



To: VELCO PV-20 Project

Date: March 10, 2016
Project #: 57660.00

Memorandum

From: Lydia Lee, PG
Jason Gorman, PE, CHA

Re: PV-20 Submarine Cable Replacement Project - Installation
Spill Prevention, Containment, and Contingency Plan

Introduction

The proposed PV-20 Project is to replace a segment of the existing 115 kV K20 circuit that extends west-to-east in Lake Champlain, between NYPA's Cumberland Head transition station in Plattsburgh, New York and VELCO's Grand Isle transition station in Grand Isle, Vermont (the "Project", see Figure 1: Site Location Map and Figure 2: EPSC Site Plan, Attached). This segment of the existing circuit, which is designated by NYPA and VELCO as the PV-20 line, currently consists of seven oil-filled cables that are buried along the land portions and within the shallows of Lake Champlain (the "Lake") and directly laid along the bottom in the deeper portions of the Lake.

In general, the Project consists of four components: installation of four new extruded dielectric (oil-free) cables, construction of a new transition station, removal of the existing cables, and decommissioning the existing transition station. The use of oil and hazardous materials ("OHM") will be limited to the use of fuel and fluids to power and operate equipment. Oil will also be purged from the existing cables prior to removal. This Spill Prevention, Containment, and Contingency Plan ("Spill Plan") describes the spill prevention and contingency methods and procedures to be utilized for the installation portion of the Project. Spill prevention methods for the removal portion are provided under separate cover.

Site Description

The existing VELCO Grand Isle transition station is located on the western shore of Grand Isle, with a 911 address of 4A Champlain Landing, Grand Isle, Vermont. The proposed new transition station will be located on the adjoining parcel to the north (see Figure 2). The Project area elevation is approximately 120 feet above mean sea level, and the surrounding land generally slopes to the west toward the Lake, which is approximately 170 feet from the fence line of the existing terminal station. The new terminal station will be located approximately 325 feet from the Lake. Temporary stockpiling and staging areas will be located approximately 315 feet from the Lake and horizontal directional drilling ("HDD") launch pits will be located 270 feet from the Lake.

OHM Storage and Use

Installation and New Construction

Installation methods will include:

- Open trenching from the proposed new transition station to the proposed HDD Launch Area;
- HDD for the land to water transition; drilling will be completed from a land-based launch site and pull back area positioned approximately 270 feet from the Lake using a horizontal directional drill;
- Jet sledding for the installation of the cable in water depths of approximately 30 to 100 feet, with anticipated burial to 4 feet below the Lake bottom. The jet sled involves a skid-mounted jet sled which is towed by a barge; and



Memorandum

- Direct laying on the lake bottom using a linear cable engine on a dynamically positioned barge to control the cable tension and placement.

Refueling

Construction of the new transition station will involve typical construction machinery and equipment, such as excavators, backhoes, and cranes that will be fueled by gasoline and diesel fuel. The barges, support boats, and support vessels will require periodic refueling. The contractor shall take all usual and reasonable precautions during refueling and maintenance activities to prevent an accidental spill. These precautions include the use of secondary containment devices and/or the use of containment booms and absorbent pads. Additionally, spill response kits shall be readily available within the work area depicted on Figure 2.

Bulk Fuel Delivery Procedures are as Follows:

- No bulk deliveries shall take place without contractor supervision and approval.
- Check all gauges and volumes prior to fuel transfer.
- The delivery truck wheels shall be chocked as soon as the truck is parked in the fuel transfer position.
- Before fueling, flexible transfer hoses shall be inspected for cuts, abrasion, and damaged ends.
- All fuel transfers shall be monitored.
- Tanks shall not be filled to overflow capacity.
- Final inspection of the tank truck and tank feed lines shall be conducted to assure that all valves and ports are closed and that no leaks have occurred.

Storage

When not in use, all OHM used and stored on site, including fuels, lubricants, and hydraulic oil, will be located within secondary containment in a secure, designated OHM storage area within the Work Zone Area depicted on Figure 2. The contractor will use discretion to designate an appropriate area for OHM storage, which shall be located on flat, dry land at least 100 feet from the mean water level of 95.5 feet in elevation.

Anticipated OHM types, volumes, quantities, and storage protocols for installation procedures are summarized in the Table 1 below. Contractor shall provide Safety Data Sheets ("SDSs") for all OHM used and stored on-site, and SDSs shall be maintained with this Spill Plan.



