent movement.
- The width of all scaffolds, ramps, and platforms shall be sufficient to prevent congestion of persons, materials, or equipment; and, in no case, shall they be less than 18 inches wide.
- Synthetic or natural fiber rope shall not be used as guardrails.
- Employees working on suspended scaffolds shall be protected by an independent lifeline, body harness, and a lanyard.
- Safe access shall be provided for all scaffolds. Structural members should not be used as a means of access. Fall protection is required on scaffold access ladders when access to the work platform exceeds 12 feet.
- Employees shall not use a scaffold unless it is properly tagged.
- When scaffolding is initially erected, an evaluation of the scaffold location and intended use must be completed for the protection of others working below. Where a potential exists for objects to fall through the guardrails of the scaffold to a lower level, netting, screening, paneling or sheeting, as appropriate, must be secured on the inside of the scaffold guardrails. The material must remain in place and be maintained while the potential for falling objects exists.

#### Ladders--General

- Wooden ladders shall not be painted so as to obscure a defect in the wood; only a clear, nonconductive finish shall be used.
- All ladders shall be inspected frequently and regularly. Ladders with weakened, broken, or missing steps; broken side rails; or other defects shall be tagged and removed from service.
- All portable ladders must be of sufficient strength and construction for their intended use and shall, at a minimum, be classified as IA or IAA.
- Portable metal ladders shall not be used in the vicinity of energized electrical circuits. (Exception: Such ladders may be used in specialized work, such as high voltage substations, where nonconductive ladders might present a greater hazard. These ladders shall be properly marked.) Areas around ladders, scaffolding, and aerial lifts shall be properly barricaded.
- Ladders shall not be placed in front of a door that opens toward the ladder, unless the door is open, locked, or guarded. Areas around ladders, scaffolding, and aerial lifts shall be properly barricaded.
- When ascending or descending ladders, employees shall have both hands free and shall face the ladder.

- Only one employee shall work from a ladder at one time (except for hook type ladders). If two employees are required, a second ladder shall be used.
- Ladders shall not be used as scaffold platforms.
- Boxes, chairs, etc., shall not be used as ladders.
- Employees shall not use a ladder until they have been properly trained in its use. Documented inspections of ladders are required on a periodic basis.

#### **Straight Ladders**

- Portable straight ladders shall not be used without nonskid bases.
- The ladder shall be placed so that the distance between the bottom of the ladder and the supporting point is approximately 1/4 of the ladder length between supports.
- Straight ladders shall not be climbed beyond the third step from the top.
- When employees work from a portable ladder, the ladder must be securely placed, held, tied, or otherwise made secure to prevent slipping or falling.
- When dismounting from a ladder at an elevated position (as at a roof), the employee shall ensure that the ladder side rails extend at least 3 feet above the dismount position, or that grab bars are present.
- Employees shall wear a body harness and lanyard, and tie off to a secure anchor whenever both hands must be used for the job or whenever employees are exposed to a fall in excess of 6 feet.
- Ladders shall not be spliced together to form a longer ladder.
- A ladder shall not be placed against an unsafe support.
- Employees climbing a ladder with a fall exposure greater than 12 feet shall be protected by an approved cage, ladder climbing device, or by the use of a body harness, lanyard, or lifeline system.

#### **Step Ladders**

- The top two steps shall not be used.
- Step ladder legs shall be fully spread and the spreading bars locked in place.
- Step ladders shall not be used as straight ladders.
- When an employee is working on a step ladder over 6 feet high, the employee shall use a body harness and lanyard attached to a substantial anchor.

#### **Material Handling**

- An employee shall obtain assistance in lifting heavy objects or shall use power equipment to lift them.
- When two or more persons carry a heavy object that is to be lowered or dropped, there shall be a prearranged signal for releasing the load.
- When two or more persons are carrying an object, each employee, if possible, should face the direction in which the object is being carried.
- Employees should avoid twisting or excessive bending when lifting or setting down loads.
- When moving a load horizontally, employees should push the load rather than pull it.
- When a task is performed that requires repetitive lifting, the load should be positioned to limit bending and twisting. The use of lift tables, pallets, and mechanical devices shall be used in these instances.
- When using such tools as screw drivers and wrenches, employees should avoid using their wrists in a bent flexed), extended, or twisted position for long periods of time. Their wrists should be maintained in a neutral (straight) position.
- When gripping, grasping, or lifting an object such as a pipe or a board, an employee's whole hand and all the fingers should be used. Gripping, grasping, and lifting with just the thumb and index finger should be avoided.

