

# FLOOD HAZARD PERMIT

**Environmental Assessment Report** 

**Applicant**: Government of the US Virgin Islands – Dept. of Public Works **Project**: VI ST ER STX(003): Storm Damage Repair to Roadways, Culverts, Embankments, Bridges, and Other Roadway Features on St. Croix, USVI

Site: Rt. 64 – East Airport Bridge

**JULY 2022** 

Prepared by: Tysam Tech, LLC

Tysam Tech, LLC

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FLOOD HAZARD PERMIT Environmental Assessment Report – Rt. 64 – East Airport Bridge Applicant: Government of the US Virgin Islands – Dept. of Public Works JULY 2022



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# 1.00 NAME AND ADDRESS OF APPLICANT

# Government of the US Virgin Islands Department of Public Works

## **Mailing Address:**

6002 Annas Hope Christiansted, VI 00820

# **Physical Address:**

6002 Annas Hope Christiansted, VI 00820





# 2.00 LOCATION OF PROJECT

The project is located at the following physical address:

#### Rt. 64 – East Airport Bridge Christiansted, VI 00820

The Rt. 64 – East Airport Bridge project site is located in St. Croix, northeast of Henry E. Rohlsen Airport. The site is positioned at 17°42'27.0"N, 64°47'14.4"W, along Highway 64, just north of Melvin H. Evans Hwy (Route 66). Figures 2.00.1 and 2.00.2 below are a Location and Agency Review Map and Vicinity Map, respectively. The red line illustrated in the Vicinity Map is the CZM delineation line which indicates this project outside of CZM requirements.



Figure 2.00.1 – Location and Agency Review Map (USGS Quadrangle Map, Long Point, VI, 2013)

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Figure 2.00.2 –Vicinity Map Showing Location of Facility (Google Earth).



## 3.00 ABSTRACT

#### **SUMMARY OF WORK FOR ALL 15 SITES**

Significant damage to roads, gut crossings and bridges occurred as a result of the landfall of Hurricane Maria in 2017 to the island of St. Croix, USVI. To provide the necessary repair to the damaged infrastructure, the USVI Department of Public Works (DPW) has contracted VI Paving, Inc. (VIP) to undertake the repairs at 15 different sites around St. Croix. These sites consist of different types of rehabilitation work and different project scale. Of the 15 sites, three are bridge rehabilitations, seven are culvert rehabilitations, and the remaining five are strictly roadway rehabilitations. This project is funded through the US Department of Transportation (USDOT), Federal Highway Administration, Eastern Federal Lands Highway Division and is in partnership with the USVI Department of Public Works (DPW).

The project involves the removal of damaged asphalt and concrete pavement, pipe culverts, bridges, guardrails, retaining walls, embankment material, utility lines and poles, and other debris. The damaged infrastructure will be replaced by new culverts, bridges, headwalls, guardrails, rip rap and gabion baskets, concrete retaining walls, embankment stabilization materials, drainage inlets, aggregate base, asphalt pavement, and concrete pavement. Also included in the scope of work is the clearing and cleaning of existing drainage structures and the reconditioning of shoulders and ditches. The aforementioned activities will restore the proposed project areas to full and improved function and prevent similar damage to occur during future storm events.

#### **ROUTE 64 – EAST AIRPORT BRIDGE**

For this particular site under project VI ST ER STX(003), 330 linear feet of roadway over the East Airport Bridge on Route 64 will be rehabilitated. This will occur after the existing bridge is removed and replaced with a precast bridge structure, slightly east of the existing bridge location. The new location will improve driver safety and bridge stability. The gut is anticipated to be dry during the work schedule timeline; however, there is no work expected to be done directly within the typical waterline of the Gut if water is flowing due to storm events. All necessary precautions will be taken in the event there is water at the site and additional stormwater BMPs are required.

#### **Project Assurances**

- Employees' and the public's health and safety are protected with the best available systems and technologies.
- Environmental impact is considered at all times.
- No significant negative impact to environment.
- Air quality is protected.
- Stormwater quality is protected.
- Nearshore water quality is protected.



# 4.00 STATEMENT OF OBJECTIVES SOUGHT BY THE PROPOSED PROJECT

VIP seeks to replace the referenced bridge structure due to structural damage which was exacerbated by Hurricane Maria. The proposed bridge would increase capacity by widening the roadway as well as increase safety by eliminating a blind turn while traveling in either direction in its current location. The bridge and associated roadway will be raised in order to flatten the profile as the current surrounding boundaries (Melvin Evans Hwy and East Airport Road) are approximately five to ten feet higher in elevation than the existing bridge surface.