Table 1: Installation OHM Summary

Product	Purpose	Approximate Quantity	Storage and Spill Prevention
Diesel Fuel	To fuel the D-2 Modular Cable Installation Barge	This vessel will be outfitted with an approved IMO Tank with adequate capacity (including contingency) to conduct an individual cable installation. The need for at sea refueling is therefore not envisaged.	When fuel is required the IMO Tank will be replenished alongside at a marine facility from shore-based tanks or fuel transport trucks. Fuel transfer operations will be completed by trained personnel. Refueling operations will be monitored at all times by the contractor. Fuel lines will be inspected before use and connection will be secure before fueling begins. The barge will be moored or stabilized as much as possible before fueling begins.
Diesel Fuel	To fuel support vessels (inboard powered crewboats, tugs, etc.)	These vessels will be refueled alongside at local marine facilities from shore-based tanks or fuel transport trucks.	Fuel transfer operations will be completed by trained personnel. Refueling operations will be monitored at all times by the contractor. Fuel lines will be inspected before use and connection will be secure before fueling begins. The vessel will be moored or stabilized as much as possible before fueling begins.
Diesel Fuel/Gasoline	To fuel support boats (outboard powered skiffs, etc.)	These vessels, when fitted with integral fuel tanks, will be refueled alongside at local marine facilities. If the vessels are outfitted with portable tanks the tanks may simply be refueled at local marine facilities or the sealed tanks may be transported to local gas stations for replenishment.	
Diesel Fuel	To fuel horizontal directional drill rig motors and heater.	Limited quantities of fuel will be stored on-site in containers with capacities less than 55 gallons. Otherwise, fuel will be transported to the site by approved bulk trucks.	Supplied in approved containers and stored in secondary containment on-site. Refueling operations will be monitored by the contractor.



Table 1: Installation OHM Summary

Product	Purpose	Approximate Quantity	Storage and Spill Prevention
Gasoline	To fuel remote water pump engines, including other support pumps and/or generators.	Limited quantities of fuel will be stored on-site in containers with capacities less than 55 gallons	Supplied in approved containers and stored in secondary containment on-site. The transfer of gas from approved containers to engines will be carried out over a containment area or absorbent pads with pumps, nozzles, or funnels designed to fit solidly into the container opening.
Lubricating Petroleum based Products	To maintain oil levels and oil changes for all engines.	Limited quantities will be supplied in approved containers with capacities less than 55 gallons	New oil will be stored in secondary containment. Used oil will be collected by containers designed to fit and be situated below equipment drain opening. The used oil will be placed in an approved container which can be sealed, and then placed into secondary containment until removed from the site and disposed of in an approved manner. To avoid excessive accumulation of used oil on-site, full containers will be routinely disposed of off-site in accordance with local, state and federal regulations.
Hydraulic Oil	To maintain the drill rig's and other equipment's hydraulic systems.	Limited quantities will be available on-site and will be transported to the site in sealed containers or barrels with capacities of 55 gallons or less.	All hydraulic hoses and fittings will be in good working order. All hydraulic pump bearing seals will be checked for leaks and repaired as necessary. Absorbent pads or small secondary containment containers will be placed beneath areas susceptible to drips or spills during the use of hydraulic oil.

Existing Transition Station Decommissioning

OHM use and handling related to decommissioning the existing transition station is limited to the purging and disposal of the conservatory tanks and associated MODF, and use of fuel (diesel and gasoline) to power typical construction machinery.

Training

Pursuant to 29 CFR 1910.120, the person(s) responsible for hazardous materials handling and spill prevention planning shall have a minimum of 40 hours of initial health and safety training for hazardous waste site operations (OSHA



HAZWOPER). Contractors shall also have OSHA 10 hour Construction Safety training per NYPA and VELCO requirements. All oil handling personnel will be trained in the operation and maintenance of equipment to prevent discharges, discharge procedures protocols, applicable pollution control laws, rules, and regulations, generally site operations, and the contents of this Spill Plan.

Prior to commencement of field activities, all personnel assigned to the Project will be provided training that will specifically address the activities, procedures, monitoring, and equipment for the site operations. It will include site and facility layout, hazards, and emergency services at the site, and will highlight all provisions contained within the Contractor's Work Plan. This training will also allow field workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity. Personnel shall respond to incidents in a manner consistent with the level and type of training received.

Spill Prevention and Containment

When not in use, all OHM containers shall be stored in the designated OHM storage area in a secondary containment structure with compatible materials, as described in Table 1. All designated OHM storage areas shall be inspected and secured daily, and inspection checklists shall be filled out weekly, at a minimum. The purpose of this inspection program is to detect any condition or malfunction of containers and equipment that could result in the release of hazardous materials, petroleum or oil to the environment. The Project Spill Response Coordinator shall maintain records of all inspections, and be made available to VELCO upon request. An example inspection form is provided on page 3 of the Attachment.

During the inspections, all OHM storage containers, motive power containers (i.e. equipment fuel tank), and equipment lines/hoses will be examined for signs of damage or leakage. Indications of leaks are required to be reported immediately to the Project Spill Response Coordinator. If the Spill Response Coordinator identifies a condition causing or contributing to a leak or potential release, the Coordinator shall ensure that the condition is corrected as soon as reasonably possible.

Spill prevention measures specific to the use of OHM, such as refueling, are summarized in Table 1.

Emergency Information

Prior to start of construction, VELCO and VELCO's contractor shall notify local police, fire, hospitals, and ENPRO (emergency spill response contractor) to make arrangements and coordinate local emergency response services.

If there is an immediate threat to life, health, or property (such as from fire, explosion, or toxic vapors) from the spilled material, VELCO personnel and VELCO contractors will first evacuate the immediate area, and remove or extinguish potential ignition sources to prevent fire and/or explosion.