#### Hand Tools

- All tools, regardless of ownership, shall be of an approved type and maintained in good condition. (Tools are subject to inspection at any time. A supervisor has the authority and responsibility to condemn unserviceable tools, regardless of ownership.)
- Defective tools shall be tagged to prevent their use and shall be removed from the jobsite.
- Employees shall always use the proper tool for the job performed.
- Hammers with metal handles, screwdrivers, knives with metal continuing through the handle, and metallic measuring tapes shall not be used on or near energized electrical circuits or equipment.
- Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool buckets or firmly attached to hand lines.
- Tools shall never be placed unsecured on elevated places.
- As impact tools such as chisels, punches, drift pins, etc., become mushroomed or cracked, they shall be dressed, repaired, or replaced before further use. Jackhammer points shall not be used for any other application besides use with a jackhammer.

- Chisels, drills, punches, ground rods, and pipes shall be held with suitable holders or tongs (not with the hands) while being struck by another employee.
- Shims shall not be used to make a wrench fit.
- Wrenches with sprung or damaged jaws shall not be used.
- Pipe shall not be used to extend a wrench handle for added leverage unless the wrench was designed for such use.
- Tools shall be used only for the purposes for which they have been approved.
- Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets.
- Wooden handles that are loose, cracked, or splintered shall be replaced. The handle shall not be taped or lashed with wire.
- All cutting tools such as saws, wood chisels or axes shall be kept in suitable guards or in special compartments.
- Fixed blade, utility or pocket knives shall not be used for wire insulation stripping.
- Tools shall not be left lying around where they may cause a person to trip or stumble.
- The insulation on hand tools shall not be depended upon to protect users from shock.
- All tools will be tethered to prevent dropping when working with at height.
- Ratchet tools shall have locking mechanism to prevent accidental dislodgement of the socket.
- Tool bags will have a method of closing through a zipper, drawstring, or velcro to prevent tools and supplies from falling from the tool bag during ascent and descent activities.
- Tool bag hoisting ropes and hooks shall be inspected and hooks having a self-closing gate in working order.
- Care shall be taken when working from elevated work platforms such as grating, scaffolding, and man baskets to prevent tools and materials from falling through the openings by use of fire blanket, plywood, or other suitable material.
- When scaffolding is initially erected, an evaluation of the scaffold location and intended use must be completed for the protection of others working below.
- Where a potential exists for objects to fall through the guardrails of the scaffold to a lower level, netting, screening, paneling or sheeting, as appropriate, must be secured on the inside of the scaffold guardrails.

- The material must remain in place and be maintained while the potential for falling objects exists.
- The danger area shall be barricaded or guarded to keep personnel out of any possible drop zones.

#### **Portable Electric Tools**

- The noncurrent-carrying metal parts of portable electric tools such as drills, saws, and grinders shall be effectively grounded when connected to a power source unless:
  - The tool is an approved double-insulated type.
  - The tool is connected to the power supply by means of an isolating transformer or other isolated power supply, such as a 24 volt dc system.
- All grinders shall be provided with a deadman power switch.
- All powered tools shall be examined before use to ensure general serviceability and the presence of all applicable safety devices. The electric cord and electric components shall be given an especially thorough examination. Periodic documented inspections of all portable electric tools are required.
- Powered tools shall be used only within their capability and shall be operated in accordance with the instructions of the manufacturer.
- All tools shall be kept in good repair and shall be disconnected from the power source while repairs are being made.
- Electrical tools shall not be used where there is a hazard of flammable vapors, gases, or dusts.
- All power tools and cord sets shall be protected by GFCIs.
- All cords shall be routed so they will not come in contact with any steel.
- Cords shall not be tied into knots.

