General

GN016230

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

N
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CIP Location

GN016230

SWIFT Research Center Educational and Outreach Improvements

HRSD

SWIFT Research Center Educational and Outreach Improvements

PR_GN016230

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$1,796	$0	$433	$1,363	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for the planning, design, and installation of improvements to the educational and outreach material at the SWIFT Research Center.

PROJECT JUSTIFICATION

The interpretive elements at the SWIFT Research Center have not been substantially updated since they were installed in 2018. Numerous organizational, strategic, technological, and educational advancements have occurred since the facility opened. Updating the information available at the SWIFT Research Center and improving how visitors engage with that information will support HRSD's public outreach efforts related to SWIFT and managed aquifer recharge.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Kerstin Geba
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	09/02/2026
Design Delay	01/02/2027
Design	01/02/2027
Bid Delay	06/02/2027
PreConstruction	06/02/2027
Construction	09/02/2027
Closeout	05/03/2028

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$1,032
PER	$113,520
Design	$309,600
PreConstruction	$25,800
Construction	$1,341,600
Closeout	$4,128
Est. Program Cost	**$1,795,680**
Contingency Budget	$268,320
Est. Project Costs	**$2,064,000**

Outfall Dispersion Modeling for Full Scale SWIFT

PR_GN016311

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Pre Planning
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$1,225	$134	$0	$0	$0	$0	$545	$545	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will assist HRSD in development of a regulatory strategy related to dispersion of treated effluent from outfalls associated with the seven facilities that will be impacted by full-scale implementation of SWIFT.

PROJECT JUSTIFICATION

One objective of full scale SWIFT implementation is to substantially reduce surface discharge by maximizing aquifer recharge at each SWIFT facility. This will result in a reduction in daily flow to surface waters from the associated treatment plants. The variability of effluent flow rate for each facility may also significantly increase. These changes may impact the operation of the existing outfall and may require a related outfall modification or new outfall. Dispersion modeling of each outfall will provide an understanding of the related impacts of these changes and will inform conversations with state regulators.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Kyle Curtis
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	05/31/2019
PER	
Design Delay	
Design	
Bid Delay	
PreConstruction	
Construction	
Closeout	

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$1,225,000
PER	$0
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$1,225,000**
Contingency Budget	$0
Est. Project Costs	**$1,225,000**

Program Management of SWIFT Full Scale Implementation

PR_GN016320

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Design
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$94,176	$59,151	$11,909	$11,909	$2,491	$2,491	$2,491	$2,491	$1,245	$0	$0	$0

PROJECT DESCRIPTION

The SWIFT Full Scale Implementation Program management team will manage the delivery of the advanced water treatment facilities to take HRSD's already highly treated wastewater and produce SWIFT water. The Program Management team will also manage the delivery of the managed aquifer recharge wells, monitoring wells, and associated pumping and piping systems. The Program Management team will also manage delivery of the wastewater treatment plant improvements, outfall modifications, conveyance, and other projects needed to ensure successful SWIFT implementation. The Program Management team will implement the processes, procedures, and systems needed to design, procure, construct, permit, manage, and integrate the new SWIFT related assets. The Program Management team will also provide staff augmentation, owner's consultant services, and other support as needed.

PROJECT JUSTIFICATION

The permitting, design, procurement and construction of advanced water treatment facilities, managed aquifer recharge facilities, wastewater treatment upgrades, conveyance, and outfall modifications required to implement the SWIFT Full Scale Implementation Program will require additional resources and expertise to augment HRSDs capabilities and capacity limitations.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: General Manager
Contacts-Dept Contacts: Lauren Zuravnsky
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	05/01/2020
PER	07/01/2018
Design Delay	02/01/2023
Design	11/01/2018
Bid Delay	02/01/2023
PreConstruction	07/01/2028
Construction	08/01/2022
Closeout	01/01/2033

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	$699,873
PER	$700
Design	$67,019,167
PreConstruction	$0
Construction	$26,456,515
Closeout	$0
Est. Program Cost	**$94,176,255**
Contingency Budget	$0
Est. Project Costs	**$94,176,255**

SWIFT Managed Aquifer Recharge Services

PR_GN016331

System: General
Type: SWIFT

Driver Category: Nutrient Reduction
Project Phase: Pre Planning
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$1,819	$843	$263	$263	$263	$160	$28	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes engineering services necessary to advance the conceptual design and planning for Managed Aquifer Recharge (MAR) wells at each SWIFT facility. Tasks include evaluating the suitability of locations for well sites, preparing preliminary site layouts with respect to well installation and site planning requirements, supporting real estate acquisition, planning well installation logistics, testing, and aquifer conditioning fluid management, developing the overall MAR well data management structure, and supporting contractor and stakeholder outreach.

PROJECT JUSTIFICATION

This project is necessary to inform the selection of individual MAR sites and provide information critical to planning and subsequently installing successful MAR wells. Information developed during this project will support SWIFT recharge and monitoring well land acquisition efforts and locality site planning requirements.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Lauren Zuravnsky
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/28/2017
PER	11/01/2017
Design Delay	11/22/2017
Design	09/27/2018
Bid Delay	12/31/2018
PreConstruction	03/01/2021
Construction	05/01/2026
Closeout	07/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$393,086
PER	$293,939
Design	$0
PreConstruction	$47,041
Construction	$807,255
Closeout	$277,872
Est. Program Cost	**$1,819,193**
Contingency Budget	$304,948
Est. Project Costs	**$2,124,141**

GN016347

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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

0 110 220 440 660 880 Feet

GN016347

James River Land Improvements - Phase II

HRSD

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CIP Location

James River Land Improvements - Phase II

PR_GN016347

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Design
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$4,012	$642	$3,238	$132	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes design and construction of multi-use trails of approximately 3,000 linear feet connecting to existing City of Newport News trails. The project area is located adjacent to HRSDs James River Treatment Plant within the City of Newport News Riverview Farm Park. The project will incorporate multi-use asphalt on grade trail and associated landscaping improvements near the managed aquifer recharge well buildings.

PROJECT JUSTIFICATION

HRSD entered into an Agreement with the City of Newport News to purchase approximately ten (10) acres of land adjacent to the James River Treatment Plant (JRTP) and receive the required easements for managed aquifer recharge wells, buildings, and related piping. Among the requirements stated in the land purchase Agreement is the commitment by HRSD to design and construct public access trails, which will be operated and maintained by the City of Newport News.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Beatriz Patino
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2019
PER	09/02/2024
Design Delay	03/03/2025
Design	04/30/2025
Bid Delay	06/01/2026
PreConstruction	06/01/2026
Construction	07/01/2026
Closeout	08/17/2027

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$61,545
Design	$560,000
PreConstruction	$20,000
Construction	$3,350,000
Closeout	$20,000
Est. Program Cost	**$4,011,545**
Contingency Budget	$549,232
Est. Project Costs	**$4,560,777**

Nansemond Recharge Well Off Site Land Acquisition

PR_GN016348

System: Nansemond
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$16,400	$0	$6,200	$10,200	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will fund the purchase of land and easements that are needed to construct the off site Nansemond Recharge Wells, monitoring well cluster, associated facilities, and linear assets, which will be designed and constructed under separate projects.

PROJECT JUSTIFICATION

Acquiring property outside of Nansemond Treatment Plant is necessary because there is insufficient space within the Nansemond Treatment Plant property to accommodate the total number of recharge wells with the required spacing to minimize interference between wells.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

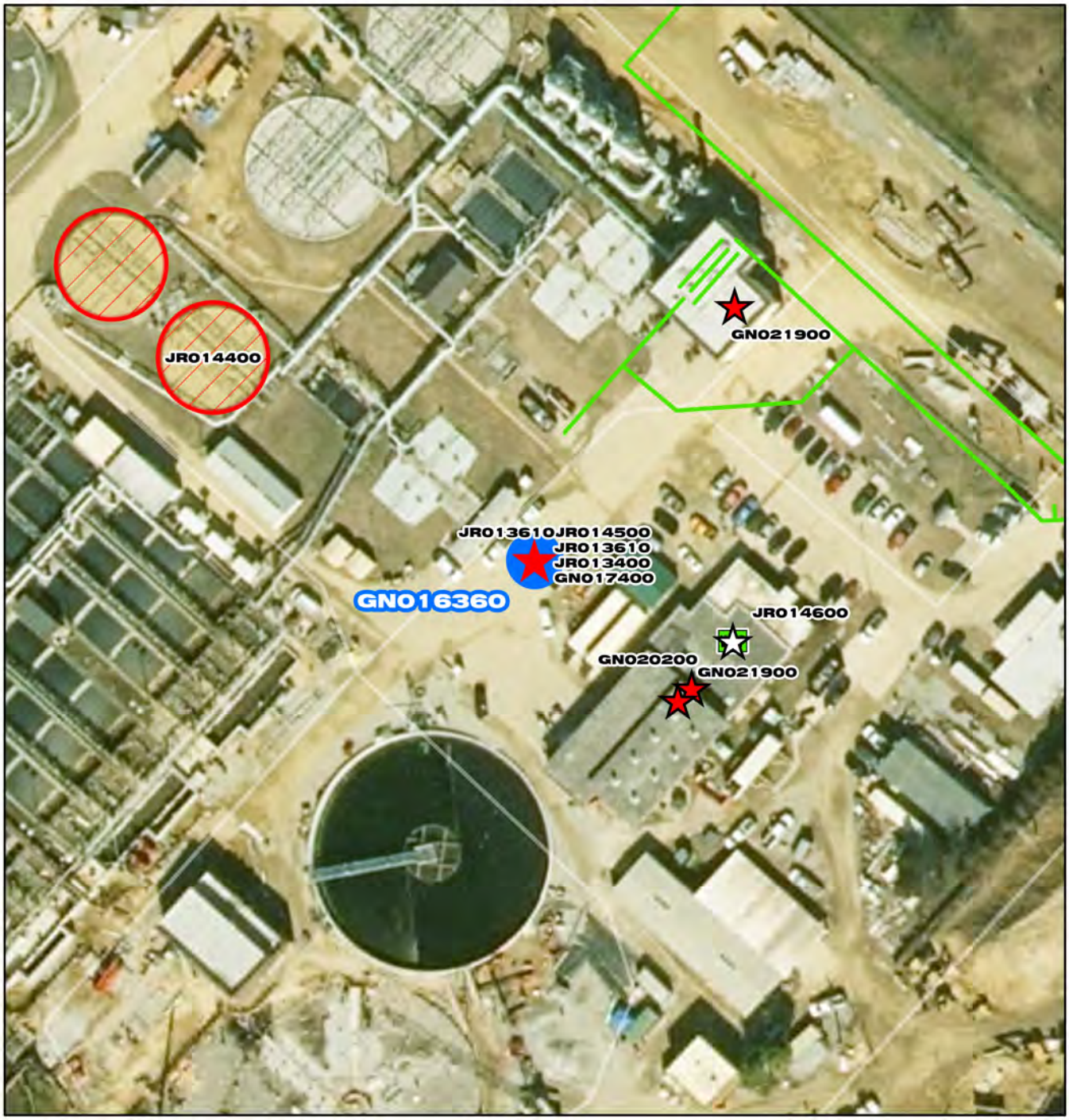
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Lauren Zuravnsky
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	07/01/2028
PreConstruction	07/01/2028
Construction	07/01/2028
Closeout	07/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$16,400,000
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$16,400,000**
Contingency Budget	$1,640,000
Est. Project Costs	**$18,040,000**



GN016360

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

GN016360

James River SWIFT Facility

HRSD

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CIP Location

James River SWIFT Facility

PR_GN016360

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Construction
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$305,700	$296,166	$9,533	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

SWIFT James River will include advanced water treatment facilities needed to produce SWIFT water at the James River Treatment Plant. The scope includes advanced water treatment facilities, conveyance of SWIFT water to the recharge wells, and modifications to the non-potable water system. The scope does not include land acquisition, modifications to the existing outfall system or improvements to the existing wastewater treatment process to improve the quality of the secondary effluent, to be compatible with the SWIFT facilities. The scope does not include drilling of the recharge and monitoring wells.

PROJECT JUSTIFICATION

SWIFT James River is needed to reduce nutrients entering the Chesapeake Bay, augment the groundwater supply, reduce the rate of ground subsidence, protect groundwater from saltwater intrusion and support Virginias economy.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: General Manager
Contacts-Dept Contacts: Aaron Montgomery
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/31/2019
PER	07/01/2019
Design Delay	04/29/2020
Design	04/23/2020
Bid Delay	07/31/2020
PreConstruction	08/02/2019
Construction	02/07/2022
Closeout	04/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$313
PER	$4,079,276
Design	$20,158,208
PreConstruction	$288,289
Construction	$281,173,453
Closeout	$0
Est. Program Cost	**$305,699,539**
Contingency Budget	$0
Est. Project Costs	**$305,699,539**

GN016363

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 80 160 320 480 640 Feet

GN016363

James River Recharge Well Enhancements

HRSD

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CIP Location

James River Recharge Well Enhancements

PR_GN016363

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Design
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$183	$53	$130	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes enhancement of approximately three managed aquifer recharge wells in the City of Newport News Riverview Farm Park. The project area is located within the City's Riverview Farm park and HRSD's easements. The project will incorporate native plants and public access design elements to enhance the area around the managed aquifer recharge well buildings.

PROJECT JUSTIFICATION

HRSD entered into an Agreement with the City of Newport News to purchase approximately ten (10) acres of land adjacent to the James River Treatment Plant (JRTP) and receive the required easements for managed aquifer recharge wells, buildings, and related piping. Among the requirements stated in the land purchase Agreement is the commitment by HRSD to integrate the managed aquifer recharge well buildings into the park through installation of landscaping and public amenities.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Beatriz Patino
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	06/02/2025
PER	06/02/2025
Design Delay	09/01/2025
Design	06/02/2025
Bid Delay	06/01/2026
PreConstruction	06/01/2026
Construction	07/01/2026
Closeout	12/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$42,800
PreConstruction	$10,000
Construction	$125,000
Closeout	$5,000
Est. Program Cost	**$182,800**
Contingency Budget	$91,400
Est. Project Costs	**$274,200**

GN016380

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

GN016380

Nansemond SWIFT Facility

HRSD

N
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CIP Location

Nansemond SWIFT Facility

PR_GN016380

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Construction
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$626,242	$149,902	$205,398	$203,010	$64,368	$3,564	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

Nansemond SWIFT will include advanced water treatment facilities needed to produce SWIFT water at the Nansemond Treatment Plant. The scope includes advanced water treatment facilities, conveyance of SWIFT water to the recharge wells, and modifications to the non-potable water system. The scope does not include land acquisition, modifications to the existing outfall system, or improvements to the existing wastewater treatment process to improve the quality of the secondary effluent to meet the influent requirements of the SWIFT treatment facilities. The scope does not include drilling of the recharge and monitoring wells.

