

City Council/AlexRenew Board CSO Subcommittee/Workgroup

Meeting No. 13

January 19, 2022



Major Updates since September Meeting

- **RiverRenew Stakeholder Advisory Group (SAG) Meeting** held in November
- **RiverRenew SAG** term extended through February 2023
- **\$40 million grant** for RiverRenew included in Governor Northam's biennial budget proposal
- **Construction underway** on all RiverRenew Tunnel Project Components
- **Tunnel Boring Machine** fabrication ongoing in Germany

Tonight's Presentation

- Overview, Progress, and 6-Month Look Ahead for RiverRenew Tunnel Project Construction Sites:
 - Pendleton Street
 - Royal Street
 - Hooffs Run
 - AlexRenew
- Community Outreach
- Public Comment Period

Construction at Four Tunnel Project Construction Staging Areas is Underway

1 Pendleton Street
Construction Staging Area
October 6, 2021

2 Royal Street
Construction Staging Area
November 8, 2021

3 Hooffs Run
Construction Staging Area
December 8, 2021
North of Jamieson Avenue
February 7, 2022*
South of Jamieson Avenue

4 AlexRenew
Construction Staging Area
May 17, 2021

*Note: Construction start date subject to shift

Legend

- Existing Outfall
- Waterfront Tunnel Route
- Hooffs Run Interceptor Route
- Construction Staging Area (CSA)