#### **Pneumatic Tools**

- Compressed air and compressed air tools shall be used with caution.
- Pneumatic tools shall never be pointed at another person.
- Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.
- Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.

- Compressed air shall not be used for general cleaning purposes. Vacuum cleaning is an acceptable alternative.
- Compressed air shall not be used to blow dust or dirt from clothing. Vacuuming methods are to be used for these cleaning purposes.
- The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.
- The use of hoses for hoisting or lowering tools shall not be permitted.
- All hoses exceeding 1/2 inch inside diameter shall have a safety device (excess flow check valve) at the source of supply or branch line to reduce pressure in case of hose failure or disengagement of a connection.
- Before adjustments are made or air tools are changed, unless they are equipped with quickchange connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before the connection is broken.
- Eye protection, foot protection, and other protective devices shall be worn when their use could reduce the possibility of injury.
- Pneumatic tools shall be operated only by competent persons who have been trained in their use.
- A pneumatic tool used where it may contact exposed live electrical parts shall have a nonconductive hose and an accumulator to collect moisture.
- Employees shall not use any part of their bodies to locate or attempt to stop an air leak.

#### **Cranes, Derricks, Hoisting Equipment**

- Only authorized persons shall be permitted in the cab or on the equipment. Only those designated persons who are trained and qualified shall operate the hoisting equipment.
- No person shall be permitted to ride the hook, sling, or load of any hoisting equipment.
- Load limits specified by the manufacturer shall not be exceeded under any circumstances.
- Operating and maintenance procedures specified by the manufacturer shall be followed.
- Before a lift is attempted, the lifting mechanism shall be level and firmly supported with the hoist line centered over the center of gravity of the load to be lifted.
- No load shall be lifted until its weight has been determined and ground conditions are suitable with proper sloping, compaction, and firmness.
- For the first lift of each day, the load shall be test lifted and the brakes checked (load lifted several inches and then tested).

- With every load, the slings and bindings shall be checked and shall be readjusted as necessary to ensure safety and stability.
- Signals to the equipment operator shall be given by one person designated to perform this task. The operator shall, however, obey a "Stop" signal given by anyone.
- No employee shall be under a suspended load or inside the angle of a hoist line. No employee shall stand or work near a cable, chain, or rope under tension.
- Hoist lines, ropes, or wire cables shall not be guided by hand when an employee is standing within reach of the drum or sheave.
- Wire rope loops shall be made by proper splicing or mechanical clamping of the tail section. Wire rope clips shall not be used to form eyes in wire rope bridles or slings.
- Operators shall not leave their position at the controls of cranes, hoists, derricks, or other lifting devices while the load is suspended. Operators found sleeping while in the cab will be removed from the project.
- Operators of cranes, derricks, hoists, and other hoisting equipment shall exercise extreme caution when close to energized lines or equipment. The operator shall keep the equipment at least 10 feet away from all lines energized up to 50 kV and 0.4 inch more for each 1 kV over 50 kV.
- Tag lines shall be used on all loads.
- All spreader bars shall be tagged by manufacturer with the rated capacity.
- All hydraulic cranes with over 15 ton capacity shall be equipped with functioning anti-two blocking devices and a functioning load moment indicator.
- A report (lift plan) shall be required prior to all critical lifts. Critical lifts are defined as (1) any lift that utilizes more than one crane or hoisting device, (2) any lift that is over 20 tons, (3) any lift involving a crane suspended work platform, (4) any lift over critical operating and/or process equipment, (5) any lift that exceeds 75 percent of the crane's capacity or stated load chart at any point during the lift, (6) any lift that the crane operator believes should be critical. If a lift exceeds 95 percent of the crane's load chart, the lift will need to be reconfigured to move below 95 percent or a different crane will need to be used.
- All cranes shall have anti-two blocks.
- The use of load movement indicators (LMI) on all hydraulic cranes in excess of 15 ton capacity including, but not limited to truck, rough terrain, and crawler cranes.
- Outriggers shall be deployed according to manufacturer's requirements.
- Outrigger pads shall be in good condition and used at all times.