## 5.00 DESCRIPTION OF PROJECT

#### 5.01 SUMMARY OF PROPOSED ACTIVITY

#### a) Purpose of Project

The purpose of the project is to replace a degrading bridge and rehabilitate a 330-foot section of associated roadway which was further damaged from Hurricane Maria in 2017. The location is along Rt. 64, East Airport Road, just north of Route 66, Melvin H Evans Hwy. The existing bridge will be removed and replaced by a wider pre-cast bridge structure at a higher elevation, in order to eliminate the drop in elevation caused by the existing bridge. The new bridge location will be east of the existing structure.

Driver sightlines will be improved by the elevation increase to flatten the overall profile and also by the new location, eliminating an existing blind turn while traveling in either direction. In addition, the project will help to ensure that another major storm event does not degrade the bridge and roadway to the point of inhibiting passage through the area.

#### b) Presence and Location of any Critical Areas and Possible Trouble Spots

The project area is in close proximity to a highly industrialized area of St. Croix. This particular project site is not directly adjacent to any building structures, however, both sides of the roadway are well vegetated and bridges a drainage route. As such, the clearing of debris, demolition and construction, along with the repair of the roadway must not cause any impact to the surrounding areas or downstream wetland areas, water quality or existing habitat or wildlife.

Site slope is 5-12%. Elevation is between approximately 18 and 25 feet above sea level.



A field study of the site by Horsley Witten's field ecologist as well as review of the U.S. Fish & Wildlife Information for Planning and Consultation (IPaC) indicate that there are no endangered species, migratory birds, or sensitive facilities directly in the project area. However, the project is a drainage route for water to and from Negro Bay.

IPAC does indicate two federally endangered reptile species that are known to swim in the waters of Negro Bay, approximately one-half mile south of the project area. They are the hawksbill sea turtle (*Eretmochelys imbricata*) and the leatherback sea turtle (*Dermochelys coriacea*). In addition, the West Indian manatee (*Trichechus manatus*) is a threatened species and has been found in the offshore waters near the project site as well. Due to the remote location of this project from the coastline, no impacts to the water quality offshore are anticipated.

Due to the nature of the project, there exists potential for sedimentation and erosion during project activities. Sedimentation can cause several harmful outcomes if unmitigated and must be minimized. It is not anticipated that the project will occur during any water flow in the Gut, though all activities would remain outside the historical the water line. Additionally, all appropriate protective Best Management Practices (BMPs), including Type II Turbidity Curtains will be employed, if needed, in accordance with minimum requirements of the VI Environmental Protection Handbook (2002). Further details on these BMPs are outlined in Section 5.01(e).

#### c) Proposed Method of Land Clearing and Construction

For this site, a detour gut crossing is required, and will be provided for with a temporary bridge. This installation will be done carefully and during zero water flow through the gut, to minimize impact to the area and downstream waters.

During removal of the existing bridge structure, the project area will be directly adjacent to the open water channel that crosses directly below the bridge. Land Clearing, earth movement and any construction activities are planned to take place only during times when water is not flowing through this water course way. However, turbidity curtains will be used if water is present in the gut and work will be adjacent to or within the water line.

The North abutment of the existing bridge structure will not be removed, however, due to its cultural and historical importance. This section will remain and be protected during construction activities. Upon removal of the other sections of the existing bridge, steel pilings will be installed on both embankments, above mean-high tide water lines. The South side of the bridge embankment will be excavated to approximately 8 feet for pile installation.

Silt fencing, and if water is present, turbidity curtains, will be used to prevent sediment migration, though activity will be performed carefully to ensure no agitation of water or sediment occurs during pile driving. Riprap and scour protection will be installed around the foundation pilings and base, for permanent long-term protection of the bridge, lagoon mouth and channel, as well as the North abutment of the previous bridge.



In order to properly build and secure the new foundation while protecting the North abutment of the existing bridge, further earthwork within the gut will be required to contour the gut centerline to ensure smooth downstream flow, prevent scouring pathways and ensure no bottlenecks in flood control are created. All gut contouring will be done in as minimal amounts as feasible, with double reinforced silt- fence used during in gut work. No work in the gut will occur when water is flowing.