Contractor shall maintain basic first aid kits, fire extinguishers, spill kits, and appropriate personal protective equipment (ear plugs, hard hats, etc.) at the Project site at all times. All personnel entering the work area shall be



notified of the storage location of such equipment. Spill kits shall be provided where oil or hazardous materials are stored, and shall be accessible at all times by trained personnel. Spill kits shall contain the following:

1. Personal Safety Wear: Tyvek suit, aprons, shoe booties, chemical goggles, solvent resistant gloves
2. Absorbents: granular sorbent, sorbent booms, sorbent static resistant pads
3. Clean Up Equipment: repair putty, 55 gallon steel Drum and hazardous waste label, drum liner, solvent resistant booms, non-spark and solvent resistant shovel, residue bags (50 each)

The closest hospital is the University of Vermont (“UVM”) Medical Center located at 111 Colchester Avenue, Burlington, VT 04501. Their phone number is 802-847-0000. A map with directions to the hospital from the Project site is attached.

Contact Information and Notification Procedures

VELCO contractors discovering an oil spill or discharge (“Discoverer”) shall immediately notify one of the Key Contractor Personnel listed in Table 2, who will notify VELCO’s Spill Response Coordinators, in the order listed in Table 3. In the event the Discoverer cannot contact Contractor Personnel, Discoverer shall notify VELCO’s Spill Response Coordinators directly. Communication will occur via cellular telephones.

Table 2: Contractor Spill Notification List		
Company/Position	Person	Contact Numbers
Project Manager	Peter Smith	(732) 557-6100 (CMI Head Office) (732) 239-7086 (Emergency)
ECI Drilling LLC. – Lead Driller	Jerry McVay	(936) 441-9080 (ECI Head Office)
Northline Utilities	TBD	(518) 647-8198 (Office)

Table 3: VELCO Spill Notification List		
Department	Person	Contact Numbers
1 st Spill Response Coordinator	Tim Follensbee	(802) 770-6423 (work) (802) 342-6267 (cell) (802) 742-2509 (pager)
2 nd Spill Response Coordinator	Brian Connaughton	(802) 770-6227 (work) (802) 343-4323 (cell)
VELCO System Operator	VELCO Control Center if Tim or Brian cannot be reached	(802) 770-6261
VELCO Emergency Line	Use for emergency situations only	(802) 770-6260



The following information shall be relayed to VELCO as soon as possible:

1. Person making the notification
2. Contact information for follow-up coordination
3. Location of release
4. Date and time of release
5. Material released
6. Estimated volume of release
7. Source of release
8. Cause of release
9. Any damages or injuries caused by the release
10. Media affected by the release
11. Actions being implemented to stop or control the release
12. Any other pertinent information (access restrictions, current weather conditions, etc.)

VELCO's Spill Response Coordinator will contact the appropriate regulatory agencies as outlined in the table below. The agency to be contacted will depend on the nature and amount of the spilled material and the location of the spill as defined in Table 4 below.

Table 4: External Spill Notification List		
Agency	Criteria for Notification	Contact Numbers
National Response Center	Any release that: (1) creates a sheen on surface water; or (2) causes deposition of sludge or emulsions beneath the surface or along the adjoining shoreline, or (3) is greater than or equal to 1,000 gallons of oil; or (4) discharges equal to or greater than 42 gallons that occur more than twice in a 12 month period; or. (5) causes a violation of the water quality standards.	(800) 424-8802
VT DEC Spills Hotline	Any release that: (1) A discharge of hazardous waste, or release of hazardous material that exceeds 2 gallons; (2) A discharge of hazardous waste, or release of hazardous material that is less than or equal to 2 gallons and poses a potential or actual threat to human health or the environment; or	(800) 641-5505 (802) 241-3888
Local Fire Department	Risk of fire or danger to public	911
U.S. Coast Guard	Risk of fire or danger to public	(802) 862-0376



Table 4: External Spill Notification List		
Agency	Criteria for Notification	Contact Numbers
Spill Response Contractor: ENPRO	<p>Cases where VELCO personnel or the Project Contractor alone cannot accomplish cleanup, or where additional material or equipment is necessary.</p> <p>ENPRO is located in Burlington, VT and maintains the capability of immediately responding to and correcting a potential spill resulting from the installation project.</p>	(800) 966-1102

Spill Response Actions and Clean Up Procedures

All clean up actions are subject to the Notification Procedures listed above. Additionally, VELCO personnel and VELCO contractors shall respond to incidents in a manner consistent with the level and type of training received. Removal and disposal of the oil and/or impacted media would be conducted in accordance with VT DEC regulations.

Small Spills on Impervious Surfaces (Less Than 2 gallons)

Wherever possible, any spilled materials should be collected with absorbents, transferred to DOT drums and properly labeled. Sufficient sorbent materials are available in the spill kits, which will be available during construction operations. If floor drains or trench drains near the spill are present, these features should be tightly sealed before commencing cleanup operations.

