

**VIRGIN ISLANDS WATER AND POWER AUTHORITY
COASTAL CONSISTENCY DETERMINATION REQUEST
FEEDER 8A, QUEEN MARY HIGHWAY, HANNAH’S REST TO BLVD 24 (LA REINE)
UNDERGROUND ELECTRICAL PROJECT, ST. CROIX, U.S. VIRGIN ISLANDS**

INTRODUCTION

The Virgin Islands Water and Power Authority (VIWAPA) has been working to relocate transmission and distribution underground throughout the islands so that power can be restored quickly after the occurrence of major storm events. Underground transmission lines provide improved protection from storm damage, reliability and reduce outage frequency caused by overhead obstructions and faults.

VIWAPA is proposing to install underground ducts with manholes, pad-mounted transformers, and other underground devices to replace existing overhead distribution lines along Queen Mary Highway. This will provide underground power infrastructure to businesses, government agencies and St. Croix residents. VIWAPA has been working at relocating transmission and distribution feeders in areas of essential services underground so that these critical services can be restored immediately after the occurrence of major storm events. Underground lines ensure that critical facilities can continue to provide essential services.

Duct banks will be installed under Queen Mary Highway along with pad-mounted transformers, pad-mounted switchgear, electrical manholes, pedestal-mounted meters and communications handholes.

The duct banks will branch off under side roads to provide access to business and facilities along the route. The project will serve large business, government facilities and individual homeowners.

The project will extend from east of Kingshill to Emancipation Drive in Frederiksted. The lines will be buried on the south side of the road. Trench routes will be returned to pre-construction standards, and a full lane width asphalt road restoration will be performed by DPW shortly after the electrical construction project is completed, in accordance with a joint utility effort that was initiated in 2022.

The project will be split into 3 phases as follows:

- Phase 1 will start at Route 663 (at the location of St. Croix Central High School) and will head west towards Frederiksted to the West Airport Access Road.
- Phase 2 will start at the West Airport access Road and will end at Route 661/ Emancipation Drive near the DPNR building.
- Phase 3 will start at Route 663 (at the location of St. Croix Central High School) and will head east towards Kingshill and will end near Emerald Tire Service just east of Queen Street.

Feeder Tie Switchgear will be strategically placed at five locations along Queen Mary Highway so that if feeder 9B is lost, customers can be switched over to Feeder 8B from the Melvin Evans Highway feeder, once this project, and some additional future projects are completed.

It is anticipated that the installation of Phase 1 will take one year to complete, Phase 2 will take another year to complete and Phase 3 is anticipated to take 4 months. However, the current supply chain challenges may slow installation due to backlogs in the availability of equipment. Most of the work will

be completed during the day, but paving may be done at night to avoid peak traffic during paving. The Civil work, which will have the most impact on the community, is expected to take approximately 9 months to complete for phase 1, 9 months for phase 2 and 3 months for phase 3. The civil work consists of saw cutting of the road, excavation of the trenches, installation of conduits and a concrete envelope within the trench, backfill of the trench, and pathing of the roadway, installation of manholes and handhole, as well as forming and pouring concrete pads for electrical equipment.

The Queen Mary Highway/Centerline Road is one of the busiest roadways in St. Croix and such the project has the potential to disrupt traffic flow. Therefore, traffic control will be a key element

VIWAPA will also ensure that staging areas are defined and that the job sites are kept neat and the roadway clean. The successful bidder will be required to prepare and submit a staging plan for this project, for review and approval by VIWAPA, and the Underground Electrical Project Management Team. Furthermore, Viwapa and the Project Management Team will perform periodic inspections of staging areas, and material laydown areas.

PROJECT LOCATION

The proposed underground project spans St. Croix from Frederiksted to the Kingshill area (Blvd 24). The project extends from Latitude 17.696878° and Longitude -64.876243° in Frederiksted to Latitude 17.728899° and Longitude -64.772739° in Kingshill.

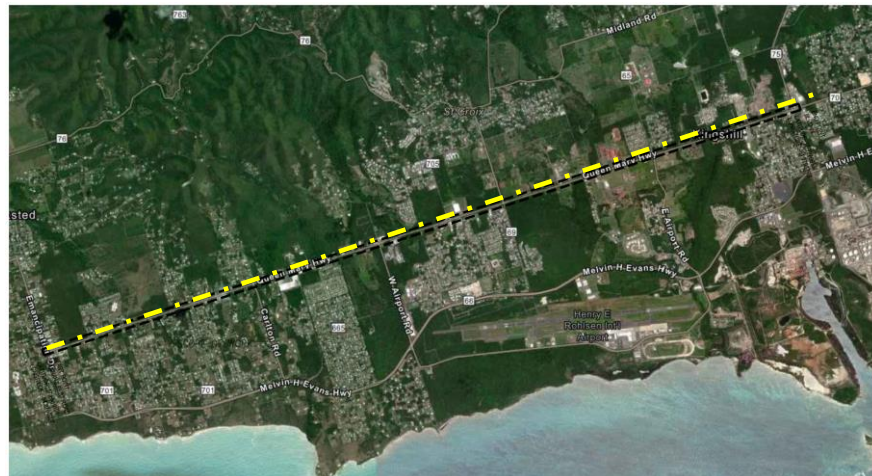


Figure 1. Location of the proposed Queen Mary Highway Underground Electrical project on the island of St. Croix, U.S. Virgin Islands.