The new structure pilings, when set in place, will be used for creating forms to pour cast-inplace concrete foundation walls as the base for a pre-cast concrete bridge. The pre-cast concrete bridge will be brought in via barge and trucked into the site, where it will be put in place by crane.

After confirming appropriate placement of the bridge, and foundation stability, the surrounding roadway will be built up and compacted to meet the new bridge elevation, applying a 24-inch aggregate base, and the roadway paved with 6 inches of asphalt across its 31-foot width. Nine feet of concrete sidewalks, curbs and FDOT Handrails will be installed on one side of the road, providing for a bridge with forty (40) foot in total width.

Removal of the temporary detour route will be done when the bridge is completed and operational. Any brush and debris requiring removal in order to access the existing bridge, roadway and/or related infrastructure, will be cut and transported off-site as green waste for disposal at the Waste Management Authority Transfer Station.

#### d) Provisions to Limit Site Disturbance

In order to limit site disturbance, proposed work timeline will be the minimum time required to perform each task, as not to cause undue disturbance to surrounding areas. The project will extend further than the current footprint, but only the minimum distance required to improve driver safety.

As the work potentially entails demolition and installation of structures in or adjacent to water, site disturbance will be both minimized and carefully performed where required. Any disturbance will be monitored at all times and no in-water activities are anticipated to be performed. After each stage of site disturbance, stabilization and scour protection will be implemented immediately upon achievement of final grade.

A Storm Water Pollution Prevention Plan (SWPPP) complying with the Department of Planning and Natural Resources' VI Construction General Permit requirements will be implemented during project activities, to ensure all site disturbance activities are minimized and BMPs appropriate to the location are in place.



#### *e)* Erosion and Sediment Control Devices to be Implemented

The following Best Management Practices (BMPs) will be implemented on the site to control runoff and protect natural resources:

**Turbidity Curtain** – Due to the proposed project located directly adjacent to an open channel, a turbidity curtain may be used minimize sedimentation during deconstruction and construction. These curtains are flexible, impermeable barriers which are weighted at the bottom to ensure that sediment does not travel underneath and are supported at the top through a flotation system. If the water level at time of project implementation does not require use, these curtains may not be utilized.

**Silt Fence** – Due to working in a drainage route and close proximity to the open channel, silt fencing shall be used to protect the downstream water and vegetated areas and control runoff and sediment loss. The proposed location for silt fencing placement is indicated in the attached Erosion Control Plan figure.

**Containment Berms** – A containment berm will be constructed, if needed, to support the silt fencing in containing stormwater and retaining sediment.

Design of these BMPs will follow the minimum standards of the VI Environmental Protection Handbook (2002).

### *f)* Schedule for Earth Changing Activities & Implementation of Erosion/Sediment Control Measures

No earth change activities will take place until the BMPs are installed at the site. Erosion and sediment control for the project construction include:

- 1. Ensure turbidity curtains, if necessary, and other BMPs are setup before work begins.
- 2. Minimize earth work in the installation of the detour route, and subsequent removal of the existing bridge structure.
- 3. Drive steel pilings into embankments, and installation of concrete cast-in-place foundation walls.
- 4. Complete installation of precast bridge prior to removing turbidity curtains, if necessary.
- 5. Install silt fencing and slope stabilization during work to adjust gut centerline.
- 6. Minimize time for completion of sidewalks, handrails, and guardrails.



- 7. Minimize time for aggregate base installation, compaction, and asphalt paving of road.
- 8. Compact and re-asphalt the road and remove temporary access road.
- 9. Provide final stabilization after demobilization from the site to ensure vegetation is established in the gut.

#### g) Maintenance of Erosion and Sediment Control

Turbidity curtains, if necessary, and silt fencing will be inspected biweekly, with daily monitoring of performance during near water work, storms or increased flow and/or wind events. Should work occur with water flowing in the gut, any visible plume of cloudy water passing beyond the curtain from the construction area will constitute inadequate performance of the curtain, and cessation of work until the faulty portion of the curtain can be modified, adjusted, or repaired to correct the inadequacy.

Inspections will be performed biweekly and after any rain event greater than 0.25 inches in a 24-hour period, to ensure silt fencing and curtains are operating correctly and not damaged. Any deficiency noted will be recorded and addressed within seven (7) days of discovery.

The site will be cleaned on a daily basis of litter, debris and materials such as paper, wood, concrete, etc. to prevent discharge into the water.

