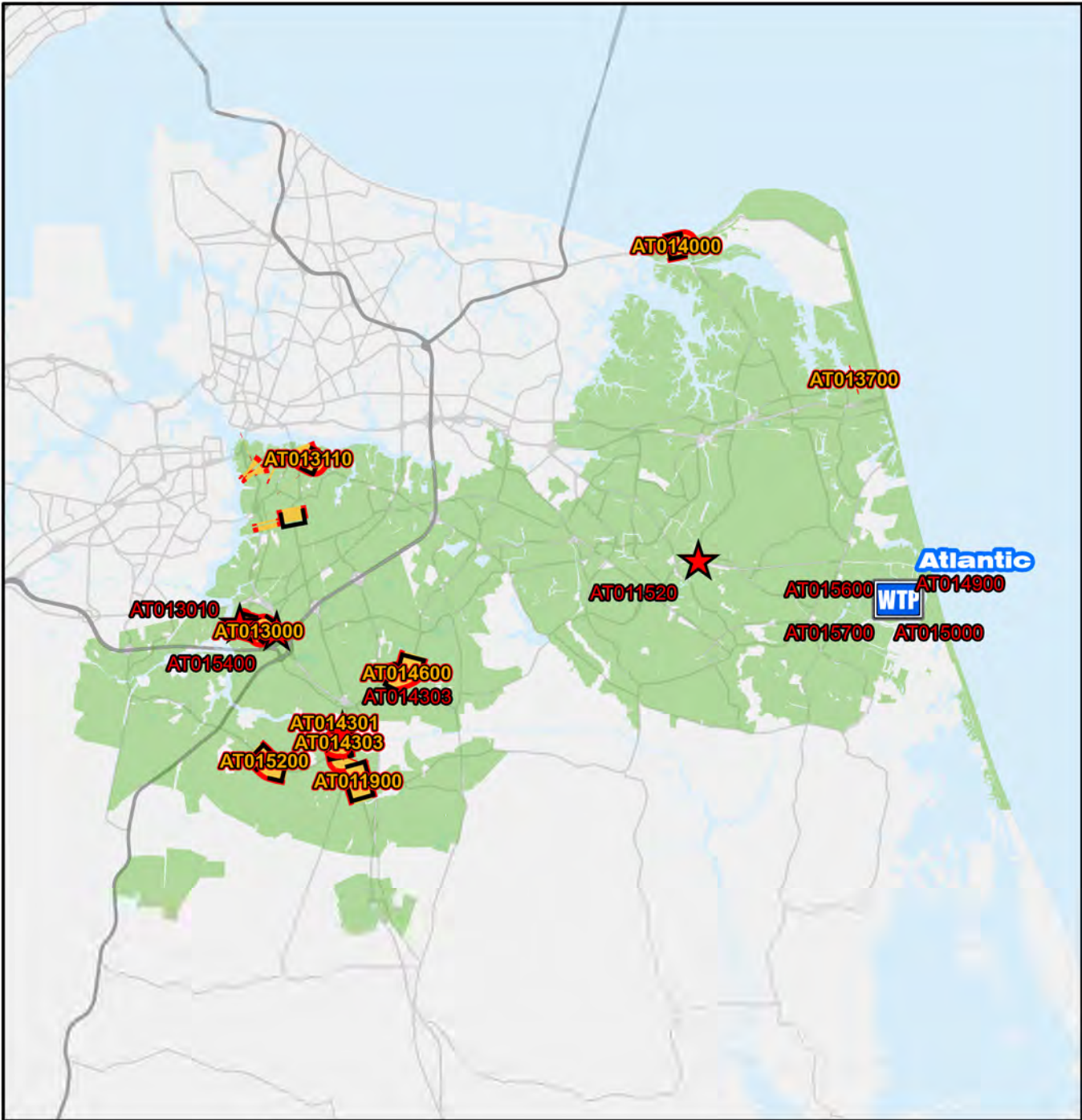


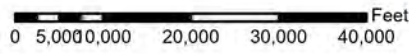
Atlantic Treatment Plant





Legend

-  **Atlantic Treatment Plant**
-  **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**



Atlantic Treatment Plant Service Area CIP Projects

Treatment Plant Projects

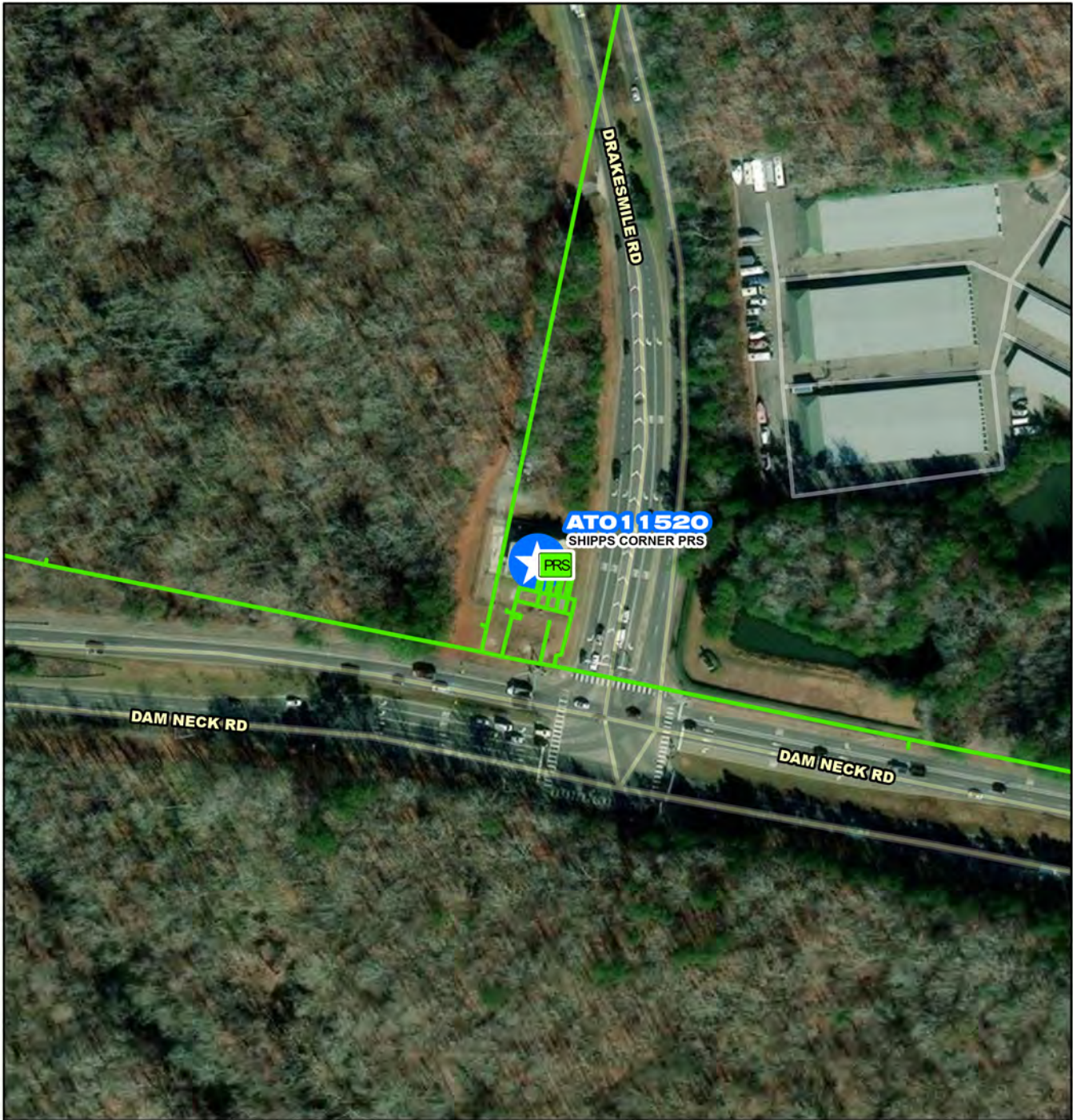
- | | |
|----------|----------|
| AT012920 | AT015500 |
| AT014301 | GN017900 |
| AT014302 | |
| AT014800 | |
| AT015100 | |



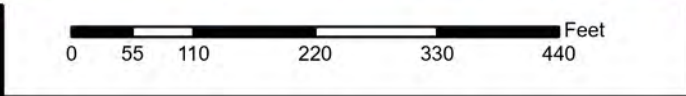
CIP Location



Service Area



- ATO11520**
- 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



ATO 1 1 5 2 0

Shippo Corner Pressure Reducing Station Modifications





System: Atlantic
Type: Pump Stations

Driver Category: I&I Abatement-Rehabilitation Plan
Project Phase: Pre Planning
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$1,462	\$80	\$185	\$1,196	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will replace the emergency generator at Shippo Corner Pressure Reducing Station (PRS). The underground fuel storage tank for the generator was replaced in 1994 which means the tank is nearing the end of it's useful life. Condition assessment will be performed during this project to determine if the tank needs to be replaced.

PROJECT JUSTIFICATION

This Shippo Corner PRS will be addressed in two separate phases and projects. This project (Phase II) will provide the reliability required by the Rehabilitation Action Plan and the Virginia SCAT regulations. Phase I was addressed in AT011510 Shippo Corner Interim Pressure Reducing Station.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Eddie Heady
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2020
PER	02/01/2021
Design Delay	05/01/2022
Design	05/01/2022
Bid Delay	09/01/2022
PreConstruction	03/01/2024
Construction	06/01/2024
Closeout	02/01/2025

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	\$0
PER	\$30,614
Design	\$49,765
PreConstruction	\$14,421
Construction	\$1,366,772
Closeout	\$0
Est. Program Cost	\$1,461,572
Contingency Budget	\$459,654
Est. Project Costs	\$1,921,226



ATO 11900

- 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

Feet

0 310 620 1,240 1,860 2,480

ATO 11900

Great Bridge Interceptor Extension 16-Inch Replacement

N

S

CIP Location



System: Atlantic
Type: Pipelines

Driver Category: I&I Abatement-Rehabilitation Plan
Project Phase: PER
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$11,010	\$598	\$5,189	\$5,223	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will address eleven (11) full circle clamps and approximately 5,585 linear feet of pipe on the 16-inch asbestos concrete Great Bridge Interceptor Extension Force Main (SF-184) along Battlefield Boulevard in Chesapeake. The 16-inch pipe will be replaced with 24-inch pipe.

PROJECT JUSTIFICATION

This project will address stress cracks and coupling failures. There are eleven (11) documented full circle clamps used in the initial installation instead of standard adapters and couplings. The clamp hardware poses a material risk of failure. The main line valve, AT-1161-2, needs to be replaced due to inability to get spare parts. Since 1989, there have been six (6) documented failures along this force main. The most recent was in September of 2016. Condition assessment activities completed in early 2017 indicated that only the full circle clamps and the southernmost portion of this force main are a material risk of failure. However, the pipe also requires upsizing to allow industrial flows to be shifted to the Atlantic Treatment Plant in order to protect the Nansemond Treatment Plant's SWIFT facility.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Holly Anne Matel
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	03/01/2021
PER	06/23/2021
Design Delay	01/14/2022
Design	01/14/2022
Bid Delay	07/05/2023
PreConstruction	08/02/2023
Construction	11/01/2023
Closeout	03/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 3
PrePlanning	\$0
PER	\$198,740
Design	\$399,611
PreConstruction	\$34,340
Construction	\$10,309,000
Closeout	\$68,700
Est. Program Cost	\$11,010,391
Contingency Budget	\$2,150,000
Est. Project Costs	\$13,160,391

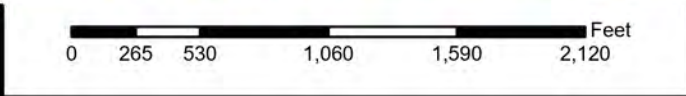


ATO 12920

- 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



ATO 12920

Atlantic Treatment Plant Access Road Extension

CIP Location



System: Atlantic
Type: Facilities, Buildings and Capital Equipment

Driver Category: Performance Upgrades
Project Phase: PER
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$11,202	\$599	\$976	\$1,855	\$4,909	\$2,864	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to provide a second vehicle access road into the Atlantic Treatment Plant. The new private two lane road will connect Firefall Drive to Dam Neck Road.