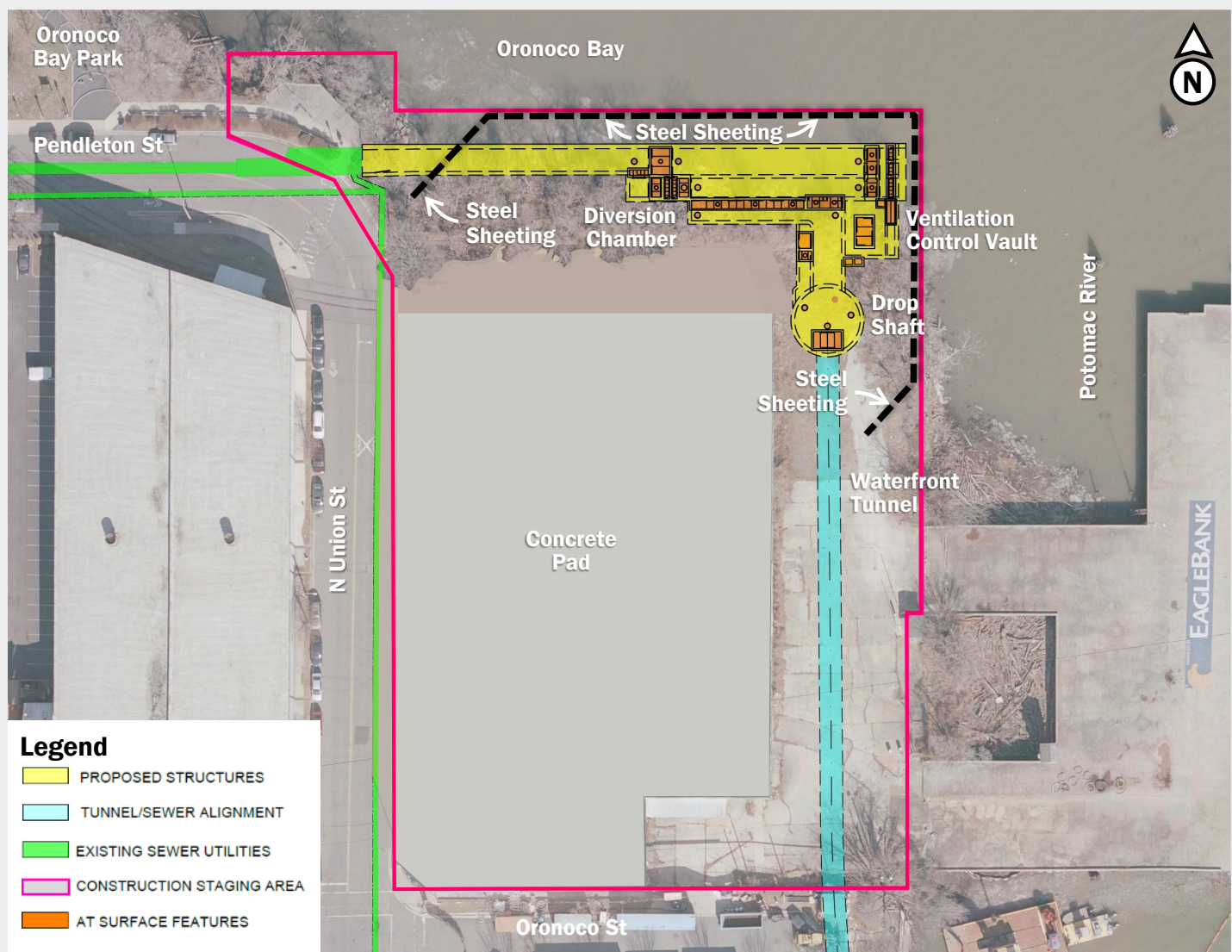




Pendleton Street Site

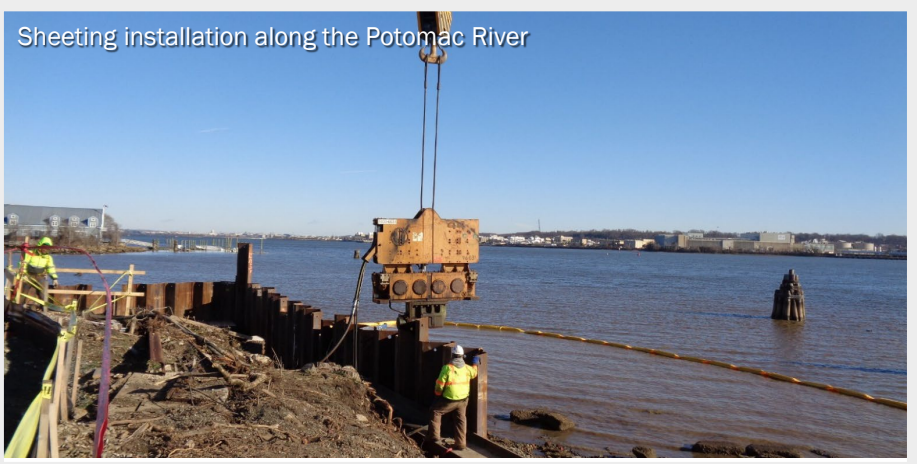
Sheeting installation along Oronoco Bay

Pendleton Street Site Construction Update



Legend

- PROPOSED STRUCTURES
- TUNNEL/SEWER ALIGNMENT
- EXISTING SEWER UTILITIES
- CONSTRUCTION STAGING AREA
- AT SURFACE FEATURES



Design Progress

■ Actual ▨ Planned As of December 30, 2021



Construction Progress

Jun 2022 ▲



Nov 2024 ▲

Major Activities

- Temporary utility installation underway
- Support of excavation (sheeting) in the Oronoco Bay and Potomac River nearly complete
- Dewatering of area behind sheeting starting



Seismographs Installed Near Pendleton Street Site



WHAT AM I?

I am a **seismograph**! I measure potential ground vibrations during construction of the RiverRenew Tunnel Project at the Pendleton Street Site.

