

Eastern Shore

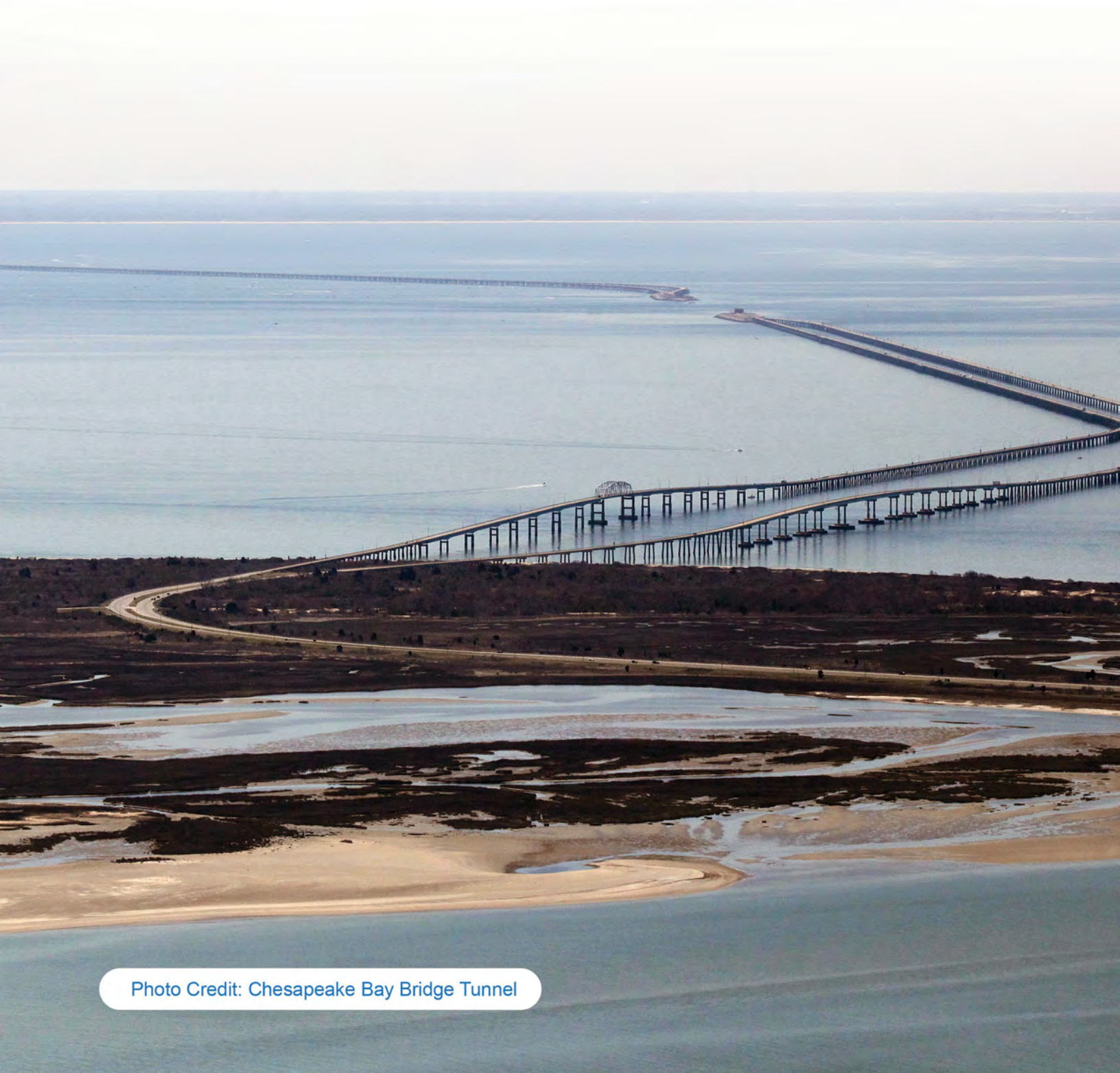