PROJECT JUSTIFICATION

The rerouting of flow from the Chesapeake Elizabeth Treatment Plant (CETP) to the Atlantic Treatment Plant will increase bio-solids production; consequently, truck traffic will increase. In addition, the new Fats, Oils, and Grease (FOG) Receiving Facility will result in an increase of truck traffic. Rerouting operations and construction related truck traffic from the residential streets adjacent to the Atlantic Treatment Plant will improve public safety and HRSDs public image. A new access road would also facilitate construction and operation of an expansion to the thermal hydrolysis process.

FUNDING TYPE

Funding Type: VCWRLF

CONTACTS

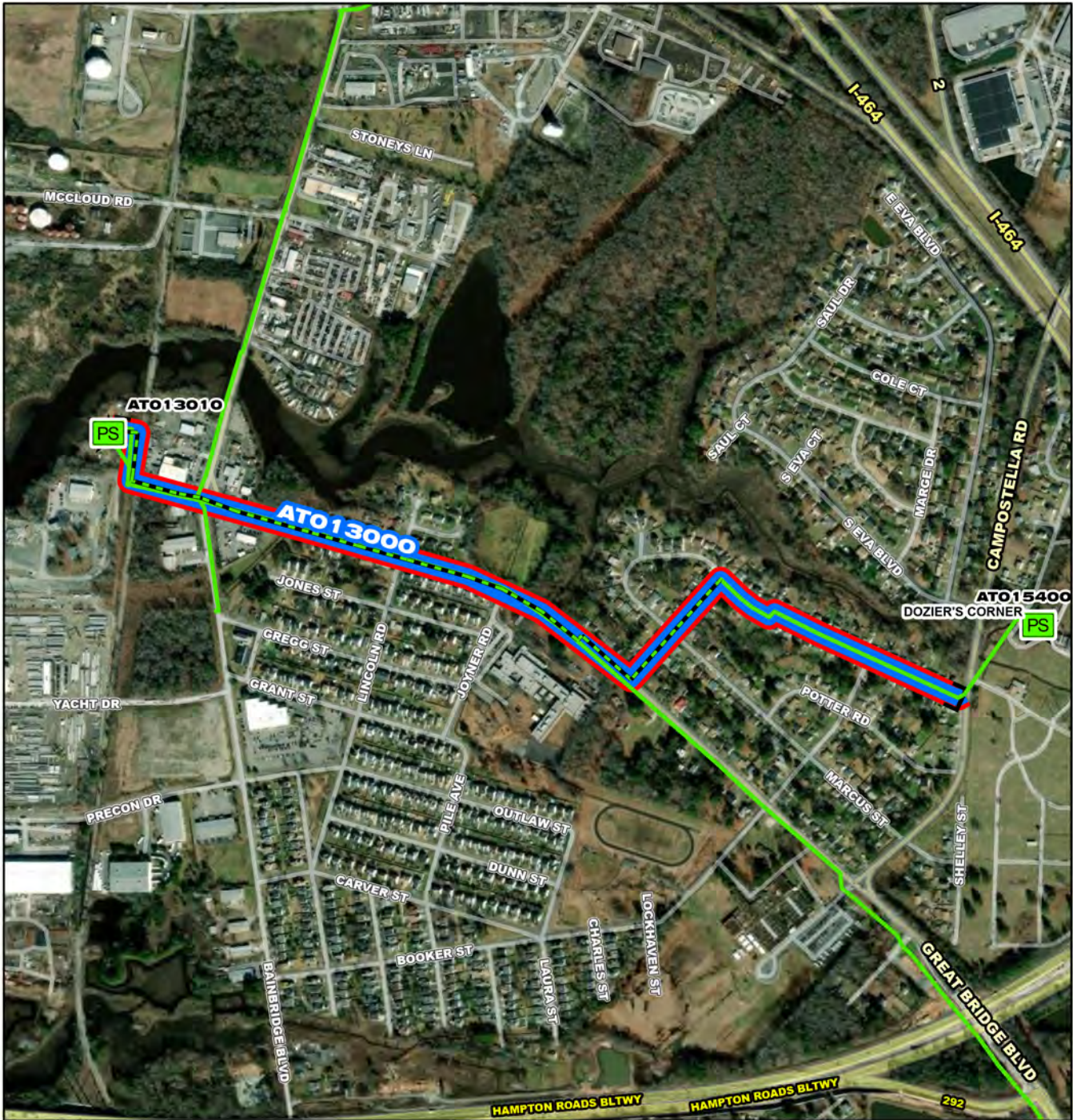
Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Holly Anne Matel
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 07/02/2018
PER 08/01/2018
Design Delay 02/01/2019
Design 01/01/2023
Bid Delay 01/01/2025
PreConstruction 01/01/2025
Construction 04/01/2025
Closeout 02/01/2027

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$0
PER	\$192,276
Design	\$1,870,000
PreConstruction	\$140,000
Construction	\$9,000,000
Closeout	\$0
Est. Program Cost	\$11,202,276
Contingency Budget	\$2,250,000
Est. Project Costs	\$13,452,276

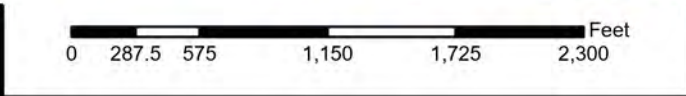


ATO 13000

- 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



ATO 13000

Washington District Pump Station Area Sanitary Sewer Improvements

CIP Location



System: Atlantic
Type: Pipelines

Driver Category: I&I Abatement-Rehabilitation Plan
Project Phase: PER
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$10,664	\$2,256	\$4,033	\$4,033	\$342	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to rehabilitate and/or replace 4,300 linear feet of gravity pipeline with associated manholes. Pipe diameter is 18 inches. Project extends from MH-SG-162-3950 to SS-PS-131-1. This project will include the permanent abandonment of the inactive Washington District outfall. Approximately, 2,200 LF of force main from Doziers Corner will be replaced due to being 1960 vintage Cast Iron piping.

PROJECT JUSTIFICATION

Condition assessment activities indicate that these assets present a material risk of failure due to physical condition defects.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

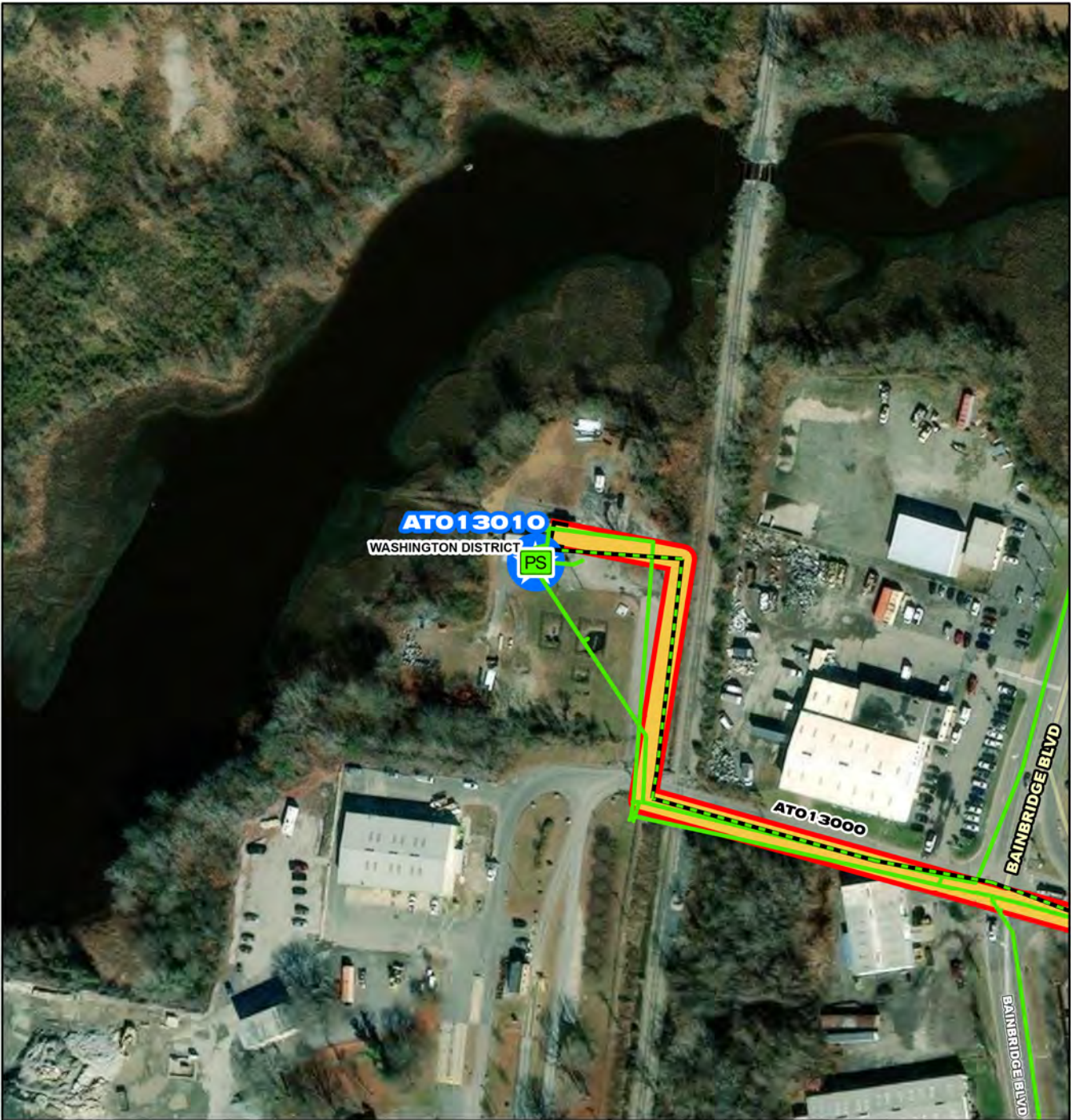
Contacts-Requesting Dept: Compliance Assurance
Contacts-Dept Contacts: Phil Hubbard
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 10/06/2021
PER 10/06/2021
Design Delay
Design 07/31/2019
Bid Delay 10/06/2021
PreConstruction 06/24/2022
Construction 01/27/2023
Closeout 08/01/2025

COST ESTIMATE

Cost Estimate Class: Class 1
PrePlanning \$0
PER \$94,850
Design \$480,386
PreConstruction \$0
Construction \$10,038,440
Closeout \$50,000
Est. Program Cost \$10,663,676
Contingency Budget \$1,505,800
Est. Project Costs \$12,169,476



- ATO13010**
- 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 55 110 220 330 440 Feet

ATO 13010

Washington District Pump Station Replacement





System: Atlantic
Type: Pipelines

Driver Category: Aging Infrastructure/Rehabilitation
Project Phase: Pre Planning
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$9,951	\$732	\$3,033	\$4,941	\$1,244	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will rehabilitate the Washington District Pump Station in order to meet the 100 year flood plain and will need to raise the finished floor in order to meet this until 2070. The existing building will be removed and install water tight hatches over the dry pit submersible pumps. The intermediate wall between the existing dry well and wet well cannot be removed due to the wall being a bearing wall for the PS. A separate control building will be constructed to meet the flood plain.