SEISMOGRAPH

protected from the elements by a waterproof box

SOLAR PANEL

powers the seismograph

GEOPHONE

buried sensor detects ground vibrations



For more information:

🌐 [RiverRenew.com/construction/pendleton-street](https://www.RiverRenew.com/construction/pendleton-street)





☎ Construction hotline: 1-800-234-6592

✉ AskRiverRenew@AlexRenew.com

Map of Seismographs Installed Near Pendleton Street Site



Pendleton Street Site Six-Month Look-Ahead

Feb	Mar	Apr	May	Jun	Jul
Rem. Sheeting	Backfill	Guide Walls	Site largely dormant (awaiting shaft slurry wall equipment from Royal Street Site)		Slurry Set up
 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>15 trucks/day</p> <p>Remove Existing Sheeting</p>	 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>30 trucks/day</p> <p>Backfill</p>	 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>15 trucks/day</p> <p>Construct Shaft Guide Walls</p>	 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>10 trucks/day</p> <p>Set up Site for Shaft Slurry Walls</p>		



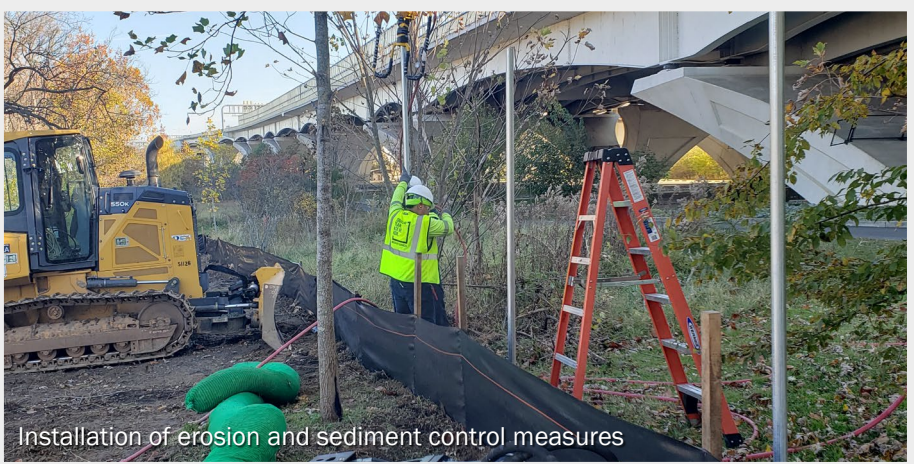
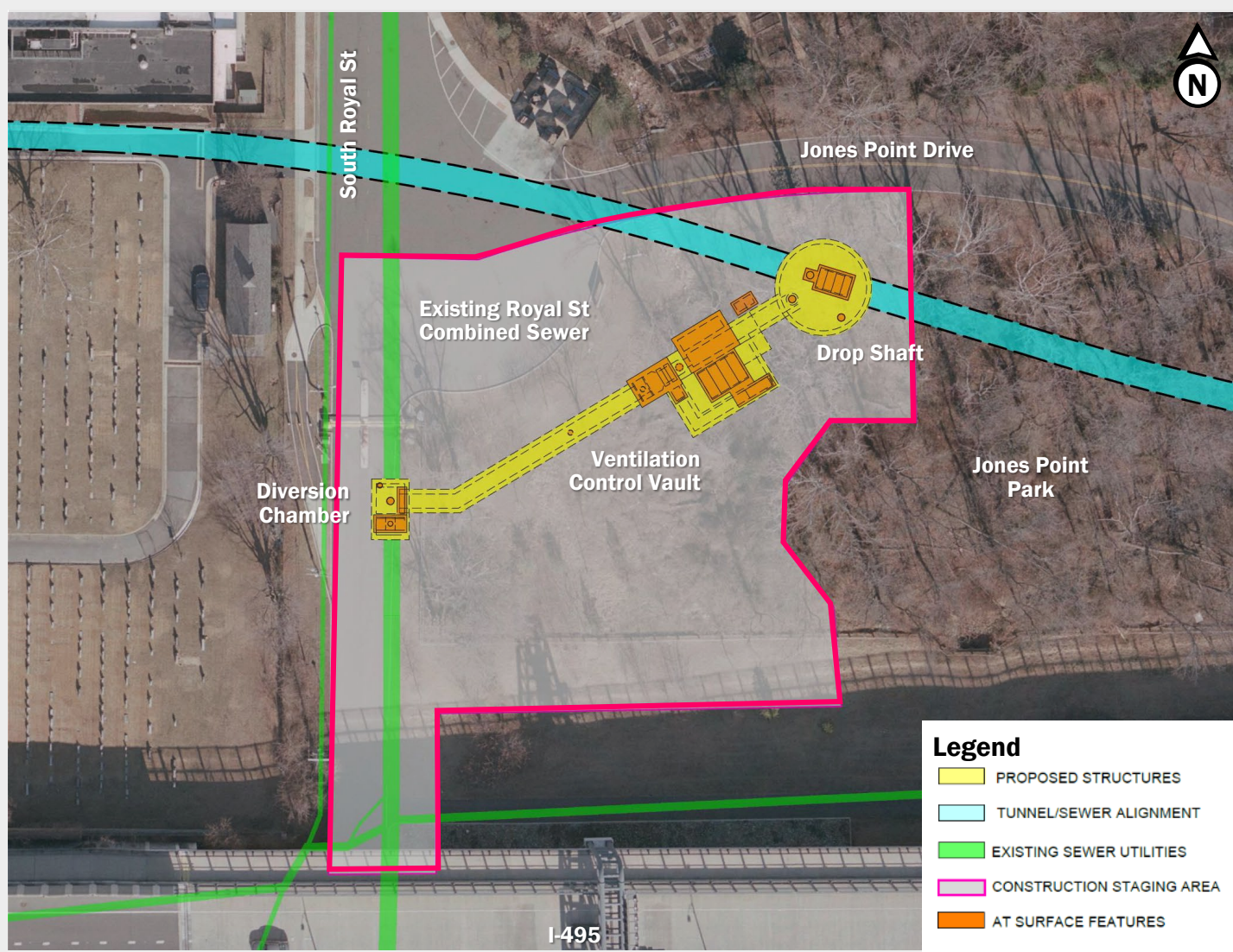
Note: Pictures representative of upcoming construction work