Small Spills on Pervious Areas (Less Than 2 gallons)

Spills on pervious areas could result in contamination to soils and possibly groundwater. Contaminated soil should be excavated and placed in DOT drums and properly labeled. The removal and disposal of the oil and/or impacted media would be conducted in accordance with VT DEC regulations. If necessary, spills should be contained with absorbent materials, trenching, or berming.

Large Spills (Any Spill Greater than 2 gallons)

Trained VELCO personnel and/or their contractors would attempt to control or slow a larger spill using normal spill response procedures if there is no immediate threat to life or health. In cases where VELCO personnel or the Project Contractor alone cannot accomplish the necessary cleanup actions, or where additional material or equipment is necessary, an Emergency Spill Response Contractor will be called in for assistance. VELCO maintains an on-call contract with ENPRO.

A large spill must be handled in a manner that prevents fire and explosion hazards. The following steps shall be taken for large spills:

1. If there is an immediate threat to life, health or property (such as from fire, explosion, or toxic vapors) from the spilled material:



- Evacuate the immediate area.
 - Remove or extinguish potential ignition sources.
2. Notify the VELCO Spill Response Coordinator as per the Notification Procedures listed above. The VELCO Spill Response Coordinator will notify the proper agencies as per the Notification Procedures listed above.
 3. Assess the magnitude of the release and direction of flow.
 4. Secure the site to prevent unauthorized access.
 5. If qualified and if not posing a danger to personnel, take action to minimize the spread of contamination.
 6. Contain the spill with absorbent materials (pads, booms, etc.), or by trenching, berming, or by securing drains, basins and sumps or by whatever other means that are necessary.
 7. Eliminate all sources of ignition near the spill. Only qualified technicians should trip switches if necessary. Also, do not plug in or unplug electrical cords in the endangered area. Absolutely no smoking is allowed in the endangered area in the event of a spill.
 8. The VELCO Spill Response Coordinator will contact an Emergency Spill Response Contractor (ENPRO, refer to Table 3 for contact information) if the spill cannot be contained by VELCO personnel.
 9. In the event of very large spills, the area should be evacuated, and any nearby buildings should be alerted of possible fire or explosion hazards, and requested to evacuate the buildings, if necessary.

Onshore Spills Potentially Affecting Surface Water

Moderate to large spills near water bodies may contaminate surface waters directly by overland flow, or indirectly by infiltrating through porous soils to the water table, then traveling along the water table until reaching the water body. The following additional procedures to those described above should be followed for onshore spills affecting or potentially affecting surface water:

1. The excavation of ditches and berms for containing spills to prevent overland flow of oil or fuel into surface waters.
2. If the spill has reached surface water, directly or indirectly, sorbent booms should be deployed to contain floating sheens or product.
3. Contaminated soils near the stream or waterbody must be excavated and stockpiled on and covered with plastic away from the spill site as soon as possible.



Offshore Spills Affecting Surface Waters

Moderate to large spills within water bodies typically float atop waters and may migrate via wave or wind action. The following additional procedures to those described above should be followed for offshore spills affecting or potentially affecting surface water:

1. Immediately take steps to stem the flow of oil or hazardous materials to the surface water.
2. Deploy sorbent booms to contain floating sheens or product. If the spill is large, several booms may be used to prevent the spread of oil.
3. Dewater contaminated liquids, if necessary.
4. If offshore spills are close to shorelines, then sediments and soils must be assessed to determine if they have been impacted and if excavation would be a proper course of remedial action (this would be determined in cooperation with the appropriate agencies). If material is excavated, it will be containerized or stockpiled on and covered with plastic away from the spill site as soon as possible.

Disposal

After a spill incident, removal of contaminated soils, liquids and absorbent debris may be necessary as part of site remediation activities. These materials may be classified as contaminated media and debris, and therefore they would become subject to the packaging, record keeping, transportation, treatment, and disposal requirements of the VT DEC and Vermont Hazardous Waste Management Regulations. Prior approval from the Vermont Agency of Natural Resources, Waste Management and Prevention Division, is required before contaminated media may be transported off-site. An approved contractor would transport the contaminated media with the appropriate shipping documentation to an approved off-site treatment or disposal facility.