Note: This project is outside of the Coastal Zone Management (CZM) first tier jurisdiction.

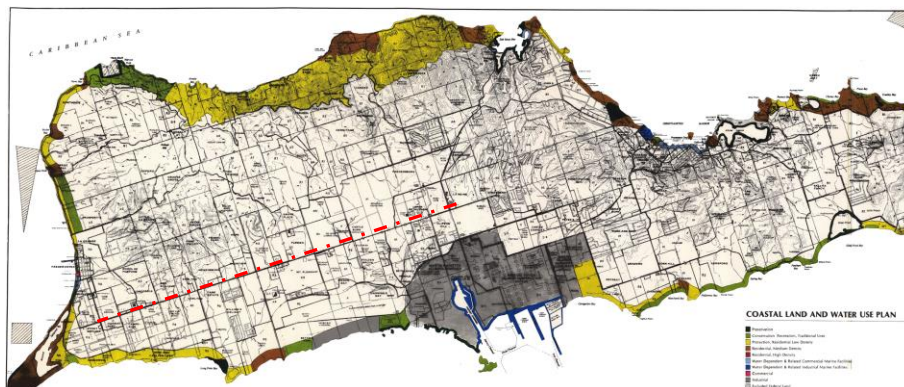


Figure 2. The relationship between the proposed Queen Mary Highway Underground Electrical project and CZM first tier jurisdiction. The first tier areas are shown in color on the map.

PROJECT DESCRIPTION

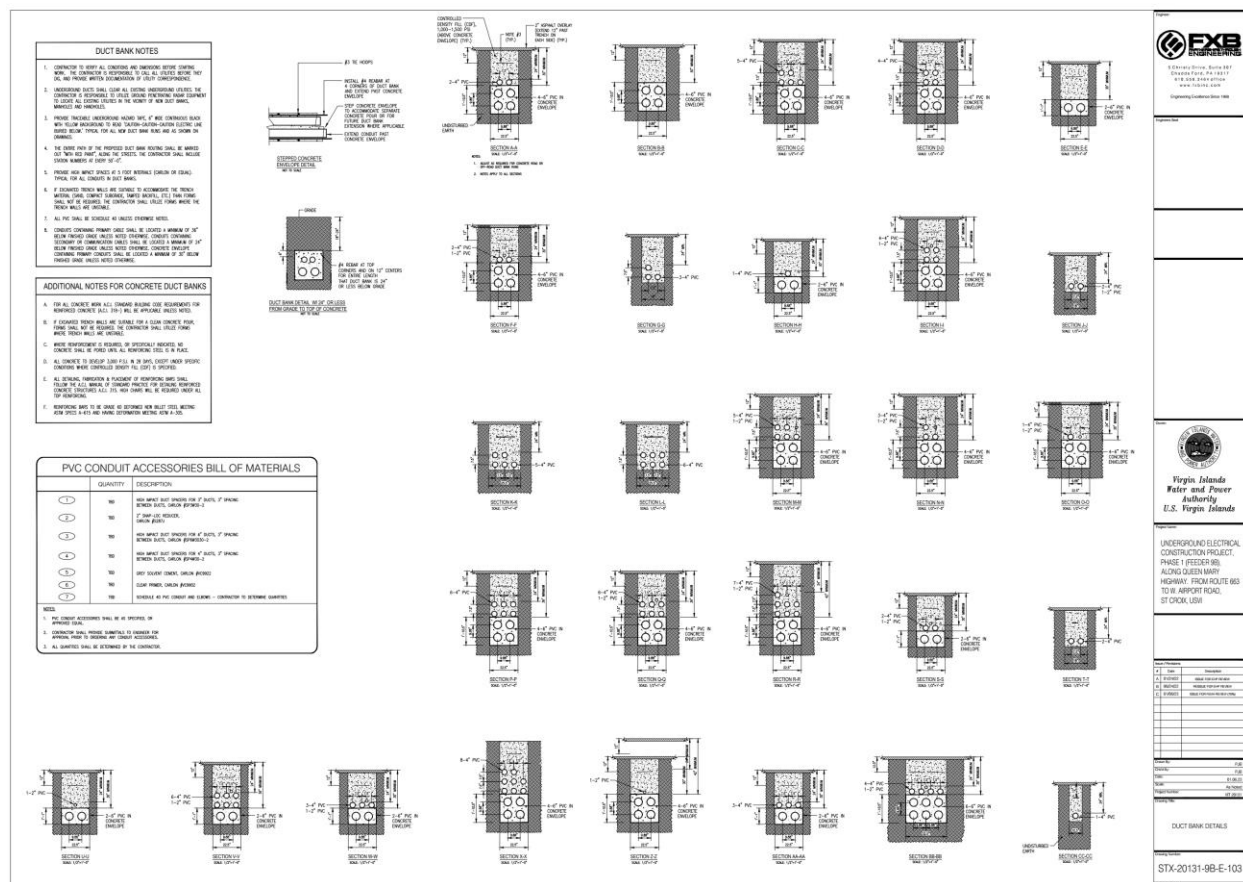
VIWAPA proposes the installation of a main underground primary distribution line (Feeder 9B) with manholes, pad-mount transformers, pad mounted primary switchgear, pad mounted primary sectionalizing cabinets, and other underground devices to replace the existing overhead distribution line along Queen Mary Highway.