#### *h)* Stormwater Management

Management of stormwater for the duration of the project will be limited to ensuring no discharge of contaminated stormwater from the site boundaries, and prevention of erosion of project areas through controlled release from site discharge points.

All stormwater control devices will be inspected every 14 calendar days and after all heavy rainfall of 0.25 inches or more. If defects or damage are noted in the measures, the defect or damage will be immediately reported and repaired. If the measures prove to be inadequate to control stormwater flow, changes will be made to the design and additional measures will be added as necessary.

#### *i)* Maintenance Schedule of Stormwater Facilities

Sediment control devices, including dikes swales, and outlets, will be inspected every 14 calendar days and after any heavy rainfall of 0.25 inches or more. If defects or damage are noted in the measures, the defect or damage will be immediately reported and repaired. If



the measures prove to be inadequate to control erosion, changes will be made to the design and additional measures will be added as necessary.

Accumulated sediment will be removed when it reaches 40% of the height of the silt fencing, and in accordance with the approved SWPPP requirements. Worn, torn or otherwise damaged silt fencing will be fixed or replaced. The site will be cleaned on a daily basis of litter, debris, and materials such as paper, wood, concrete, etc.

#### *j)* Sewage Disposal

Project sewage management will be limited to maintaining portable restrooms on site, and ensuring they are emptied by a qualified waste management company at an appropriate frequency to minimize spills or discharges from the site.

There are no existing sewer lines (either private or municipal) in the area.

#### 5.02 SITE PLANS (See Attached Drawings)

5.02.01 Lot Layout (See Attached Engineer/Surveyor drawings)

5.02.02 Road Layouts (See Attached Engineer/Surveyor drawings)

5.02.03 Position of Structures (See Attached Engineer/Surveyor drawings)

5.02.04 Septic System/wastewater Treatment (Not Applicable)

5.02.05 Stormwater Drainage (See Attached Engineer/Surveyor drawings)

5.02.06 Stormwater Facilities (See Attached Engineer/Surveyor drawings)

5.02.07 Erosion and Sediment Control Plan (See Attached Spec Sheets)

5.02.08 Landscaping Plan (Not Applicable)

5.02.09 Other Required Drawings (See Attached Engineer/Surveyor drawings)

5.02.10 Required Maps (See Attached: Official Zoning Map, Parcel Map, FIRM)

#### 5.03 PROJECT WORKPLAN

The project is proposed to be performed as four phases, in sequential order with some overlapping tasks. It will entail Site preparation and mobilization, demolition and earth work, construction and finally demobilization and cleanup.

#### Phase 1 – Site Preparation

This phase will consist of mobilization and initial survey and staking as well as temporary access road installation. After establishing the layout, Erosion & Sediment control will be set up, to include turbidity curtains (if necessary) and silt fencing. Installation of the temporary detour route will be performed, setting up safety barriers and access routes. Mobilization of machinery and equipment will follow proper site setup for safety and protection of workers and environment.

#### Approximate Timeline – 108 days

#### Phase 2 – Foundation and Bridge Construction

This phase will entail foundation construction and placement of pre-cast bride structure. To prepare for the new bridge, the site will require steel pile driving, concrete cast-in-place foundation construction, and riprap and other scour protection installation along entire gut and bank walls. After foundation installation and base stabilization, the new bridge unit will be put in place by crane.

Approximate Timeline – 50 days

#### Phase 3 – Roadway Construction

This phase will focus on roadway construction and profile. Aggregate base will be laid over newly installed infrastructure. New safety guardrails and concrete sidewalks will be installed according to included site plan drawings, and new permanent utility infrastructure will be installed. After compaction and final grading is complete, final asphalt layers will be applied per road construction specifications, to provide correct profile for safe driving conditions and to allow for proper drainage and storm resistance. Finally, installation of signage and pavement markings will complete the construction work, and the site will be stabilized and closed through any necessary landscaping and site cleanup as required by environmental standards and regulation. Removal of the temporary detour route and culverts will be performed carefully and with continued installation of turbidity curtains.

Approximate Timeline – 9 days



#### Phase 4 – Demolition and Site Clean Up

This final phase will entail general landscaping to ensure revegetation of the site and stabilization of banks to prevent erosion. Demobilization and trash cleanup will occur to restore the site to full functionality.

#### Approximate Timeline – 1 day

All work on this road project will follow Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, as well as local building, environmental and safety regulations.

Total estimated time for construction completion is estimated at 168 days.