PROJECT JUSTIFICATION

Nansemond SWIFT is needed to reduce nutrients entering the Chesapeake Bay, augment the groundwater supply, reduce the rate of ground subsidence, protect groundwater from saltwater intrusion, and support Virginia's economy. This project will support HRSD's nutrient management strategy for meeting the Lower James River Basin total phosphorus and total nitrogen discharge limits.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: General Manager
Contacts-Dept Contacts: Adam Werner
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/22/2021
PER	05/02/2022
Design Delay	
Design	05/29/2024
Bid Delay	
PreConstruction	02/07/2023
Construction	11/25/2024
Closeout	10/01/2029

COST ESTIMATE

Cost Estimate Class:	**Class 3 (-10% to +30%)**
PrePlanning	$0
PER	$969,626
Design	$43,084,717
PreConstruction	$843,327
Construction	$581,344,197
Closeout	$0
Est. Program Cost	**$626,241,867**
Contingency Budget	$23,455,755
Est. Project Costs	**$649,697,622**

Nansemond Recharge Wells (On Site)

PR_GN016381

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Construction
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$117,210	$38,729	$43,811	$33,916	$754	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

Nansemond Recharge Wells will provide for the construction of recharge wells and monitoring wells; services for the development, logging, testing, and conditioning of wells associated with SWIFT at the Nansemond Treatment Plant. The scope does not include well site development or the mechanical equipment associated with the conveyance of SWIFT water up to and into the wells.

PROJECT JUSTIFICATION

Nansemond Recharge Wells are required for managed aquifer recharge using SWIFT Water. The monitoring wells are required by permit.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Adam Werner
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/21/2021
PER	05/01/2022
Design Delay	03/27/2023
Design	05/29/2024
Bid Delay	01/27/2026
PreConstruction	02/02/2023
Construction	11/08/2024
Closeout	09/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 3 (-10% to +30%)**
PrePlanning	$0
PER	$0
Design	$11,924,700
PreConstruction	$0
Construction	$105,285,165
Closeout	$0
Est. Program Cost	**$117,209,865**
Contingency Budget	$6,067,314
Est. Project Costs	**$123,277,179**

Nansemond Recharge Wells (Off Site)

PR_GN016382

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: PER
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$66,257	$418	$5,215	$3,529	$27,782	$27,413	$1,850	$50	$0	$0	$0	$0

PROJECT DESCRIPTION

Nansemond Recharge Wells (Off-Site) will provide for the design and construction of recharge wells and monitoring wells and services for the development, logging, testing, and conditioning of wells associated with SWIFT at the Nansemond Treatment Plant. The scope does not include well site development or the mechanical equipment associated with the conveyance of SWIFT water up to and into the wells. The well locations are outside the boundary of Nansemond Plant property.

PROJECT JUSTIFICATION

Nansemond Recharge Wells are required for managed aquifer recharge using SWIFT Water. The monitoring wells are required by permit.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Lauren Zuravnsky
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/21/2021
PER	08/08/2024
Design Delay	09/01/2025
Design	04/01/2026
Bid Delay	06/01/2031
PreConstruction	06/01/2026
Construction	08/01/2026
Closeout	10/01/2029

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$417,946
Design	$6,980,000
PreConstruction	$9,000
Construction	$58,750,000
Closeout	$100,000
Est. Program Cost	**$66,256,946**
Contingency Budget	$9,950,000
Est. Project Costs	**$76,206,946**

Nansemond Recharge Well Integration

PR_GN016383

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: PER
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$90,830	$1,172	$3,477	$4,672	$5,667	$26,723	$32,016	$16,072	$1,030	$0	$0	$0

PROJECT DESCRIPTION

The project will design and construct the process mechanical elements, mechanical, civil/site, structural/architectural, electrical, and instrumentation and control for the infrastructure required to convey SWIFT Water from the Nansemond SWIFT facility to the off-site managed aquifer recharge wells and monitoring wells. A section of the backflush and SWIFT Water piping will be constructed from the Nansemond Plant boundary to the traffic circle at the College Drive/Armstead Road intersection under a separate project, Boat Harbor Treatment Plant Transmission Force Main Section 2 project. The remaining off-site SWIFT Water and backflush piping will fall under this project.

PROJECT JUSTIFICATION

Nansemond Recharge Wells are required for managed aquifer recharge using SWIFT Water. The monitoring wells are required by permit. Separation of this project from the well drilling and advanced water treatment facility projects allows for a focused selection of delivery methods and contract requirements for off-site work.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Lauren Zuravnsky
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/21/2021
PER	08/07/2024
Design Delay	10/16/2025
Design	04/01/2026
Bid Delay	09/01/2031
PreConstruction	08/01/2027
Construction	11/01/2027
Closeout	03/01/2031

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$1,171,000
Design	$8,150,000
PreConstruction	$9,000
Construction	$81,500,000
Closeout	$0
Est. Program Cost	**$90,830,000**
Contingency Budget	$9,090,000
Est. Project Costs	**$99,920,000**

GN016390

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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

0 110 220 440 660 880 Feet

GN016390

VIP SWIFT Tertiary Preliminary Engineering

HRSD

N
W E
S

CIP Location

VIP SWIFT Tertiary Preliminary Engineering

PR_GN016390

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: PER
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$4,920	$3,915	$1,005	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will include the preliminary engineering of the initial phase of SWIFT implementation, including tertiary treatment comprised of coagulation, flocculation, and sedimentation followed by granular media filters.

PROJECT JUSTIFICATION

This project will support HRSD's nutrient management strategy for meeting the 2032 Lower James River Basin total phosphorus discharge limits.

FUNDING TYPE

Funding Type: Cash

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	03/10/2023
PER	07/04/2023
Design Delay	11/05/2026
Design	09/01/2026
Bid Delay	11/05/2026
PreConstruction	11/05/2026
Construction	11/05/2026
Closeout	11/05/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$1,491,069
PER	$3,428,463
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$4,919,532**
Contingency Budget	$206,421
Est. Project Costs	**$5,125,953**

GN016391

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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

0 110 220 440 660 880 Feet

GN016391

VIP SWIFT Tertiary Site Work

HRSD

N
W E
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CIP Location

VIP SWIFT Tertiary Site Work

PR_GN016391

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$52,916	$0	$0	$1,881	$962	$11,416	$22,780	$14,891	$987	$0	$0	$0

PROJECT DESCRIPTION

This project will design and construct the necessary site preparation, grading, and debris removal to prepare the former Lambert's Point Golf Course site adjacent to VIP treatment plant for SWIFT tertiary treatment facilities.

PROJECT JUSTIFICATION

VIP treatment plant is land constrained. A portion of the former Lambert's Point Golf Course, adjacent to the treatment plant, was purchased for treatment expansion including SWIFT facilities. Prior to redevelopment as a golf course, the parcel was used as a landfill from prior to 1965 until its closure around 1980. Separate planning, design, and construction will allow this project to proceed prior to the construction of treatment facilities.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	03/01/2023
PER	07/01/2023
Design Delay	09/01/2025
Design	09/01/2027
Bid Delay	09/01/2025
PreConstruction	11/01/2028
Construction	05/01/2029
Closeout	11/01/2032

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$2,515,000
PreConstruction	$101,000
Construction	$50,300,000
Closeout	$0
Est. Program Cost	**$52,916,000**
Contingency Budget	$13,229,000
Est. Project Costs	**$66,145,000**

GN016392

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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

0 110 220 440 660 880 Feet

GN016392

VIP SWIFT Tertiary Facility

HRSD

N
W E
S

CIP Location

VIP SWIFT Tertiary Facility

PR_GN016392

System: VIP
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$269,369	$0	$0	$22,410	$23,951	$49,282	$96,407	$73,123	$4,197	$0	$0	$0

PROJECT DESCRIPTION

This project will include the design, construction, and commissioning of the initial phase of SWIFT implementation, including tertiary treatment comprised of coagulation, flocculation, and sedimentation followed by granular media filters.

PROJECT JUSTIFICATION

This project will support HRSD's nutrient management strategy for meeting the 2032 Lower James River Basin total phosphorus discharge limits.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	03/01/2023
PER	07/04/2023
Design Delay	09/01/2025
Design	07/01/2027
Bid Delay	02/29/2028
PreConstruction	11/01/2028
Construction	04/01/2029
Closeout	11/01/2032

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$44,820,000
PreConstruction	$449,000
Construction	$224,100,000
Closeout	$0
Est. Program Cost	**$269,369,000**
Contingency Budget	$67,342,250
Est. Project Costs	**$336,711,250**

GN016700

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

N
W E
S

CIP Location

GN016700

Treatment Plant Solids Handling Replacement Phase II

HRSD

Treatment Plant Solids Handling Replacement Phase II

PR_GN016700

System: General
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$11,418	$4,245	$5,057	$2,117	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will replace two and refurbish one Dewatering Centrifuges at the James River Treatment Plant (JRTP). The one existing Sharples DS706 Centrifuges and required accessory equipment will be uninstalled, refurbished, and reinstalled at the JRTP. Additionally, two DS-706 centrifuges acquired from Denver Metro will be rehabilitated and installed at the JRTP, for a total of three Sharples DS-706 machines in the facility. In addition to the dewatering equipment replacement, this project will replace ancillary equipment to the dewatering process, include centrate piping and NPW pumps and piping. This project will also include the construction of a new control room for a RIO cabinet on the third floor of the Dewatering Building.

PROJECT JUSTIFICATION

Rehabilitating and replacing the existing dewatering centrifuges at JRTP with like dewatering equipment, instrumentation/controls, and operations across all dewatering systems will provide the plant with reliable dewatering processes as SWIFT comes online. This project will allow for leveraging of existing assets for established needs, renewing dewatering at JRTP with equipment that improves resource and operational efficiencies.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Angela Weatherhead
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/02/2018
PER	01/01/2020
Design Delay	03/19/2021
Design	08/20/2024
Bid Delay	07/22/2025
PreConstruction	07/23/2025
Construction	03/01/2026
Closeout	09/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$1,390,219
PreConstruction	$0
Construction	$10,017,953
Closeout	$10,000
Est. Program Cost	**$11,418,172**
Contingency Budget	$500,898
Est. Project Costs	**$11,919,070**

Interceptor Systems PS Control and SCADA Upgrades and Enhancements Phase II

PR_GN017200

System: General
Type: Software and Technology

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$10,505	$9,216	$619	$619	$52	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project provides for implementation of Phase II of the Interceptor System Supervisory Control and Data Acquisition System (SCADA). This project will replace approximately 130 control panels at remote HRSD facilities. The project will also provide replacement of the current top-end SCADA software and hardware.

PROJECT JUSTIFICATION

The existing remote facilities require replacement of the control panels and SCADA system to provide operational improvements and replace aging equipment that was installed in the 1990s. The current design of the control panels at the remote facilities does not promote adequate data acquisition, supervisory control, or emerging control technologies.

FUNDING TYPE

Funding Type: Cash

CONTACTS

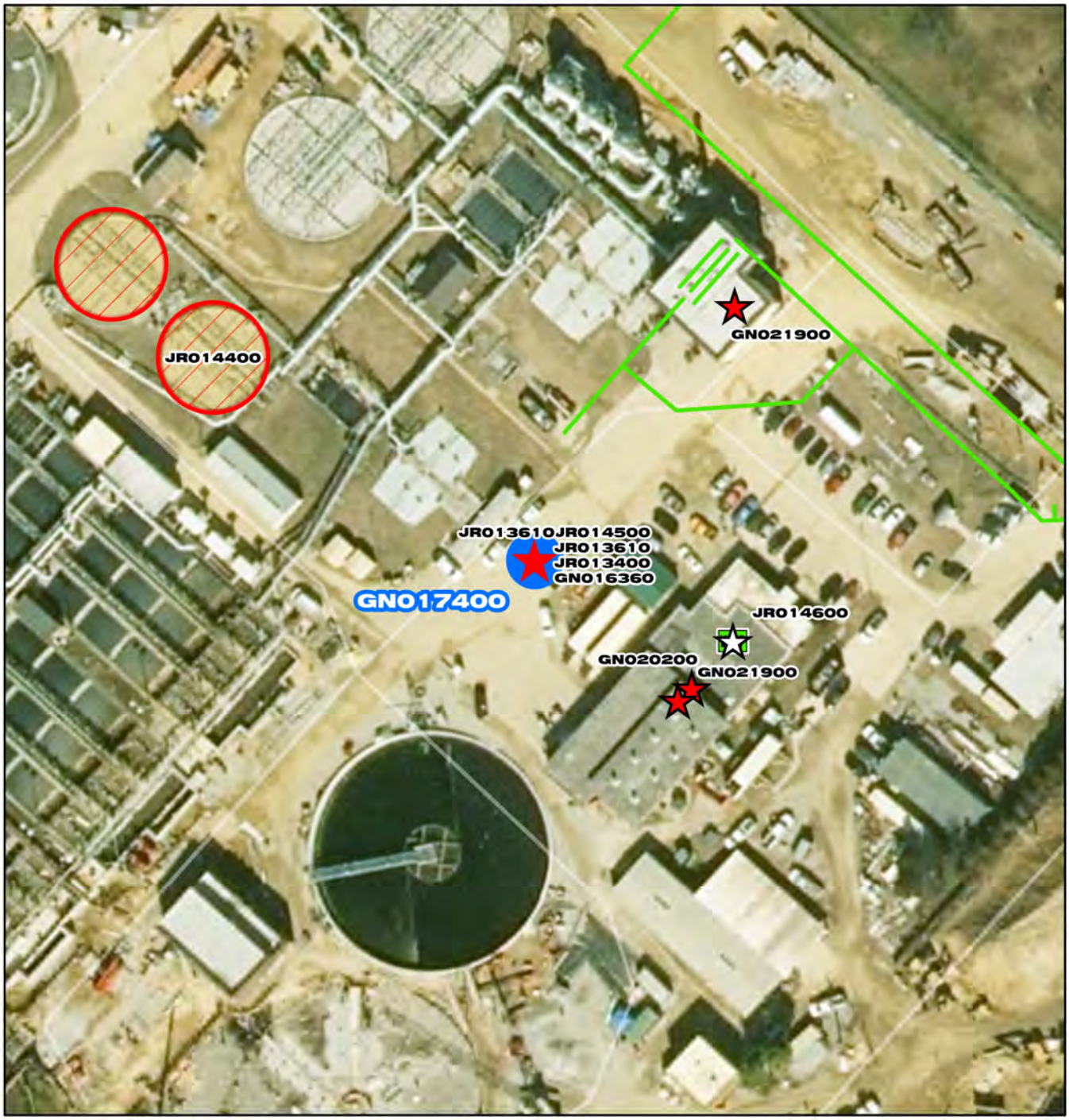
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Chris Stephan
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	05/01/2020
PER	05/01/2020
Design Delay	05/01/2020
Design	05/01/2020
Bid Delay	05/01/2020
PreConstruction	05/01/2020
Construction	07/01/2020
Closeout	08/01/2022

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$10,505,000
Closeout	$0
Est. Program Cost	**$10,505,000**
Contingency Budget	$0
Est. Project Costs	**$10,505,000**



GN017400

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

GN017400

Treatment Plant Dewatering Replacement Phase III

HRSD

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W E
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CIP Location

Treatment Plant Dewatering Replacement Phase III

PR_GN017400

System: General
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$12,926	$4,381	$7,316	$1,229	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes evaluation, design, and construction relating to the modification of the solids handling building for the installation of two HRSD-owned final dewatering centrifuges. Additionally, the project will include rehabilitation as needed of HRSD-owned centrifuges currently installed and in operation at the James River Treatment Plant (JRTP) (DS706) and Chesapeake-Elizabeth Treatment Plant (CETP) (PM76000). These centrifuges will be installed in locations with no currently installed centrifuges at Virginia Initiative Plant (VIP), requiring addition of cake conveyors and other appurtenance to feed solids and polymer to the centrifuges, to convey dewatered solids cake to the multiple hearth furnace, and to connect to the centrate drain.