PROJECT JUSTIFICATION

This pump station is also part of the Environmental Protection Agency (EPA) Rehabilitation Action Plan Phase II and is due May 5, 2025.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

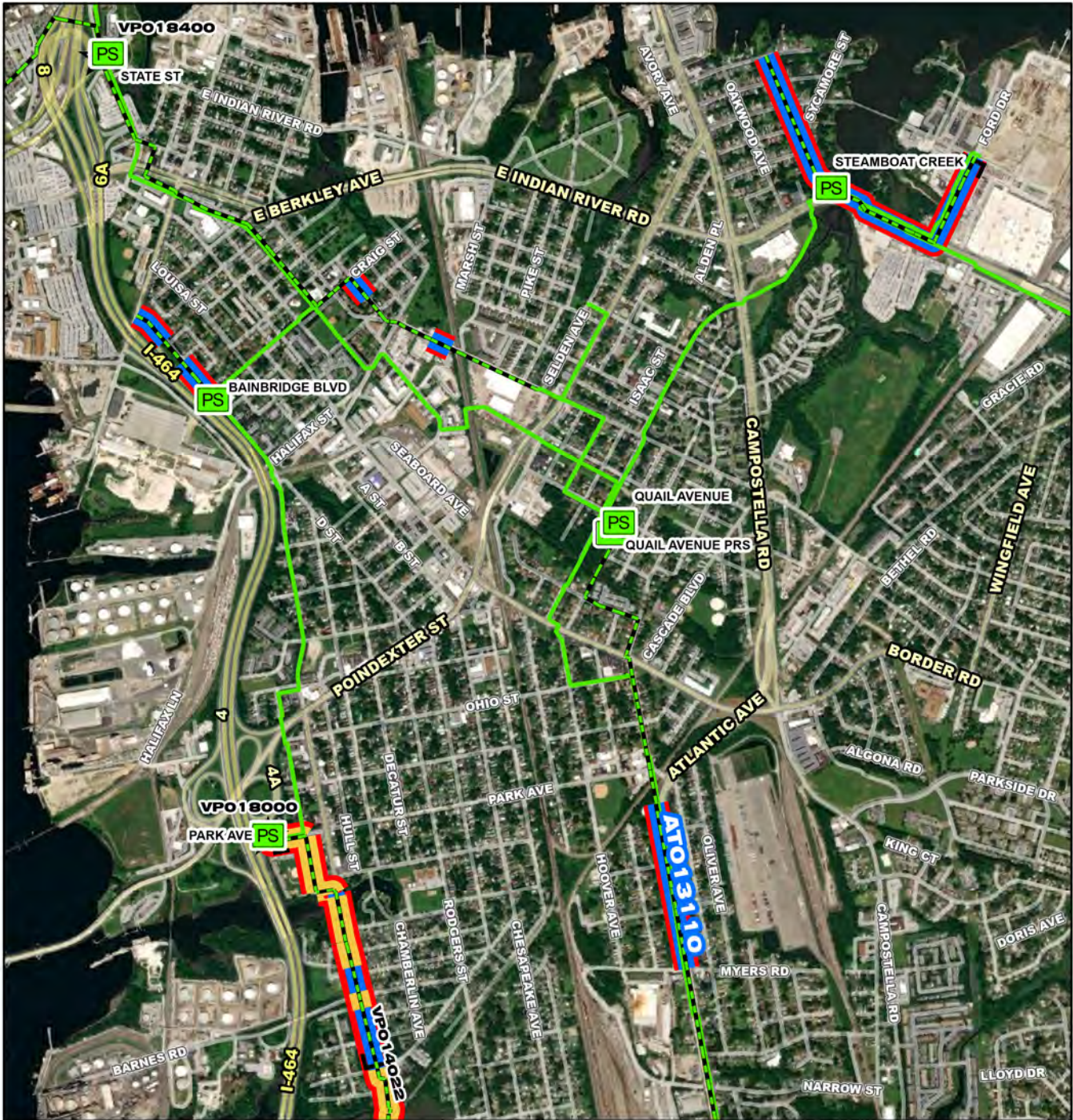
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Phil Hubbard
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning
PER 10/06/2021
Design Delay 10/06/2021
Design 06/03/2022
Bid Delay 09/01/2023
PreConstruction 09/01/2023
Construction 12/01/2023
Closeout 10/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 4
PrePlanning	\$0
PER	\$170,644
Design	\$650,000
PreConstruction	\$40,000
Construction	\$9,010,000
Closeout	\$80,000
Est. Program Cost	\$9,950,644
Contingency Budget	\$1,255,300
Est. Project Costs	\$11,205,944



ATO13110

- 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

0 500 1,000 2,000 3,000 4,000 Feet

ATO13110

South Norfolk Area Gravity Sewer Improvements, Phase II

N
W E
S
CIP Location



System: Atlantic
Type: Pipelines

Driver Category: I&I Abatement-Rehabilitation Plan
Project Phase: Design
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$7,341	\$823	\$2,451	\$4,067	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will rehabilitate and/or replace gravity sewer segments and manholes in the South Norfolk area of Chesapeake. Refer to the Rehab Plan for full listing of all affected assets. The pipeline under I-264 in South Norfolk adjacent to State Street Pump Station was addressed under a separate CIP project, AT013100 South Norfolk Area Gravity Sewer Improvements, Phase I (Interstate Crossing).

PROJECT JUSTIFICATION

Condition assessment activities indicate that these assets present a material risk of failure due to I/I and physical condition defects.

FUNDING TYPE

Funding Type: VCWRLF

CONTACTS

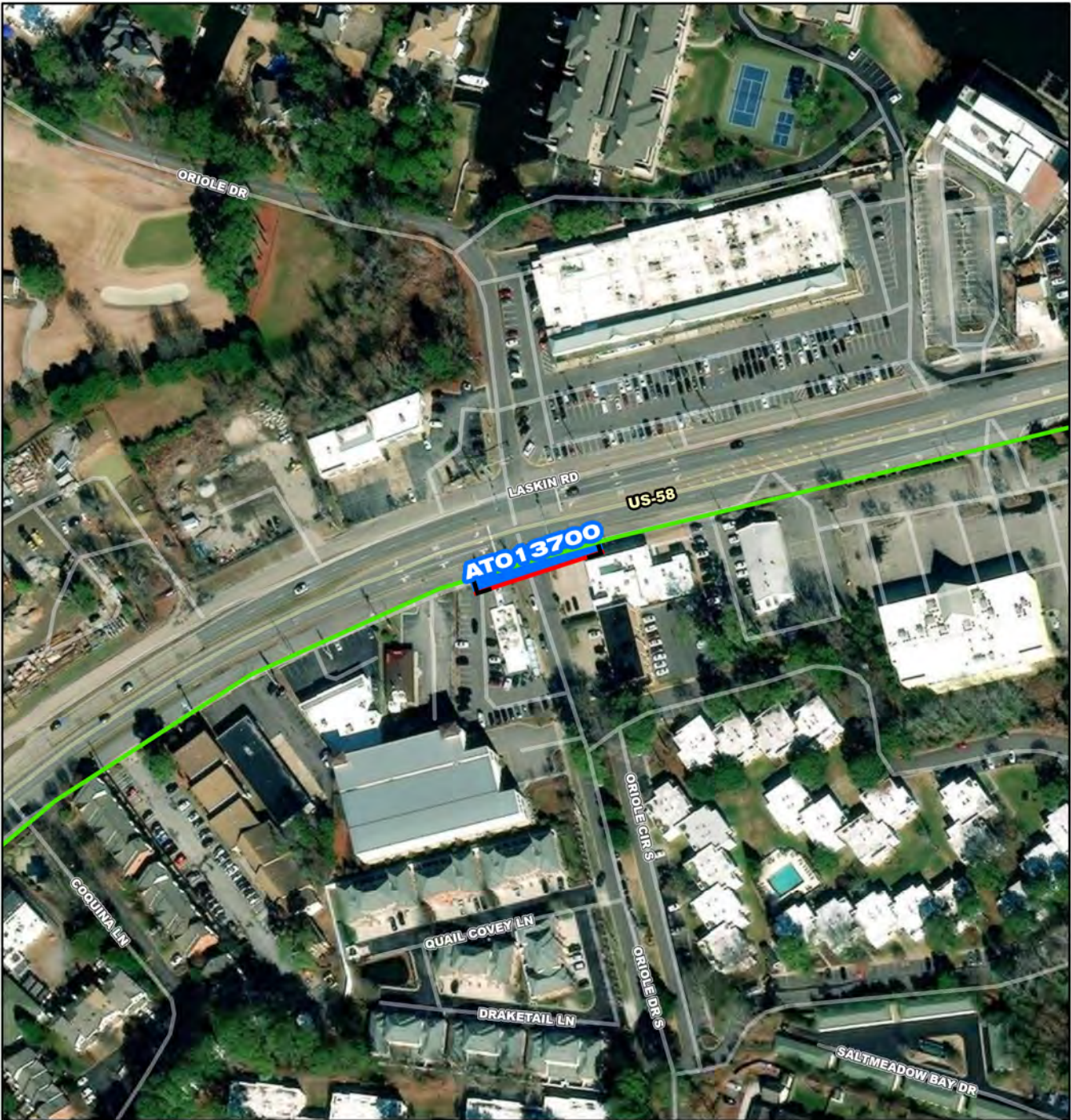
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Nick Taschner
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

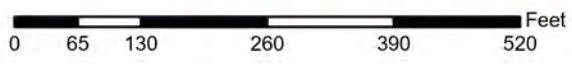
PrePlanning 02/03/2020
PER 08/30/2021
Design Delay 09/01/2021
Design 09/01/2021
Bid Delay 05/01/2023
PreConstruction 09/01/2023
Construction 01/01/2024
Closeout 05/01/2025

COST ESTIMATE

Cost Estimate Class: Class 3
PrePlanning \$0
PER \$185,360
Design \$629,000
PreConstruction \$20,000
Construction \$6,507,000
Closeout \$0
Est. Program Cost \$7,341,360
Contingency Budget \$738,000
Est. Project Costs \$8,079,360



- ATO13700**
- 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



ATO 13700

Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment)





System: Atlantic
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$422	\$336	\$86	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to design and construct approximately 2000 linear feet (LF) of 30-inch ductile iron force main (SF-134) along Laskin Road in the City of Virginia Beach. This project will be coordinated with a VDOT Laskin Road Improvement project (No. 0058-134-F02) as a betterment.

PROJECT JUSTIFICATION

This project will replace a section of the 30-inch 1965 reinforced concrete pipe (RCP) that has known repairs. The VDOT extent of relocation ends just west of S Oriole Drive in a section of force main (FM) with two known repairs. This project will extend the relocation 200 LF to the east of S Oriole Drive to a section of force main with no previous repairs to Fremac Drive west of the bridge across the creek. There will be four connections which will need to be accomplished. The first is at Oriole Drive, the second will be at the existing 24-inch pipe near the City of Virginia Beach Pump Station known as Laskin Road. The proposed 30-inch Ductile Iron (DI) FM has been stubbed out on both sides of the existing 24-inch RCP. The pump station (PS) at Laskin Road will also need to be connected. The last connection will be along Fremac Drive to connect the 30-inch DI pipe to the 42-inch prestressed concrete cylinder pipe (PCCP). The contractor Allan Meyers has contracted with Bridgeman Civil to accomplish the four connections. These connects will be accomplished in 2023. Extending traffic relocation will need to be accomplished in order to complete the connections.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	10/06/2021
PER	10/06/2021
Design Delay	10/06/2021
Design	10/06/2021
Bid Delay	10/06/2021
PreConstruction	10/06/2021
Construction	10/06/2021
Closeout	04/01/2022

COST ESTIMATE

Cost Estimate Class:	Class 1
PrePlanning	\$0
PER	\$0
Design	\$28,149
PreConstruction	\$0
Construction	\$165,000
Closeout	\$228,960
Est. Program Cost	\$422,109
Contingency Budget	\$50,000
Est. Project Costs	\$472,109

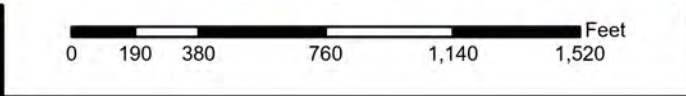


ATO14000

- 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



ATO 14000

**Lynnhaven-Great Neck IFM (SF-021)
Relocation**

N
W E
S

CIP Location



System: Atlantic
Type: Pipelines

Driver Category: Relocation
Project Phase: Design
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$2,858	\$358	\$0	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

The project will abandon the existing 16-inch HRSD Asbestos Cement (AC) Force Main (FM), SF-021, in E. Shore Drive and SF-022 to the north of Valve Guide CE5030. The total length to be abandoned is approximately 3,600 linear feet (LF). Service to City of Virginia Beach (City) Pump Station 200 will be provided by a new force main installed in the Shore Drive corridor as part of the City's Shore Drive Corridor Improvements. The City will manage the design and construction of the new force main and will assume ownership of this facility and all associated appurtenances. This project also includes the relocation of valve complex CE5030 due to a proposed physical conflict.