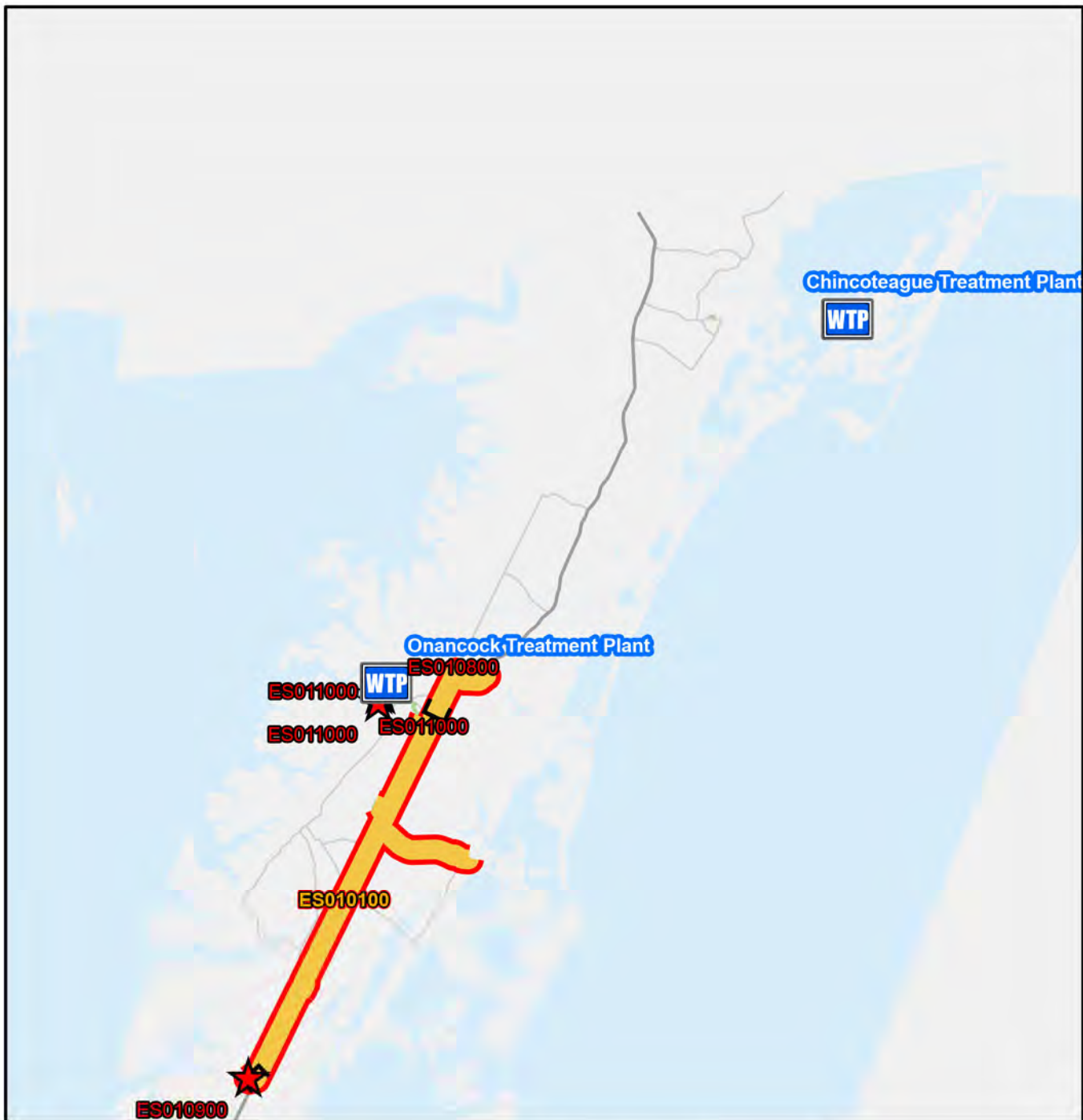