Existing Electrical and communication manholes will be intercepted / tied into at the intersection of Queen Mary Highway and Emancipation Drive, the new main Feeder 9B duct bank will have four (4) 6" conduits (primary) and two (2) 4" conduits (communications). The duct bank will provide service to the Police Department and the Department of Planning and Natural Resources, The University of VI St. Croix, The Education Complex, Central High, and numerous small businesses. A short feeder duct with conduits will extend to the north and south along Mars Hill Road. A feeder duct will extend to the north into Concordia Estate and to the south on Campo Rico Road, the Campo Rico Road will avoid an existing sewer manhole. Throughout the alignment adjustments have been made to avoid existing infrastructure. A Sectionalizing Cabinet will be placed to the south on Morales Road as well as a feeder duct. Another feeder duct will be installed north into Concordia Estate. A feeder duct will extend to the north on Concordia Road and to the south on Route 63. A Sectionalizing Cabinet will be placed at the entrance to the Whim Estate near Kiss Grill and Sectionalizing Cabinet and a feeder duct will be placed at the Whim Estate Road and on Whim Road. A feeder duct will be placed on Two Williams Estate Road, Concordia Terrace Road, and Hope and Carlton Land Estate Roads. Feeders will be placed on Good Wives Road, in the Estate Carlton and into Carlton Garden Estates. A feeder duct will be placed on Carlton Road to the north of the highway. A feeder will be placed on Pond Lane. A feeder will service Sunshine Mall and the warehouse formally used by Virgin Islands Waste Management. A feeder will be

Figure 4. The duct banks that will be installed along the proposed Queen Mary Underground Electrical project route.

Climate/Weather

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installation. The contractor will obtain coverage under the Construction General Permit (CGP) for stormwater prior to the start of construction.

Landform Geology, Soils and Historic Land Use

The electrical utility lines are being buried under the existing Queen Mary Highway (Centerline Road), and existing connecting roadways. The electrical ducts will be buried to a depth of approximately 3ft. Minor earthwork will occur, within developed properties, to provide service to existing meters and pedestals and to place pad mounted transformers and Sectionalizing Cabinets.

Queen Mary Highway passes through a variety of soil types through the route. The highest elevations are found near Central High School at 190ft and the lowest, approximately 80ft at the western terminus near Frederiksted.