PROJECT JUSTIFICATION

During the Lesner Bridge replacement, HRSD abandoned the force main to the west leaving only a single City sewer pump station utilizing this line. Due to multiple physical conflicts with proposed storm drainage infrastructure, it is in the best interest of HRSD and the City to replace the existing force main with a new and appropriately sized pipe given the changed system conditions. The construction of this force main (~3,200 LF) would be at the discretion of the City. HRSD will enter a cost sharing agreement to fund the new sewer infrastructure under the condition that it will be dedicated to Virginia Beach Department of Public Utilities (DPU) for ownership, operation, and maintenance.

FUNDING TYPE

Funding Type: Cash

CONTACTS

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

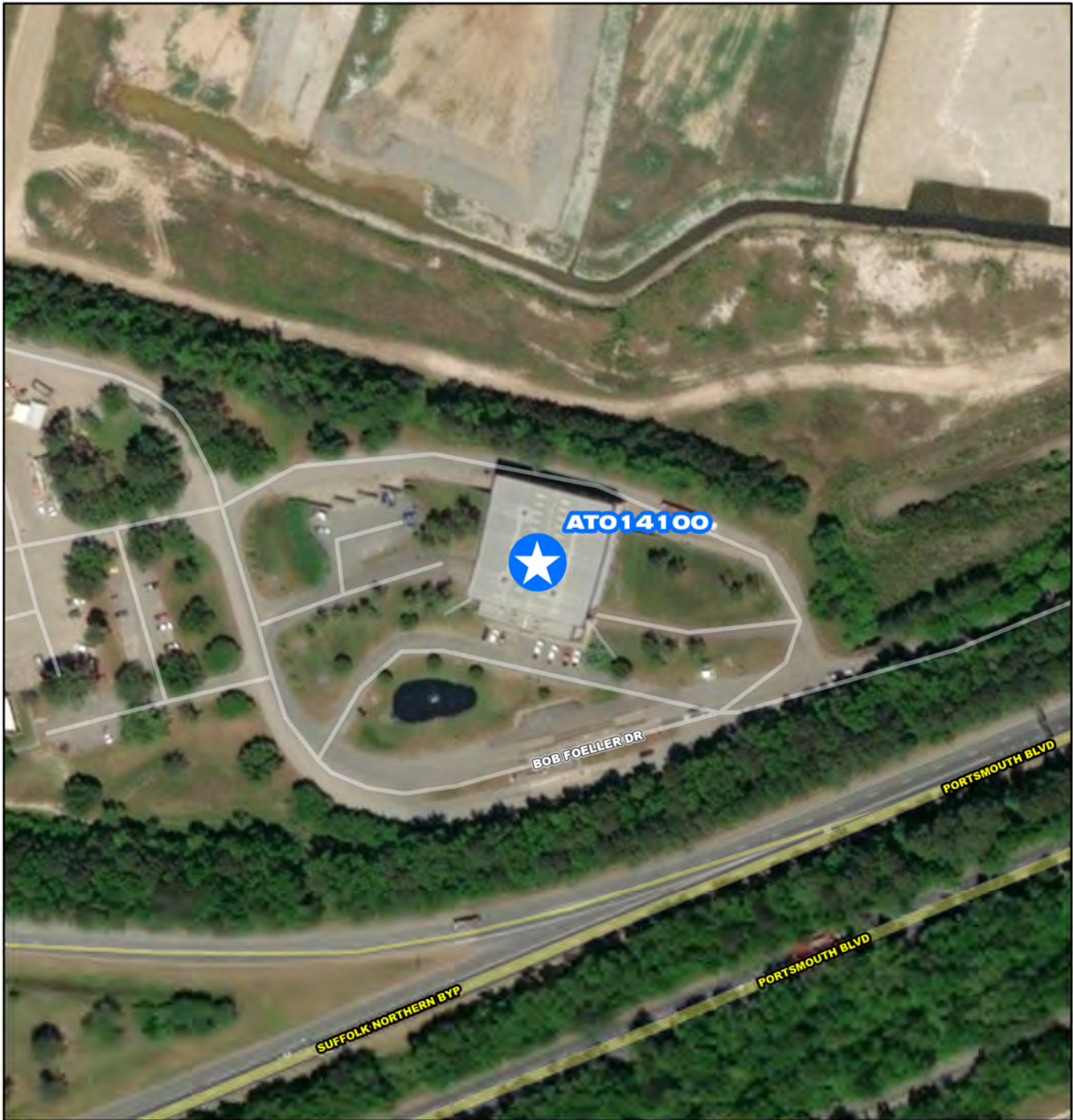
PROPOSED SCHEDULE START DATE

PrePlanning 06/01/2017
PER 06/29/2017
Design Delay 08/18/2017
Design 04/27/2018
Bid Delay 07/31/2018
PreConstruction 04/09/2019
Construction 07/23/2019
Closeout 01/14/2020





COST ESTIMATE

Cost Estimate Class:

PrePlanning	\$0
PER	\$0
Design	\$27,063
PreConstruction	\$0
Construction	\$331,435
Closeout	\$2,500,000
Est. Program Cost	\$2,858,498
Contingency Budget	\$625,000
Est. Project Costs	\$3,483,498

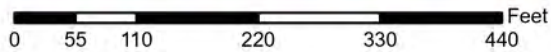


ATO14100

-  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



ATO 14100

**Suffolk Regional Landfill
Transmission Force Main**



CIP Location





System: Atlantic
Type: Wastewater Treatment

Driver Category: Risk Mitigation
Project Phase: Pre Planning
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$5,641	\$1,641	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

The project will reimburse Southeastern Public Service Authority (SPSA) for the construction of a treatment plant they will operate to treat their leachate.

PROJECT JUSTIFICATION

SPSA has a permit allowing leachate discharge into the HRSD collection system. This leachate could have negative impacts on the SWIFT facility at the Nansemond Treatment Plant. The identified solution is to have SPSA construct and operate a privately owned treatment plant. HRSD will cost share with SPSA for a portion of the plant cost.

FUNDING TYPE

Funding Type: Cash

CONTACTS

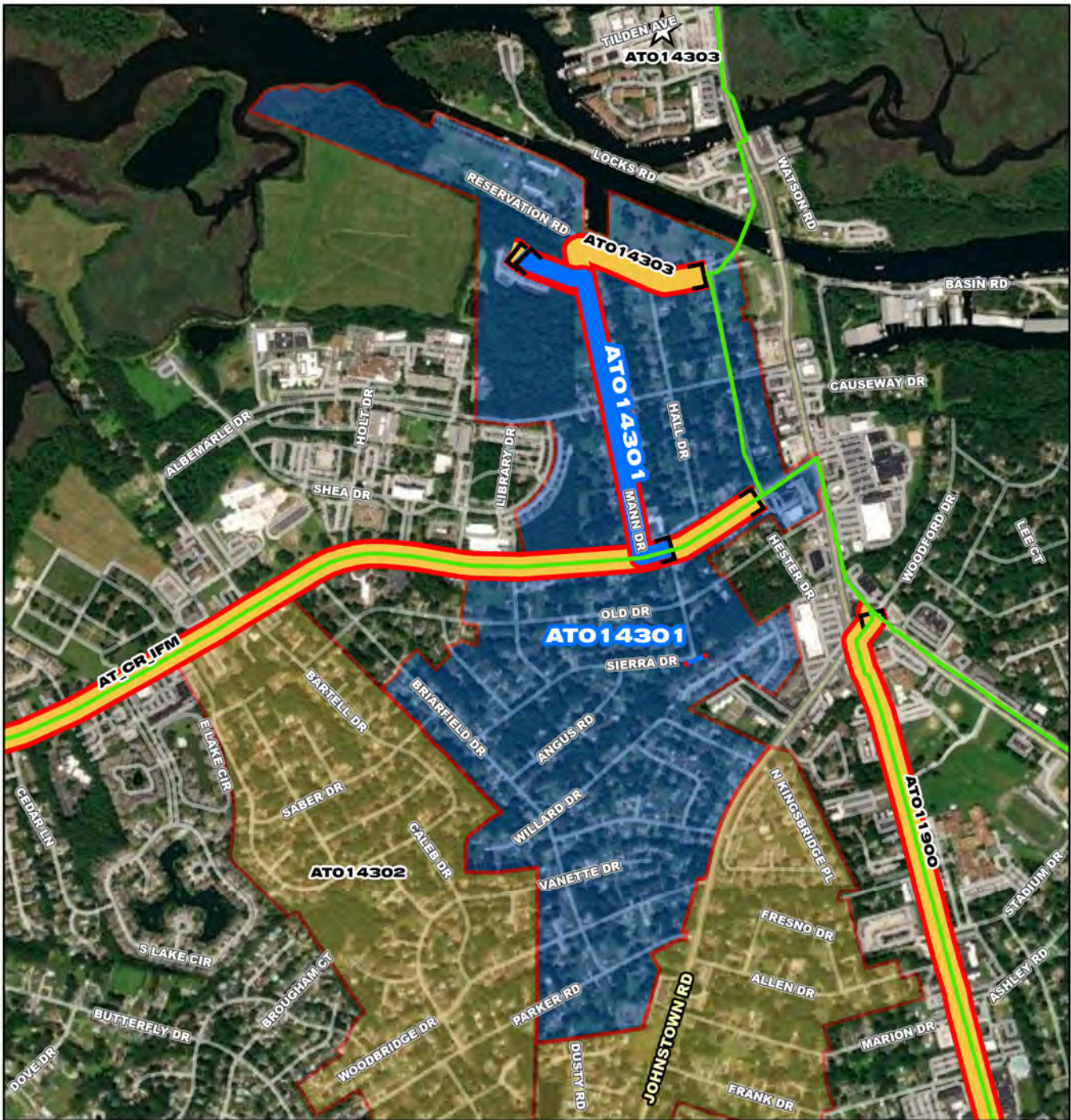
Contacts-Requesting Dept: General Manager
Contacts-Dept Contacts: Jay Bernas
Contacts-Managing Dept: General Manager

PROPOSED SCHEDULE START DATE

PrePlanning	10/06/2021
PER	10/06/2021
Design Delay	10/06/2021
Design	10/06/2021
Bid Delay	10/06/2021
PreConstruction	10/06/2021
Construction	10/06/2021
Closeout	10/06/2021

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	\$97,000
PER	\$80,400
Design	\$1,463,792
PreConstruction	\$0
Construction	\$0
Closeout	\$4,000,000
Est. Program Cost	\$5,641,192
Contingency Budget	\$1,358,808
Est. Project Costs	\$7,000,000

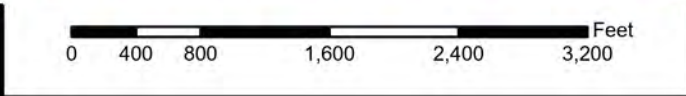


ATO14301

- 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



ATO 14301

**Atlantic Service Area I-I Reduction
Phase I (CHES)**

N
W E
S

CIP Location



System: Atlantic
Type: Locality and Private Property

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Proposed
Regulatory: Integrated Plan-HPP 1

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$13,635	\$0	\$1,143	\$761	\$999	\$6,547	\$4,169	\$16	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

Install 280 linear feet (LF) of 12-inch gravity main (GM); Install 2,760 LF of 16-inch GM; CHES-067 Comprehensive I/I Reduction Plan.