Photo Credit: Chesapeake Bay Bridge Tunnel



Legend

-  Eastern Shore
-  CIP Interceptor Point
-  CIP Pump Station Point
-  CIP Interceptor Line
-  CIP Abandonment
-  Treatment Plant Service Area
-  HRSD Interceptor Force Main
-  HRSD Interceptor Gravity Main
-  HRSD Treatment Plant
-  HRSD Pressure Reducing Station
-  HRSD Pump Station

05,000 00020,00030,00040,000 Feet

Eastern Shore Service Area CIP Projects

Treatment Plant Projects

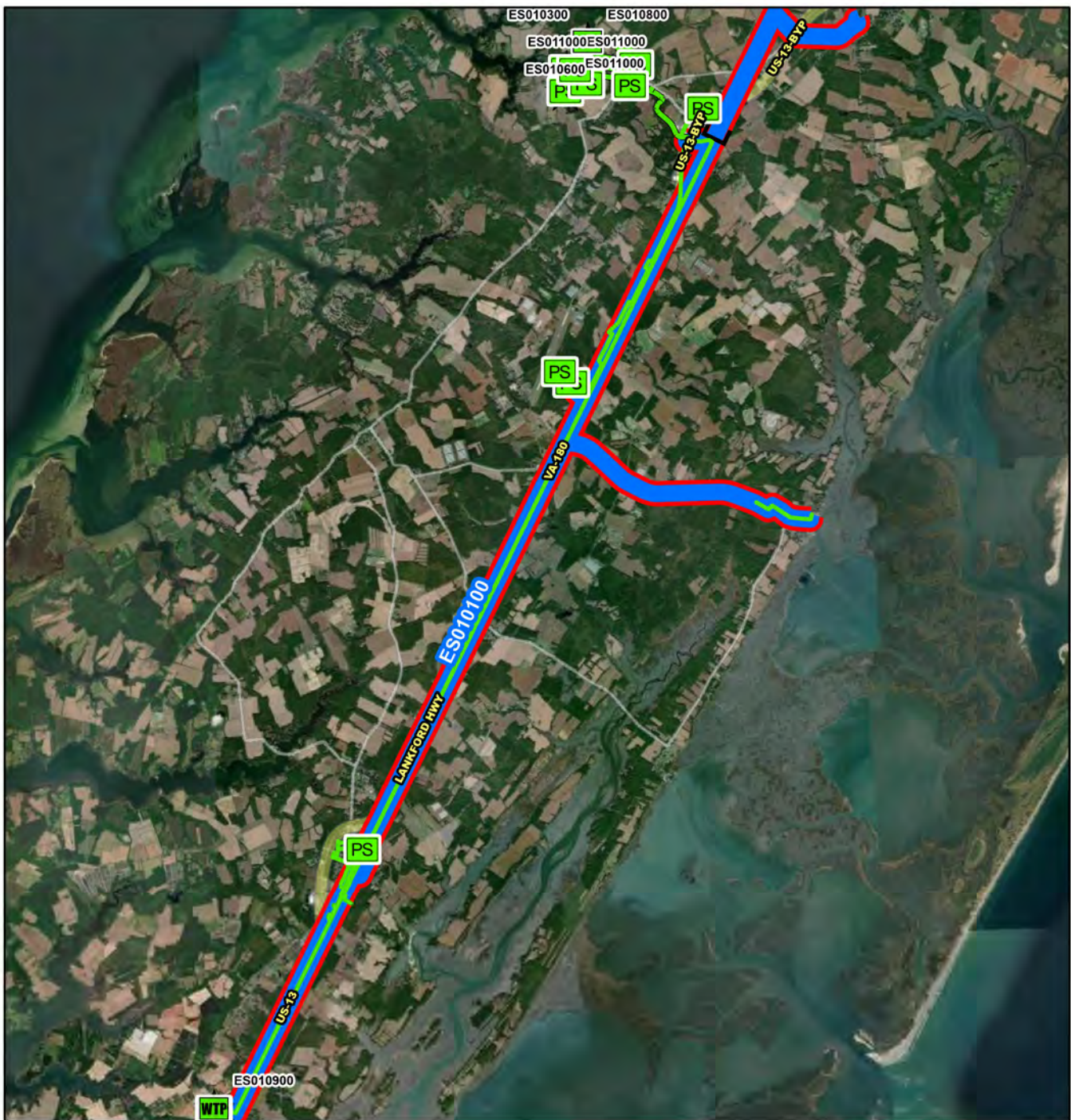
ES010300
ES010500
ES010600



CIP Location



Service Area



ES010100

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

Legend

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station

0 4,000 8,000 16,000 24,000 32,000 Feet

ES010100

**Eastern Shore Infrastructure Improvements -
Transmission Force Main Phase I**



CIP Location





System: Eastern Shore
Type: Pipelines

Driver Category: Capacity Improvements
Project Phase: Construction
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$53,747	\$44,325	\$9,380	\$42	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will install three pumping stations in Nassawadox, Exmore and Onancock Hartman Avenue replacement. This project will install approximately 110,000 linear feet (LF) of 4, 6, 8, 10 and 12-inch force main (FM). The Industrial Park in Melfa will be connected to the FM, as well. Accomack County sewer systems will be incorporated into the HRSD service area. The force main will be installed in the Railway right-of-way from Nassawadox to Exmore and then to Onley, then it will be installed in the VDOT right-of-way and discharge to existing Accomack County gravity sewer, which flows to Hartman Avenue Pump Station. This project will also install force main from Onley to the Town of Accomack, to service the Accomack County facilities. A pumping station will be built on Accomack County property along Front Street. Gravity sewer from County Facilities will need to be installed from the Courthouse Complex to the PS on Front Street. There will also be two miles of force main and a pumping station to be constructed in the Town of Wachapreague to service Virginia Institute for Marine Science (VIMS), as well as, businesses along Atlantic Avenue and Brooklyn Avenue to serve the businesses. An agreement will be needed prior to this work being accomplished.