#### Flammable and Combustible Liquids

- "Danger, No Smoking" signs shall be posted around all flammable and combustible liquid storage areas.
- All aboveground tanks shall have impervious containment around them of adequate size to contain spills.
- Tanks shall be vented with a pipe not less than 1-1/4 inch inside diameter and shall be 12 feet high from the adjacent ground level.
- Tanks shall be kept at least 20 feet from buildings.
- At least one 20 pound (4A60BC) ABC fire extinguisher shall be kept between 25 feet to 75 feet from tanks.
- All tanks shall be properly grounded.
- All tanks shall be labeled with the contents and Contractor's name.

#### **Confined or Enclosed Spaces**

- Only employees who have been properly trained on the hazards associated with confined space work shall be allowed to enter a confined space.
- Before any entrance cover to a confined space is removed, it shall be determined that there are no temperature or pressure differences, or other hazardous conditions that may injure the employees removing the cover.
- When covers are removed from confined spaces, the opening shall be guarded by a railing, temporary cover, or other temporary barrier.
- Before entering a confined space, employees shall test all levels of the confined space for the presence of flammable or toxic gases and vapors or an oxygen deficient atmosphere.
- If flammable or toxic gases or vapors are detected or if an oxygen deficiency is found, forced ventilation shall be used to maintain oxygen at a safe level and to prevent a hazardous concentration of flammable or toxic gases and vapors.
- While work is being performed in the confined space, a person with basic first aid training shall be immediately available to render emergency assistance if there is reason to believe that a hazard may exist in the space or if a hazard exists.
- Entry into a confined space with an unsafe atmosphere shall be avoided if at all possible. Employees required to enter a confined space with an unsafe atmosphere shall be equipped with a fresh air breathing apparatus, body harness, and attended lifeline.
- Electric welding, gas welding, cutting, or any other hot work shall not be performed on the interior or exterior, or near the openings of any confined space that may contain flammable or explosive gases or vapors until the space has been properly cleared.

- Compressed gas bottles shall not be taken into a confined space.
- Safe access to the confined space shall be maintained at all times. If possible, all cords, hoses, leads, etc., shall be routed through an entrance other than the employee access into the confined space.
- Before employees are allowed to enter a confined space, all electrical and mechanical energy sources that could affect the employees working in the space shall be physically rendered inoperative, locked out, and tagged. If required, the space shall be drained, vented, and cleaned.
- Contractors are responsible for supplying workers with the proper air monitoring equipment.

#### <u>Heaters</u>

- UL approved salamanders, Redi heaters, and space heaters are the only approved heaters on the jobsite.
- $\circ$   $\,$  Heaters shall be used in accordance with 29 CFR 1926.154.
- Job-made heaters, solid fuel salamanders, and open fires are prohibited on the jobsite.

#### Powered Industrial Trucks (Forklifts)

• All powered industrial truck operators shall be trained and certified by their employer for the type of truck to be used.

#### **Steel Erection**

- Fall protection is required 100 percent of the time for all steel erection activities when employees are exposed to a fall in excess of 6 feet or when required by additional rules.
- Cranes involved in steel erection activities shall be inspected prior to each shift by a competent person.
- The crane operator shall have the authority to stop work operations that are unsafe.
- All loads shall be rigged by a qualified rigger.
- A qualified rigger shall inspect the rigging prior to each shift in accordance with 29 CFR 1926.1404 (r)(1).
- No employee shall work directly below a suspended load except for employees engaged in the initial connection of the steel or employees necessary for the hooking and unhooking of the load.
- Bundle packaging and strapping shall not be used for hoisting unless specifically designed for that purpose.