# 6.00 SETTING AND PROBABLE IMPACT ON THE NATURAL ENVIRONMENT

#### 6.01 DRAINAGE, FLOODING AND EROSION CONTROL

#### a) Drainage Patterns

Runoff currently flows from the east side of the road to the west, enters Fairplains Gut and continues south toward Negro Bay at the shoreline over one half mile to the south. Near area drainage consists of sheet flow and shallow concentrated flow before reaching this main water course way within the project boundaries.

#### b) Proposed Alterations to Drainage Patterns

Due to relocation of the bridge, the gut flow centerline is proposed to be moved, 20.2 feet at greatest distance, south of the existing centerline. This will be required to prevent any damage to the culturally and historically protected North abutment of the existing bridge. To prevent any damage to this structure, the movement of the gut centerline will be required. However, while the gut recontouring will be necessary, it will be only performed as required to both protect the abutment as well as minimize changes to gut profile (see site drawings for details).

#### c) Relationship of Project to Coastal Floodplain

Review of Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for U.S. Virgin Islands Index indicate that the project area is within the flood zone rated A. See below in Figure 6.01.1, the FIRM Panel 0080G, depicting exact site location relative to flood zones. Possible flooding is anticipated for this section of roadway in its current use during flood conditions.





Figure 6.01.1 – Section of Flood Insurance Rate Map (FIRM) Panel 0080G, 80 of 94. April 16, 2007

#### d) Peak Stormwater Flow Calculations

While there will be centerline adjustment to the gut profile, no changes to gut capacity or overall profile is anticipated, and no changes to bridge capacity will be made between the current and proposed structures. A hydrologic & hydraulic study (H&H Study) was used to assess and engineer the infrastructure at this Site. The H&H Study referenced, detailing peak stormwater flow calculations, is attached for reference.

#### e) Existing Stormwater Disposal Structures

There are no known existing stormwater disposal structures at the site aside from natural slope drainage to the gut around either end of bridge structure.



#### f) Proposed Stormwater Control Facilities

No proposed changes to stormwater flows, quantities or direction are proposed for this project, with the exception of the above-mentioned gut recontouring. During project activities, ten (10) temporary 18 inch culverts will be installed below the proposed detour route, as per drawing specifications. Management of stormwater for the duration of the project will be limited to ensuring no discharge of contaminated stormwater from the site boundaries, and prevention of erosion of project areas through controlled release from site discharge points.

#### g) Impacts to Terrestrial and Shoreline Erosion

The project area is in close proximity to a highly industrialized area of St. Croix. This particular project site is not directly adjacent to any building structures. There is slight sloping (5-12%) with heavy vegetation on both sides of the roadway within the project area.

Silt Fencing will be set up with reinforcing berms as needed to ensure catchment and control of direct runoff from the project area, thereby minimizing potential impact to receiving waters.

Sediment control devices will be implemented when performing any site work and will be maintained as discussed in Section 5.01(e). Permanent BMPs shall be maintained by DPW according to standard practices on a regular schedule and after storm events.

There are no anticipated impacts to the shoreline due to the significant distance from the project boundaries.



#### 6.02 MARINE RESOURCES AND HABITAT ASSESSMENT

The project area is partially developed and located northeast of the Henry E. Rohlsen Airport. This section of St. Croix is highly industrialized with many areas that have been greatly altered from their natural states. However, areas of rich vegetation still remain which inhabit several local species and must not be disturbed during project activities.

NOAA and DPNR have established Southshore Industrial as an Area of Particular Concern (APC). Figure 6.02.1 below depicts APCs of St. Croix, including the Southshore Industrial area (#3). Although the project area is slightly outside of the referenced APC boundary, it is important to ensure that construction and deconstruction activities do not disturb any downstream resources or habitats.



Maps of Areas of Particular Concern (APC; purple outline) and Territorial MPAs (solid purple) of St. Thomas and St. John (top) and St. Croix (bottom). Brown shading represents shallow (<35 m) hard bottom substrate. MSWR= Marine Sanctuary and Wildlife Reserve.

Figure 6.02.1 – NOAA, NOAA Technical Memorandum NOS NCCOS 187, October 2014

There are several marine species that inhabit the inland waterway of Negro Bay. These species are illustrated in the Environmental Sensitivity Index Map below (Figure 6.02.2).