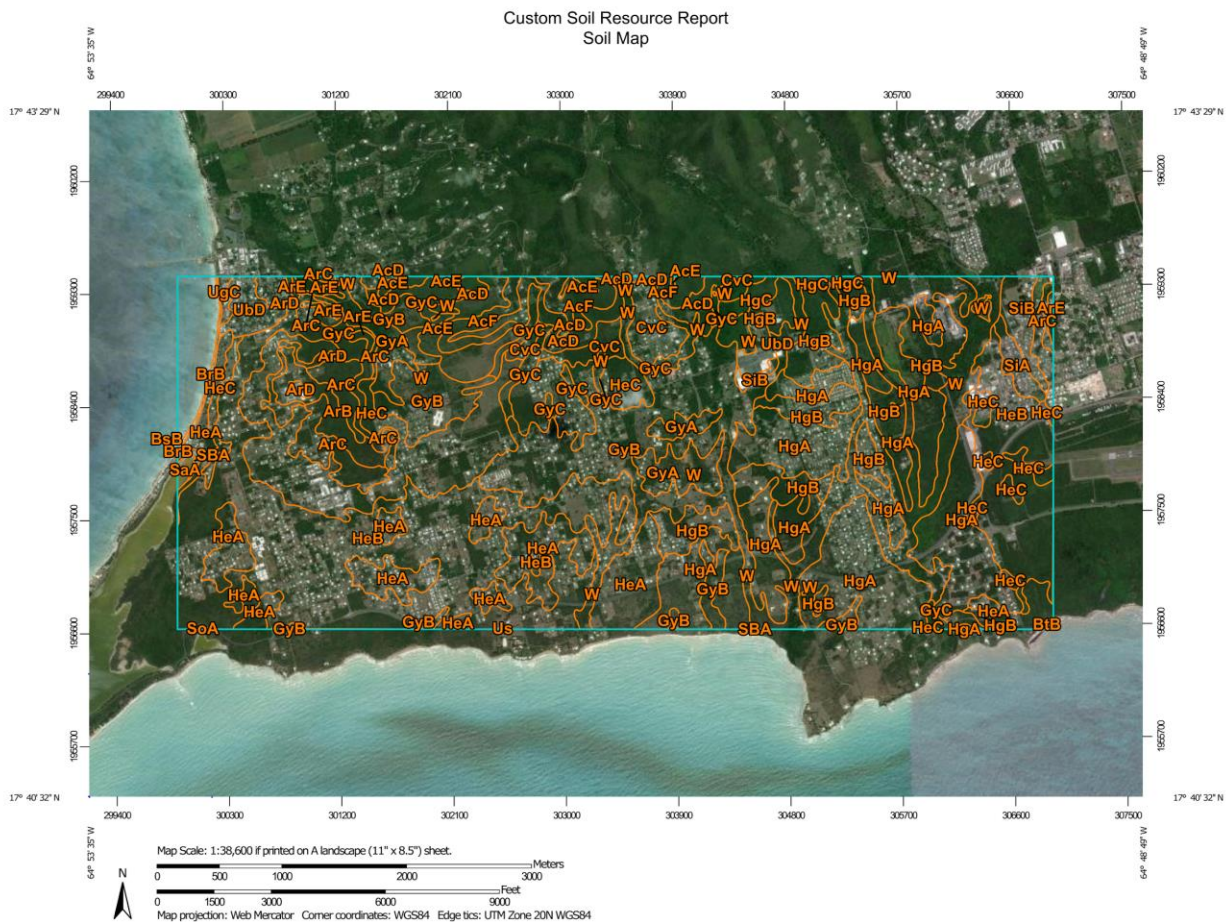


Figure 5. The composition of soils within the west end of the proposed Queen Mary Highway Underground Electrical project.

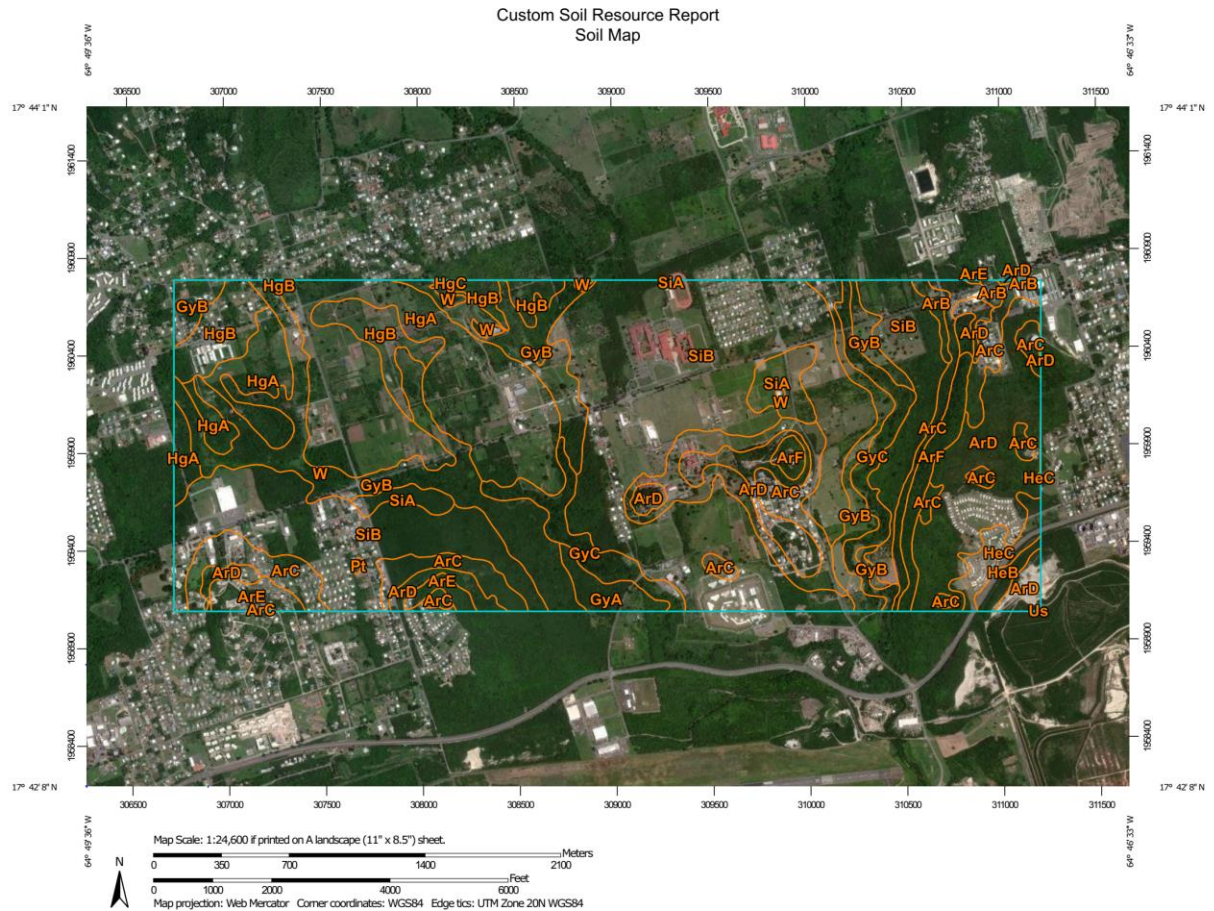


Figure 6. The composition of soils within the eastern end of the proposed Queen Mary Highway Underground Electrical project.