PROJECT JUSTIFICATION

As part of HRSD's Integrated Plan, a program of High Priority RWWMP Projects (HPP) will be constructed through 2030. These projects were selected based on their ability to provide the greatest environmental and human health benefits. Further, this \$200+ million investment will significantly reduce sanitary sewer overflow (SSO) volume at the 5-year level of service by 47 percent.

FUNDING TYPE

Funding Type: Cash

CONTACTS

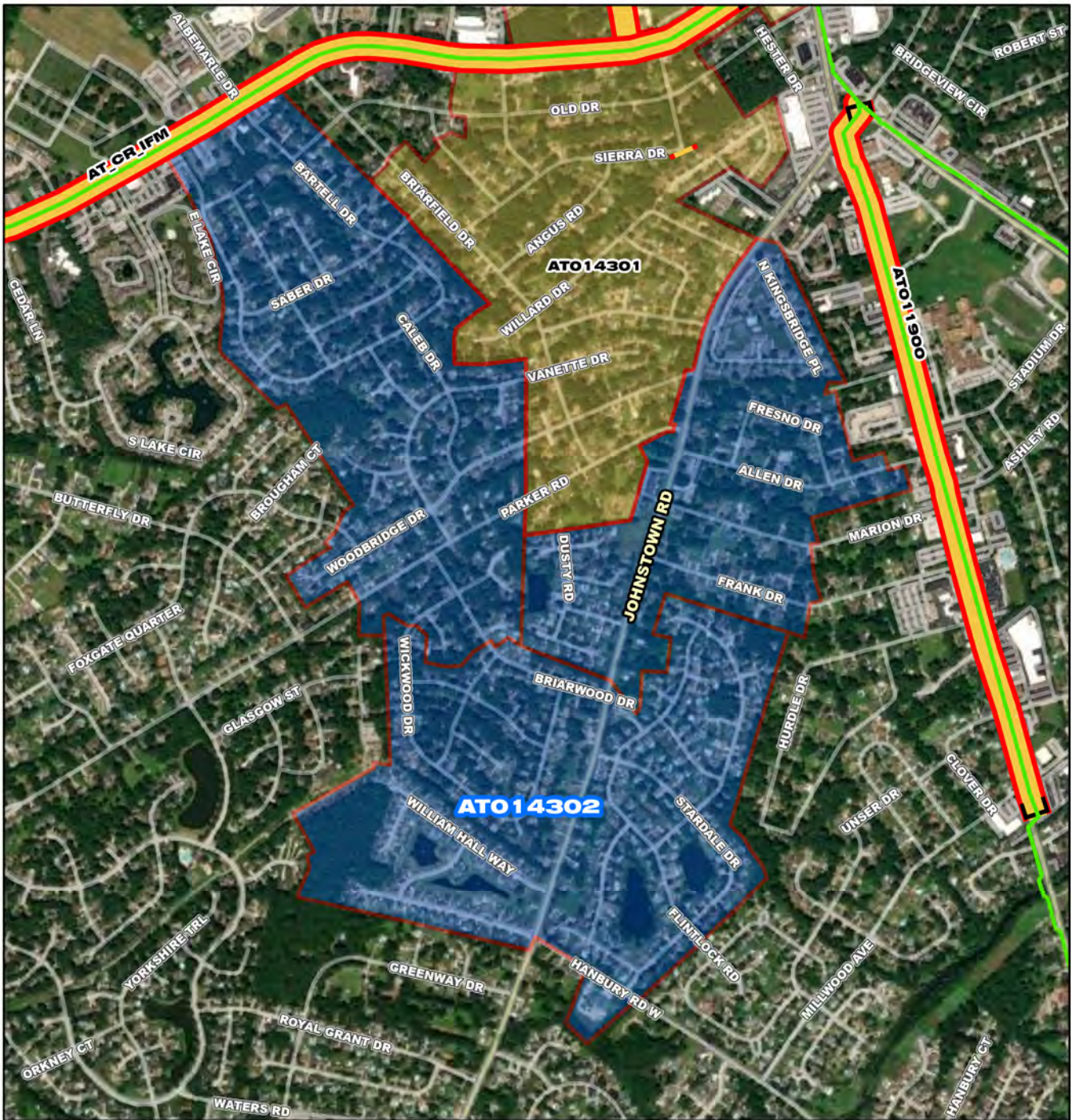
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Gene Rutledge
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2023
PER	02/01/2024
Design Delay	08/01/2025
Design	08/01/2025
Bid Delay	05/01/2026
PreConstruction	05/01/2026
Construction	08/01/2026
Closeout	02/01/2028

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$825,682
PER	\$1,141,990
Design	\$919,846
PreConstruction	\$23,354
Construction	\$10,701,269
Closeout	\$23,354
Est. Program Cost	\$13,635,494
Contingency Budget	\$2,607,343
Est. Project Costs	\$16,242,838

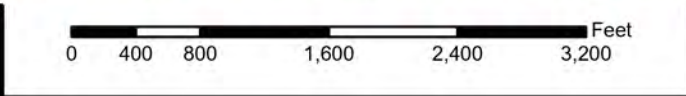


ATO14302

- 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



ATO14302

**Atlantic Service Area I-I Reduction
Phase II (CHES)**

N
W E
S

CIP Location



System: Atlantic
Type: Locality and Private Property

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Proposed
Regulatory: Integrated Plan-HPP 1

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$11,755	\$0	\$1,159	\$729	\$760	\$5,554	\$3,549	\$4	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

CHES-032 General I/I Reduction Plan; CHES-047 Data-Driven I/I Reduction Plan; CHES-111 General I/I Reduction Plan.

PROJECT JUSTIFICATION

As part of HRSD's Integrated Plan, a program of High Priority RWWMP Projects (HPP) will be constructed through 2030. These projects were selected based on their ability to provide the greatest environmental and human health benefits. Further, this \$200+ million investment will significantly reduce sanitary sewer overflows (SSO) volume at the 5-year level of service by 47 percent.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Gene Rutledge
Contacts-Managing Dept: Engineering

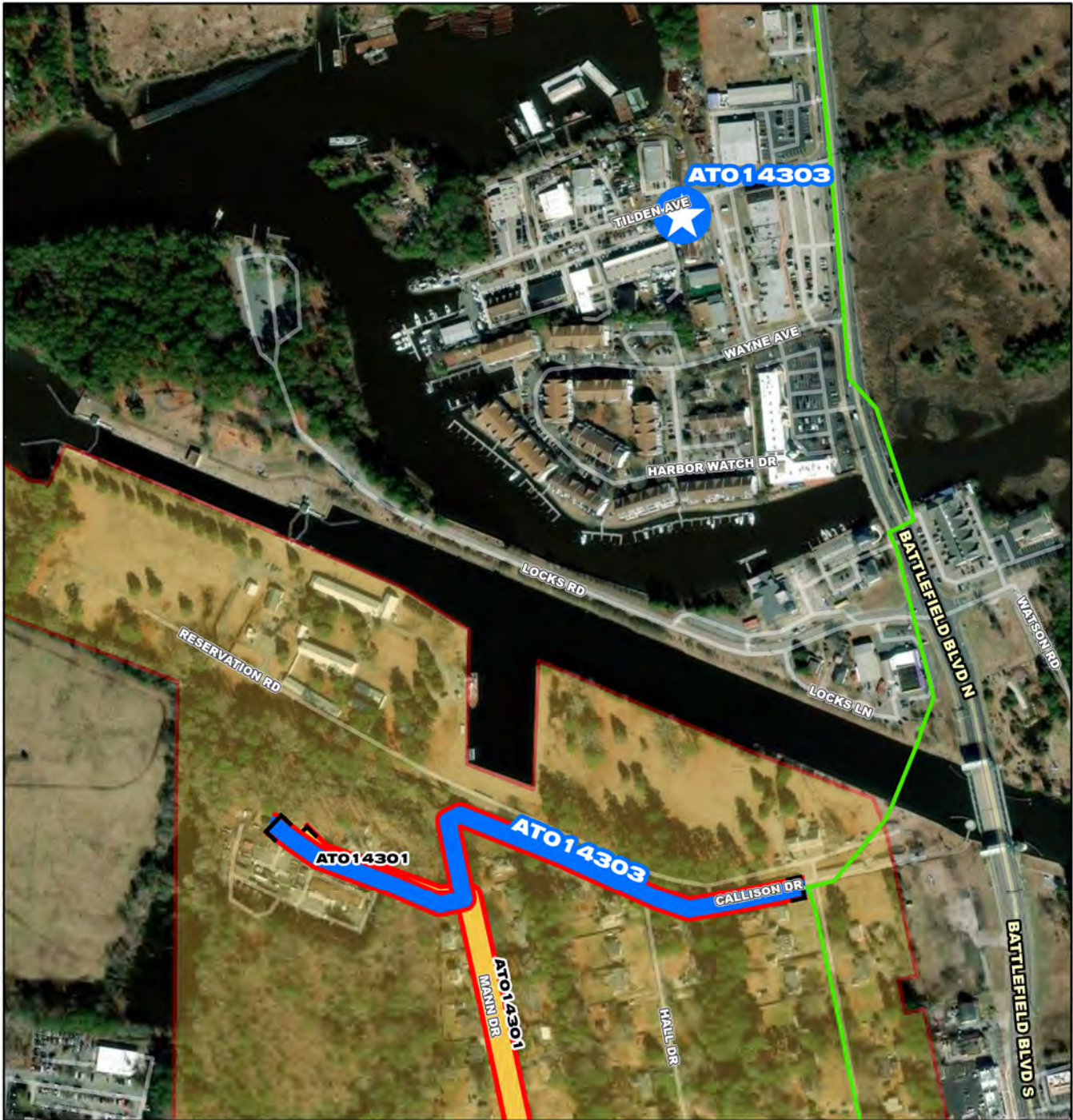
PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2023
PER	02/01/2024
Design Delay	08/01/2025
Design	08/01/2025
Bid Delay	05/01/2026
PreConstruction	05/01/2026
Construction	08/01/2026
Closeout	02/01/2028

COST ESTIMATE

Cost Estimate Class:

PrePlanning	\$855,280
PER	\$1,093,158
Design	\$683,509
PreConstruction	\$23,354
Construction	\$9,076,351
Closeout	\$23,354
Est. Program Cost	\$11,755,006
Contingency Budget	\$2,178,331
Est. Project Costs	\$13,933,336

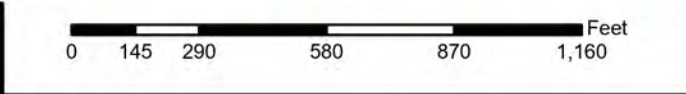


ATO14303

- 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



ATO 14303

Chesapeake Pump Station Capacity Improvements (AT-HPP-01C)

N
W E
S

CIP Location



System: Atlantic
 Type: Locality and Private Property

Driver Category: I&I Abatement-IP/RWWMP
 Project Phase: Proposed
 Regulatory: Integrated Plan-HPP 1

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$991	\$0	\$0	\$0	\$55	\$198	\$738	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

Chesapeake Pump Station Upgrade PS072; Install 1,930 linear feet (LF) of 10-inch discharge force main downstream of Chesapeake Pump Station 067 (114 Mann Drive).

PROJECT JUSTIFICATION

As part of HRSD's Integrated Plan, a program of High Priority RWWMP Projects (HPP) will be constructed through 2030. These projects were selected based on their ability to provide the greatest environmental and human health benefits. Further, this \$200+ million investment will significantly reduce sanitary sewer overflows (SSO) volume at the 5-year level of service by 47 percent.