PROJECT JUSTIFICATION

This project will increase capacity of solids handling systems at the VIP by increasing hydraulic throughput of solids dewatering by the installation of larger centrifuges. Currently, primary sludge pumping and activated solids wastage is intermittently limited by hydraulic throughput limitations of existing dewatering centrifuges. Limitations to solids pumping and wastage due to existing centrifuge hydraulic capacity have caused upset to nutrient removal performance at VIP.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Angela Weatherhead
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	10/01/2021
PER	09/01/2020
Design Delay	07/05/2023
Design	08/07/2023
Bid Delay	01/31/2025
PreConstruction	02/03/2025
Construction	11/01/2025
Closeout	10/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$290,408
Design	$956,968
PreConstruction	$13,484
Construction	$11,655,105
Closeout	$10,000
Est. Program Cost	**$12,925,965**
Contingency Budget	$1,165,511
Est. Project Costs	**$14,091,476**

Fleet Management Program

PR_GN017500

System: General
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	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$28,800	$0	$0	$3,230	$3,230	$3,230	$3,230	$3,230	$3,230	$3,230	$3,230	$2,961

PROJECT DESCRIPTION

This project will provide funding for the scheduled replacement of fleet assets.

PROJECT JUSTIFICATION

Fleet assets are on a scheduled replacement plan. This program will ensure there is funding in each fiscal year to meet the replacement schedule.

FUNDING TYPE

Funding Type: Cash

CONTACTS

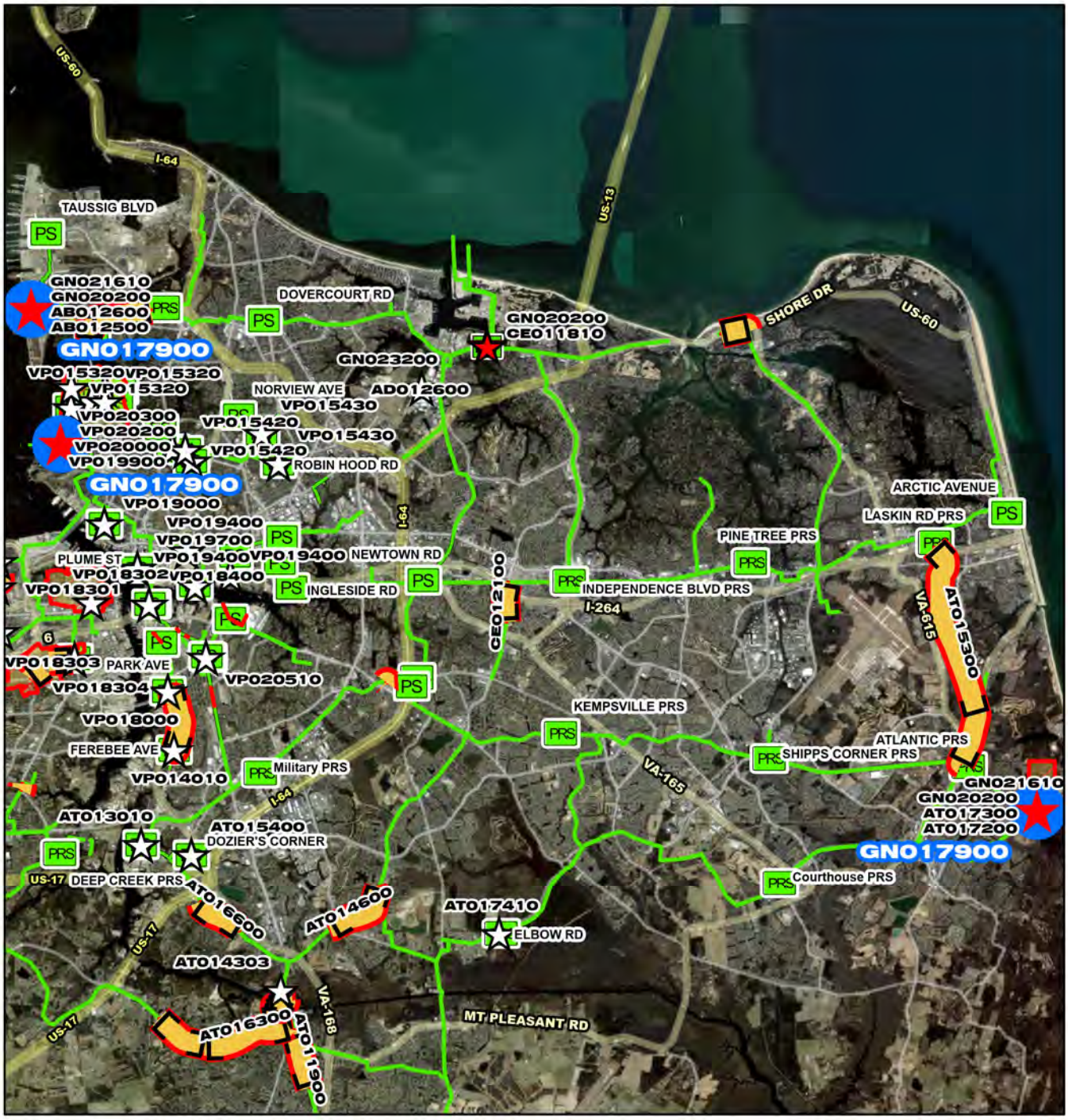
Contacts-Requesting Dept: Operations-Support Systems
Contacts-Dept Contacts: Lee Heath
Contacts-Managing Dept: Operations-Support Systems

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2020
PER	07/01/2020
Design Delay	07/01/2020
Design	07/01/2020
Bid Delay	07/01/2020
PreConstruction	07/01/2020
Construction	07/01/2027
Closeout	06/01/2036

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$28,800,000
Closeout	$0
Est. Program Cost	**$28,800,000**
Contingency Budget	$0
Est. Project Costs	**$28,800,000**



GN017900

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 5,000 10,000 20,000 30,000 40,000 Feet

GN017900

Solids System Improvements for Army Base MHI Offline

HRSD

N
W E
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CIP Location

Solids System Improvements for Army Base MHI Offline

PR_GN017900

System: General
Type: Biosolids

Driver Category: Clean Air Act
Project Phase: Construction
Regulatory: Clean Air Act

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$7,236	$6,134	$859	$227	$17	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

Design and installation of thickened liquid solids load out facilities at Army Base Treatment Plant (ABTP) and thickened liquid solids load in facilities at Atlantic Treatment Plant (ATP) and Virginia Initiative Plant (VIP). Completed facilities will leverage existing solids handling capacity at receiving plants to remove solids handling facilities at ABTP from operation (including dewatering and multiple hearth incinerator (MHI) operations). Utilizing improvements will require contracting of thickened liquid solids hauling from ABTP to ATP and VIP.

PROJECT JUSTIFICATION

Project is projected to reduce net annual operating expenses for ABTP solids management by approximately $100,000/year. Removing ABTP solids handling systems from operation will reduce baseline operational staffing requirements at ABTP by four (4) Plant Operators, one (1) Maintenance Operator, one (1) Maintenance Operator Assistant; reduce electrical energy requirements at ABTP by 27 percent; and reduce net carbon emissions associated with ABTP solids management (inclusive of contract hauling of thickened liquid sludge) by 2,880 tons CO2e/year (35% of current ABTP net annual emissions). Removing ABTP MHI from operation mitigates regulatory risk of CAA129 MACT standards non-compliance.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Delane Carty
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2020
PER	10/14/2020
Design Delay	05/17/2021
Design	05/19/2021
Bid Delay	02/11/2022
PreConstruction	05/02/2022
Construction	08/10/2022
Closeout	09/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$44,864
Design	$573,028
PreConstruction	$17,938
Construction	$6,500,000
Closeout	$100,000
Est. Program Cost	**$7,235,830**
Contingency Budget	$330,000
Est. Project Costs	**$7,565,830**

North Shore Galvanic Cathodic Protection Rehabilitation

PR_GN018600

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$2,575	$811	$743	$1,021	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will renew eleven (11) Cathodic Protection(CP) systems in the Interceptor system currently protecting force mains with a high consequence of failure. The Interceptor force main CP systems requiring renewal consists of NF-015, NF-170, NF-172, NF-197, NF-204, NF-205, NF-215, NF-216, NF-217, NF-223, NF-961.

PROJECT JUSTIFICATION

The identified cathodic protection systems are no longer providing an adequate level of protection for force mains located in highly corrosive soils, which increases the potential for future failures due to external corrosion. The CP system renewals associated with NF-172, NF-204, and NF-205 are part of the Rehab Action Plan Phase 2 projects.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	12/01/2022
PER	02/02/2023
Design Delay	07/03/2023
Design	07/01/2023
Bid Delay	12/01/2026
PreConstruction	12/01/2026
Construction	03/01/2027
Closeout	01/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 2 (-5% to +20%)**
PrePlanning	$0
PER	$0
Design	$365,625
PreConstruction	$36,562
Construction	$2,102,341
Closeout	$70,667
Est. Program Cost	**$2,575,195**
Contingency Budget	$420,468
Est. Project Costs	**$2,995,663**

South Shore Galvanic Cathodic Protection Rehabilitation Phase I

PR_GN018700

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$3,635	$345	$722	$2,140	$416	$12	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will renew twelve (12) Cathodic Protection(CP) systems in the Interceptor system currently protecting force mains with a high consequence of failure. The Interceptor force main CP systems requiring renewal consists of SF-024, SF-081, SF-082, SF-083, SF-283, SF-084, SF-126, SF-172, SF 225,- SF-260, SF-268, and SF-281.

PROJECT JUSTIFICATION

The identified cathodic protection systems are no longer providing an adequate level of protection for force mains located in highly corrosive soils, which increases the potential for future failures due to external corrosion.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	03/01/2024
PER	05/02/2024
Design Delay	10/02/2024
Design	05/01/2026
Bid Delay	02/01/2027
PreConstruction	02/01/2027
Construction	05/01/2027
Closeout	09/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 2 (-5% to +20%)**
PrePlanning	$0
PER	$164,681
Design	$496,315
PreConstruction	$49,632
Construction	$2,853,812
Closeout	$70,667
Est. Program Cost	**$3,635,107**
Contingency Budget	$570,762
Est. Project Costs	**$4,205,870**

South Shore Galvanic Cathodic Protection Rehabilitation Phase II **PR_GN018800**

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$3,612	$591	$812	$1,832	$364	$12	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will renew eleven (11) Cathodic Protection(CP) systems in the Interceptor system currently protecting force mains with a high consequence of failure. The interceptor force main CP systems requiring renewal will consist of SF-216, SF-223, SF-235, SF-261, SF-262, SF-263, SF-265, SF 270, SF-274, SF-275, and SF-284.

PROJECT JUSTIFICATION

The identified cathodic protection systems are no longer providing an adequate level of protection for force mains located in highly corrosive soils, which increases the potential for future failures due to external corrosion. The CP system renewal associated with SF-262 is part of the Rehab Action Plan Phase 2 projects.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	07/03/2023
PER	09/04/2023
Design Delay	02/02/2024
Design	02/01/2024
Bid Delay	12/01/2026
PreConstruction	12/01/2026
Construction	03/01/2027
Closeout	09/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 2 (-5% to +20%)**
PrePlanning	$0
PER	$0
Design	$517,009
PreConstruction	$51,701
Construction	$2,972,803
Closeout	$70,667
Est. Program Cost	**$3,612,180**
Contingency Budget	$594,561
Est. Project Costs	**$4,206,741**

Pump Station Motor Control Center Replacements - Phase I

PR_GN018900

System: General
Type: Electrical

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$2,863	$780	$532	$532	$532	$488	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project is to replace Motor Control Centers (MCCs) at various pump stations located within HRSD service area that have exhibited signs of copper bus bar deterioration. The bus bar condition was identified while performing annual maintenance inspections.

PROJECT JUSTIFICATION

This project will improve the overall reliability of HRSD's collection systems to prevent disruptions to the electrical distribution system, and safeguard HRSD employees from potential exposure to an arc flash event. This project will include the replacement of variable frequency drives (VFD's), motor control center (MCC), and associated electrical equipment. Lastly, the project will involve the installation of an air purification system to help mitigate hydrogen sulfide (H2S) gases which is the leading cause of copper bus bar deterioration.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-E&I
Contacts-Dept Contacts: Sherman Pressey
Contacts-Managing Dept: Operations-E&I

PROPOSED SCHEDULE START DATE

PrePlanning	05/19/2023
PER	05/19/2023
Design Delay	05/19/2023
Design	05/19/2023
Bid Delay	05/19/2023
PreConstruction	05/19/2023
Construction	08/25/2023
Closeout	06/01/2030

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$2,863,500
Closeout	$0
Est. Program Cost	**$2,863,500**
Contingency Budget	$572,700
Est. Project Costs	**$3,436,200**

Water Quality Department Instrumentation Equipment Program

PR_GN019400

System: General
Type: Facilities, Buildings and Capital Equipment

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$2,700	$0	$0	$300	$300	$300	$300	$300	$300	$300	$300	$300

PROJECT DESCRIPTION

This project will provide funding for analytical equipment for the Water Quality Department.

PROJECT JUSTIFICATION

The sampling and analytical equipment will support various projects and programs led by the Water Quality Department. This program will ensure there is funding in each fiscal year to meet the Department's needs.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Jamie Mitchell
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2024
PER	07/01/2024
Design Delay	07/01/2024
Design	07/01/2024
Bid Delay	07/01/2024
PreConstruction	07/01/2024
Construction	07/01/2027
Closeout	07/01/2036

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$2,700,000
Closeout	$0
Est. Program Cost	**$2,700,000**
Contingency Budget	$0
Est. Project Costs	**$2,700,000**

Interceptor Systems PS Control and SCADA Upgrades and Enhancements Phase III

PR_GN019600

System: General
Type: Pump Stations

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$10,457	$769	$734	$2,688	$3,578	$2,685	$4	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes a comprehensive review of the SCADA system to ensure the long-term viability of the system to extend into machine learning and SmartSewer applications. The project also includes the upgrades necessary to provide additional, necessary functionality. Additional functionality will include VeeterRoot (Emergency Generator - Diesel UST) levels, leak detection, and total fuel quantities; Emergency Generator and ATS Power Management connectivity and graphics; as well as individual VFD network cards and ethernet modbus communication to pump station variable frequency drives.

PROJECT JUSTIFICATION

The original SCADA system requirements were developed over fifteen years ago and technology has progressed and may have outpaced the original design. A comprehensive review of the network architecture, communications, database architecture, and system requirements is necessary to ensure the viability of the system to maximize security, minimize life-cycle costs, and ensure a viable platform to extend into machine learning and SmartSewer applications. Additional functionality will be extended and include upgrades to and inclusion of HRSD's VeeterRoot UST Leak detection systems, which include a wide range of mostly outdated models and alarms. This project will update all systems to the latest technology and provide network cards to communicate this data to the top-end SCADA system. Leak detection, inner wall annular floats, sump floats, belly tanks, and fuel transfer pump conditions are a necessity for proper management, alarming, and upkeep for each pump station. USTs are regulated by DEQ and these project improvements will provide a means for required leak detection and alarming, and ultimately better fuel management. Emergency Generator, ATS, VFD, and Power Management connectivity are also included upgrades with this project for total visibility into each pump station's operation and power consumption. Availability of this data through the SCADA system will provide for complete awareness and better overall operations at each pump station.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Ted Denny
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	09/02/2024
PER	09/02/2024
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	07/01/2027
PreConstruction	07/01/2027
Construction	10/01/2027
Closeout	04/01/2030

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$462,760
Design	$1,040,000
PreConstruction	$5,200
Construction	$8,944,000
Closeout	$5,200
Est. Program Cost	**$10,457,160**
Contingency Budget	$1,778,400
Est. Project Costs	**$12,235,560**

GN019700

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

GN019700

Treatment Plant Dewatering Improvement Phase IV

HRSD

N
W E
S

CIP Location

Treatment Plant Dewatering Improvement Phase IV

PR_GN019700

System: General
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$11,169	$3,444	$6,612	$1,112	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will design and install improvements at the Virginia Initiative Plant to include the addition of two gravity belt thickeners for waste-activated sludge thickening and provide necessary electrical, control, and mechanical improvements to make the system operable.