The project crosses through 5 different soil types of various slopes. These include; Sion Clay, 2 to 5% slopes (SiB) Glynn gravelly loam, 0 to 2% slopes (GyA) slopes, 2 to 5% slopes (GyB) and 5 to 12% slopes (GyC). The conduits will also pass through Arawak gravelly loam, 2 to 5% slopes (ArB), 5 to 12% slopes (ArC), 20 to 40% slopes (ArE), Hesselberg clay, 5 to 12% slopes (HeC), and Hogensborg clay loam, 0 to 2% slopes (HgA), 2 to 5 % slopes (HgB), 5 to 12% slopes (HgC)

The Sion Clay, Glynn gravelly loam and Hogensborg clay loam have restrictive layers deeper than 80 inches, which will be below the depth of the conduits. Arawak gravelly loam and Hesselberg clay may have paralithic bedrock at 10 to 20 inches which means that a restrictive layer will be encountered. Ground water will be deeper than 80 inches throughout the project site.

Drainage, Flooding and Erosion Control

Strictly enforced measures to control sedimentation and erosion will be implemented during all phases of the proposed project to ensure that rainfall will not impact the nearby drainageways and water course during installation. In addition, no materials will be stockpiled overnight. The project will apply

for coverage under the General Construction Permit for stormwater due to its length. A total of 19 drainageways cross Queen Mary Highway along the project length.

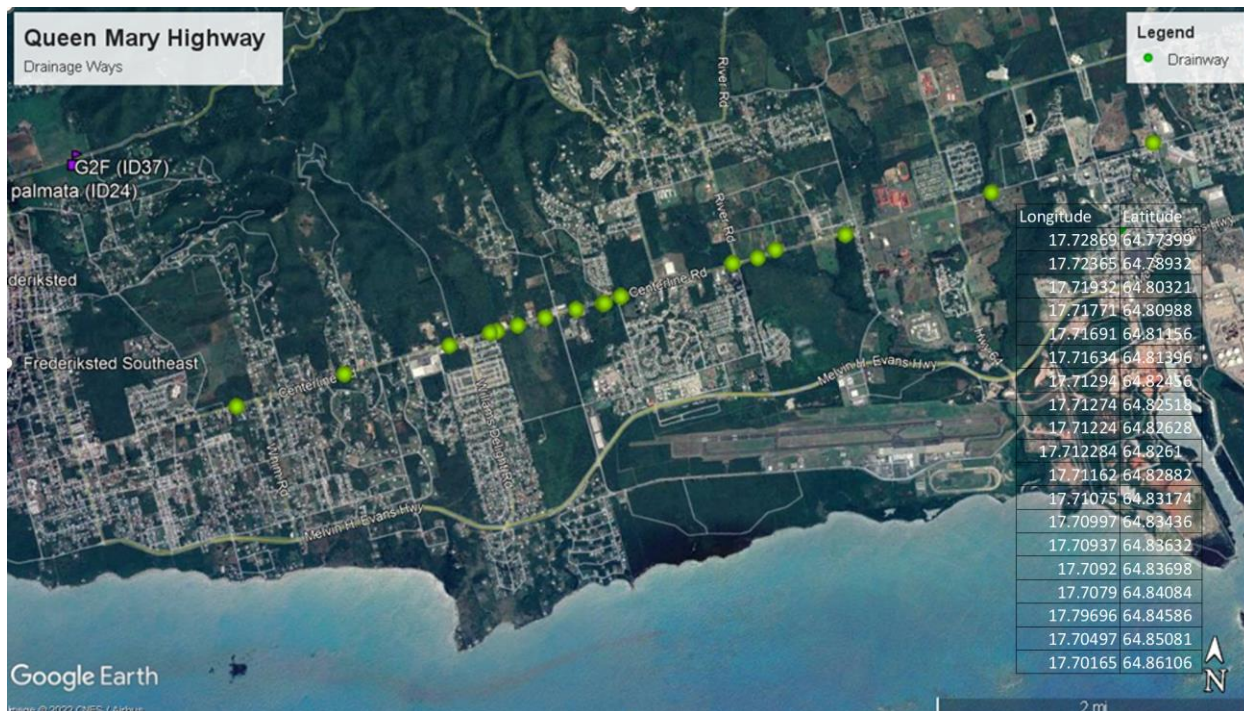


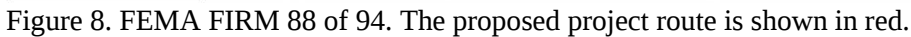
Figure 7. Drainageways along Queen Mary Highway/Centerline Road.