A construction site under a bridge. A worker in an orange vest and white hard hat stands on a black geomembrane liner. In the background, there are green and yellow storage containers, a yellow excavator, and a gravel area. The sky is overcast.

Royal Street Site

Installation of gravel working base in construction staging area

Royal Street Site Construction Update



Design Progress

Actual Planned As of December 30, 2021



Construction Progress

Jun 2022 ▲







Jul 2024 ▲

Major Activities

- Site preparation and equipment mobilization ongoing
- Erosion and sediment control installation complete



Royal Street Site Six-Month Look-Ahead

Feb	Mar	Apr	May	Jun	Jul
Site Mobilization and Preparation		Set up for Slurry Walls	Construct Shaft Slurry Walls		Excav. Set up
 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>10 trucks/day</p> <p>Site Mobilization and Preparation</p>	 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>10 trucks/day</p> <p>Set up Site for Shaft Slurry Walls</p>	 <p>24 hours (variance)* Mon-Sat</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>75 trucks/day</p> <p>Construct Shaft Slurry Walls</p>	 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>10 trucks/day</p> <p>Set up Site for Shaft Excavation</p>		

*Note: Variance for 5 days only, limited work hours due to school pick-up/drop-off



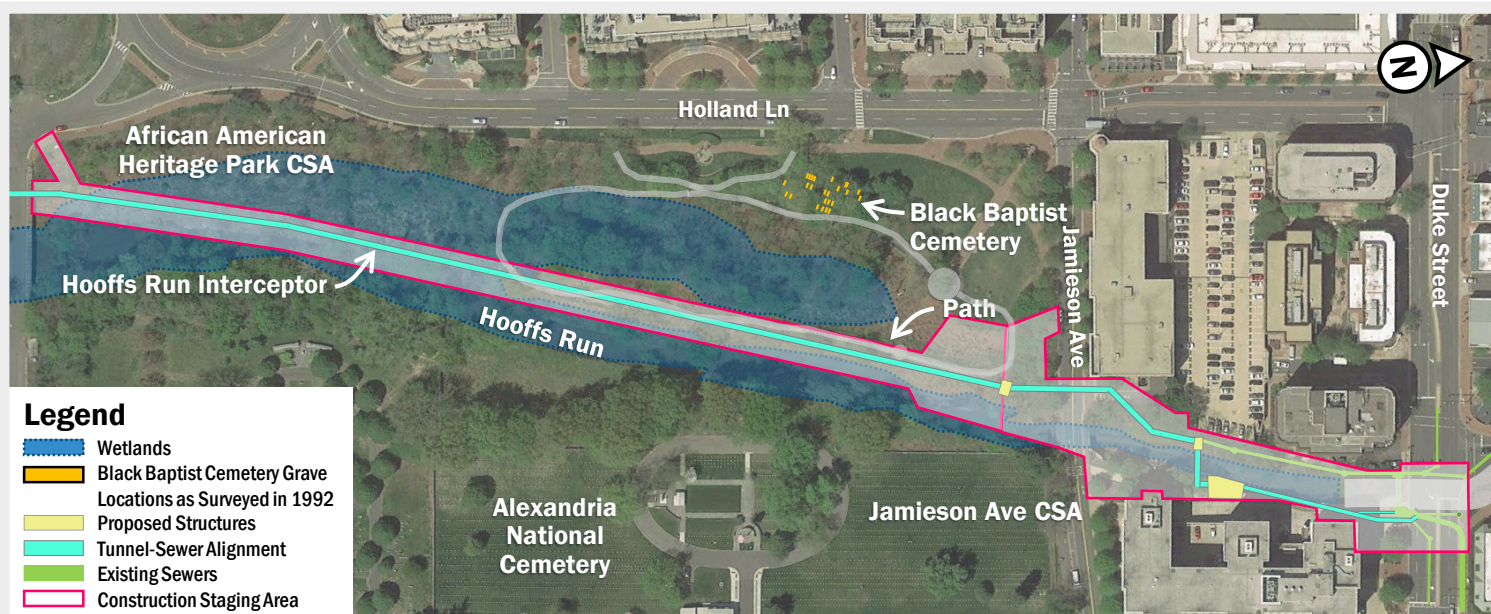
Note: Pictures representative of upcoming construction work



Hooffs Run Site

Site mobilization north of Jamieson Avenue

Hooffs Run Interceptor Construction Update

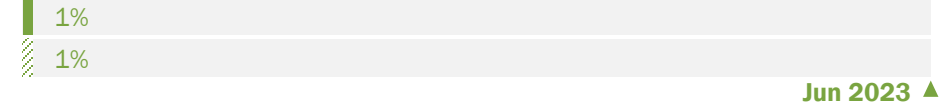


Design Progress

■ Actual ▨ Planned As of December 30, 2021



Construction Progress



Major Activities

- Mobilization and site preparation of Jamieson Ave Site ongoing
- Walkway and portion of Outfall 004 demolished
- Maintenance of flow measures installed






◀ African American Heritage Park CSA



◀ Jamieson Avenue CSA




Jamieson Avenue Site Six-Month Look-Ahead

Feb	Mar	Apr	May	Jun	Jul	
Support of Excv. Installation		Diversion Chamber Construction			Open Cut Construction	
						
<p>7am-6pm Mon-Fri</p>	<p>7am-6pm Mon-Fri</p>	<p>7am-6pm Mon-Fri</p>				
<p>Lane and sidewalk closures: Duke St and Jamieson Ave</p>	<p>Lane and sidewalk closures: Duke St and Jamieson Ave</p>	<p>Lane and sidewalk closures: Duke St and Jamieson Ave</p>				
<p>20 trucks/day</p>	<p>30 trucks/day</p>	<p>30 trucks/day</p>				
Support of Excavation Installation		Diversion Chamber Construction			Open Cut Construction	