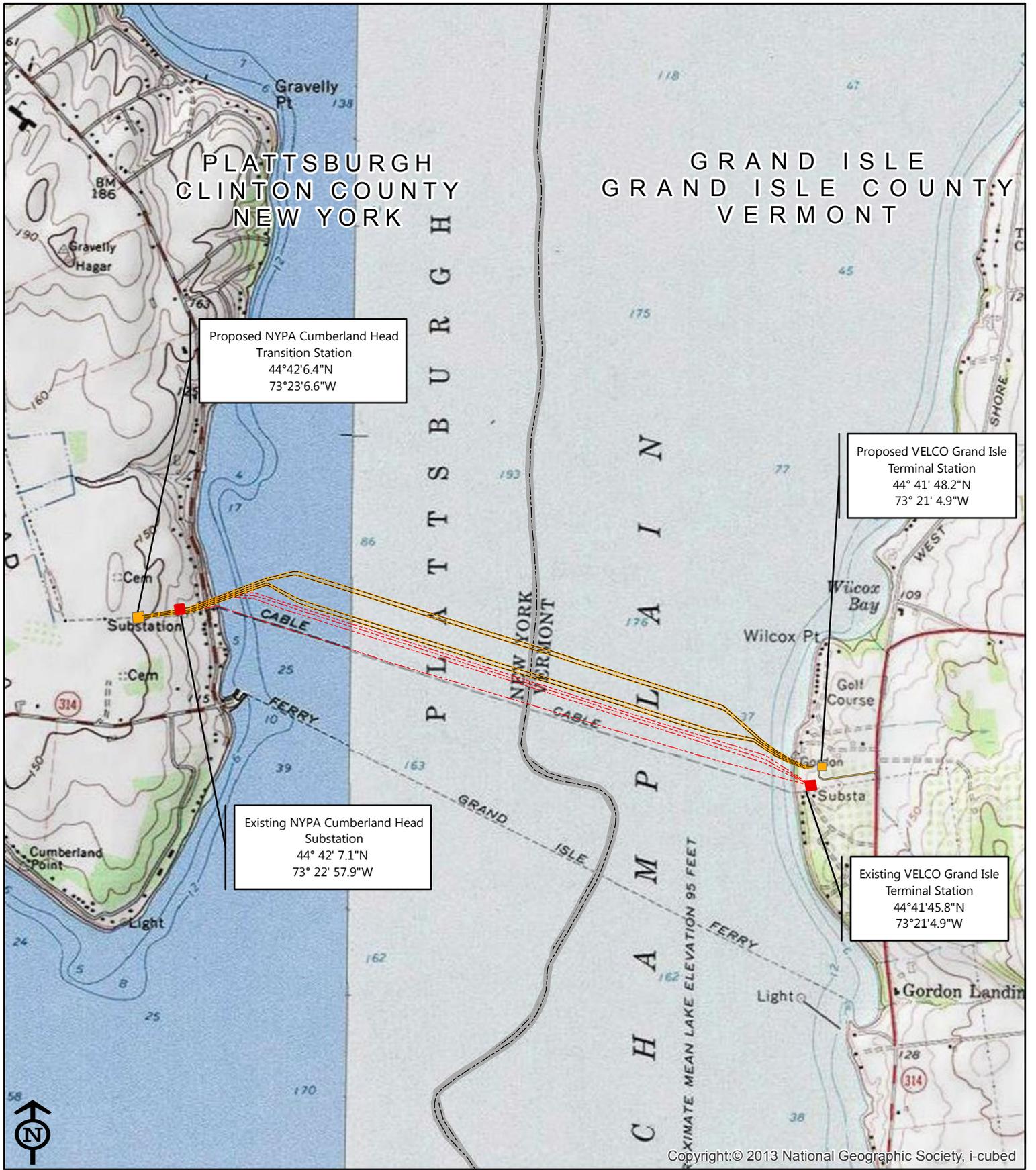
Summary

On behalf of VELCO, VHB has prepared this Spill Plan to outline procedures to be implemented in the event of a spill during Project installation activities. The goal of this Spill Plan is to avoid the risk of a release of OHM to Lake Champlain, soils, or groundwater; and to have response actions in place in the event of a release. This goal is attainable with proper training, careful planning, and adherence to this Spill Plan.

Attachments

- Figure 1: Site Location Map (page 1)
- Figure 2: EPSC Plan Sheet Showing Work Area (page 2)
- Weekly Inspection Checklist (page 3)
- Directions to UVM Medical Center (pages 4 through 6)

ATTACHMENT



Proposed NYPA Cumberland Head
Transition Station
44°42'6.4"N
73°23'6.6"W

Proposed VELCO Grand Isle
Terminal Station
44° 41' 48.2"N
73° 21' 4.9"W

Existing NYPA Cumberland Head
Substation
44° 42' 7.1"N
73° 22' 57.9"W

Existing VELCO Grand Isle
Terminal Station
44°41'45.8"N
73°21'4.9"W

Legend

- - - Existing Cables (Approx.)
- Proposed Replacment Cable Locations (Approx.)
- Proposed Terminal Station
- Existing Terminal Station
- State Boundary

**VELCO and NYPA
PV-20 Submarine Cable Replacement Project
Grand Isle, VT and Plattsburgh, NY
Figure 1: Site Location Map
December 11, 2015**