PROJECT JUSTIFICATION

Wastage of Activated Sludge from the VIP Biological Nutrient Removal (BNR) process is intermittently hydraulically limited by the capacity of dewatering centrifuges and centrate management systems. This project will un-bottleneck the treatment process and allow on-demand wastage of solids from the BNR process, which will improve treatment performance at VIP and stabilize solids handling operations, including centrifuge dewatering and incineration. This improvement will also help VIP to better accommodate hauled liquid primary solids from Army Base Treatment Plant (ABTP) by reducing the overall hydraulic load on the VIP dewatering centrifuges. Feasibility of the proposed improvements has been previously investigated under GN017400 in support of the budget and schedule estimates shown.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

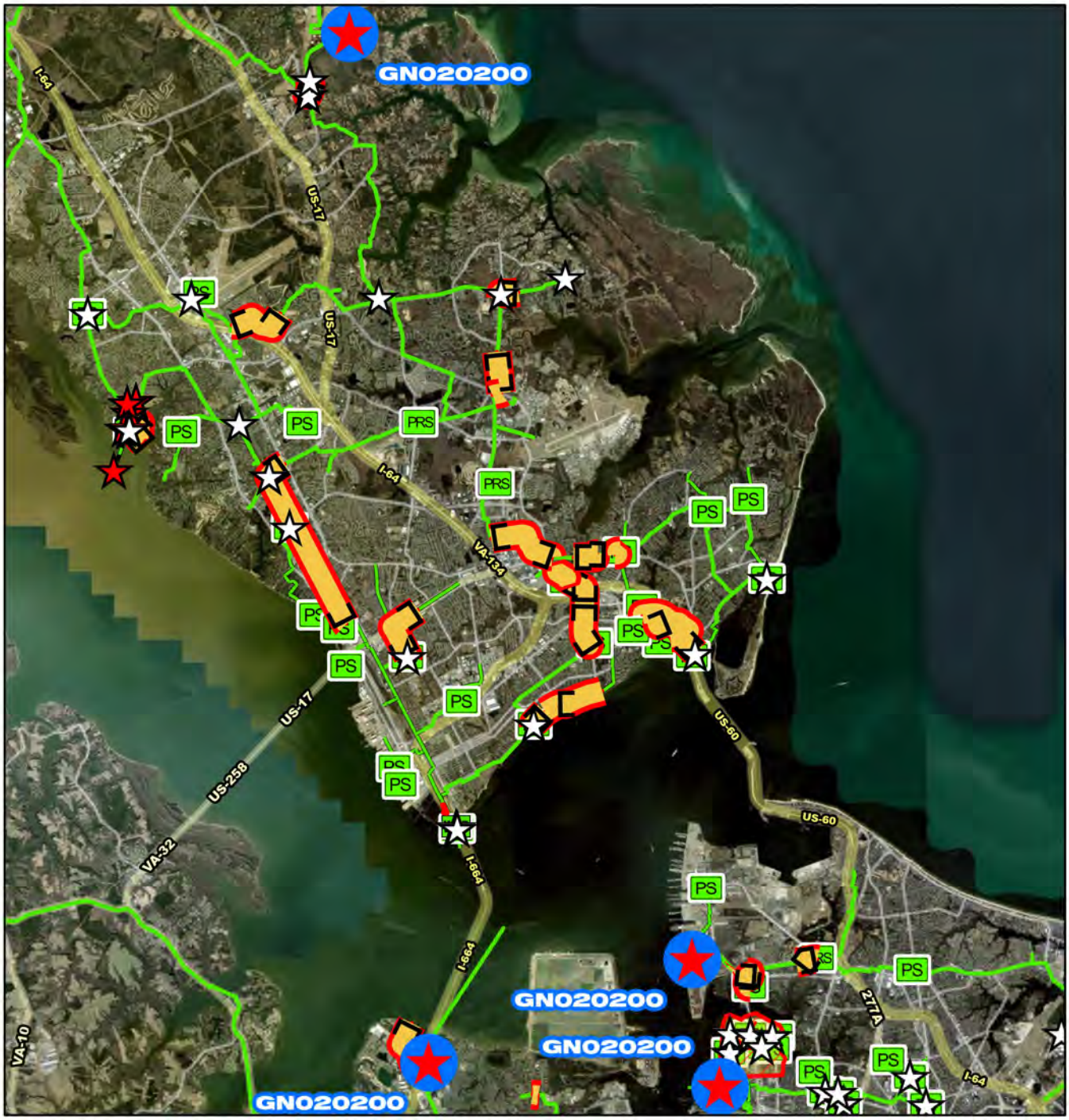
Contacts-Requesting Dept: Operations
Contacts-Dept Contacts: Angela Weatherhead
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	01/02/2023
PER	07/31/2023
Design Delay	12/04/2023
Design	12/04/2023
Bid Delay	02/03/2025
PreConstruction	02/03/2025
Construction	11/01/2025
Closeout	10/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$668,839
PreConstruction	$10,817
Construction	$10,479,353
Closeout	$10,000
Est. Program Cost	**$11,169,009**
Contingency Budget	$1,047,935
Est. Project Costs	**$12,216,944**



GN020200

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 5,585 11,170 22,340 33,510 44,680 Feet

N
W E
S

CIP Location

GN020200

Treatment Plant Fire Suppression System Upgrades

HRSD

Treatment Plant Fire Suppression System Upgrades

PR_GN020200

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Safety Compliance
Project Phase: Design
Regulatory: None

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$1,196	$703	$493	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project involves developing conceptual designs, Class 5 estimates, and design documents to upgrade fire suppression systems at the YRTP, ABTP NTP, and VIP methanol facilities. The existing systems currently utilize Alcohol Resistant Aqueous Film Forming Foam (AR-AFFF) containing Perfluoroalkyl and Polyfluoroalkyl substances (PFAS). Due to the Federal Forever Chemical Regulation Accountability Act of 2024, refilling extinguishers with AR-AFFF is being phased out and will no longer be permitted. Furthermore, if any existing systems are discharged, whether due to emergency, or false alarms and equipment malfunctions experienced in the past, they cannot be recharged with the current foam. In addition, a temporary foam suppression trailer will be purchased to extinguish methanol fires, should the need arise, while the permanent suppression systems are offline.

PROJECT JUSTIFICATION

The current methanol fire suppression systems use AR-AFFF which contains PFAS. AR-AFFF foam is being phased out due to the Federal Forever Chemical Regulation Accountability Act of 2024. If any of these fire suppression systems are discharged the existing system cannot be re-charged. In the past, some of these fire suppression systems have experienced false alarms and equipment malfunction causing activation of the AR-AFFF. This item was brough to the 9/11/23 HRSD QST and agreed to be an out of cycle CIP.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Support Systems
Contacts-Dept Contacts: Delane Carty
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/01/2024
PER	06/01/2025
Design Delay	06/01/2025
Design	02/01/2025
Bid Delay	03/01/2027
PreConstruction	03/01/2027
Construction	04/01/2026
Closeout	03/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$76,363
PER	$0
Design	$1,032,434
PreConstruction	$0
Construction	$87,429
Closeout	$0
Est. Program Cost	**$1,196,226**
Contingency Budget	$55,994
Est. Project Costs	**$1,252,220**

High Priority Inflow and Infiltration Reduction Program Implementation

PR_GN020310

System: General
Type: Locality and Private Property

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$122,156	$27,937	$44,387	$29,213	$20,619	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project encompasses the program management, design, construction, and post construction activities identified in the High Priority Inflow and Infiltration Reduction Program (HPIIRP). These activities include, but are not limited to: program management and controls, design, construction, public outreach and stakeholder engagement, flow monitoring, Sanitary Sewer Evaluation Surveys (SSES), cost effective analysis, hydraulic modeling, private I&I investigations, post construction modeling as well as development of the Adaptative Management Plan. This project and the overall Program are being delivered via the PPEA project delivery method.

PROJECT JUSTIFICATION

HRSD's Regional Wet Weather Management Plan (RWWMP) identified nineteen high-priority basins where Inflow and Infiltration (I&I) could be implemented to cost-effectively reduce modeled-simulated Sanitary Sewer Overflows (SSOs). Under project GN020300, the Design-Builder performed data collection and analysis on the nineteen high-priority project areas and other alternate basins identified by localities as contributors to SSOs. As a result of this analysis, the Design-Builder developed a Comprehensive Inflow and Infiltration Reduction Plan, which concluded that only three of the original nineteen basins were cost-effective for I&I reduction projects, and ultimately identified seven alternate basins recommended for incorporation into the program. This project includes the design and construction of the selected priority projects and post-construction flow monitoring and modeling to determine the resulting reduction in modeled SSO volume.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Beatriz Patino
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	09/02/2025
PER	09/02/2025
Design Delay	09/02/2025
Design	10/01/2025
Bid Delay	04/01/2026
PreConstruction	04/01/2026
Construction	04/01/2026
Closeout	02/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$31,505,840
PreConstruction	$0
Construction	$85,000,000
Closeout	$5,650,000
Est. Program Cost	**$122,155,840**
Contingency Budget	$21,560,000
Est. Project Costs	**$143,715,840**

System: General
Type: Facilities, Buildings and Capital Equipment

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$4,433	$4,245	$188	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for replacement of aging fleet vehicles and purchase of additional vehicles to meet the needs of the organization. An itemized list of vehicles to be replaced or added is maintained by the Support Systems Division.

PROJECT JUSTIFICATION

Replacement of aging vehicles will result in lower repair costs and the purchase of additional vehicles will provide for increased staff efficiency.

FUNDING TYPE

Funding Type: Cash

CONTACTS

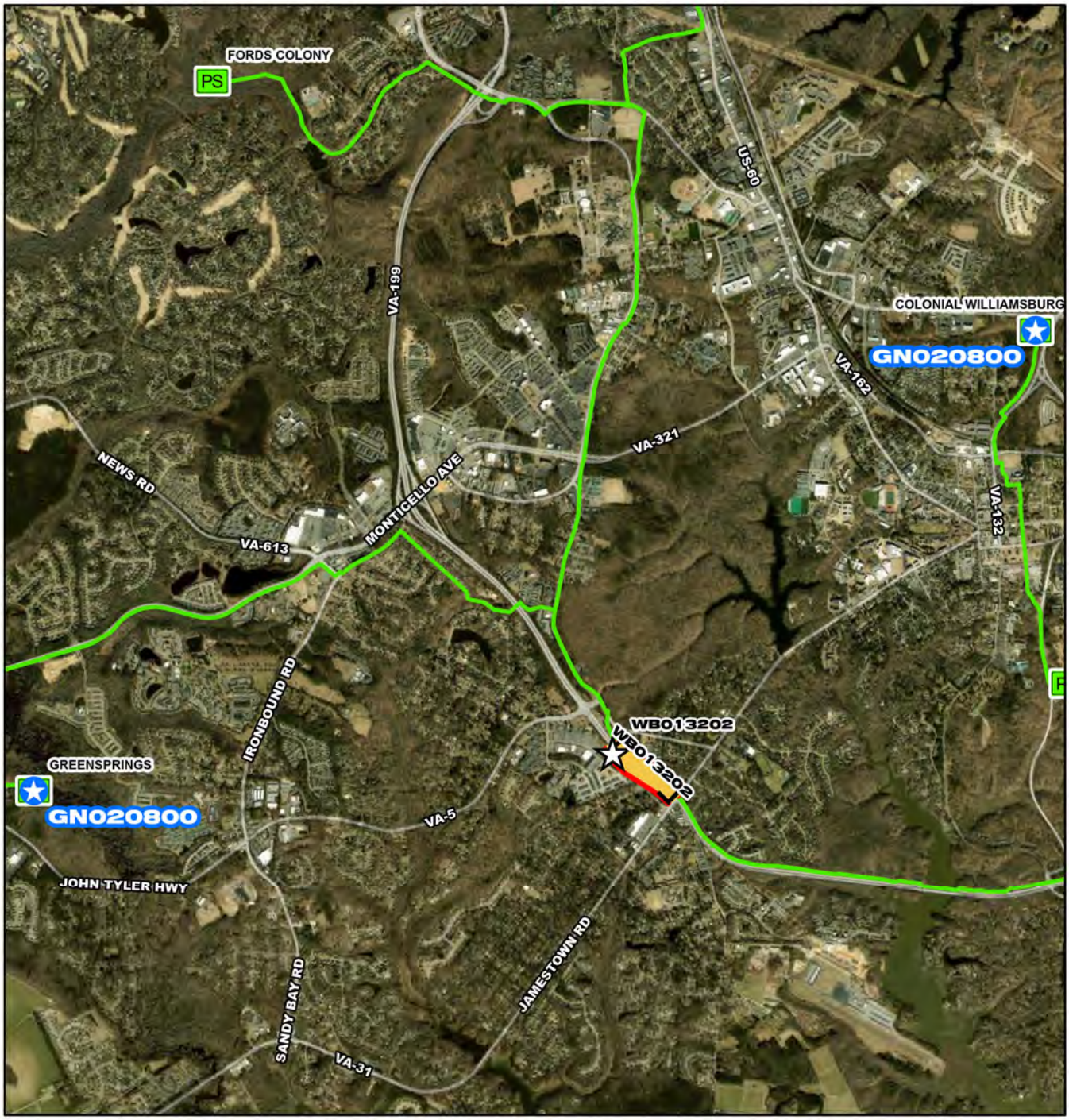
Contacts-Requesting Dept: Operations-Support Systems
Contacts-Dept Contacts: Lee Heath
Contacts-Managing Dept: Operations-Support Systems

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2024
PER	07/01/2024
Design Delay	07/01/2024
Design	07/01/2024
Bid Delay	07/01/2024
PreConstruction	07/01/2024
Construction	07/01/2024
Closeout	09/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$3,570,608
PER	$0
Design	$0
PreConstruction	$0
Construction	$862,172
Closeout	$0
Est. Program Cost	**$4,432,780**
Contingency Budget	$0
Est. Project Costs	**$4,432,780**



GN020800

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 1,150 2,300 4,600 6,900 9,200 Feet

GN020800

North Shore Pump Station Influent Valve Installations

HRSD

N
W E
S

CIP Location

North Shore Pump Station Influent Valve Installations

PR_GN020800

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$878	$305	$572	$1	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will include the installation of a shutoff isolation valve at Colonial Williamsburg and Greensprings Pump Stations. The work will require the Contractor to bypass the pump station, isolate the last segment of piping between the terminal manhole and the pump station's wet well wall, remove a portion of the existing piping, install a new vertical gate valve, and complete the site restoration.