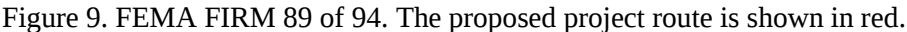
Drainage Patterns

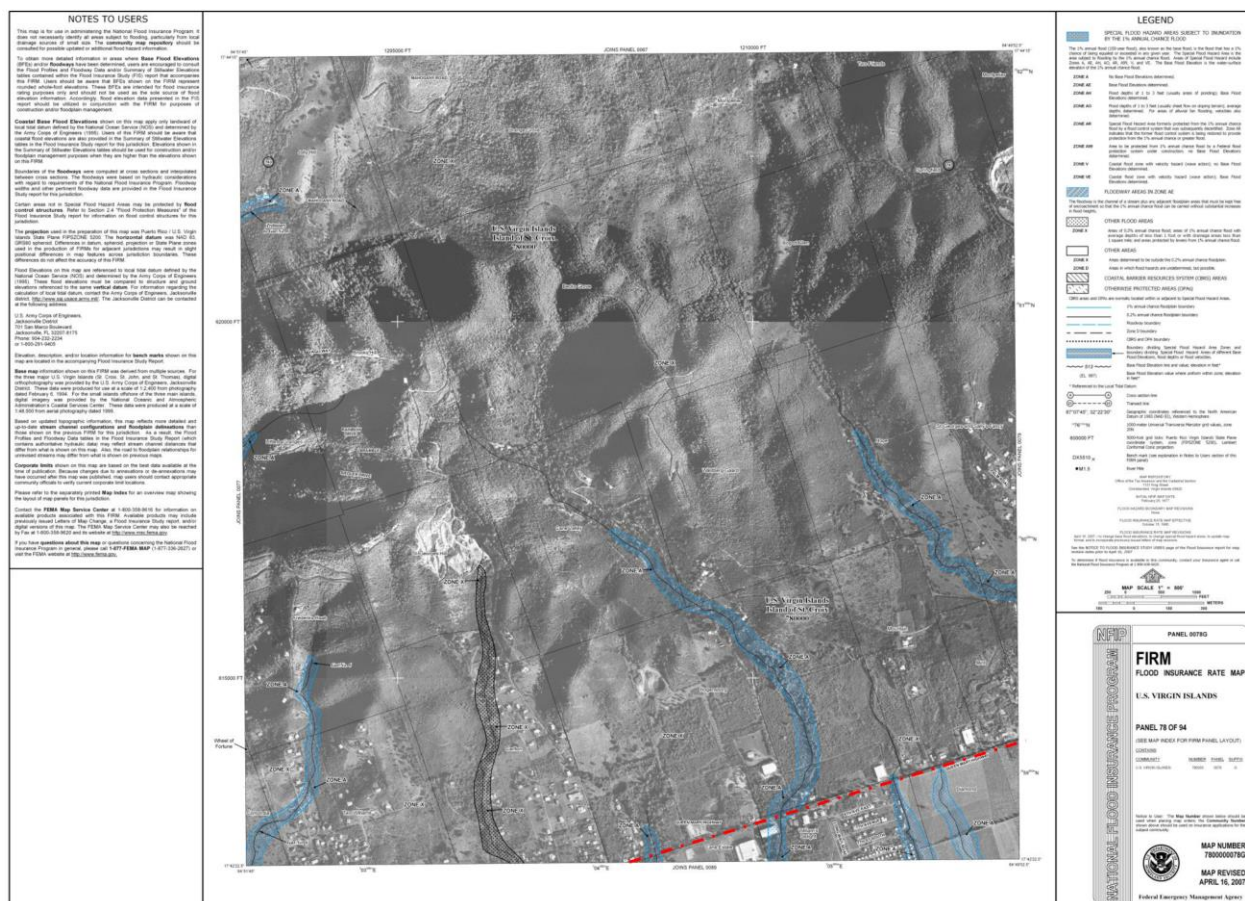
The proposed project will have no impact on existing drainage patterns once complete since the electrical utility lines will be installed within existing paved roadway. Pad mounted transformers and Sectionalizing Cabinets are not being placed within drainage ways.

Coastal Floodplain

There are numerous drainage ways along Queen Mary Highway and Queen Mary Highway passes through nine (9) areas of Zone A where 100-year flooding is expected. Elevations have not been determined and two (2) areas of Zone A terminate at Queen Mary Highway. Pad mounted electrical equipment consisting of primary switchgear, transformers, and primary sectionalizing cabinets, will be strategical located to avoid these nine (9) areas. Under scenarios where a flood zone cannot be practically avoided, equipment pads will be elevated to 54" above finished grade in order to comply with DPNR requirements that have been established on a previous underground project that contained equipment pads ,located in flood zones (Container Port).







Oceanography

The project location is well inland and will not be affected by sea storm events. The project will implement strict stormwater control measures during construction and will apply for coverage under the General Stormwater Permit for construction and the required monitoring of the controls and therefore should not create sediment laden runoff which could impact water quality.

Marine Resources

The property is located entirely inland and will have no direct impact on the marine environment.

Terrestrial Resources

The proposed project will occur within existing paved Queen Mary Highway. No natural terrestrial resources or any native flora or fauna will be significantly impacted during the installation of the buried conduits. The electrical lines will be buried near large trees along the roadside; thus, some minor cutting of tree roots may occur due to the proximity of some of the trees and the roadway.

An arborist will be retained by the successful bidder for the project, to monitor/advise. Any vegetative debris will be mulched.

Relocating electrical lines underground will alleviate the need to trim large trees away from suspended overhead lines and will prevent future damage to large trees during storm events.

Wetlands

The project will have no impact on wetlands, as there are no wetlands in, or adjacent to, the proposed project route. The proposed project route is in an existing paved highway and paved roadways. The ground-mounted equipment will be placed in areas which have already been altered from their natural state.



Figure 13. The relationship between the proposed Queen Mary Highway Underground Electrical project and wetlands.

Rare and Endangered Species

No endangered or threatened species or endangered species habitat exist within the proposed project route; therefore, no federal, or local, endangered, or threatened, species will be impacted. According to the U.S. Fish and Wildlife Service (USFWS) Information, Planning and Conservation System (iPAC) project tool “There are no listed species or critical habitats expected to occur at this location”. There are no migratory birds of conservation concern expected to occur at this location and no endangered species, critical habitat or migratory birds are expected to occur in the proposed project area.