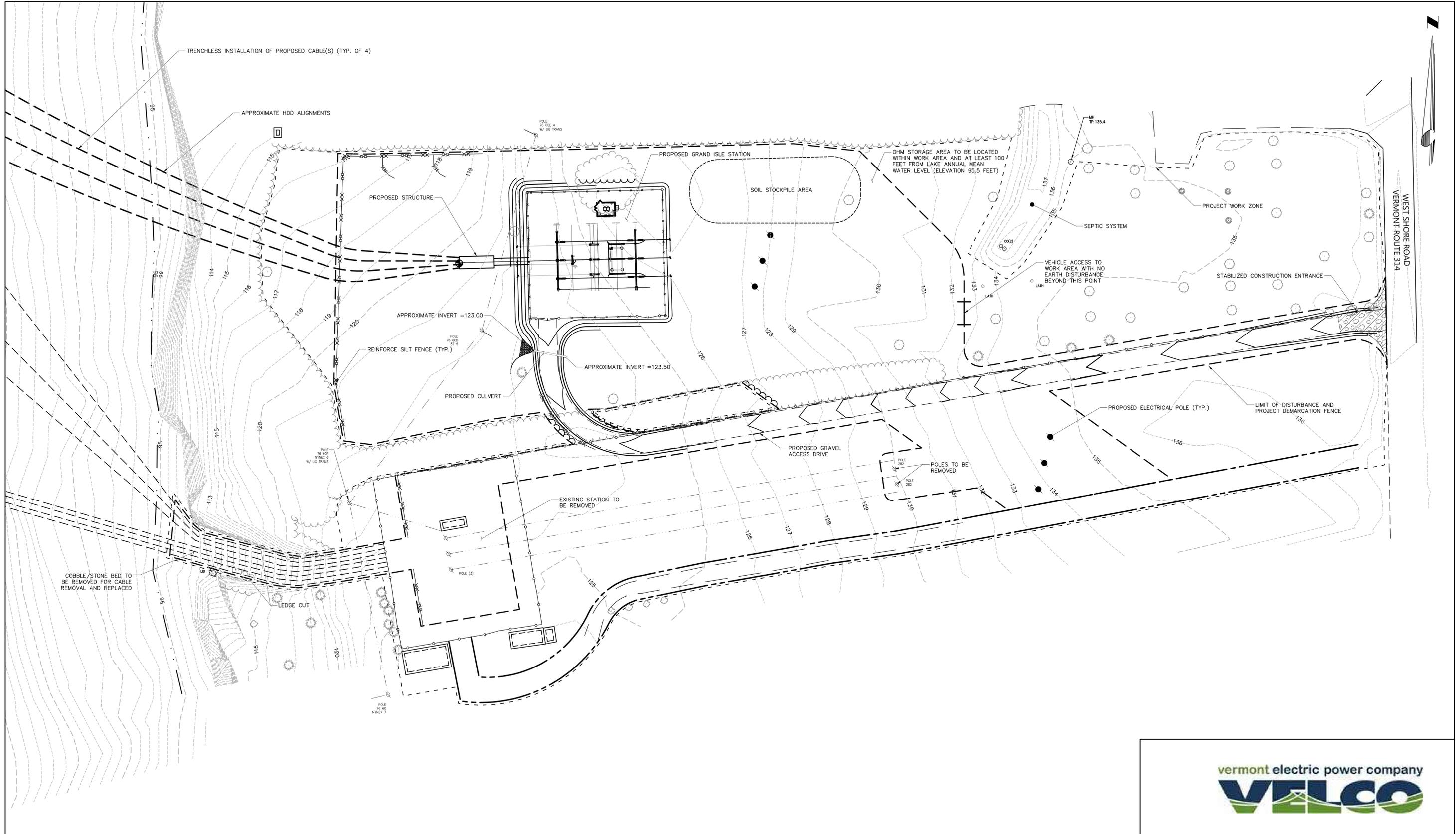
2,000 1,000 0 2,000

Feet

Sources: USGS Topo Quads from ESRI (2015); State and Town Boundaries from VCGI (2010); Approximate Replacment Cable Locations, Existing and Proposed Terminal Station Locations from CHA (2015); Approximate Existing Cable Locaitons Digitized from Plans Provided by CHA (2015).



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EROSION PREVENTION AND SEDIMENT CONTROL PLAN
 PV-20 CABLE REPLACEMENT PROJECT
 VT TRANSCO

PROJECT NO.
57660.00
 DATE: 02/08/16
 FIGURE # 2

**PV-20 SUBMARINE CABLE REPLACEMENT PROJECT
OHM STORAGE WEEKLY INSPECTION CHECKLIST**

(make multiple copies as necessary)

Inspector's Name: _____

Inspector's Signature: _____

Date: _____

Completed forms must be retained by the Contractor and provided to VELCO upon their request.

NOTE: Check **yes** or **no** for each item. If no, indicate corrective action.

ITEMS	YES	NO	IF NO, CORRECTIVE ACTION
OHM DRUM AND CONTAINER STORAGE			
OHM CONTAINERS IN SECONDARY CONTAINMENT			
1. Are the drum/container surfaces in good condition and free of stains?			
2. Is the floor surrounding the drums and dikes/basins free of signs of spills?			
3. Are all OHM containers from the site located in the designated storage area at the end of the day?			
OPERATIONAL EQUIPMENT			
EQUIPMENT AND MACHINERY			
1. Are equipment and machinery surfaces in good condition and free of fuel stains?			
2. Is the area around the equipment and machinery free of stains?			
3. Is a spill kit accessible and does it have a complete supply of absorbent pads/booms and other emergency spill containment and cleanup equipment?			
Additional Notes/Observations:			