PROJECT JUSTIFICATION

Both stations have failed sluice/slide gates and no longer have a permanent mechanical means to isolate system flows from entering into the station wet wells. These gates are required to provide Operations control of influent flows to perform maintenance activities inside the wet wells. The new valves offer a more robust and reliable means of isolating flow that enters the wet well than the sluice/slide gates. The use of temporary plugs induces some inherent safety concerns due to the potential unexpected flooding of the wet well should the temporary measure fail.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Donald Jennings
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2024
PER	11/04/2024
Design Delay	05/02/2025
Design	06/01/2025
Bid Delay	04/01/2026
PreConstruction	04/01/2026
Construction	06/01/2026
Closeout	10/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$110,442
PreConstruction	$5,200
Construction	$757,158
Closeout	$5,200
Est. Program Cost	**$878,000**
Contingency Budget	$145,600
Est. Project Costs	**$1,023,600**

Microbial Source Tracking Identified Locality Repair Program

PR_GN020900

System: General
Type: Locality and Private Property

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$4,000	$0	$0	$0	$1,600	$1,600	$800	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide funding for the Microbial Source Tracking (MST) Program required as part of the Integrated Plan.

PROJECT JUSTIFICATION

Several water bodies in the Hampton Roads region remain impaired by bacteria with elevated levels found in dry weather in areas that have no record of sewer overflow and, in some cases, in areas without any public sewer infrastructure. Dry weather, ongoing, sources almost always present a greater impact to water quality than isolated wet weather-related sewer overflows. Surface water monitoring data following SSOs has indicated that the impacts of a transient SSO on the long-term impairment of a waterway are minimal, supporting the conclusion that waterway impairments in the Hampton Roads area are driven by chronic and persistent sources. Given that the regional sanitary sewer system has no chronic capacity-related overflow locations, the most effective approach toward achieving a higher degree of public health protection is to identify and eliminate the sources of bacterial contamination, specifically those that are known to represent the greatest risk to public health - human sources. To this end, HRSD has implemented its Microbial Source Tracking Program. This focused water quality monitoring effort, in partnership with local governments and the Virginia Department of Health, has been successfully used to identify, locate, and eliminate chronic and persistent non-SSO-related sources of human-sourced bacteria.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Jamie Mitchell
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	
PER	07/01/2025
Design Delay	07/02/2025
Design	07/02/2025
Bid Delay	07/02/2025
PreConstruction	07/02/2025
Construction	07/01/2028
Closeout	01/01/2031

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$4,000,000
Closeout	$0
Est. Program Cost	**$4,000,000**
Contingency Budget	$0
Est. Project Costs	**$4,000,000**

Microbial Source Tracking Identified Locality Repairs (FY25)

PR_GN020910

System: General
Type: Locality and Private Property

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Pre Planning
Regulatory: Integrated Plan-MST

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$300	$153	$147	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide FY25 funding for the Microbial Source Tracking (MST) Program required as part of the Integrated Plan.

PROJECT JUSTIFICATION

Several water bodies in the Hampton Roads region remain impaired by bacteria with elevated levels found in dry weather in areas that have no record of sewer overflow and, in some cases, in areas without any public sewer infrastructure. Dry weather ongoing sources almost always present a greater impact to water quality than isolated wet weather-related sewer overflows. Surface water monitoring data following SSOs has indicated that the impacts of a transient SSO on the long-term impairment of a waterway are minimal supporting the conclusion that waterway impairments in the Hampton Roads area are driven by chronic and persistent sources. Given that the regional sanitary sewer system has no chronic capacity-related overflow locations the most effective approach toward achieving a higher degree of public health protection is to identify and eliminate the sources of bacterial contamination specifically those that are known to represent the greatest risk to public health - human sources. To this end HRSD has implemented its Microbial Source Tracking Program. This focused water quality monitoring effort in partnership with local governments and the Virginia Department of Health has been successfully used to identify locate and eliminate chronic and persistent non-SSO-related sources of human-sourced bacteria.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Kyle Curtis
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	
PER	07/01/2024
Design Delay	07/01/2024
Design	07/01/2024
Bid Delay	07/01/2024
PreConstruction	07/01/2024
Construction	07/01/2024
Closeout	07/02/2025

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$300,000
Closeout	$0
Est. Program Cost	**$300,000**
Contingency Budget	$0
Est. Project Costs	**$300,000**

Microbial Source Tracking Identified Locality Repairs (FY26)

PR_GN020920

System: General
Type: Locality and Private Property

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$500	$0	$250	$250	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide FY26 funding for the Microbial Source Tracking (MST) Program required as part of the Integrated Plan.

PROJECT JUSTIFICATION

Several water bodies in the Hampton Roads region remain impaired by bacteria with elevated levels found in dry weather in areas that have no record of sewer overflow and, in some cases, in areas without any public sewer infrastructure. Dry weather ongoing sources almost always present a greater impact to water quality than isolated wet weather-related sewer overflows. Surface water monitoring data following SSOs has indicated that the impacts of a transient SSO on the long-term impairment of a waterway are minimal supporting the conclusion that waterway impairments in the Hampton Roads area are driven by chronic and persistent sources. Given that the regional sanitary sewer system has no chronic capacity-related overflow locations the most effective approach toward achieving a higher degree of public health protection is to identify and eliminate the sources of bacterial contamination specifically those that are known to represent the greatest risk to public health - human sources. To this end HRSD has implemented its Microbial Source Tracking Program. This focused water quality monitoring effort in partnership with local governments and the Virginia Department of Health has been successfully used to identify locate and eliminate chronic and persistent non-SSO-related sources of human-sourced bacteria.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Kyle Curtis
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	07/01/2026
PreConstruction	07/01/2026
Construction	07/01/2026
Closeout	07/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$500,000
Closeout	$0
Est. Program Cost	**$500,000**
Contingency Budget	$0
Est. Project Costs	**$500,000**

Regional Granular Activated Carbon Reactivation Facility

PR_GN021000

System: General
Type: Water Reuse

Driver Category: NPDES Compliance
Project Phase: Proposed
Regulatory: None

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$242,391	$0	$0	$0	$0	$11,414	$11,899	$7,933	$62,818	$104,119	$43,687	$521

PROJECT DESCRIPTION

This project will include PER, design, and construction of a granular activated carbon (GAC) reactivation facility that would accept and treat exhausted GAC for the Hampton Roads region. This design will be based on a preliminary study completed in Spring 2024 that investigated the feasibility and practicality of a regional GAC reactivation facility. The facility will be built at either the Nansemond Treatment Plant or the decommissioned Chesapeake-Elizabeth Treatment Plant.

PROJECT JUSTIFICATION

With per-and polyfluoroalkyl substance (PFAS) regulatory developments, the demand for GAC continues to grow. The U.S. EPA released lifetime health advisories (LHAs) for four PFAS in June 2022 and provided draft maximum contaminant levels (MCLs) for multiple PFAS in Spring 2023. These regulatory developments will advance implementation of GAC for Virginia drinking water utilities to manage PFAS in finished waters.
HRSD will also have significant GAC reactivation demands from its planned SWIFT facilities at James River and Nansemond by 2028, with additional demands possible from the Virginia Initiative Plant in the future. The GAC Reactivation Study in 2024 concluded through a cost-benefit analysis that onsite GAC reactivation would not only provide HRSD with a significantly lower net present value to reactivate GAC (~ 33% reduction when compared to third-party reactivation), but also offer several non-financial benefits, such as control over GAC production in a highly volatile GAC market.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2029
PER	09/01/2029
Design Delay	06/01/2030
Design	06/01/2030
Bid Delay	03/01/2032
PreConstruction	09/01/2032
Construction	12/01/2032
Closeout	12/01/2034

COST ESTIMATE

Cost Estimate Class:	**Class 10**
PrePlanning	$10,733
PER	$10,411,889
Design	$20,823,779
PreConstruction	$2,082,378
Construction	$208,237,786
Closeout	$1,041,189
Est. Program Cost	**$242,607,753**
Contingency Budget	$41,647,557
Est. Project Costs	**$284,255,310**

Conceptual Project Development (FY25)

PR_GN021200

System: General
Type: Strategic Planning

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$500	$341	$159	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide funding to take a concept for selected CIP projects or studies to a level that it can be chartered, budgeted, and scheduled appropriately.

PROJECT JUSTIFICATION

New project budgets and schedules are typically estimated by the requesting Operations work center and programmed into the CIP program by Finance using these projections. The scopes and estimates for these projects are challenging for in-house staff to fully explore and accurately develop under typical market conditions. Recent bidding conditions have presented challenges even for experienced consultants estimating fully designed projects. Early conceptual project development of select projects will help to identify key elements of projects that could lead to dramatic changes in cost or schedule allowing for better confidence in CIP programming.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Delane Carty
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/01/2024
PER	07/01/2027
Design Delay	07/01/2027
Design	07/01/2027
Bid Delay	07/01/2027
PreConstruction	07/01/2027
Construction	07/01/2027
Closeout	07/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$495,500
PER	$0
Design	$4,500
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$500,000**
Contingency Budget	$0
Est. Project Costs	**$500,000**

Treatment Plant Dewatering Centrifuge Equipment Rehabilitation

PR_GN021300

System: General
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$1,250	$916	$334	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will allow for the refurbishment of dewatering centrifuge equipment previously procured by HRSD as salvage equipment or via intergovernmental agreement. In FY24, we purchased a number of used DS706 centrifuges from a salvage auction (DCWATER) and acquired by trade (Denver Metro) from operational funds. Several of these machines are being allocated for existing capital projects as follows: (note that these machines will be refurbished as part of their respective two CIPs.) GN016700 Treatment Plant Solids Handling Replacement Phase II James River TP 2 x DS706 GN017400 Treatment Plant Dewatering Replacement Phase III, VIP 2 x DS706. The remaining centrifuges that have been purchased/procured are currently being stored at the Atlantic Treatment Plant and will be refurbished and placed at HRSD facilities that currently operate DS706 centrifuges as shelf spares. Centrifuges require routine off-site repair and refurbishment that can take from 3-12 months in duration. HRSD's design approach for dewatering facilities is to install units to meet maximum monthly operational throughput plus a single redundant unit; when a centrifuge is off-site for rehabilitation, the plant lacks redundancy and may lack needed processing capacity if a mechanical failure occurs in an operating unit. After the completion of this project, these ready shelf spares would allow the facilities to rely on their full design redundancies during periodic rehabilitation of existing installed equipment.

PROJECT JUSTIFICATION

This project allows HRSD's Condition Assessment Superintendent to obtain a quote for the rehabilitation 8 on-hand centrifuges to serve as shelf spare and replacement equipment for installed units at Atlantic, James River, Nansemond, Williamsburg, and York River Treatment Plants (and at the completion of GN017400, the Virginia Initiative Plant). Once refurbished and brought into the normal cycle of refurbishment of our current machines, we anticipate the service life of the refurbished machines to be greater than 15 years. Similarly, the current DS706 machines installed at WB, JR, YR, NP, AT (and VIP, at the completion of GN017400) are viable as long as we have suitable backup equipment. Without this insertion of new machines/parts etc., we would need to program the replacement of these machines with new equipment within 5-10 years. With suitable backup equipment and the ability to maintain design redundancy, the existing DS706s have an expected service life of greater than 15 years.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations
Contacts-Dept Contacts: Chris Wilson
Contacts-Managing Dept: Operations

PROPOSED SCHEDULE START DATE

PrePlanning	
PER	12/02/2024
Design Delay	01/02/2025
Design	01/02/2025
Bid Delay	01/03/2025
PreConstruction	01/03/2025
Construction	03/03/2025
Closeout	09/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$1,250,000
Closeout	$0
Est. Program Cost	**$1,250,000**
Contingency Budget	$0
Est. Project Costs	**$1,250,000**

System: General
Type: Facilities, Buildings and Capital Equipment

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$2,949	$1,577	$1,373	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for replacement of aging fleet vehicles and purchase of additional vehicles to meet the needs of the organization. An itemized list of vehicles to be replaced or added is maintained by the Support Systems Division.

PROJECT JUSTIFICATION

Replacement of aging vehicles will result in lower repair costs and the purchase of additional vehicles will provide for increased staff efficiency.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Support Systems
Contacts-Dept Contacts: Lee Heath
Contacts-Managing Dept: Operations-Support Systems

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2025
PreConstruction	07/01/2025
Construction	07/01/2025
Closeout	12/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$2,949,430
Closeout	$0
Est. Program Cost	**$2,949,430**
Contingency Budget	$0
Est. Project Costs	**$2,949,430**

Water Quality Department Instrumentation Equipment (FY26)

PR_GN021500

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Performance Upgrades
Project Phase: Pre Planning
Regulatory: None

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$664	$572	$92	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for analytical equipment for the Water Quality Department for Fiscal Year 2026.

PROJECT JUSTIFICATION

The sampling and analytical equipment will support various projects and programs led by the Water Quality Department.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Jamie Mitchell
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2025
PreConstruction	07/01/2025
Construction	07/01/2025
Closeout	07/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$664,000
Closeout	$0
Est. Program Cost	**$664,000**
Contingency Budget	$0
Est. Project Costs	**$664,000**

Coatings and Concrete Rehabilitation & Replacement Program

PR_GN021600

System: General
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	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$21,259	$0	$0	$2,362	$2,362	$2,362	$2,362	$2,362	$2,362	$2,362	$2,362	$2,362

PROJECT DESCRIPTION

This project will provide funding for the scheduled rehabilitation and replacement of coatings and concrete systems across the district including but, not limited to, treatment plants, pump stations, and the complexes.