FUNDING TYPE

Funding Type: Cash

CONTACTS

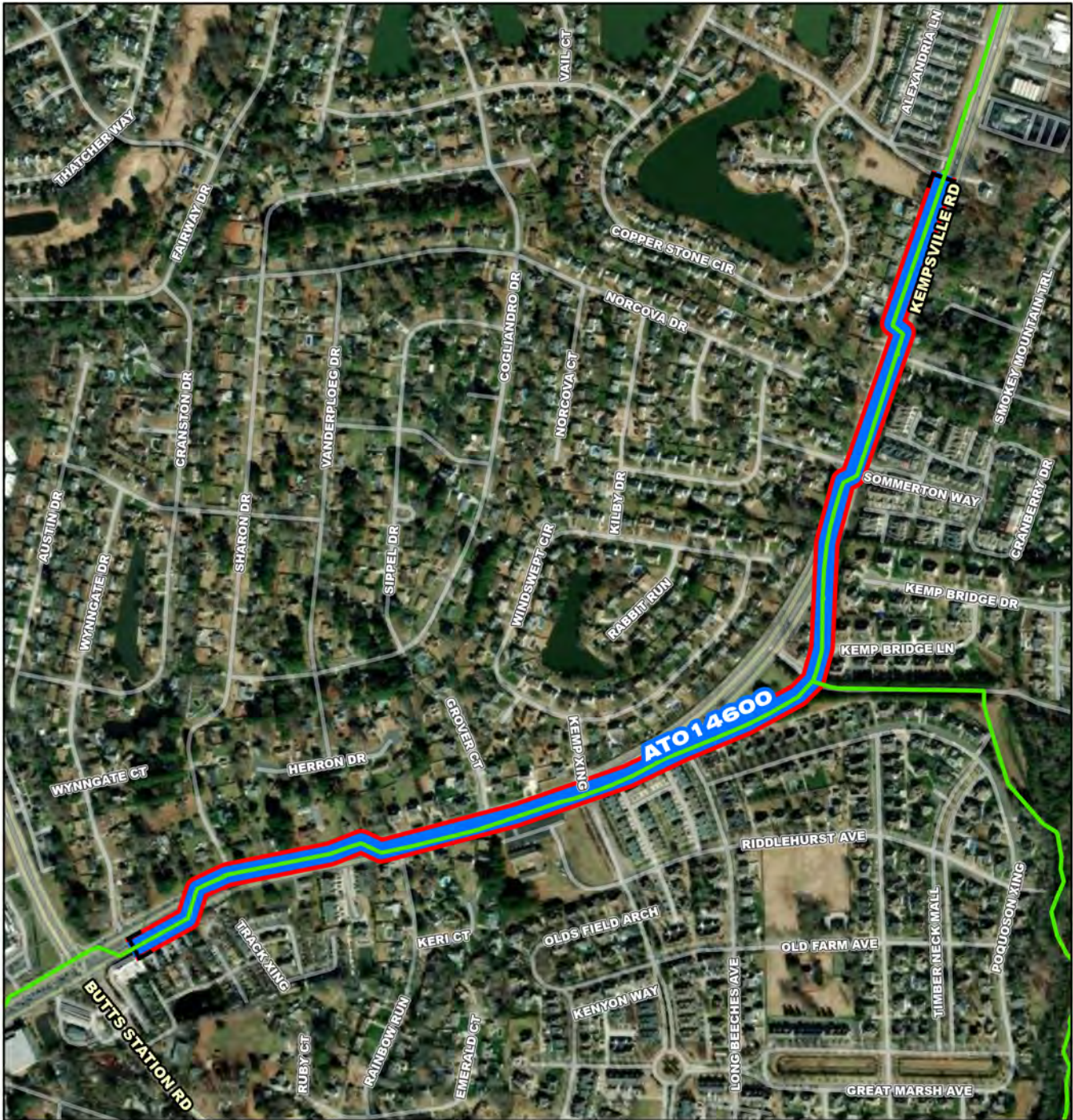
Contacts-Requesting Dept: Operations-Interceptors
 Contacts-Dept Contacts: Gene Rutledge
 Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	02/03/2025
PER	08/04/2025
Design Delay	03/02/2026
Design	03/02/2026
Bid Delay	01/01/2027
PreConstruction	01/01/2027
Construction	05/01/2027
Closeout	06/02/2028

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$0
PER	\$26,033
Design	\$72,511
PreConstruction	\$20,327
Construction	\$872,041
Closeout	\$0
Est. Program Cost	\$990,911
Contingency Budget	\$218,010
Est. Project Costs	\$1,208,922



ATO14600

- 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

Feet

0 240 480 960 1,440 1,920

ATO 14600

Kempsville Interceptor Force Main Replacement - Phase I

N
W — E
S

CIP Location



System: Atlantic
Type: Pipelines

Driver Category: Risk Mitigation
Project Phase: Proposed
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$6,247	\$46	\$111	\$369	\$1,350	\$3,488	\$884	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will replace 4,300 feet of 24 and 30-inch ductile iron pipe along Kempsville Road between Hunningdon Lakes Boulevard and Greenbriar Parkway.

PROJECT JUSTIFICATION

The interceptor force main (IFM) along Kempsville Road has experienced multiple failures due to internal and external corrosion. This 33,000 foot long IFM was installed between 1972 and 1999 and consists of prestressed concrete cylinder pipe (PCCP) and ductile iron pipe (DIP). Recent breaks near Hunningdon Lakes Boulevard have reconnected to ductile iron pipe that shows significant evidence of internal corrosion, which is why this section of the IFM is being addressed first. Approximately 1,700 feet of this alignment was replaced in 1997 with a VDOT Project and is not included in the replacement work. Recent failures along this corridor have been more than \$400,000 each.

FUNDING TYPE

Funding Type: VCWRLF

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Gene Rutledge
Contacts-Managing Dept: Operations-Interceptors

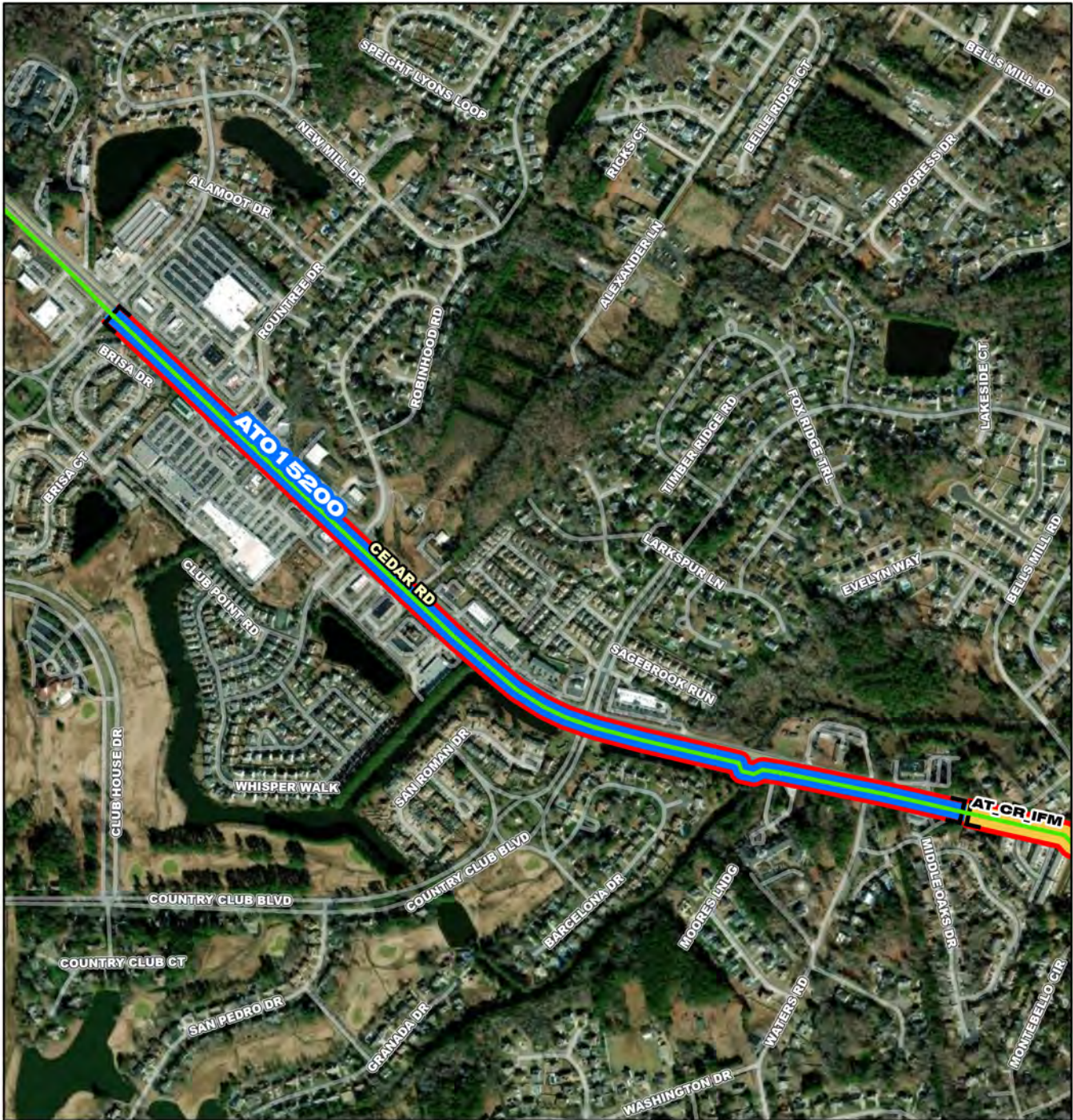
PROPOSED SCHEDULE START DATE

PrePlanning 09/01/2021
PER 10/01/2023
Design Delay 09/01/2024
Design 09/01/2024
Bid Delay 12/01/2025
PreConstruction 12/01/2025
Construction 03/01/2026
Closeout 10/01/2027

COST ESTIMATE

Cost Estimate Class:

PrePlanning	\$0
PER	\$175,154
Design	\$525,463
PreConstruction	\$11,677
Construction	\$5,523,202
Closeout	\$11,677
Est. Program Cost	\$6,247,174
Contingency Budget	\$1,167,696
Est. Project Costs	\$7,414,870



ATO 15200

- 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

Feet

0 290 580 1,160 1,740 2,320

ATO 15200

Cedar Road Interceptor Force Main Replacement Phase I

N
W E
S

CIP Location



System: Atlantic
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$6,449	\$4	\$149	\$349	\$1,148	\$3,565	\$1,234	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will replace and upsize 5,800 feet of 16-inch ductile iron pipe along Cedar Road from valve AT-1159R-1 at Las Gaviotas Boulevard to valve AT-1159L-1 near Charleston Street. The existing pipeline will up upsized to 24-inch pipe.

PROJECT JUSTIFICATION

The interceptor force main (IFM) along Cedar Road was installed in 1983 and has experienced multiple failures due to internal and external corrosion. Several of these failures showed signs of graphitization of the pipe wall that have raised concerns over the integrity of this section of pipeline. The repairs performed on this pipeline have been full-circle clamps, thus only addressing the immediate leak and not the larger problem of pipeline integrity. The remaining pipe wall thickness on most of this pipe is not precisely known but is assumed to be very similar to that of the pieces that failed in 2019/2020. More than half of this pipeline is High risk and nearly a third is Extreme risk, as described in the HRSD Risk Guidelines (February 2018). Thus, urgent action is needed to minimize the risk of this pipeline failing again. Proposed development in this area of Chesapeake necessitate the upsize from 16-inch to 24-inch pipe. In the future, the remainder of this pipeline to Battlefield Boulevard will also be upsized to 24-inch.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Gene Rutledge
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	05/01/2023
PER	10/01/2023
Design Delay	09/01/2024
Design	09/01/2024
Bid Delay	12/01/2025
PreConstruction	12/01/2025
Construction	04/01/2026
Closeout	11/01/2027

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$5,724
PER	\$179,734
Design	\$475,092
PreConstruction	\$98,453
Construction	\$5,643,864
Closeout	\$45,792
Est. Program Cost	\$6,448,658
Contingency Budget	\$1,293,624
Est. Project Costs	\$7,742,282



System: Atlantic
Type: Pipelines

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Proposed
Regulatory: Integrated Plan-HPP 2

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$30,452	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,381	\$3,535	\$23,536

PROJECT DESCRIPTION

High Priority Project (HPP) Round 2 Project 2 consists of the following Regional Wet Weather Management Plan (RWWMP) Project ID and general description:
AT-RWWMP-06 Birdneck-General Booth Boulevard Force Main Improvements

PROJECT JUSTIFICATION

As part of the RWWMP submitted to the DEQ and EPA, HRSD developed an approach to recognize the highest-priority system improvements with the greatest relative environmental benefit. The result being the identification of High-Priority Projects (HPPs). The initial HPPs (Round 1) were identified in the RWWMP, submitted to EPA in September of 2017, and are scheduled to be constructed between plan approval and 2030. Further review of RWWMP projects was conducted in 2019 to find beneficial solutions to implement as a second set of HPPs (identified as Round 2). A prioritization methodology was used to identify improvements to minimize sanitary sewer overflow (SSO) volume.