PROJECT JUSTIFICATION

This project will provide all flow to the Onancock Treatment Plant which has excess capacity to handle the additional approximately 450 gallons per minute (GPM).

FUNDING TYPECONTACTS

Funding Type: VCWRLF

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Phil Hubbard
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATECOST ESTIMATE

PrePlanning	12/01/2020	Cost Estimate Class:	Class 1
PER	01/21/2021	PrePlanning	\$0
Design Delay	07/01/2021	PER	\$2,992
Design	07/01/2021	Design	\$6,360,835
Bid Delay	07/01/2021	PreConstruction	\$350
PreConstruction	09/01/2021	Construction	\$43,000,000
Construction	09/01/2021	Closeout	\$100,000
Closeout	12/01/2024	Est. Program Cost	\$49,464,177
		Contingency Budget	\$3,000,000
		Est. Project Costs	\$52,464,177



ES010300

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

Legend

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station

0 45 90 180 270 360 Feet

ES010300

Onancock Treatment Plant Administration Building Upgrade



CIP Location





System: Eastern Shore

Type: Facilities, Buildings and Capital Equipment

Driver Category: Aging Infrastructure/Rehabilitation

Project Phase: Proposed

Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$4,515	\$0	\$114	\$87	\$184	\$4,130	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

Replacement of the Onancock Treatment Plant Administrative and Laboratory Building.

PROJECT JUSTIFICATION

The existing building is in poor condition and is not rated as a ride-out shelter. The office and lunch areas are on bare concrete floors with old cinderblock walls and deteriorated windows and doors. There is no shower or locker room and there are no private spaces or offices for supervisors. The proposed building will be built to HRSD standards and will provide offices for supervisors, a new laboratory space, a locker room with a shower and laundry area, and a conference room for meetings and apprenticeship courses. This proposed building will serve all Eastern Shore staff which will be increasing as additional infrastructure comes online and act as a ride-out shelter for all Eastern Shore staff.