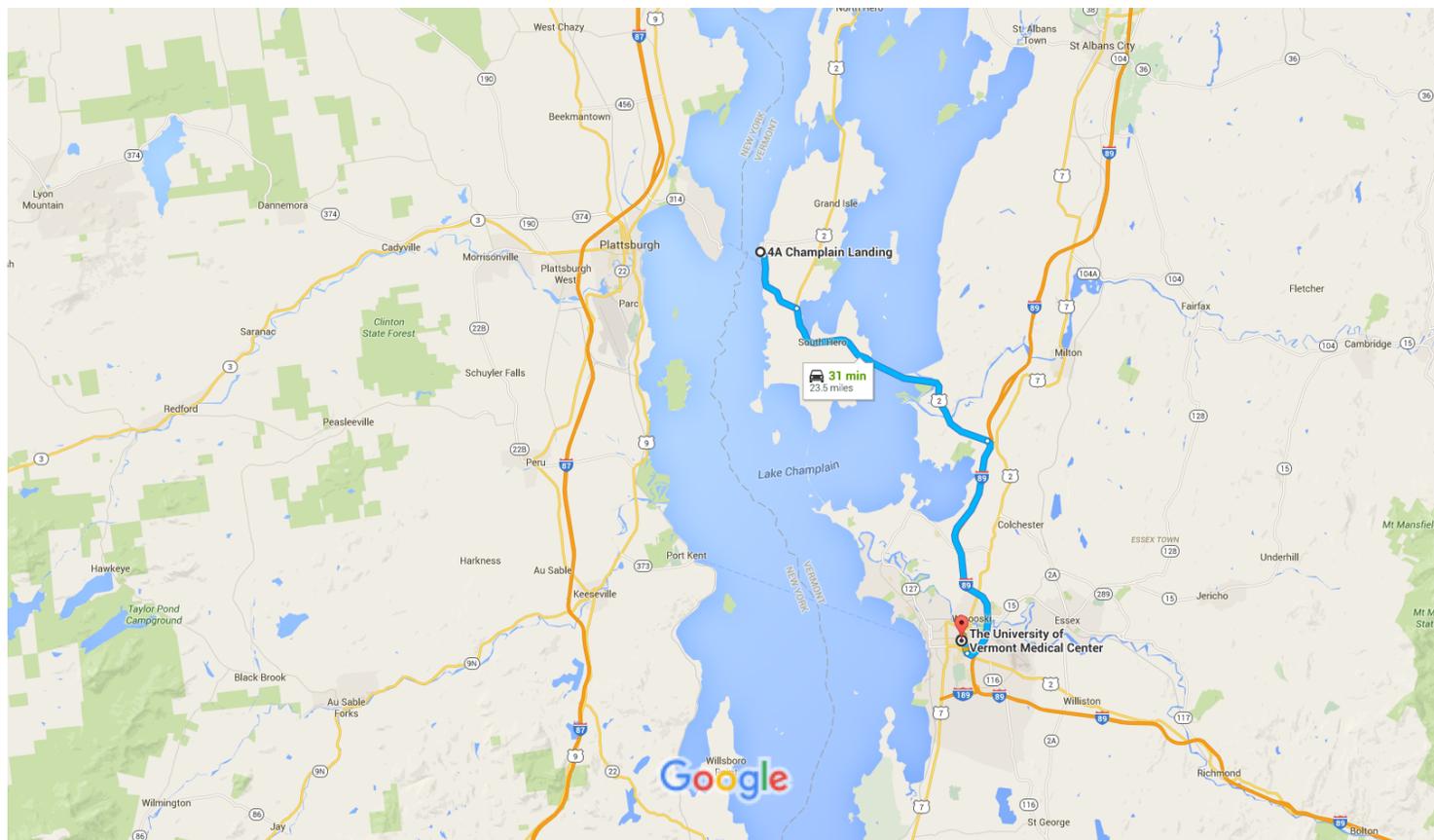
Supervisor's Signature: _____ Date: _____



4A Champlain Landing, Grand Isle, VT 05458 to The University of Vermont Medical Center

Drive 23.5 miles, 31 min

VELCO PV-20 Emergency Planning. Medical Center's Phone Number: 802-847-0000. Call 911 in an emergency.