Rounds 1 and 2 of High-Priority Projects were scheduled with consecutive 10-year implementation periods starting with Round 1 being completed between plan approval and 2030. Prior to commencement, HRSD will review the Round 2 projects to confirm that they are still expected to meet the desired result and confirm this in a check in with the EPA/DEQ. To modify the list of specific Round 2 HPP projects, HRSD will show that the revised set of projects will attain a minimum of the same percent reduction, or better.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

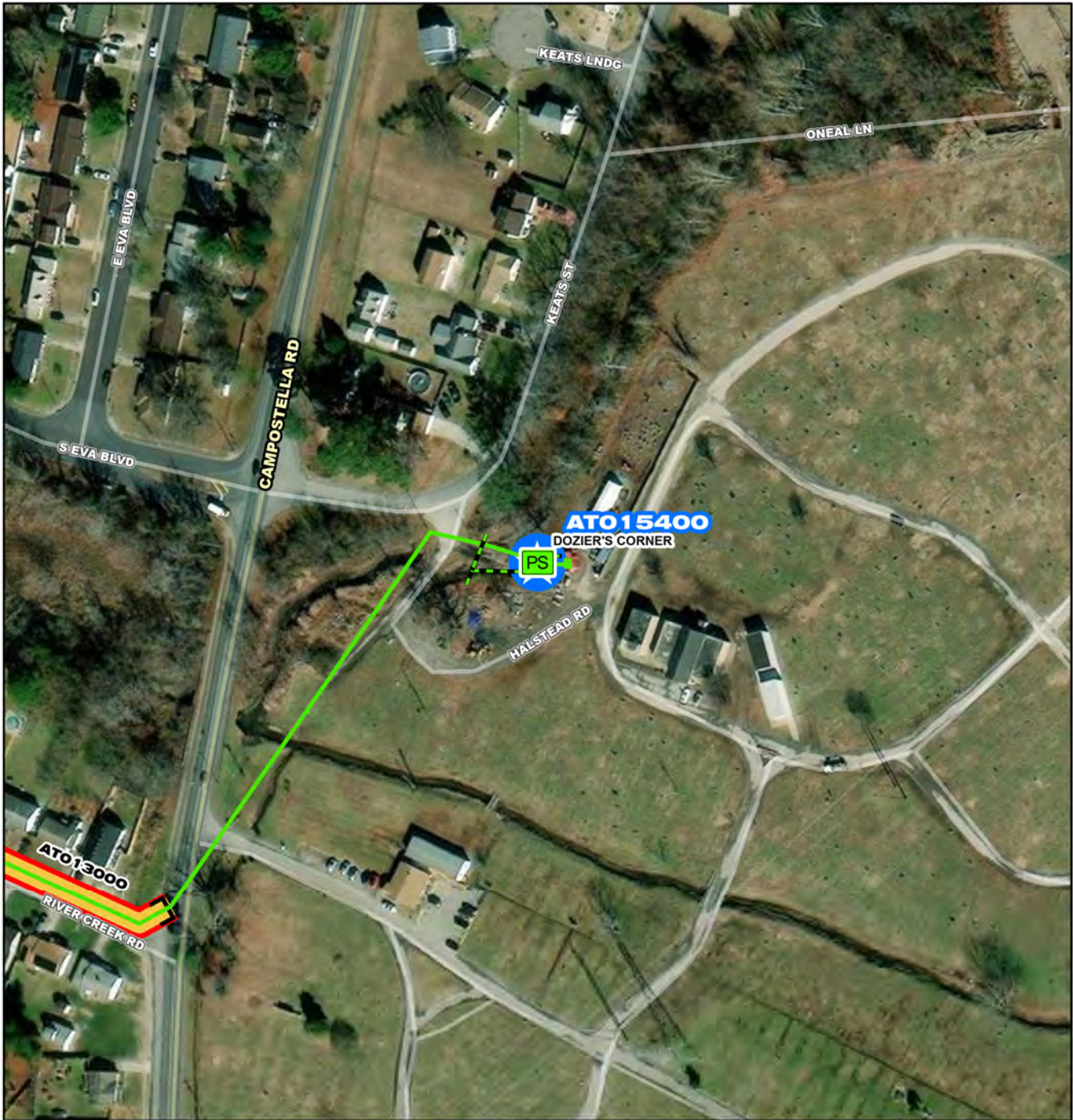
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: John Dano
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

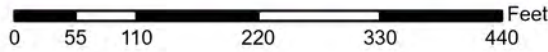
PrePlanning	07/01/2030
PER	07/29/2030
Design Delay	09/17/2030
Design	05/27/2031
Bid Delay	08/28/2031
PreConstruction	05/06/2032
Construction	06/16/2032
Closeout	04/13/2033

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	\$614,758
PER	\$1,536,894
Design	\$1,844,273
PreConstruction	\$307,379
Construction	\$26,127,198
Closeout	\$307,379
Est. Program Cost	\$30,737,880
Contingency Budget	\$0
Est. Project Costs	\$30,737,880



- ATO 15400**
- 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



CIP Location



ATO 15400

Doziers Corner Pump Station Replacement





System: Atlantic
Type: Pump Stations

Driver Category: I&I Abatement-Rehabilitation Plan
Project Phase: Pre Planning
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$11,251	\$299	\$548	\$6,328	\$4,075	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

The project is to install dry pit submersible pumps and raise, or otherwise protect, electrical equipment at Dozier's Corner. In addition, all electrical assets such as electrical control panels, generator, disconnects, panelboards, etc. shall be located above the 100 year flood/wave action. Conduits located below the 100 year flood/wave action shall be adequately sealed per National Electrical Code (NEC) requirements for flood prone locations. This station is well below the 100 year flood plan and the site is too small to install a separate control room. This is due to the Cemetery and storm water ditches surrounding this station. This project cannot be completed within the Phase II of the Rehabilitation Action Plan.

PROJECT JUSTIFICATION

This pump station may need to be relocated due to the flood plain, the ditches on two sides of the property, as well as, the cemetery next to the pump station.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

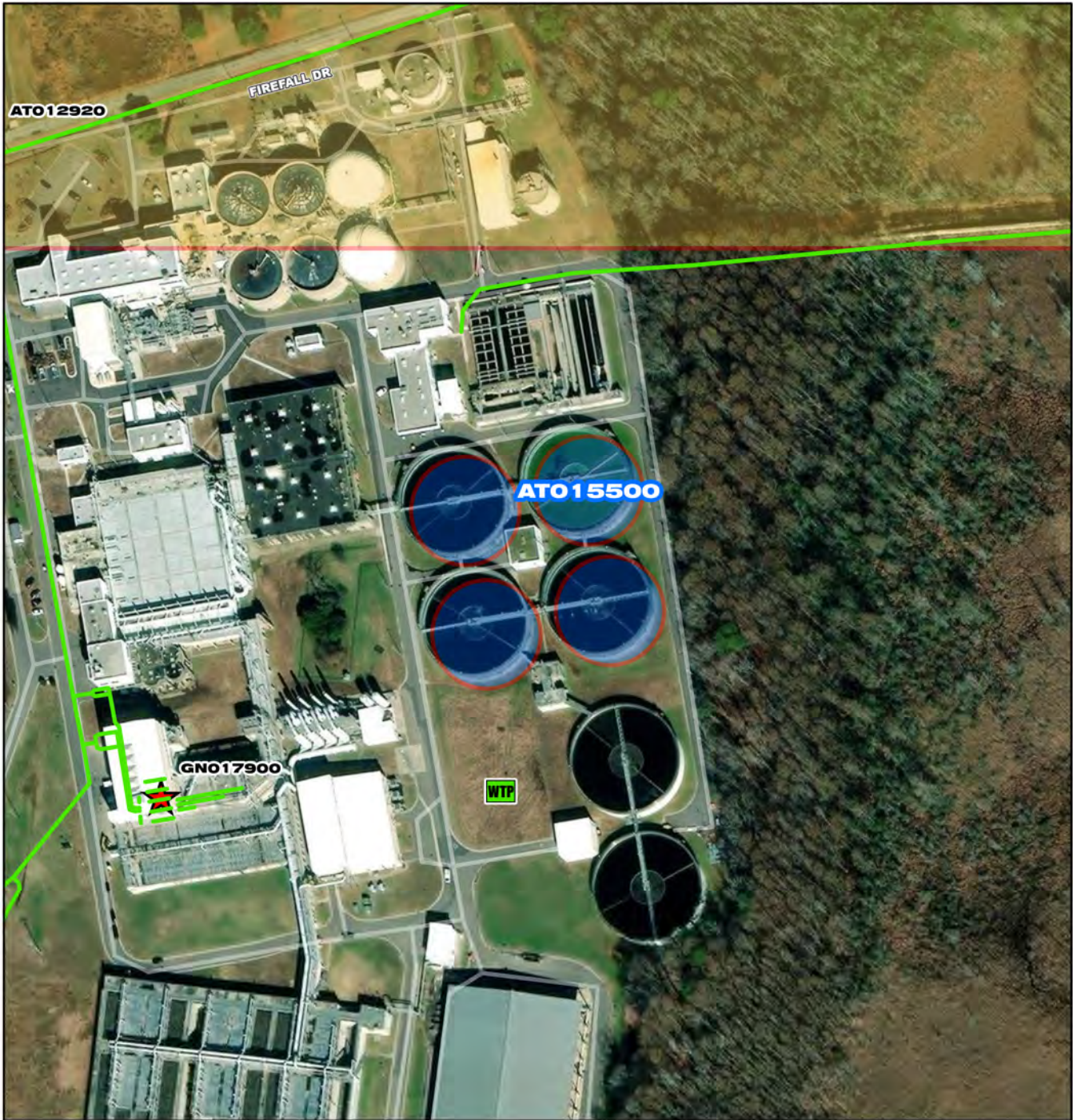
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Phil Hubbard
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 09/01/2022
PER 09/01/2022
Design Delay 04/28/2023
Design 05/01/2023
Bid Delay 05/01/2024
PreConstruction 05/01/2024
Construction 08/01/2024
Closeout 02/01/2026

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$0
PER	\$190,800
Design	\$650,000
PreConstruction	\$10,000
Construction	\$10,350,000
Closeout	\$50,000
Est. Program Cost	\$11,250,800
Contingency Budget	\$2,000,000
Est. Project Costs	\$13,250,800

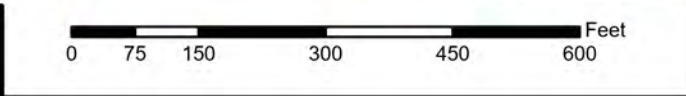


ATO1550

- 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



ATO 1550

Atlantic Treatment Plant Secondary Clarifier Effluent Weir Replacement and Enhancements

CIP Location

Virginia Beach



ATP Secondary Clarifier Effluent Weir Replacement and Enhancements

PR_AT015500

System: Atlantic
Type: Wastewater Treatment

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$2,325	\$894	\$1,431	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will replace secondary clarifier effluent weirs, launders and add new covers to the weirs for Secondary Clarifiers 1 through 4.