FUNDING TYPECONTACTS

Funding Type: Revenue Bond

Contacts-Requesting Dept: Operations-Treatment

Contacts-Dept Contacts: Jeremiah Burford

Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATECOST ESTIMATE

PrePlanning		Cost Estimate Class:	Class 5
PER	07/01/2024	PrePlanning	\$0
Design Delay	03/01/2025	PER	\$114,400
Design	03/01/2026	Design	\$260,000
Bid Delay	03/01/2027	PreConstruction	\$10,400
PreConstruction	03/01/2027	Construction	\$4,129,840
Construction	07/01/2027	Closeout	\$0
Closeout	07/01/2028	Est. Program Cost	\$4,514,640
		Contingency Budget	\$156,000
		Est. Project Costs	\$4,670,640



System: Eastern Shore
Type: Strategic Planning

Driver Category: Capacity Improvements
Project Phase: Pre Planning
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$480	\$307	\$173	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

Studies to evaluate strategies to address both short-term and long-term wastewater conveyance, treatment, and disposal needs for northern Accomack County. The studies will consider wastewater treatment demand, conveyance constraints, capacity constraints at existing facilities, disposal alternatives for treated effluent, environmental impacts, and permitting. The studies will include outfall modeling to determine outfall constraints.

PROJECT JUSTIFICATION

Accomack and Northampton Counties were added to the HRSD service territory in October 2020. A regional initiative to provide centralized wastewater treatment to southern Accomack County and Northern Northampton County is underway. Accomack County and the Town of Chincoteague have requested HRSD investigate wastewater solutions for Northern Accomack County.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Korey Kendall
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/01/2021
PER	06/01/2025
Design Delay	06/01/2025
Design	06/01/2025
Bid Delay	06/01/2025
PreConstruction	06/01/2025
Construction	06/01/2025
Closeout	06/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 1
PrePlanning	\$480,000
PER	\$0
Design	\$0
PreConstruction	\$0
Construction	\$0
Closeout	\$0
Est. Program Cost	\$480,000
Contingency Budget	\$20,000
Est. Project Costs	\$500,000



ES010500

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

Legend

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station

0 45 90 180 270 360 Feet

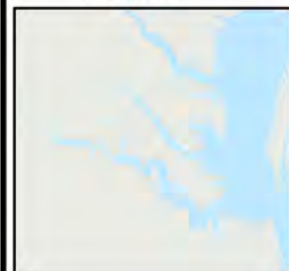
ES010500

Chincoteague Treatment Plant Improvements

HRSD



CIP Location





System: Eastern Shore
Type: Wastewater Treatment

Driver Category: Aging Infrastructure/Rehabilitation
Project Phase: Design
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$7,098	\$568	\$2,412	\$4,118	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will include the installation of two packaged treatment plants, an outfall and appurtenances, the demolition of the two existing packaged treatment plants and site work needed to make new connections to the treatment plants.

PROJECT JUSTIFICATION

The two existing packaged treatment plants are at the end of their useful life and are at full capacity; permitted outfalls are located in multiple locations and run under private buildings and private property. Additional treatment capacity is needed to provide service to properties along Main Street and Maddox Boulevard in the Town of Chincoteague. The United States Coast Guard treatment facility is interested in connecting to the HRSD treatment plant. The permitted outfall capacity should be consolidated to an accessible outfall.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations
Contacts-Dept Contacts: Shirley Smith
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE





PrePlanning
PER
Design Delay 07/01/2023
Bid Delay 11/01/2024
PreConstruction 11/01/2024
Construction 03/01/2025
Closeout 03/01/2026

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$0
PER	\$0
Design	\$906,312
PreConstruction	\$28,525
Construction	\$6,136,000
Closeout	\$27,000
Est. Program Cost	\$7,097,837
Contingency Budget	\$1,080,000
Est. Project Costs	\$8,177,837



ES010600

-  Project Interceptor Line
-  Project Interceptor Point
-  Project Pump Station Point
-  Project Area

Legend

-  CIP Interceptor Point
-  CIP Pump Station Point
-  CIP Interceptor Line
-  CIP Abandonment
-  CIP Project Area
-  HRSD Interceptor Force Main
-  HRSD Interceptor Gravity Main
-  WTP HRSD Treatment Plant
-  PRS HRSD Pressure Reducing Station
-  PS HRSD Pump Station

0 45 90 180 270 360 Feet

ES010600

Onancock Meter Replacement



CIP Location





System:
Type:

Eastern Shore
Locality and Private Property

Driver Category:
Project Phase:
Regulatory:

Performance Upgrades
Design
None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$2,497	\$207	\$2,290	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project includes locating, inspecting, and potentially replacing approximately 800 water meters in the Town of Onancock.