Map data ©2016 Google 2 mi

4A Champlain Landing

Grand Isle, VT 05458

Follow VT-314 S to US-2 E in South Hero

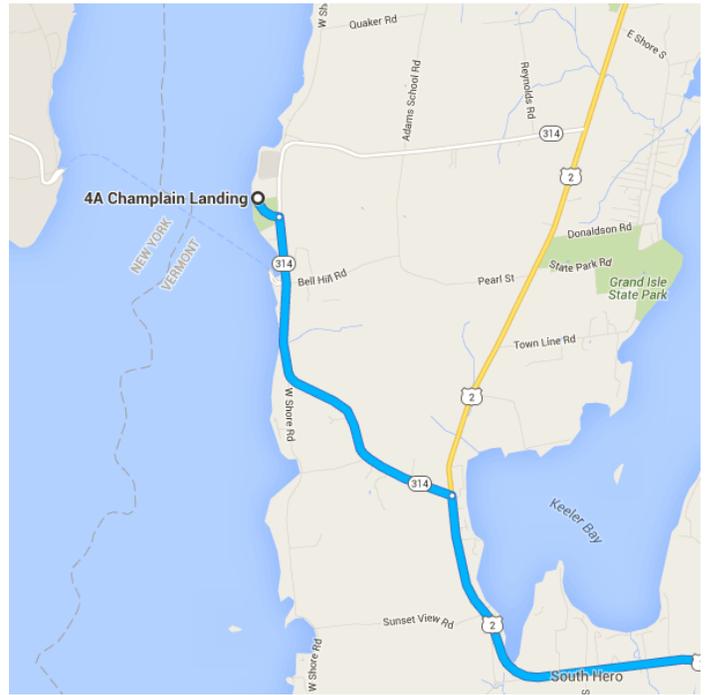
6 min (2.9 mi)

- ↑ 1. Head south on Champlain Landing toward Silent Cedars Cir

0.2 mi

- ↘ 2. Turn right onto VT-314 S

2.7 mi



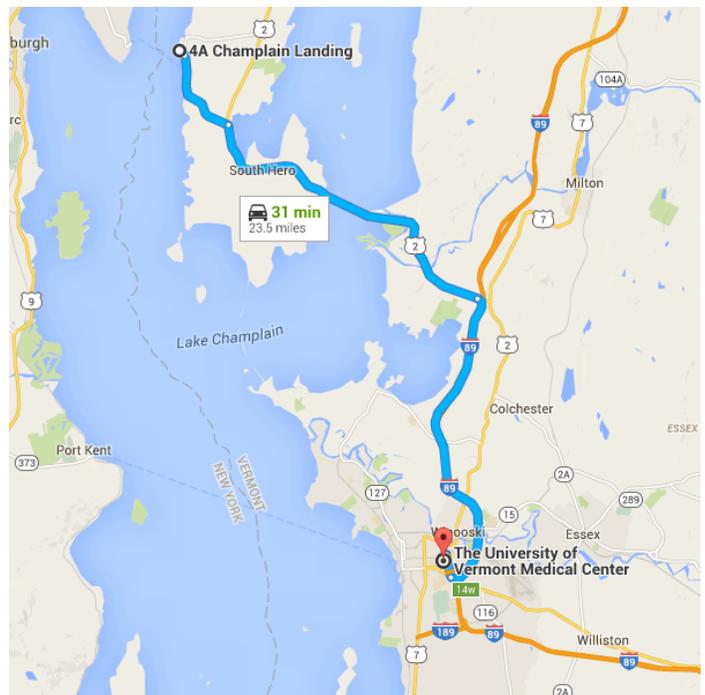
Follow US-2 E and I-89 S to East Ave in South Burlington

- 23 min (19.7 mi)

 3. Turn right onto US-2 E
- 10.1 mi

 4. Use the right lane to take the ramp onto I-89 S
- 9.0 mi

 5. Take exit 14w to merge onto US-2 W/Main St toward Burlington
- 0.6 mi



Continue on East Ave. Drive to Colchester Ave in Burlington

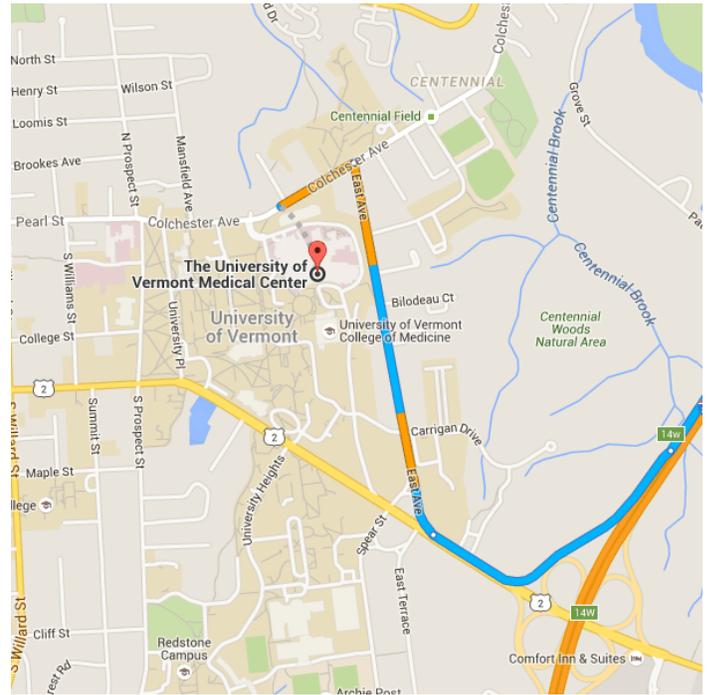
- 3 min (0.9 mi)

 6. Use the right 2 lanes to turn right onto East Ave
- 0.7 mi

7. Turn left onto Colchester Ave

 Destination will be on the left

0.2 mi



The University of Vermont Medical Center

111 Colchester Avenue, Burlington, VT 05401

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.