PROJECT JUSTIFICATION

Coatings and Concrete Rehabilitation & Replacements needs are regularly assessed and scheduled across the district based on severity and accessibility. This program will ensure there is funding in each fiscal year to address large scale replacement and repair needs.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

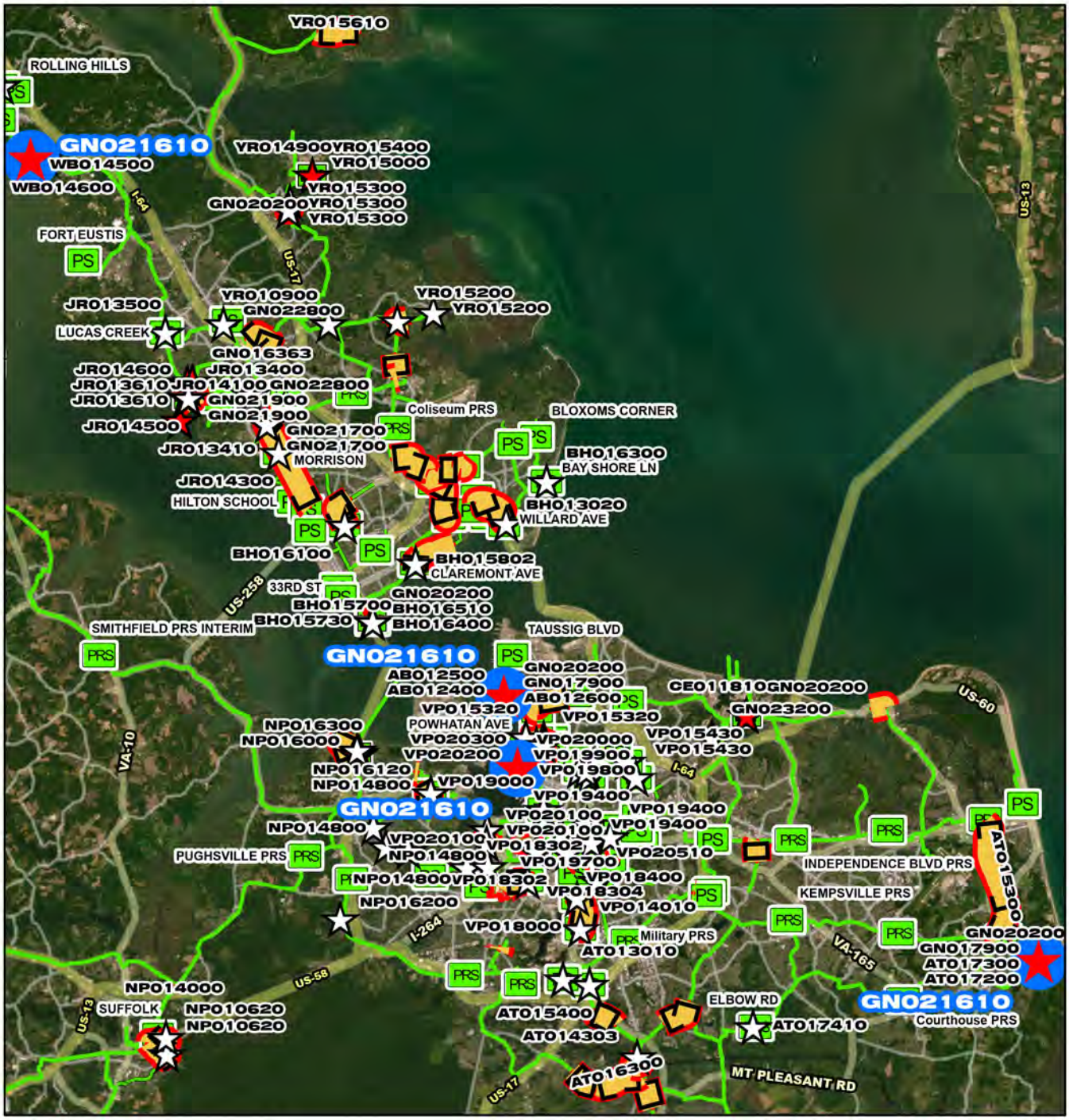
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Amber DiSomma
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2025
PreConstruction	07/01/2025
Construction	07/01/2027
Closeout	07/01/2036

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$21,259,159
Closeout	$0
Est. Program Cost	**$21,259,159**
Contingency Budget	$0
Est. Project Costs	**$21,259,159**



GN021610

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 10,000 20,000 40,000 60,000 80,000 Feet

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CIP Location

GN021610

Coatings and Concrete Rehabilitation and Replacement FY26

HRSD

Coating and Concrete Rehabilitation and Replacement
FY26

PR_GN021610

System: General
Type: Facilities, Buildings and Capital Equipment

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$2,050	$1,799	$251	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This fiscal year may include the following coatings and concrete projects; Atlantic Primary Clarifier ducting and scrubber recoating and repairs, Army Base BNR Tank structural restoration, Virginia Initiative Plant Secondary Clarifier trough coatings and concrete restoration, and Williamsburg Secondary Clarifiers coatings installation.

PROJECT JUSTIFICATION

Atlantic Primary Clarifier ducting and scrubbers coating is flaking badly, and fiberglass is missing in multiple sections which, will require larger repairs. Army Base BNR Tanks are structurally unsound and need rehabilitation to continue functioning at current capacities. Virginia Initiative Plant Secondary Clarifier troughs have concrete chipped away in multiple areas are require concrete restoration and well as recoating. Williamsburg Secondary Clarifiers require coating to prevent further erosion of concrete from wear and algae growth as well as protect the installed brushes.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2025
PreConstruction	07/01/2025
Construction	07/01/2025
Closeout	09/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$2,050,000
Closeout	$0
Est. Program Cost	**$2,050,000**
Contingency Budget	$0
Est. Project Costs	**$2,050,000**

Coatings and Concrete Rehabilitation and Replacement FY27

PR_GN021620

System: General
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	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$2,180	$0	$2,180	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This fiscal year will include the following coatings and concrete projects; Army Base BNR Tank #2 Structural Rehab, Atlantic Treatment Plant Secondary Clarifier Rake Arm Rehab, Atlantic Treatment Plant Primary Clarifier Coating Replacement, Virginia Initiative Plant Secondary Clarifier Effluent Trough Structural Rehab, Williamsburg Aeration Tank Concrete Repairs

PROJECT JUSTIFICATION

Aging infrastructure repairs and replacements for major assets across Treatment Plants.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

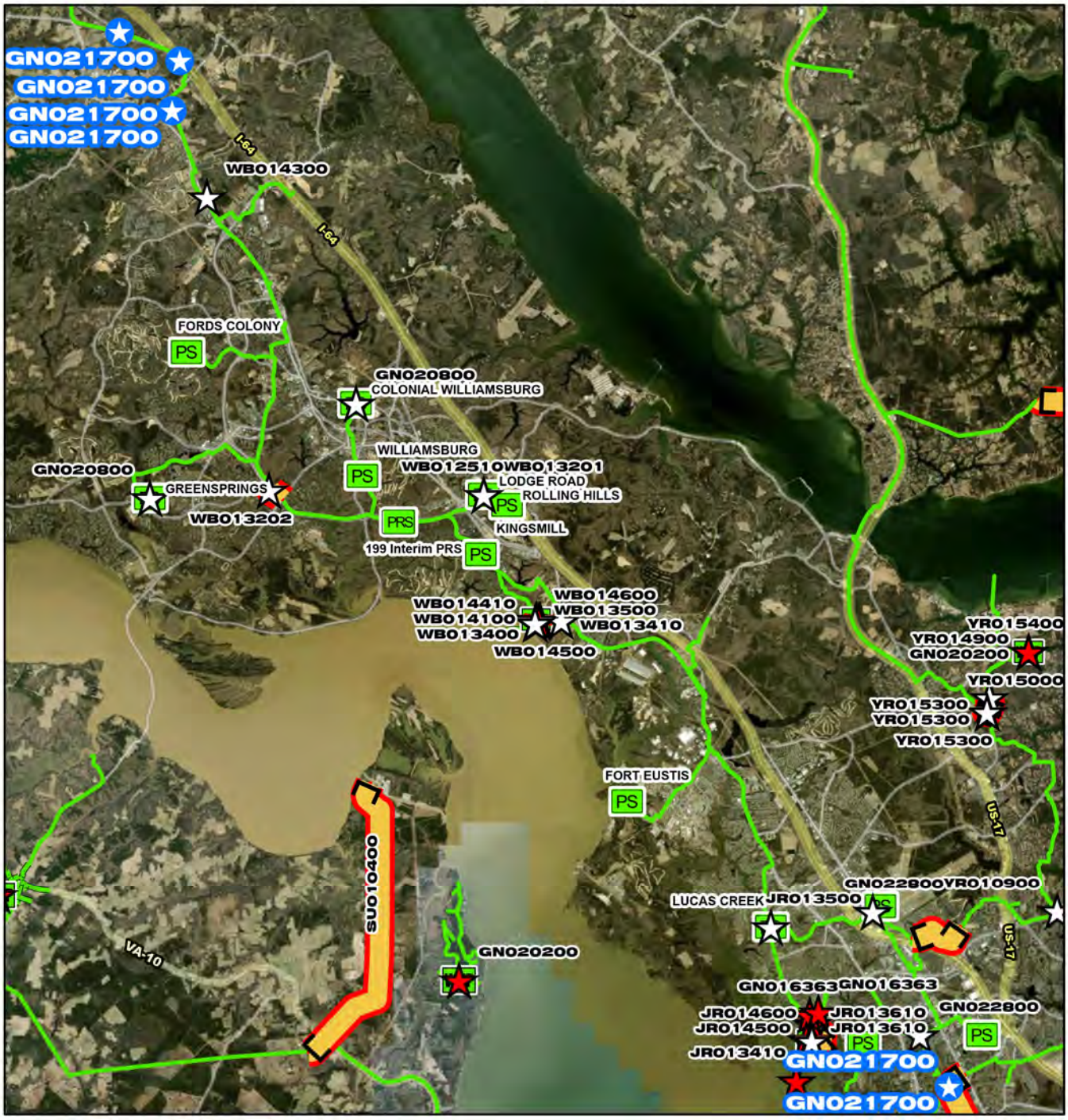
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Amber DiSomma
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	07/01/2026
PreConstruction	07/01/2026
Construction	07/01/2026
Closeout	07/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$2,180,000
Closeout	$0
Est. Program Cost	**$2,180,000**
Contingency Budget	$109,000
Est. Project Costs	**$2,289,000**



GN021700

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 5,500 11,000 22,000 33,000 44,000 Feet

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CIP Location

GN021700

Interceptor System Valve Improvements Phase II

HRSD

Interceptor System Valve Improvements Phase II

PR_GN021700

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$4,670	$175	$473	$2,673	$1,342	$6	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will utilize a phase approach to removing and replacing failed valves that are critical to the interceptor system. Phase II of the project will address the following failed valves, JR1041-5, JR3007-3, W5060-1, W5064-3, W5067-1, and W5072-5

PROJECT JUSTIFICATION

The valves identified in the project description have failed, are critical to the operation of the interceptor system, and require specialized equipment (line stops) to isolate the force main and replace the failed valve. Valve JR1041-5 is located between the CSX train tracks and the Virginia Living Museum. This valve was installed in 1966 and flow from the southwestern part of the JRTP service area pass through this valve. Maintenance records indicate that this valve failed in 2021. Valve JR3007-3 has failed in the open position, this valve conveys flow from the several City of Newport News pump stations and is necessary to isolate flow for NF-039. Valves W5060-1, W5064-3, W5067-1, and W5072-5, have all failed are and located in the northern end of the Williamsburg Treatment Plant service area. Due to the location of these valves, diversion capabilities do not exist.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Beatriz Patino
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	12/01/2025
Design Delay	07/01/2026
Design	08/01/2026
Bid Delay	04/01/2027
PreConstruction	06/01/2027
Construction	09/01/2027
Closeout	12/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$175,000
Design	$470,000
PreConstruction	$10,000
Construction	$4,000,000
Closeout	$15,000
Est. Program Cost	**$4,670,000**
Contingency Budget	$550,000
Est. Project Costs	**$5,220,000**

North Shore and Small Communities Division Aerial Crossing Improvements

PR_GN021800

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$2,657	$261	$2,391	$4	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project is to address aerial crossing issues identified in the North Shore and Small Communities Division interceptor systems.

PROJECT JUSTIFICATION

HRSD contracted with Collins Engineers, Inc. (Collins) to perform structural inspections of aerial crossings within the North Shore and Small Communities interceptor systems. During the inspection, Collins identified multiple issues at various locations, including signs of corrosion, structural weaknesses, and other concerns that could impact the long-term integrity of the aerial crossings and their support. Given their critical role in the interceptor system and exposure to environmental factors, regular inspections and repairs are necessary. Addressing these issues is essential to maintaining functionality and minimizing further degradation or potential failures.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

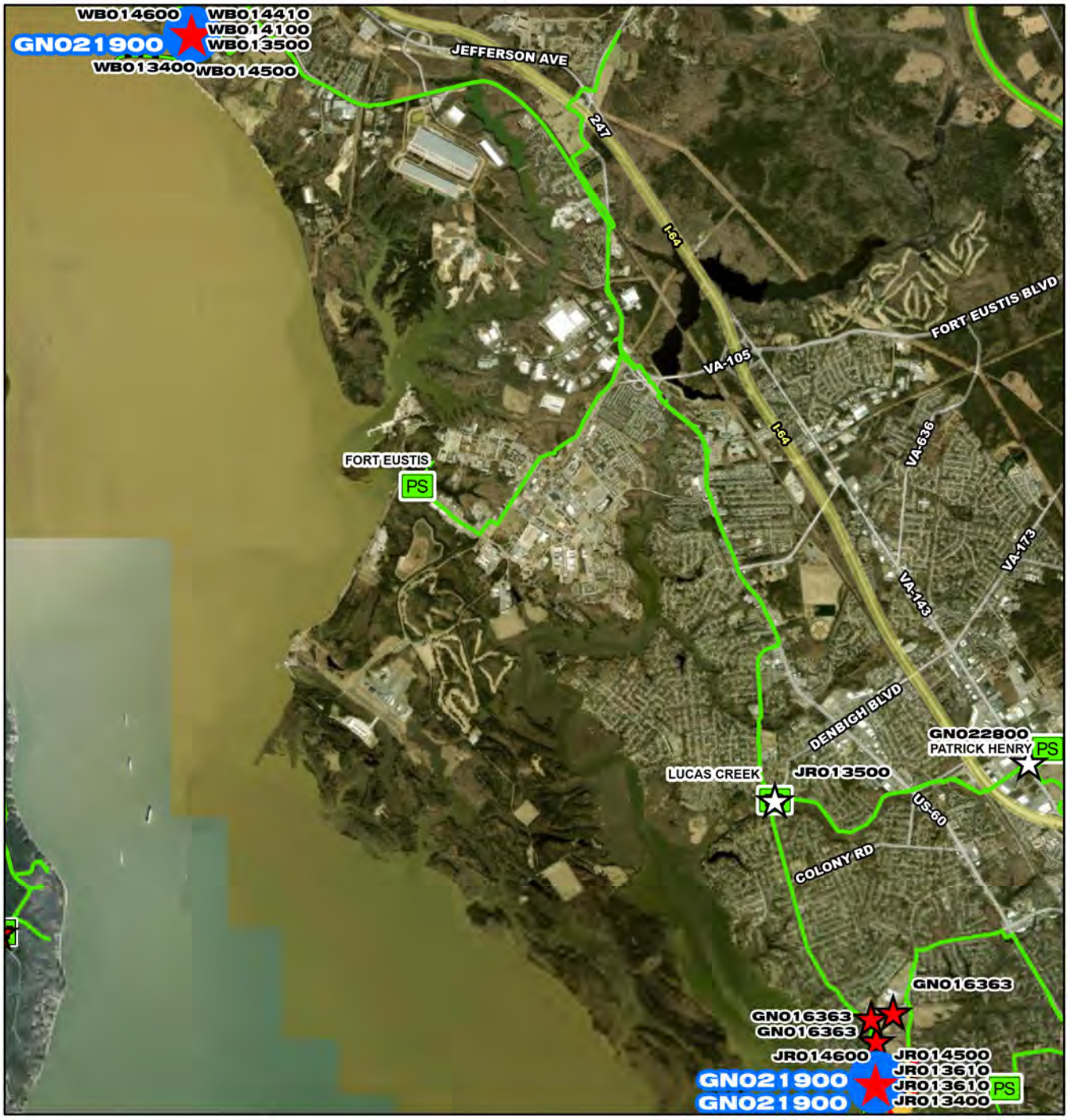
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Virginia Opp
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	09/01/2025
Design Delay	09/01/2025
Design	09/01/2025
Bid Delay	05/01/2026
PreConstruction	05/01/2026
Construction	08/01/2026
Closeout	02/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$42,250
Design	$205,591
PreConstruction	$20,000
Construction	$2,381,623
Closeout	$7,510
Est. Program Cost	**$2,656,974**
Contingency Budget	$476,325
Est. Project Costs	**$3,133,299**



GN021900

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 2,250 4,500 9,000 13,500 18,000 Feet

GN021900

Roofing Rehabilitation & Replacement Program

HRSD

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CIP Location

Roofing Rehabilitation & Replacement Program

PR_GN021900

System: General
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	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$5,400	$0	$0	$600	$600	$600	$600	$600	$600	$600	$600	$600

PROJECT DESCRIPTION

This project will provide funding for the scheduled rehabilitation and replacement of roofing systems across the district including but, not limited to, treatment plants, pump stations, and the complexes.