PROJECT JUSTIFICATION

The existing water meters are assumed to be outdated and in questionable condition. Upon confirming during inspection, HRSD has agreed to replace the water meters with new meters with automated reading features to ensure accurate billing moving forward.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering

Contacts-Dept Contacts: Shirley Smith

Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	05/01/2023
PER	07/17/2023
Design Delay	03/01/2024
Design	03/01/2024
Bid Delay	07/01/2042
PreConstruction	07/01/2024
Construction	09/01/2024
Closeout	04/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 4
PrePlanning	\$0
PER	\$114,646
Design	\$92,064
PreConstruction	\$11,684
Construction	\$2,267,743
Closeout	\$10,403
Est. Program Cost	\$2,496,540
Contingency Budget	\$416,109
Est. Project Costs	\$2,912,649



ES010800

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

Legend

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station

0 45 90 180 270 360 Feet

ES010800

Onancock Treatment Plant Solids Handling Improvements

HRSD



CIP Location





System: Eastern Shore
Type: Biosolids

Driver Category: Aging Infrastructure/Rehabilitation
Project Phase: Pre Planning
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$8,307	\$1,087	\$2,520	\$4,678	\$22	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will utilize the completed PER for the Onancock Solids Handling Upgrades project (formerly CIP ES010000) and carry this project through Design and Construction. This project will include the construction of a new 100,000 gallon Aerobic Digester with Coarse Bubble Aeration and associated infrastructure, new Screw press with polymer feed system and cake storage, new surface wasting system, and yard piping upgrades. This project will also incorporate a Distributed Control System (DCS) system for the entire plant.

PROJECT JUSTIFICATION

The existing solids handling components have reached their end of useful life. The equipment being utilized cannot keep up with the existing solids accumulating in the plant and will require periodic contracted dewatering to alleviate treatment strain. Flows to the Onancock Treatment Plant are expected to double by FY 2025 and this will greatly exacerbate this problem.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Rebecca Currall
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE





PrePlanning	
PER	05/01/2023
Design Delay	05/01/2023
Design	05/01/2023
Bid Delay	08/01/2024
PreConstruction	10/01/2024
Construction	02/01/2025
Closeout	05/01/2026

COST ESTIMATE

Cost Estimate Class:	Class 4
PrePlanning	\$0
PER	\$0
Design	\$1,224,316
PreConstruction	\$45,114
Construction	\$7,010,880
Closeout	\$26,500
Est. Program Cost	\$8,306,810
Contingency Budget	\$1,416,499
Est. Project Costs	\$9,723,309



ES010900

-  Project Interceptor Line
-  Project Interceptor Point
-  Project Pump Station Point
-  Project Area

Legend

-  CIP Interceptor Point
-  CIP Pump Station Point
-  CIP Interceptor Line
-  CIP Abandonment
-  CIP Project Area
-  HRSD Interceptor Force Main
-  HRSD Interceptor Gravity Main
-  HRSD Treatment Plant
-  HRSD Pressure Reducing Station
-  HRSD Pump Station

0 45 90 180 270 360 Feet

ES010900

**Riverside Nassawadox Treatment Plant
Decommissioning**



CIP Location





System: Eastern Shore
Type: Wastewater Treatment

Driver Category: Aging Infrastructure/Rehabilitation
Project Phase: PER
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$1,014	\$171	\$838	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will demolish the facilities at the Riverside Nassawadox Plant. This project will also look at other potential uses of the site after the plant has been decommissioned. This project will include a Closure Plan that is required to be submitted to DEQ. Demolishment or abandonment needed at the treatment plant may include, but is not limited to, influent lift station and junction box, concrete holding tank (aerated lagoon), emergency lagoon, secondary lift station, and junction box, aeration and secondary clarifier tanks, electrical room (houses VFD and electrical equipment), effluent channel, chemical storage building, and the digester tanks, and the administration building. The underground piping may be demolished in place and or removed. Lights and potable water are not to be demolished.