PROJECT JUSTIFICATION

The effluent weirs are failing in all four of the secondary clarifiers due to age and sun exposure. This project will replace all weirs, to include the launders, and will include the purchase and installation of covers to prevent UV degradation on the fiberglass weirs.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations
Contacts-Dept Contacts: Christel Dyer
Contacts-Managing Dept: Operations-Treatment

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2022
PER	07/01/2022
Design Delay	07/01/2022
Design	07/01/2022
Bid Delay	07/01/2022
PreConstruction	07/01/2022
Construction	07/01/2022
Closeout	03/01/2024

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	\$0
PER	\$0
Design	\$0
PreConstruction	\$0
Construction	\$2,325,170
Closeout	\$0
Est. Program Cost	\$2,325,170
Contingency Budget	\$319,830
Est. Project Costs	\$2,645,000



**Atlantic Treatment Plant Liquid Side Odor Evaluation
and Improvements**

PR_AT015800

System: Atlantic
Type: Wastewater Treatment

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$2,017	\$463	\$1,433	\$121	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project includes evaluation of Odor Control Station (OCS) B and D, as well as, all of the unit processes and process piping that flow towards OCS B and D. Any repairs deemed necessary will be completed as part of this project.

PROJECT JUSTIFICATION

There has been a distinct increase in odor complaints from neighbors around Atlantic Plant. This project will ensure that all odor control is operating optimally and as designed.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Holly Anne Matel
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 08/01/2022
PER 03/01/2023
Design Delay 10/01/2023
Design 10/01/2023
Bid Delay 08/01/2024
PreConstruction 08/01/2024
Construction 08/01/2024
Closeout 08/01/2024

COST ESTIMATE

Cost Estimate Class: Class 5
PrePlanning \$0
PER \$810,000
Design \$1,207,000
PreConstruction \$0
Construction \$0
Closeout \$0
Est. Program Cost \$2,017,000
Contingency Budget \$0
Est. Project Costs \$2,017,000



Atlantic Treatment Plant Gravity Belt Thickener & Pre-Dewatering Polymer Improv

PR_AT015900

System: Atlantic
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$6,395	\$43	\$164	\$166	\$2,440	\$2,920	\$662	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will construct an additional gravity belt thickener (GBT) and replace existing pre-dewatering and GBT polymer systems.

PROJECT JUSTIFICATION

The Chesapeake-Elizabeth Treatment Plant (CEPT) was shut down in calendar year 2021 and influent flows were redirected to the Atlantic Treatment Plant (ATP). At peak loadings with CEPT flow, ATP requires a fourth GBT to maintain GBT redundancy. The polymer systems at the ATP do not meet expected performance and are often the root-cause of failures in the pre-dewatering system. Upgrading the polymer system at pre-dewatering will minimize such failures, while upgrades at thickening and final dewatering will allow for standardization, operating at minimum cost, additional automation, and full leveraging of thermally hydrolyzed solids by providing opportunity for drier cake.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Holly Anne Matel
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 08/01/2022
PER 02/15/2023
Design Delay 11/15/2023
Design 11/15/2023
Bid Delay 05/15/2025
PreConstruction 06/16/2025
Construction 09/15/2025
Closeout 09/01/2027

COST ESTIMATE

Cost Estimate Class: Class 5
PrePlanning \$0
PER \$77,593
Design \$292,407
PreConstruction \$10,000
Construction \$5,840,000
Closeout \$175,000
Est. Program Cost \$6,395,000
Contingency Budget \$948,000
Est. Project Costs \$7,343,000



System: Atlantic
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$55,103	\$583	\$2,592	\$2,660	\$19,934	\$23,913	\$5,421	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project includes the construction of gravity thickeners, and all associated piping and appurtenances for primary solids thickening; Replacement of Odor Control Station (OCS) A and OCS C with a new odor control system that is sized to accommodate current odor sources served by OCS A and C as well as the gravity thickeners, primary fermenter, and digesters 1-4 annular space; Evaluation and upgrade of digester gas system, replacement of existing flares with fully enclosed flares, and cover and scrub the annular space of digesters 1-4; Installation of a new Cambi B6 skid with associated piping, appurtenances, instrumentation and electrical work; Installation of screw loadout from pre-dewatering cake shoot that will allow loadout of raw cake if pre-dewatering hopper is out of service; Installation of a third FOG receiving tank and associated piping and appurtenances; Installation of blower, coarse bubble system, Mg feed system, and all associated piping and appurtenances for post-digestion struvite precipitation in the digested solids storage tank (DSST).

PROJECT JUSTIFICATION

There have been increased odor complaints around Atlantic Plant in calendar year 2022. This project will improve resiliency in solids handling at Atlantic Plant and will reduce the potential for offsite odors around the plant.

FUNDING TYPE

Funding Type: VCWRLF

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Holly Anne Matel
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 08/01/2022
PER 02/15/2023
Design Delay 11/15/2023
Design 11/15/2023
Bid Delay 05/15/2025
PreConstruction 06/16/2025
Construction 09/15/2025
Closeout 09/01/2027

COST ESTIMATE

Cost Estimate Class: Class 5
PrePlanning \$0
PER \$1,049,500
Design \$4,782,500
PreConstruction \$10,000
Construction \$47,825,000
Closeout \$1,436,000
Est. Program Cost \$55,103,000
Contingency Budget \$8,108,000
Est. Project Costs \$63,211,000



Atlantic Treatment Plant Solids Curing Facility and Pad Improvements

PR_AT016100

System: Atlantic
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$11,730	\$69	\$512	\$574	\$4,282	\$5,130	\$1,164	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will enclose the north end of the South pad for biosolids curing and install biofilter, piping, and appurtenances to scrub the headspace of the enclosure; increase wall height around the remaining portion of the south pad to allow for higher stacking of biosolids; repair columns on North biosolids pad; and install conveyor that runs from the curing enclosure to the North biosolids pad.

PROJECT JUSTIFICATION

There have been increased odor complaints around Atlantic Plant in calendar year 2022. This project will reduce the potential for offsite odors from the biosolids storage pads and from trucks hauling solids for land application.

FUNDING TYPE

Funding Type: Cash

CONTACTS

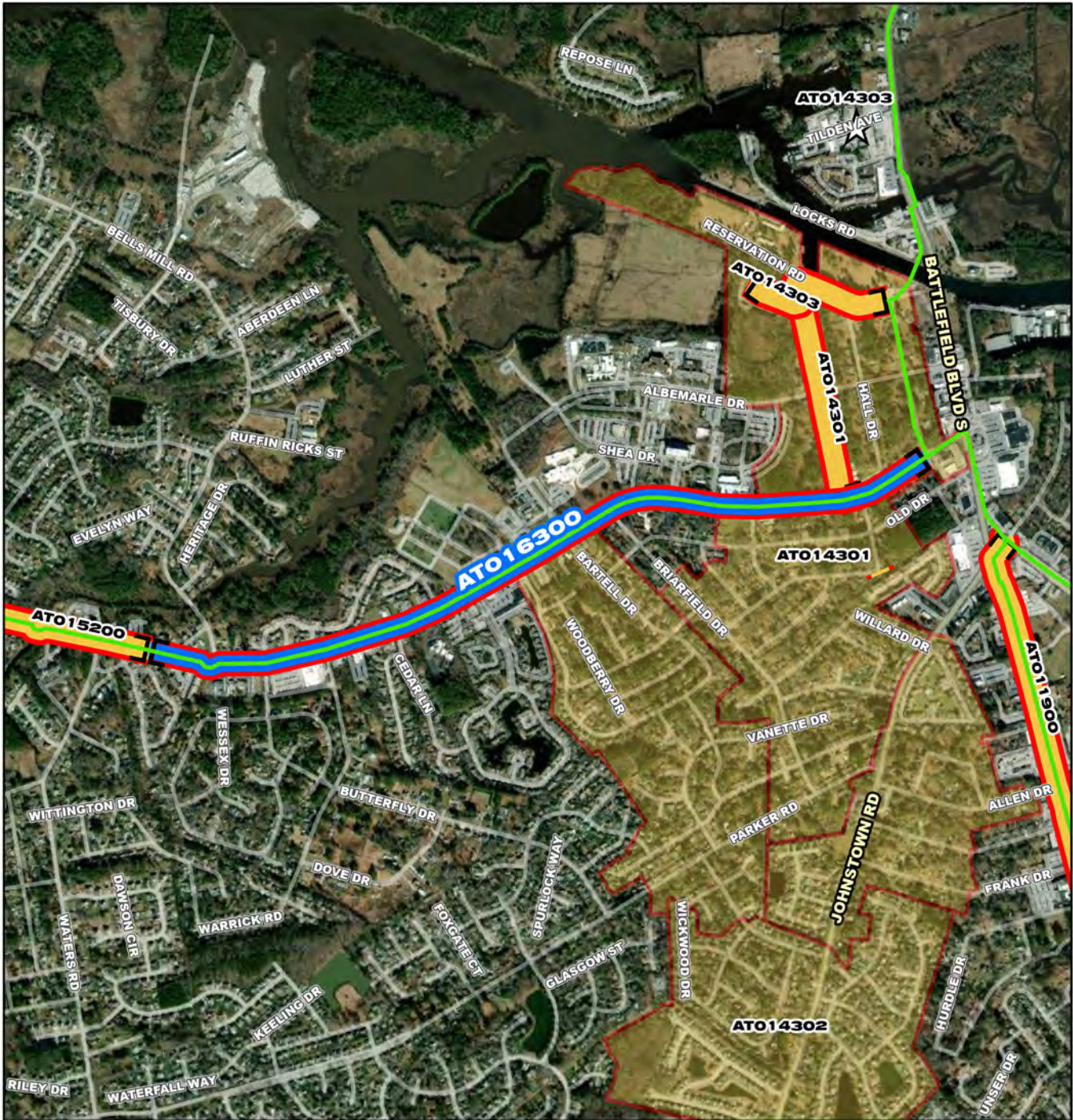
Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Holly Anne Matel
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 08/01/2022
PER 02/15/2023
Design Delay 11/15/2023
Design 11/15/2023
Bid Delay 05/15/2025
PreConstruction 06/16/2025
Construction 09/15/2025
Closeout 09/01/2027

COST ESTIMATE

Cost Estimate Class: Class 5
PrePlanning \$0
PER \$123,593
Design \$1,027,407
PreConstruction \$10,000
Construction \$10,260,000
Closeout \$309,000
Est. Program Cost \$11,730,000
Contingency Budget \$1,742,000
Est. Project Costs \$13,472,000



ATO16300

- 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

Feet

0 500 1,000 2,000 3,000 4,000

ATO 16300

Cedar Road Interceptor Force Main Replacement Phase II

CIP Location



System: Atlantic
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$14,647	\$179	\$760	\$2,477	\$5,337	\$5,337	\$557	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is a continuation of project AT015200 and continuing the new 24-inch upsized pipe 9500 feet to valve AT-1159-2.

PROJECT JUSTIFICATION

This project is a continuation of project AT015200 and continuing the new 24-inch upsized pipe 9500 feet to valve AT-1159-2. This project (Phase II) will provide the necessary improvements required in the hydraulic analysis for the Great Bridge Interceptor Extension 16-inch Replacement - CIP AT011900 HART report.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Gene Rutledge
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 01/01/2023
PER 04/01/2023
Design Delay 10/01/2023
Design 10/01/2023
Bid Delay 10/01/2024
PreConstruction 10/01/2024
Construction 02/01/2025
Closeout 08/01/2027

COST ESTIMATE

Cost Estimate Class: Class 5
PrePlanning \$0
PER \$357,670
Design \$774,951
PreConstruction \$59,612
Construction \$13,342,424
Closeout \$112,475
Est. Program Cost \$14,647,132
Contingency Budget \$2,881,868
Est. Project Costs \$17,529,000