PROJECT JUSTIFICATION

Roofing needs are regularly assessed and scheduled across the district based on severity and accessibility. This program will ensure there is funding in each fiscal year to address large scale replacement and repair needs.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

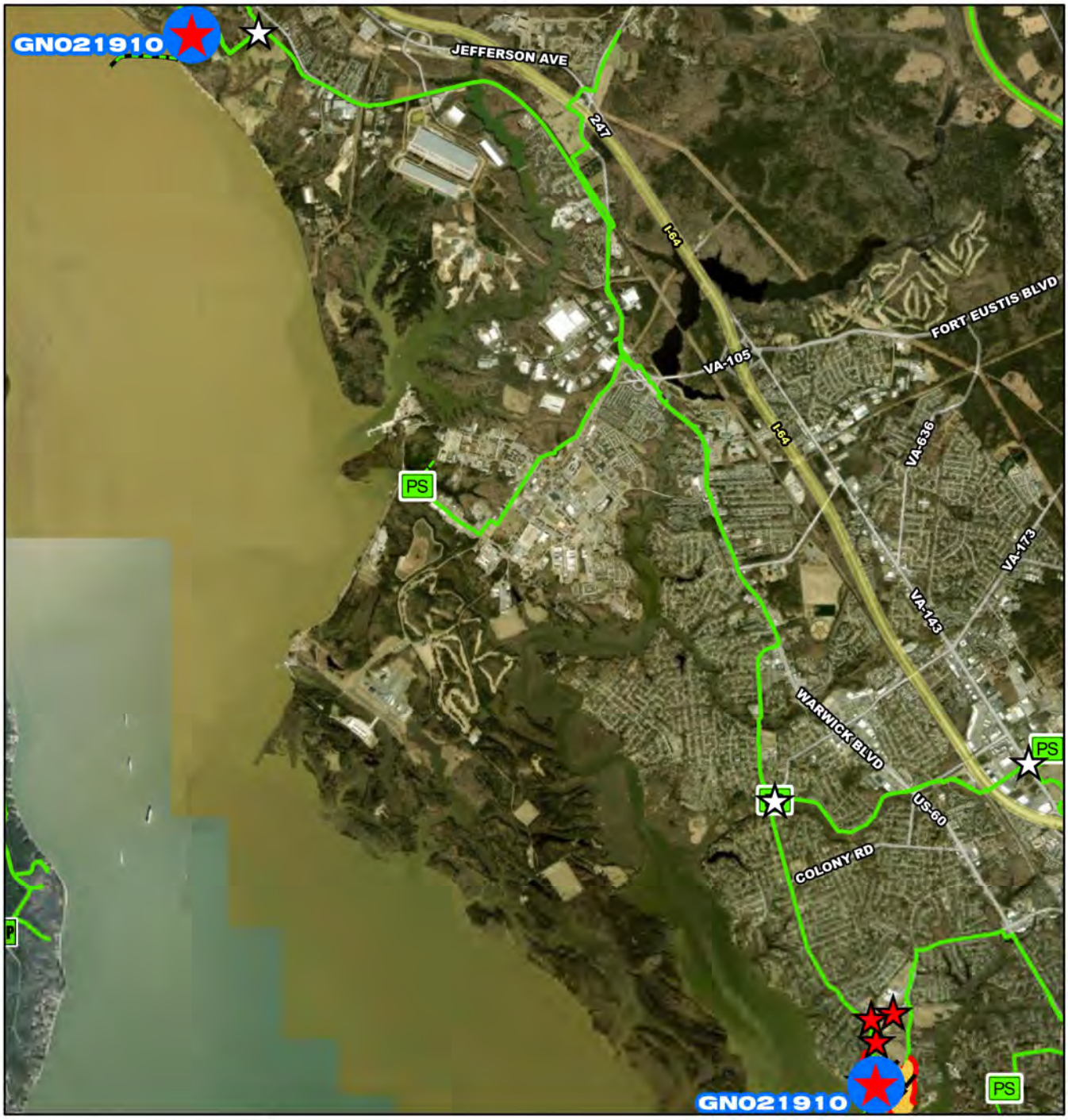
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Amber DiSomma
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	07/01/2026
PreConstruction	07/01/2026
Construction	07/01/2027
Closeout	07/01/2036

COST ESTIMATE

Cost Estimate Class:	**Class 10**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$5,400,000
Closeout	$0
Est. Program Cost	**$5,400,000**
Contingency Budget	$0
Est. Project Costs	**$5,400,000**



GN021910

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 2,250 4,500 9,000 13,500 18,000 Feet

N
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CIP Location

GN021910

Roofing Rehabilitation and Replacement FY 27

HRSD

Roofing Rehabilitation and Replacement FY 27

PR_GN021910

System: General
Type: Facilities, Buildings and Capital Equipment

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$545	$0	$545	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This fiscal year will include the following roofing replacement projects: Administrative Building at Williamsburg Treatment Plant, Administrative Building #1 and Headworks Building at James River Treatment Plant.

PROJECT JUSTIFICATION

Aging infrastructure repairs and replacements for major assets across Treatment Plants

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Amber DiSomma
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	07/01/2026
PreConstruction	07/01/2026
Construction	07/01/2026
Closeout	07/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$545,000
Closeout	$0
Est. Program Cost	**$545,000**
Contingency Budget	$109,000
Est. Project Costs	**$654,000**

GN022000

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

GN022000

Compost Facility Capacity Expansion

HRSD

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CIP Location

Compost Facility Capacity Expansion

PR_GN022000

System: General
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$8,535	$128	$107	$8,300	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will fund the expansion of a privately owned composting facility in Waverly, VA to ensure adequate reserved capacity for HRSD's wastewater solids supporting a loading rate of 90,200 wet tons per year for at least 10 years with two optional five-year renewal periods.

PROJECT JUSTIFICATION

With the closure of the Chesapeake-Elizabeth Treatment Plant, the Boat Harbor Treatment Plant, along with the closure of the multiple hearth incinerator at the Army Base Treatment Plant, and the unplanned, but necessary cessation of land application for solids from the Atlantic Treatment Plant, HRSD needs additional outlets for cost-effective and beneficial management of its wastewater solids. Since 2005, HRSD has used a third-party contract to produce a Class A biosolids compost product from its wastewater solids; however, the existing capacity of that facility is insufficient to meet HRSD's projected needs following the closure of Boat Harbor Treatment Plant in 2026.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Chris Wilson
Contacts-Managing Dept: Operations-Treatment

PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2026
PER	01/01/2026
Design Delay	01/01/2026
Design	01/01/2026
Bid Delay	12/01/2026
PreConstruction	01/01/2027
Construction	07/01/2027
Closeout	01/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$235,000
PreConstruction	$0
Construction	$8,300,000
Closeout	$0
Est. Program Cost	**$8,535,000**
Contingency Budget	$1,465,000
Est. Project Costs	**$10,000,000**

Fleet Management (FY27)

PR_GN022100

System: General
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	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$3,280	$0	$3,280	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for replacement of aging fleet vehicles and purchase of additional vehicles to meet the needs of the organization. An itemized list of vehicles to be replaced or added is maintained by the Support Systems Division.

PROJECT JUSTIFICATION

Replacement of aging vehicles will result in lower repair costs and the purchase of additional vehicles will provide for increased staff efficiency.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Support Systems
Contacts-Dept Contacts: Archie Roberts
Contacts-Managing Dept: Operations-Support Systems

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	07/01/2026
PreConstruction	07/01/2026
Construction	07/01/2026
Closeout	

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$3,280,000
Closeout	$0
Est. Program Cost	**$3,280,000**
Contingency Budget	$328,000
Est. Project Costs	**$3,608,000**

Water Quality Department Instrumentation Equipment (FY27)

PR_GN022200

System: General
Type: Facilities, Buildings and Capital Equipment

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$300	$0	$300	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for analytical equipment for the Water Quality Department for Fiscal Year 2027.

PROJECT JUSTIFICATION

The sampling and analytical equipment will support various projects and programs led by the Water Quality Department.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Rachel Hook
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	07/01/2026
PreConstruction	07/01/2026
Construction	07/01/2026
Closeout	07/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$300,000
Closeout	$0
Est. Program Cost	**$300,000**
Contingency Budget	$0
Est. Project Costs	**$300,000**

Interceptor System Valve Improvements Phase III

PR_GN022300

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$660	$0	$446	$214	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will continue a phased approach to replace failed valves that are critical to the interceptor system. Phase III will include replacement of five (5) interceptor valves utilizing engineering services for the design effort for the assets. Contractor services will be required for three of the replacements while HRSD will utilize internal staff to complete the construction effort for the remaining two valves.

PROJECT JUSTIFICATION

The valves identified in this project have failed. These valves are critical to the operation of the interceptor system and require specialized equipment (line stops) to isolate the force main to replace and/or repair the failed valve. CMMS work orders for each of these assets have been open and outstanding for years. Without replacement, proper control of the HRSD interceptor system is not possible.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Chris Stephan
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	10/01/2026
Design Delay	03/01/2027
Design	03/01/2027
Bid Delay	10/01/2027
PreConstruction	10/01/2027
Construction	10/01/2027
Closeout	10/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$160,000
Design	$500,000
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$660,000**
Contingency Budget	$660,000
Est. Project Costs	**$1,320,000**

Interceptor System Valve Improvements Phase IV

PR_GN022400

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$318	$0	$174	$144	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will repair multiple assets assessed to be failed or inoperable that are critical to the interceptor system. Condition Assessment Activities and/or Preventative Maintenance records suggest that these assets are either at material risk of failure, in need of replacement, or in need of repair. This phase will repair five valves and one air vent, add one additional branch valve, and construct a new platform for an existing air vent, which is currently unsafe to operate.

PROJECT JUSTIFICATION

The assets identified in the project description have failed or are otherwise deemed inoperable. These assets are critical to the operation of the interceptor system and require specialized equipment (line stops) to isolate the force main and implement repair and replacement efforts. Additionally, specialized traffic control efforts are anticipated for the many of these assets, of which exceed the capabilities of South Shore Interceptor operations staff.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Lyndsey Davis
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	12/01/2026
Design Delay	04/01/2027
Design	04/01/2027
Bid Delay	12/01/2027
PreConstruction	12/01/2027
Construction	12/01/2027
Closeout	12/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$87,000
Design	$231,000
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$318,000**
Contingency Budget	$318,000
Est. Project Costs	**$636,000**

Interceptor System Valve Improvements Program

PR_GN022500

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$9,000	$0	$0	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000

PROJECT DESCRIPTION

This project will provide funding for scheduled interceptor system valve rehabilitation and replacements.

PROJECT JUSTIFICATION

Valve replacements and rehabilitations are regularly assessed and scheduled across the district based on risk associated with the adjacent interceptors and consequence of failure. This program will ensure there is funding to address ongoing repair and replacement needs.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Anas Malkawi
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	
PER	
Design Delay	
Design	
Bid Delay	
PreConstruction	
Construction	07/01/2027
Closeout	

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$9,000,000
Closeout	$0
Est. Program Cost	**$9,000,000**
Contingency Budget	$0
Est. Project Costs	**$9,000,000**

South Shore Interceptors Material Storage Feasibility and Site Study

PR_GN022610

System: General
Type: Facilities, Buildings and Capital Equipment

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$50	$0	$50	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will perform a feasibility and site study to evaluate alternatives for protecting stored materials at the South Shore Interceptor Storage Yard and the Common Storage Yard at the Nansemond Treatment Plant. These materials include, but are not limited to, pipe, fittings, valves, and equipment.

The study will assess options to reduce environmental exposure and improve storage conditions. It will include a life-cycle cost analysis comparing current outdoor storage practices with proposed alternatives, considering material degradation rates, expected service life, and long-term replacement and maintenance costs.

General Engineering Services will be utilized to perform this study. An opinion of probable cost will be developed for each alternative.

PROJECT JUSTIFICATION

This project will support system reliability and emergency response readiness by improving the long-term condition and availability of critical stored materials. The materials stored at the South Shore and Nansemond storage yards are essential for supporting emergency repairs and time-sensitive projects. Maintaining adequate and reliable inventory helps mitigate risks associated with supply chain disruptions and extended procurement lead times, which can directly affect system reliability and public health. Currently, much of this material is stored outdoors and uncovered, exposing it to extreme temperatures, ultraviolet radiation, and weather-related deterioration. As a result, some materials degrade prematurely and require replacement before they can be utilized, and in some cases have become unusable due to environmental damage. Evaluating improved storage alternatives is expected to extend the useful life of these materials, reduce waste and replacement costs, and improve HRSD's ability to respond efficiently to operational and emergency needs.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Shawn Heselton
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2027
Design Delay	07/01/2027
Design	07/01/2027
Bid Delay	07/01/2027
PreConstruction	07/01/2027
Construction	07/01/2027
Closeout	07/01/2027

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	$50,000
PER	$0
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$50,000**
Contingency Budget	$0
Est. Project Costs	**$50,000**

Locality Pump Station Study

PR_GN022710

System: General
Type: Locality and Private Property

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$100	$0	$100	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will perform as-needed studies to evaluate select locality-owned pump stations that experience performance challenges and are directly connected to HRSD's interceptor force mains. These studies will assess whether the challenges are caused by pressure policy exceedances within HRSD's system. Where applicable, the studies will identify planning-level solutions to mitigate these impacts and improve system coordination and performance. Studies will be initiated based on a review of information provided by the localities. General Engineering Services will be utilized to perform these studies.

PROJECT JUSTIFICATION

This project will provide resources to evaluate reported performance issues at locality-owned pump stations that may be influenced by pressure conditions within HRSD's system. Several localities within the Williamsburg and Nansemond Treatment Plant service areas have indicated that pressure exceedances have contributed to operational challenges, increased maintenance needs, and reduced system reliability. Without a formal evaluation process, these issues may continue to result in service disruptions, increased operating costs, and strained relationships with partner localities. The proposed studies will provide the technical basis needed to clarify system interactions, support collaborative problem-solving, and identify cost-effective solutions that benefit both HRSD and its partner localities.