PROJECT JUSTIFICATION

The Riverside Nassawadox Treatment Plant Feasibility Study conducted by HRSD resulted in taking the plant offline and diverting the flow to the Onancock Treatment Plant (ONTP). A new pipeline and pump stations are being installed with the Eastern Shore Infrastructure Improvements-Transmission Force Main Phase 1 (ES010100) CIP and is projected to be in service by the end of 2023. The Transmission Force Main Phase I CIP does not address the abandonment of the Nassawadox Treatment Plant and once offline, the existing plant will fill up with rainwater and will need to be addressed routinely. This project will properly sanitize and demolish the abandoned treatment plant.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations
Contacts-Dept Contacts: Virginia Opp
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2023
PER	08/01/2023
Design Delay	01/01/2024
Design	01/01/2024
Bid Delay	10/01/2024
PreConstruction	10/01/2024
Construction	12/01/2024
Closeout	06/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$0
PER	\$75,000
Design	\$143,788
PreConstruction	\$15,000
Construction	\$770,000
Closeout	\$10,000
Est. Program Cost	\$1,013,788
Contingency Budget	\$77,000
Est. Project Costs	\$1,090,788



- ES011000**
- Project Interceptor Line
 - Project Interceptor Point
 - Project Pump Station Point
 - Project Area
- Legend**
- CIP Interceptor Point
 - CIP Pump Station Point
 - CIP Interceptor Line
 - CIP Abandonment
 - CIP Project Area
 - HRSD Interceptor Force Main
 - HRSD Interceptor Gravity Main
 - HRSD Treatment Plant
 - HRSD Pressure Reducing Station
 - HRSD Pump Station

0 125 250 500 750 1,000 Feet

ES011000

Onancock Pump Station Improvements



CIP Location





System: Eastern Shore
Type: Pump Stations

Driver Category: Aging Infrastructure/Rehabilitation
Project Phase: Proposed
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$1,658	\$0	\$100	\$125	\$717	\$717	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will bring ON-PS-01, ON-PS-02, and ON-PS-03 pump stations to HRSD standards and provide reliable service and operation for the Onancock Collection system.

PROJECT JUSTIFICATION

The ON-PS-01 pumps half of the flow generated by the Town of Onancock to the existing treatment plant. The pump station building was constructed in 1959 and has reached its useful life. The station will need to be demolished, and an external control cabinet should be installed to replace the existing pump station's controls. The control cabinet should be above the 100-year flood plain. The pumps will need to be evaluated for current capacity, as this station has shown to have capacity issue. Additionally, the existing generator is permanently mounted and will need to be replaced with a current model that meets HRSD's current decibel requirements due to its proximity to neighbors.

ON-PS-02, the metering base is within the existing wet well and must be relocated outside the wet well. Pumps will need to be evaluated for current capacity. An additional pump will need to be installed; there is currently no redundancy to prevent overflow. The pump station structure will need to be rehabilitated or replaced due to the condition of the pump station lids. Additionally, an emergency pump connection will need to be installed.

ON-PS-03 was installed in 1960 and has reached the end of its useful life. An additional pump will need to be installed; there is currently no redundancy to prevent overflow. Due to its condition and surrounding infrastructure, the pump station structure will need replacement. This project will correct these deficiencies and safety concerns and bring this facility to current HRSD standards.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Jeremiah Burford
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2024
PER	09/01/2024
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2026
PreConstruction	07/01/2026
Construction	11/01/2026
Closeout	03/01/2028

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$0
PER	\$100,000
Design	\$125,000
PreConstruction	\$4,000
Construction	\$1,425,150
Closeout	\$4,000
Est. Program Cost	\$1,658,150
Contingency Budget	\$250,000
Est. Project Costs	\$1,908,150