Note: Pictures representative of upcoming construction work

African American Heritage Park Site Six-Month Look-Ahead

Feb	Mar	Apr	May	Jun	Jul	
Site Mobilization and Preparation		Junction Chamber Construction			Open Cut Construction	
 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>10 trucks/day</p>	 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>20 trucks/day</p>	 <p>7am-6pm Mon-Fri</p> <p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p> <p>30 trucks/day</p>				
Site Mobilization and Preparation		Junction Chamber Construction			Open Cut Construction	

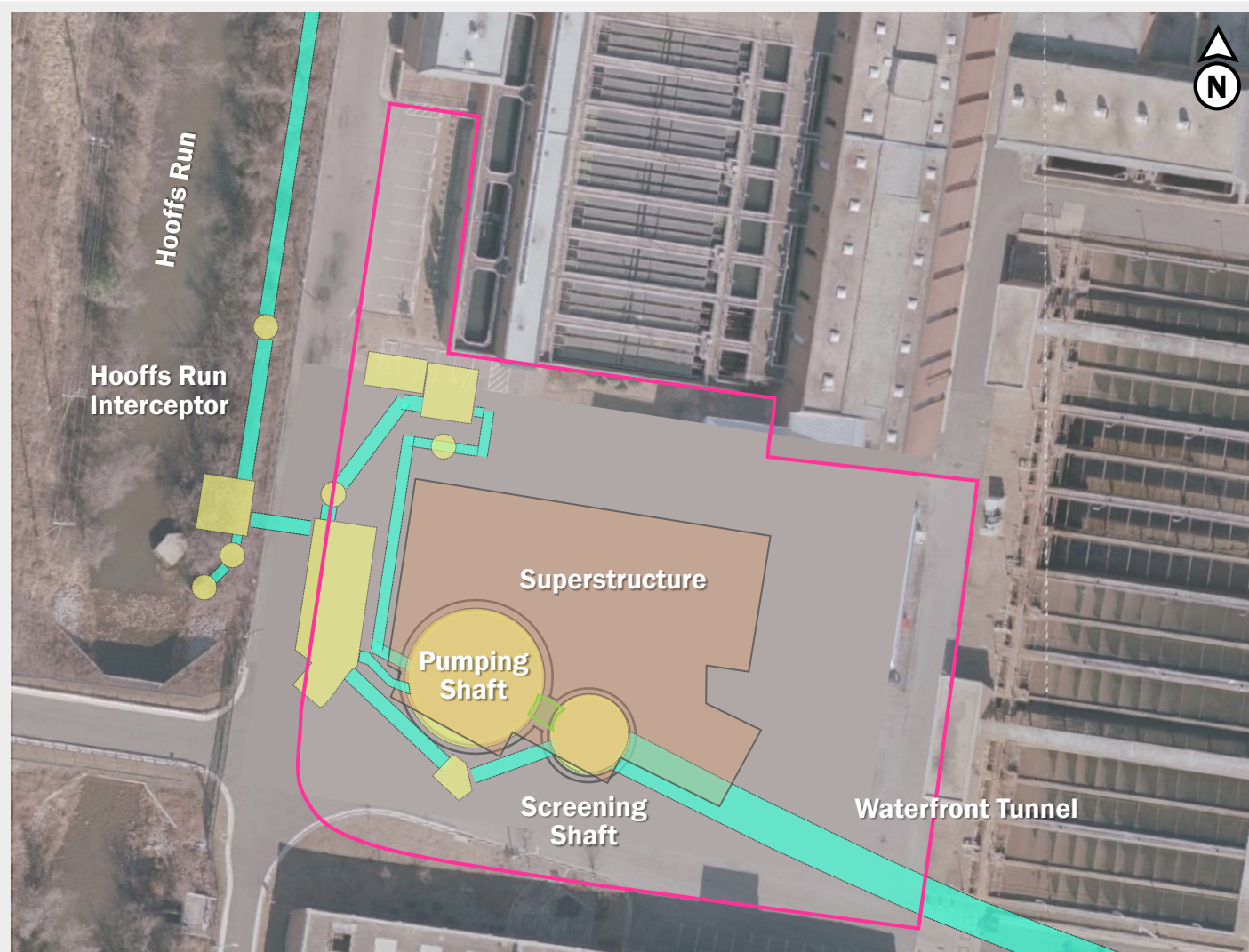


Note: Pictures representative of upcoming construction work

AlexRenew Site

Hydromill excavation of a slurry wall panel at AlexRenew

AlexRenew Site Construction Update



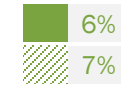
Design Progress

■ Actual ▨ Planned As of December 30, 2021



Construction Progress

Jun 2022 ▲