FUNDING TYPE

Funding Type: Cash

CONTACTS

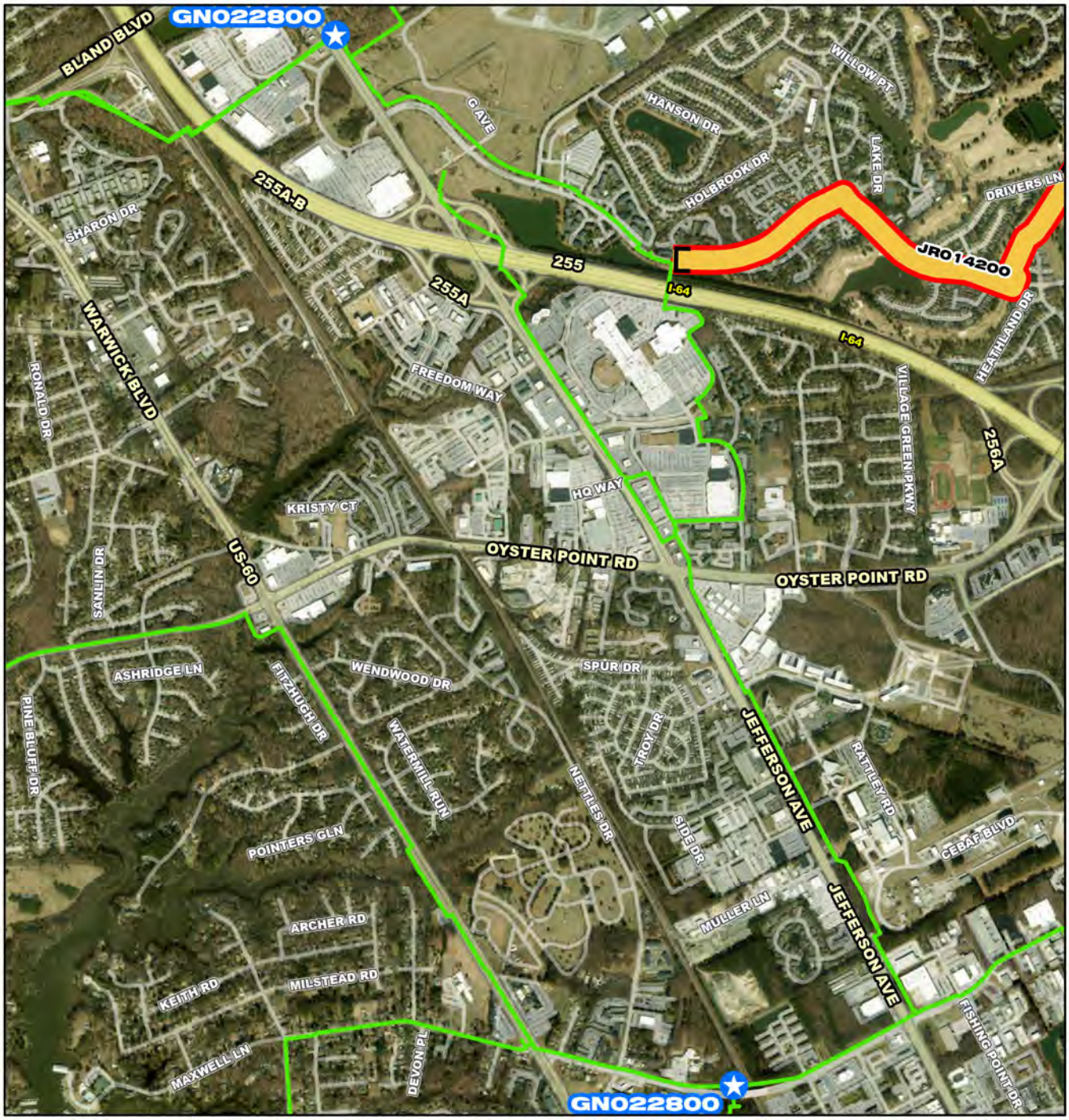
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: John Dano
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2027
Design Delay	07/01/2027
Design	07/01/2027
Bid Delay	07/01/2027
PreConstruction	07/01/2027
Construction	07/01/2027
Closeout	07/01/2027

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	$100,000
PER	$0
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$100,000**
Contingency Budget	$0
Est. Project Costs	**$100,000**



GN022800

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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

0 650 1,300 2,600 3,900 5,200 Feet

N
W E
S

CIP Location

GN022800

North Shore Automated Diversion Facilities Phase II

HRSD

North Shore Automated Diversion Facilities Phase II

PR_GN022800

System: General
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$5,775	$0	$756	$1,515	$2,683	$821	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will involve installing control valves, actuators, and SCADA telemetry and controls at four sites in the North Shore System (at City Center, Jefferson Avenue, Ft. Eustis, and Lackey). As a continued and phased approach to provide greater operational flexibility and system diversion capabilities during emergencies and localized wet weather events, this project will complete the strategic facilities needed to implement the foundation of a SmartSewer system. The four locations are centralized locations that will allow for the automatic shifting of flows during localized severe wet weather events, system emergencies, and for daily diurnal needs. The long-term goal of equalizing and coordinating flows between the north shore treatment plants for dry weather optimization and wet weather capacity will be achieved. City Center will be at JR1307, Jefferson Ave will be at JR5015, and the exact locations for Ft. Eustis and Lackey will be determine during the study phase of this project.

PROJECT JUSTIFICATION

The concept of SmartSewer has been in development for years. With the completion of the SCADA Phase II project, the backbone for automated system control is now available. There are currently six active flow control facilities in the north shore system at Woodland Rd PS, Coliseum PRS, Big Bethel PRS, Tabb PRS, Lucas Creek PS, and the Center Avenue Diversion valve. There are four additional sites currently under design and will be implemented as part of other CIP projects, including VA Living Museum valves, Ron Springs valves, and LaSalle IFM replacement. The additional four sites at City Center, Jefferson Ave. JR5015, Ft. Eustis, and Lackey will complete the backbone valves, controls, and facilities needed to finalize the system. This automated diversion project will serve as the long-range solution to manage flows through diversions and operational strategies to maximize system capacity when localized wet weather patterns dictate. For example, when a heavy, training rain event hits the JR system, the SmartSewer system will recognize elevated pressures and flows and change system diversions valves to divert flow towards other portions of the system not experiencing capacity limitations. This system thereby maximizes the system capacity without investing in large-scale pipe or pumping projects.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Chris Stephan
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	10/01/2026
Design Delay	03/01/2027
Design	03/01/2027
Bid Delay	12/01/2027
PreConstruction	12/01/2027
Construction	04/01/2028
Closeout	10/01/2029

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$400,000
Design	$800,000
PreConstruction	$400,000
Construction	$4,025,000
Closeout	$150,000
Est. Program Cost	**$5,775,000**
Contingency Budget	$1,125,000
Est. Project Costs	**$6,900,000**

Offsite Biosolids Storage Facility Phase I

PR_GN022900

System: General
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$1,205	$0	$1,029	$176	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will acquire land for Routine Storage of biosolids produced by HRSD's treatment plants.

PROJECT JUSTIFICATION

After closure of the Boat Harbor Treatment Plant (TP) in 2026, HRSD will produce approximately 90,000 wet tons of dewatered biosolids annually from the Atlantic TP, James River TP, Nansemond TP, and York River TP. These facilities have limited ability to store dewatered biosolids on-site and rely on daily hauling from the facilities to contracted disposal or processing sites. Ad hoc storage of solids on-site at any HRSD treatment plant (where practical) is not desirable as it may result in off-site odors and periodic increases of hauling activities through adjacent communities after any necessary storage period. Therefore, HRSD desires to develop an off-site Routine Storage facility for biosolids. Phase I includes the identification and purchase of land for the Biosolids Storage Facility, permitting, etc. Identification of suitable parcels will prioritize permitability, appropriate buffers, and proximity to contracted disposal and processing sites.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations
Contacts-Dept Contacts: Chris Wilson
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	09/01/2027
PreConstruction	09/01/2027
Construction	09/01/2027
Closeout	09/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$1,200,000
PreConstruction	$0
Construction	$0
Closeout	$5,000
Est. Program Cost	**$1,205,000**
Contingency Budget	$0
Est. Project Costs	**$1,205,000**

Offsite Biosolids Storage Facility Phase II

PR_GN023000

System: General
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$15,400	$0	$0	$400	$7,500	$7,500	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will design and construct a consolidated off-site biosolids storage facility for use by HRSD on previously purchased land permitted for this use.

PROJECT JUSTIFICATION

After closure of the Boat Harbor Treatment Plant (TP) in 2026, HRSD will produce approximately 90,000 wet tons of dewatered biosolids annually from the Atlantic TP, James River TP, Nansemond TP, and York River TP. These facilities have limited ability to store dewatered biosolids on-site and rely on daily hauling from the facilities to contracted disposal or processing sites. Ad hoc storage of solids on-site at any HRSD treatment plant (where practical) is not desirable as it may result in off-site odors and periodic increases of hauling activities through adjacent communities after any necessary storage period. Therefore, HRSD desires to develop an off-site Routine Storage facility for biosolids. Phase II includes the design and construction of a biosolids storage facility including slab, manufactured cover, stormwater management, and other features germane to the use of the facility for biosolids receiving, storage, and loadout.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations
Contacts-Dept Contacts: Chris Wilson
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2028
PER	01/01/2028
Design Delay	06/01/2028
Design	06/01/2028
Bid Delay	07/01/2028
PreConstruction	07/01/2028
Construction	01/01/2029
Closeout	01/01/2030

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$400,000
Design	$400
PreConstruction	$0
Construction	$15,000,000
Closeout	$0
Est. Program Cost	**$15,400,400**
Contingency Budget	$0
Est. Project Costs	**$15,400,400**

Saltwater Intrusion Reduction Program

PR_GN023100

System: General
Type: Pipelines

Driver Category: Cost Recovery
Project Phase: Proposed
Regulatory: None

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$855	$0	$119	$309	$363	$63	$1	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

Through the Salt Chasers and Conductivity Source Tracking (CST) efforts, multiple sources of saltwater-related inflow and infiltration (I/I) to the HRSD and Locality-owned collection systems have been identified. These sources have been constrained as much as possible with CST methods, and the quantity of saltwater has been measured or estimated. The majority of finds are currently in the Virginia Initiative Plant (VIP) and Army Base Plant service areas. This project will provide funding to conduct Sanitary Sewer Evaluation Surveys and repairs on identified sources of saltwater I/I to reduce sanitary sewer overflows (SSOs) and increase treatability at the plants.

PROJECT JUSTIFICATION

Saltwater decreases treatability, requiring increased chemical demand for settling and disinfection within the wastewater treatment process. Saltwater-related I/I also reduces system capacity and can lead to SSOs. Repairs will be prioritized based on Return on Investment for treatment and reclaimed system capacity.

FUNDING TYPE

Funding Type: Cash

CONTACTS

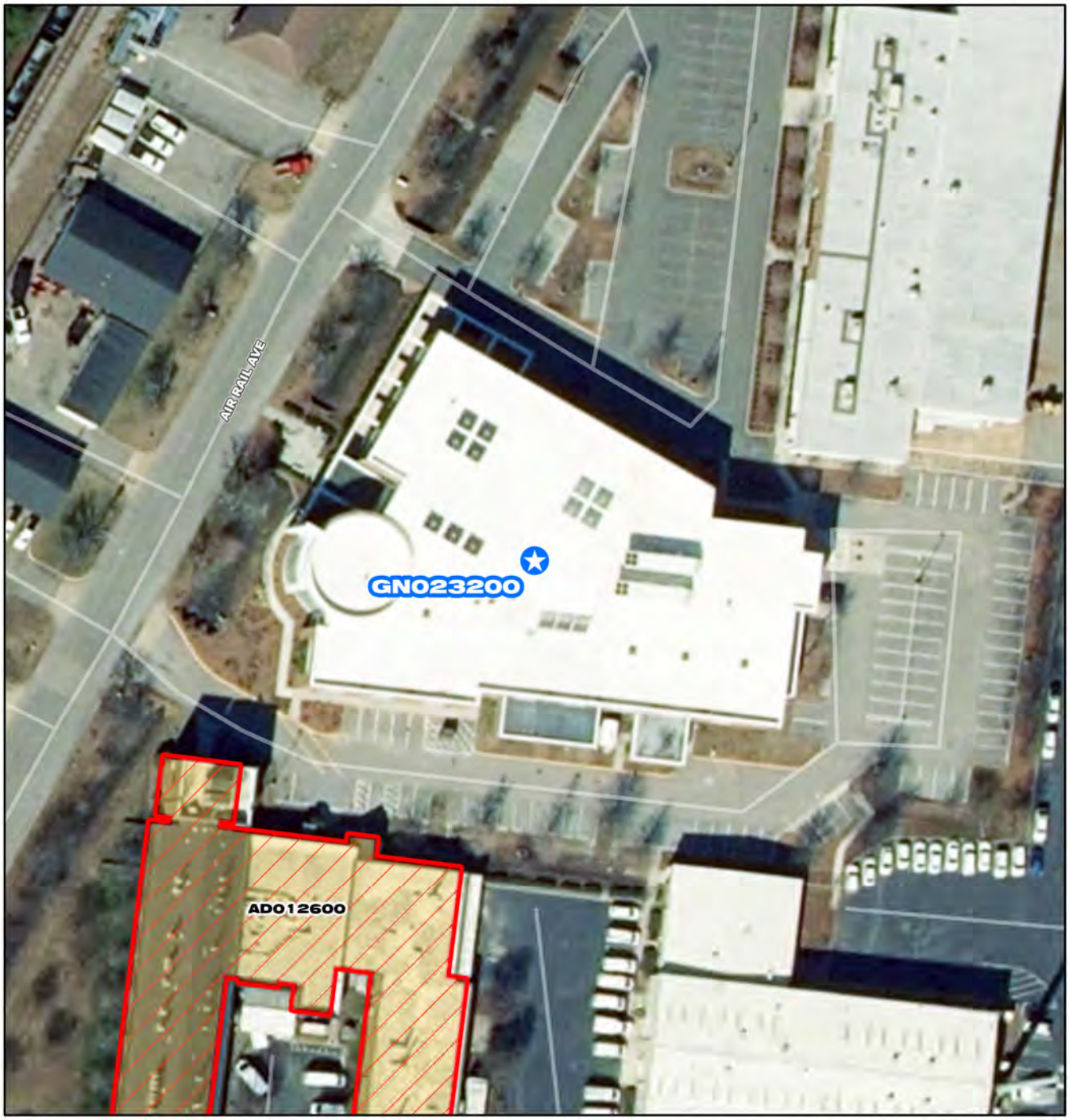
Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Kyle Curtis
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	09/01/2026
Design Delay	02/01/2027
Design	02/01/2027
Bid Delay	07/01/2027
PreConstruction	07/01/2027
Construction	09/01/2027
Closeout	09/01/2029

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$10,000
PER	$36,264
Design	$72,528
PreConstruction	$7,253
Construction	$725,275
Closeout	$3,626
Est. Program Cost	**$854,945**
Contingency Budget	$145,055
Est. Project Costs	**$1,000,000**



GN023200

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

N
W E
S

CIP Location

GN023200

1434 Air Rail Avenue Switchgear Controls Upgrade

HRSD

1434 Air Rail Avenue Switchgear Controls Upgrade

PR_GN023200

System: General
Type: Electrical

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
$363	$0	$363	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project is to design and fabricate a new switchgear control system by retrofitting the existing control system that has reached the end of its useful life. The programmable logic controller and protective relays are obsolete, and replacement parts are no longer supported. The project will include a new, modernized control platform for monitoring, control, and protection. In addition, all control wire modifications which are necessary to interface the new equipment are included. The project will include the installation, testing, commissioning, and spare parts support of the new switchgear controls system.

PROJECT JUSTIFICATION

The existing control and protection platforms have reached obsolescence, presenting a risk of prolonged downtime in the event of a component failure. Replacement of failed components would necessitate substantial engineering effort and extended lead times, which could compromise the facility's ability to ensure reliable emergency power availability. The two 750 kW standby diesel Carter CAT generators support the Building 1434 and Building 1436 electrical loads in the event of a utility power loss and are critical to prevent process disruptions and unplanned extended power outages.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-E&I
Contacts-Dept Contacts: Dale Stevick
Contacts-Managing Dept: Operations-E&I

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	02/01/2027
PreConstruction	02/01/2027
Construction	02/01/2027
Closeout	03/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$330,000
Closeout	$33,000
Est. Program Cost	**$363,000**
Contingency Budget	$87,000
Est. Project Costs	**$450,000**