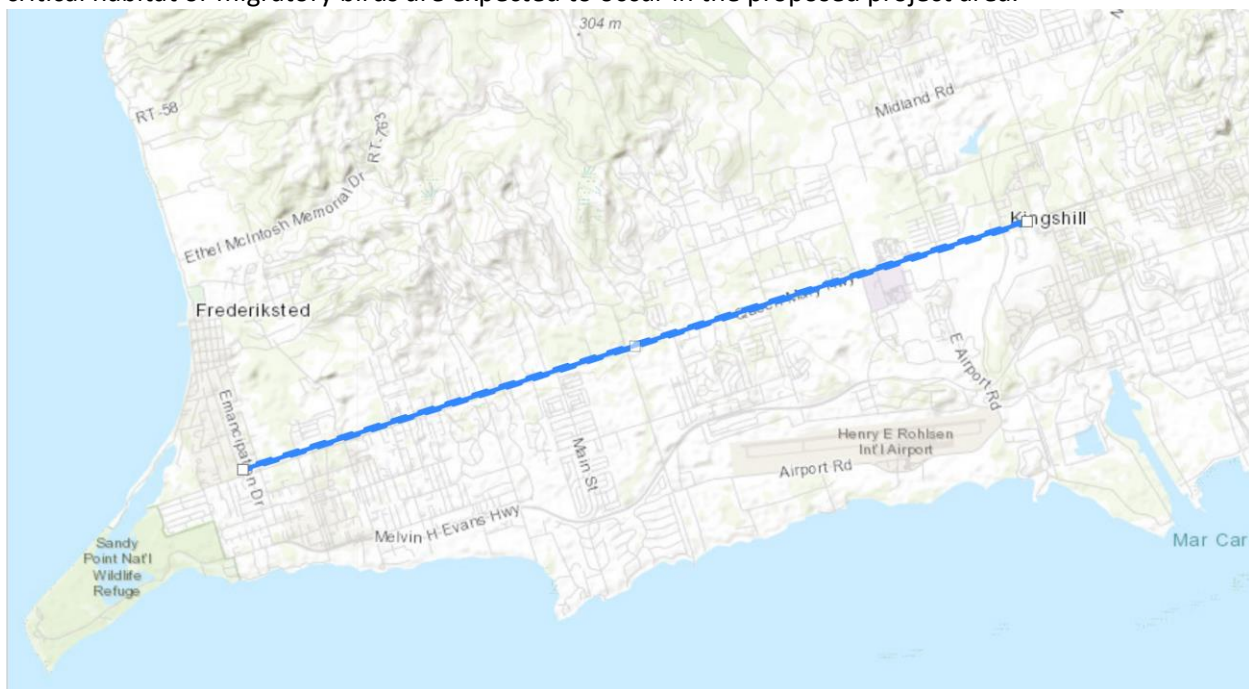


Figure 14. FWS iPAC location map.

There is an endangered ground lizard, *Ameiva polops*, on the island of St. Croix, but this lizard is only found on Protestant Cay and Ruth Cay. There are also three endangered plant species on St. Croix – i.e., *Agave eggersiana*, *Buxus vahlii* and *Catesbaea melanocarpa*. *Agave eggersiana*, and *Catesbaea melanocarpa* primarily occur in dry, exposed areas and are not known to occur along this roadway. There are three known populations of *B. vahlii* on St. Croix and one is on the west end of St. Croix southwest of the terminus of the route.

Despite not being known to occur in these areas these species were looked for during the terrestrial studies of the route. Neither the endangered ground lizard nor any of the endangered plant species are found within the proposed project footprint.

Air Quality

All of St. Croix is designated Class II by the Environmental Protection Agency, in compliance with National Ambient Air Quality Standards. In Class II air quality regions, the following air pollutants are regulated: open burning, visible air contaminants, particulate matter emissions, volatile petroleum products, sulfur compounds, and internal combustion engine exhaust (Virgin Islands Code Rules and

Regulations). Trenchers will be used during project construction and will create combustion engine exhaust during use. Upon the completion, air quality will return to pre-construction conditions.

IMPACT ON MAN'S ENVIRONMENT

Land and Water Use Plans

The burial of electrical lines is in accordance with the laws and regulations of the U.S. Virgin Islands.

Visual Impacts

The relocation of the overhead electrical lines underground will be a visual improvement of St. Croix's landscape by not only placing the unsightly lines underground but by also not requiring the cutting of tree limbs to protect the lines. Trees will no longer have to be pruned into unnatural shapes to protect the lines.

Social Impacts and Economic Impacts

Providing more reliable and resilient power to critical infrastructure on St. Croix will benefit both residents and businesses on the island. Being able to maintain, or quickly restore, power to critical facilities like the Superior Court, the Department of Planning and Natural Resources and Central High School.

Historical and Archaeological Resources

The proposed project involves the installation of underground electrical utility lines in existing roadways, which are located on lands that have been extensively altered by cutting or filling. An archeological Scope of Work (ASoW) will be developed with the USVI State Historic Preservation Office (SHPO) to monitor for historic resources along the highway.

Waste Disposal and Accidental Spills

Equipment will be kept in good operational condition during the proposed project work and will not be fueled on site. Any excess excavated material and debris will be collected, taken off-site and properly disposed of.