Figure 6.02.2 – Environmental Sensitivity Index Map VI-2, St. Croix, USVI

Bird species within the Negro Bay inland waterway include the common moorhen, gulls, neotropical migrants, shorebirds, terns, wading birds, and the white-cheeked pintail. Of these, only the white-cheeked pintail is listed as endangered on the state (USVI) list and none of the species are listed on the federal (U.S.) list. Concentration estimates which would indicate the abundance of the referenced species is not available.

The only fish species noted within the referenced waterway is the nursery fish, which is not classified as threatened nor endangered.



It should be noted that the Environmental Sensitivity Index Map does not indicate the presence of sea turtles in the vicinity of the project area. However, the U.S. Fish & Wildlife Information for Planning and Consultation (IPaC) website tool indicates that the hawksbill sea turtle (*Eretmochelys imbricata*) and the leatherback sea turtle (*Dermochelys coriacea*) have been spotted swimming in the waters of Negro Bay. These species are listed as endangered on both the state and federal lists. In addition, IPaC indicates that the West Indian Manatee (*Trichechus manatus*), a threatened species, has been found in these waters as well (Conservation Data Center, 2010).

A review of the 2002 NOAA Benthic Habitat Maps (Figure 6.02.3 below) shows the portion of shoreline closest to the project site is comprised of mostly mangroves within the Shoreline Intertidal Zone.

However, no impact to the shoreline is anticipated during the project activities due to a combination of strict stormwater BMP management and distance of the project from the shoreline.



Figure 6.02.3 – 2002 NOAA Benthic Habitat Maps, Tile #23, St. Croix, USVI.





#### 6.03 TERRESTRIAL RESOURCES

The Environmental Sensitivity Index (ESI) Map for the island of St. Croix notes no specific habitat of particular sensitivity in the area, as show in Figure 6.03.1 below. The field survey performed by the field ecologist showed no evidence of critical habitat or wildlife in the area.

Should any protected plant or animal be encountered, staff at VI DPNR – DFW will be contacted immediately at (340) 773-1082.

#### Impact of the Proposed Project

As part of recommendations set by the Section 7 CWA Endangered Species Act consultation with USFWS, VIP will minimize the footprint of work to the greatest extent possible and is not expected to extend farther than necessary beyond the road shoulder to complete repairs.

As compliance with both stormwater and air pollution permits will be ensured through the life of the facility, there are no anticipated negative impacts to these species or their habitat, neither in the nearshore waters nor on land.

#### 6.04 WETLANDS

The U.S. Army Corps of Engineers defines wetlands as "those areas that are periodically inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, bogs, marshes and similar areas." (U.S. Army Corps of Engineers, 1986).



Figure 6.04.1 – Wetlands and Deepwater Habitats, U.S. Geological Survey Water Supply paper 2425.

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The referenced inland waterway of Fairplains Gut does exhibit wetland features as defined by ACOE and is indicated by the U.S. Geological Survey in Figure 6.04.1 as being predominantly wetland.

All required permits and preventative measures, including a stringent sedimentation control plan, will be implemented and maintained throughout the life of the project and operation to prevent impact to this wetland downstream of the project boundaries.

#### 6.05 RARE AND ENDANGERED SPECIES

A review of the U.S. Fish & Wildlife Information for Planning and Consultation (IPaC) indicate that there are no endangered species, migratory birds, or sensitive facilities directly in the project area. In the Negro Bay area, IPAC indicates that the hawksbill sea turtle (*Eretmochelys imbricata*) and the leatherback sea turtle (*Dermochelys coriacea*) have been spotted swimming in the waters of Negro Bay. These species are listed as endangered on both the state and federal lists. In addition, IPaC indicates that the West Indian Manatee (*Trichechus manatus*), a threatened species, has been found in these waters as well (Conservation Data Center, 2010).

According to the Environmental Sensitivity Map in Section 6.02, the white-cheeked pintail is prevalent in the area and listed as Least Concern (LC) in the Lower Risk category for ESA birds.

#### 6.06 AIR QUALITY

No air quality issues are anticipated for this project. A minimum of soil exposure and earth movement will occur at the site. Stockpiling will be protected and kept to a minimum. If work is done during particularly dry and/or windy conditions, a water truck can be used to wet down the area to prevent fugitive dust from leaving the site. These water trucks will bring water from the VIP asphalt plant location, or from a commercial water provider. Dust control measures to ensure no air quality issues arise are outlined in the Storm Water Pollution Plan for this project.