- Uninstalled metal decking shall be secured against displacement.
- Roof and floor hole openings shall be decked over or protected in accordance with 29 CFR 1926.501(d)(4).
- Metal decking holes and openings shall not be cut until immediately prior to being permanently filled with the equipment or structure needed or intended to fulfill its specific use or shall be immediately covered.
- All covers shall be capable of supporting twice the weight of any loads that may be imposed on them at any one time, secured against displacement, and shall be marked to warn of the hazard. Smoke domes and skylight fixtures that have been installed are not considered covers for openings.
- All columns shall be anchored by a minimum of four anchor rods.
- Anchor rods shall not be repaired, replaced, or field modified without the approval of the project engineer. of record. If an employee notices damaged anchor rods, he/she shall immediately notify his/her supervisor.
- No construction loads shall be placed on steel joists until all bridging is installed and all joist bearing ends are attached.
- On systems engineered metal buildings, joist connections shall be made on both ends before releasing hoisting cables, allowing personnel on joists, and allowing any construction loads on joists.
- Purlins and girts shall not be used as anchorage points for fall arrest systems unless written approval is obtained from a qualified person.
- Any time a Contractor removes grating or creates an open hole, a Grating Removal/Open Hole Permit must be submitted no less than 24 hours in advance of removal of the grating creating the hole. All necessary safety precautions such as, but not limited to, placement of a hard barricade, placement of adequate warning signage, etc., shall be met prior to removal of the grating or creation of the hole. At no time shall grating removal or creation of a hole prevent adequate egress for other work operations in the area. The permit shall be completed after the grating is replaced and the hole adequately filled.
- Christmas treeing (multiple lifts at one time) is permissible with strict adherence to 29 CRF 1926.753. Prior to occurring, the plan, employee training, and other supporting documentation shall be submitted to Nextera Energy Resources.

#### **Mobile Equipment**

• Seat belts shall be worn by all personnel riding in vehicles (except for school buses without installed seat belts), as well as heavy equipment operators and forklift operators. Those observed not wearing seat belts may have their driving privilege revoked.

- Passengers riding in school buses on construction projects not equipped with seat belts are permitted to do so. In addition, they have to be seated no more than two to a seat with no one standing. This is only allowed on private property, operated below the posted site speed limit, and no more than 20 miles per hour. School buses are not to be used to transport cargo.
- No riders other than the operator shall be allowed on any piece of mobile equipment unless designed for that purpose.
- Personnel are not allowed to ride in the back of pick-up trucks, on flat-bed trailers, or on any piece of mobile equipment not designed for that purpose.
- Backup alarms shall be used where the operator has a restricted view to the rear of the equipment and shall be loud enough to be heard over the surrounding noise levels.
- Maneuvering and Spotters--To avoid injury to persons and to prevent property damage, extreme caution must be exercised when maneuvering mechanized equipment or vehicles (aerial lifts, cranes, forklifts, trucks, cars, skid steers, track hoes, backhoes, etc.). A spotter must be used to assist the operator/driver in safely maneuvering the equipment.
- When maneuvering equipment, the operator/driver must do the following:
  - Keep a constant lookout during the entire time he/she is maneuvering.
  - Carefully check any blind areas.
  - Maneuver slowly.
  - If in an area of the project where a spotter is required, obtain a spotter prior to moving.
- Each site shall develop a map that clearly defines any areas of the project where the use of a spotter is **not required**. This map shall be kept current, posted, and appropriately communicated to all personnel on-site. Criteria for spotter required areas include the following:
  - Maneuvering equipment within 6 feet of stationary objects, construction activities, or other pieces of equipment.
  - Maneuvering equipment in areas with obstructions or where work activities are occurring.
  - Maneuvering equipment within 50 feet of overhead power lines (or other overhead obstructions such as pipe racks, communication cables, bridges, etc.).
  - Unless otherwise noted on the map, craft and staff parking lots are exempt from spotter requirements.
- Except as defined by the site map, **spotters shall be used whenever the equipment is being maneuvered** (forward, backward, up, down, rotating, etc.). This includes all mechanized

mobile equipment that is used on construction projects (aerial lifts, cranes, forklifts, trucks, cars, skid steers, track hoes, backhoes, etc.).

To avoid turnover of trailers while dumping material, tractor must be lined up straight with trailer. Tractor and trailer must be on firm, compacted and level ground. Avoid dumping in strong winds. Line trailer up with wind to avoid possible turnover from cross winds. Operator should warn all persons to stand clear at least 35 feet (11 meters) from trailer being raised and lowered. Should trailer start to tilt, move control immediately to "lower" position. Under inflated tires can cause instability when dump. Always check tires to make sure they are properly inflated. Operator must stay at the controls while dumping is in progress.