If any hazardous materials are encountered or created, they will be taken back to the yard with the proper paperwork. No hazardous materials will be stored overnight.

COASTAL CONSISTENCY

The proposed Queen Mary Highway Underground Electrical project has a negligible potential of impacting environmental resources, or ambient water quality during construction. A General Stormwater Permit for construction will be obtained by the installation contractor(s) and sedimentation and erosion control measures will be implemented during construction to ensure that no environmental impacts occur. The proposed project will occur only within previously altered areas and archeological monitoring will be conducted to minimize impact on historical or cultural resources. Project activities stop if historic remains or resources are encountered, and SHPO will be contacted to determine the best course of action.

The Coastal Zone Management Act of 1972 requires that federal actions, within and outside the coastal zone, which have reasonably foreseeable effects on any coastal use (land or water), or natural resource of the coastal zone be consistent with the enforceable policies of a state's federally approved coastal management program. The Queen Mary Highway Underground Electrical Project, as proposed, will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the U.S. Virgin Islands' CZM Program. This federal consistency determination demonstrates the Queen Mary Highway Underground Electrical project's compliance with the U.S. Virgin Islands' CZM Program.

The following policies are set forth in the U.S. Virgin Islands Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, § 903(b)]. The proposed Queen Mary Highway Underground Electrical project meets each of the basic goals of the USVI for its coastal zone. Additional details are as follows:

USVI Code Title Twelve Conservation, Chapter 21 § 903 (b)

(1) Protect, maintain, preserve and, where feasible, enhance and restore, the overall quality of the environment in the coastal zone, the natural and man-made resources therein, and the scenic and historic resources of the coastal zone for the benefit of residents of and visitors of the United States Virgin Islands.

- The proposed Queen Mary Highway Underground Electrical project is designed to be within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape along Queen Mary Highway by removing overhead electrical lines and poles.

(2) Promote economic development and growth in the coastal zone and consider the need for development of greater than territorial concern by managing: (1) the impacts of human activity and (2) the use and development of renewable and nonrenewable resources so as to maintain and enhance the long-term productivity of the coastal environment.

- This proposed project promotes the economic development and growth in the coastal zone by providing more reliable, resilient electrical transmission to critical island infrastructure. The improved resilience of electrical power on the island of St. Croix is beneficial for routine service provision and in the event of future catastrophic weather events.

(3) Assure priority for coastal-dependent development over other development in the coastal zone by reserving areas suitable for commercial uses including hotels and related facilities, industrial uses including port and marine facilities, and recreation uses.

- The proposed project involves the burial of electrical utility lines outside the coastal area and is therefore consistent with this policy.

(4) Assure the orderly, balanced utilization and conservation of the resources of the coastal zone, taking into account the social and economic needs of the residents of the United States Virgin Islands.

- The burial of the electrical lines will only occur in areas that have been previously altered and will improve the electrical power resilience both for routine service provision and in the event of

future catastrophic weather events. The proposed project will also service critical island infrastructure and, therefore, will meet and protect the economic and social needs of residents of the island of St. Croix.

5) Preserve, protect and maintain the trust lands and other submerged and filled lands of the United States Virgin Islands so as to promote the general welfare of the people of the United States Virgin Islands.

- The proposed project will not impact trust lands or other submerged or filled lands of the U.S. Virgin Islands.

(6) Preserve what has been a tradition and protect what has become a right of the public by insuring that the public, individually and collectively, has and shall continue to have the right to use and enjoy the shorelines and to maximize public access to and along the shoreline consistent with constitutionally-protected rights of private property owners.

- The proposed project will in no way affect public access to, or use of, the shoreline. The project is located well inland.

(7) Promote and provide affordable and diverse public recreational opportunities in the coastal zone for all residents of the United States Virgin Islands through acquisition, development and restoration of areas consistent with sound resource conservation principles.

- The proposed project will not affect public recreational opportunities in the coastal zone.

(8) Conserve ecologically significant resource areas for their contribution to marine productivity and value as wildlife habitats, and preserve the function and integrity of reefs, marine meadows, salt ponds, mangroves and other significant natural areas.

- The proposed project is designed so that it impacts only previously disturbed areas. The project will have no impact on natural resources and will utilize best management practices (BMPs) to minimize areas of disturbance, thereby protecting adjacent habitats.

(9) Maintain or increase coastal water quality through control of erosion, sedimentation, runoff, siltation, and sewage discharge.

- The proposed project will have no long-term change on sedimentation or erosion and will not result in the creation of wastewater. The project will implement sedimentation and erosion control BMPs to prevent loss of sediment from the project site.
- The proposed Queen Mary Highway Underground Electrical project, as designed, will maintain coastal water quality through control of erosion, sedimentation, runoff, and siltation and therefore is consistent with the policy set forth in the USVI Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, § 903 (b)].
- The proposed Queen Mary Highway Underground Electrical project, as designed, protects, maintains, preserves, and enhances the overall quality of the environment in the coastal zone, the natural and man-made resources therein, and the scenic and historic resources of the coastal zone for the benefit of residents of and visitors of the USVI. It is therefore consistent with the policy V.I. Code tit. 12, § 903 (b).