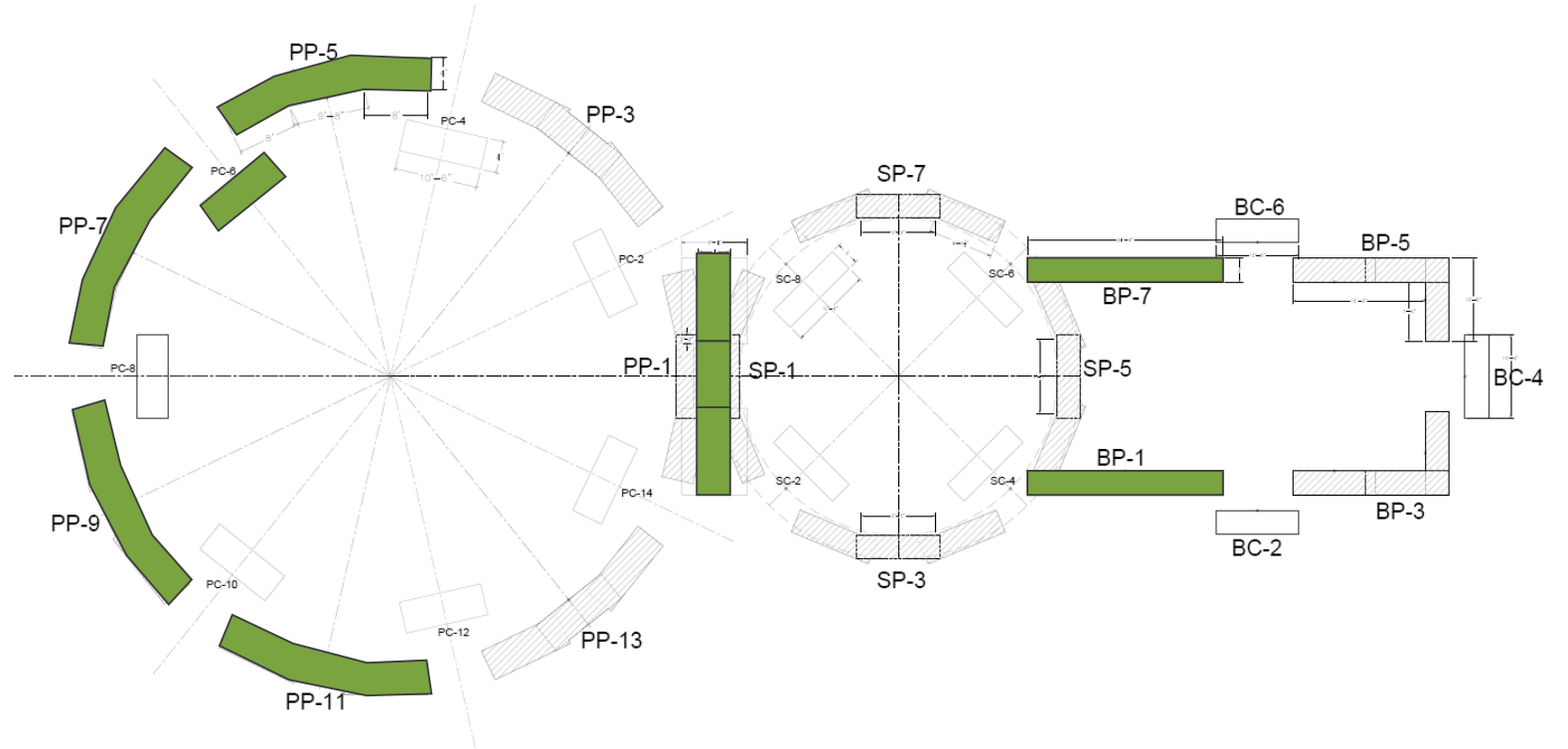
Jul 2024 ▲

Major Activities

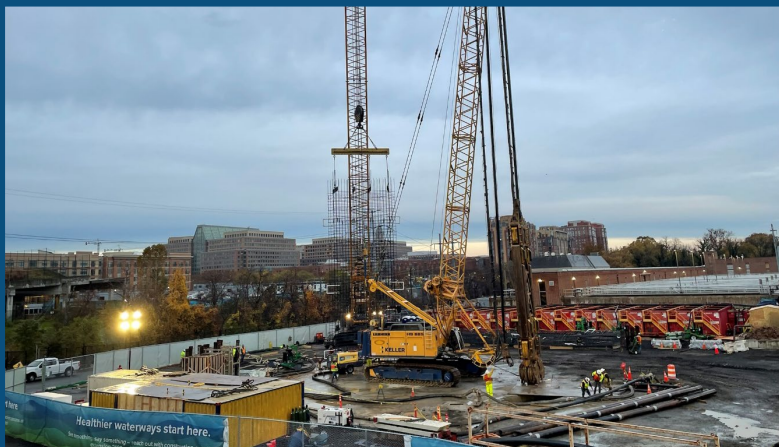

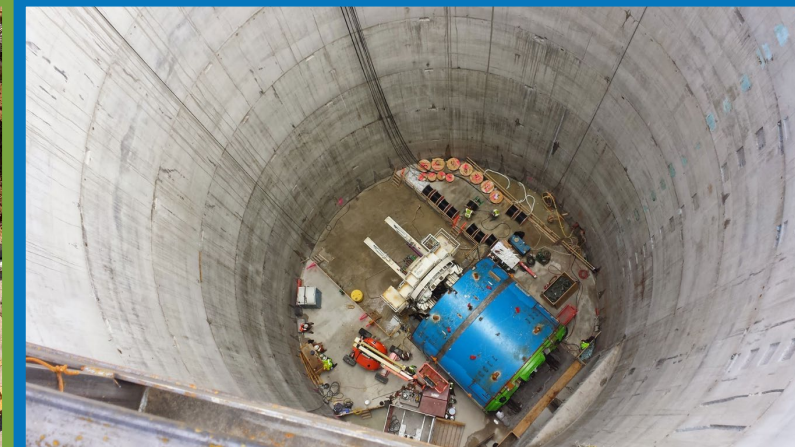
- Shaft slurry wall construction ongoing

Shaft Slurry Wall Progress at AlexRenew

Panel ID	Cubic Yards of Concrete	Pounds of Reinforcing
PP-5	744	57,000
PP-7	748	57,000
PP-9	728	57,000
PP-11	744	57,000
PC-6	293	26,000
BLP-1	480	Unreinforced
BLP-2	688	Unreinforced
BP-1	544	Unreinforced
BLP-3	272	Unreinforced
BP-7	544	Unreinforced



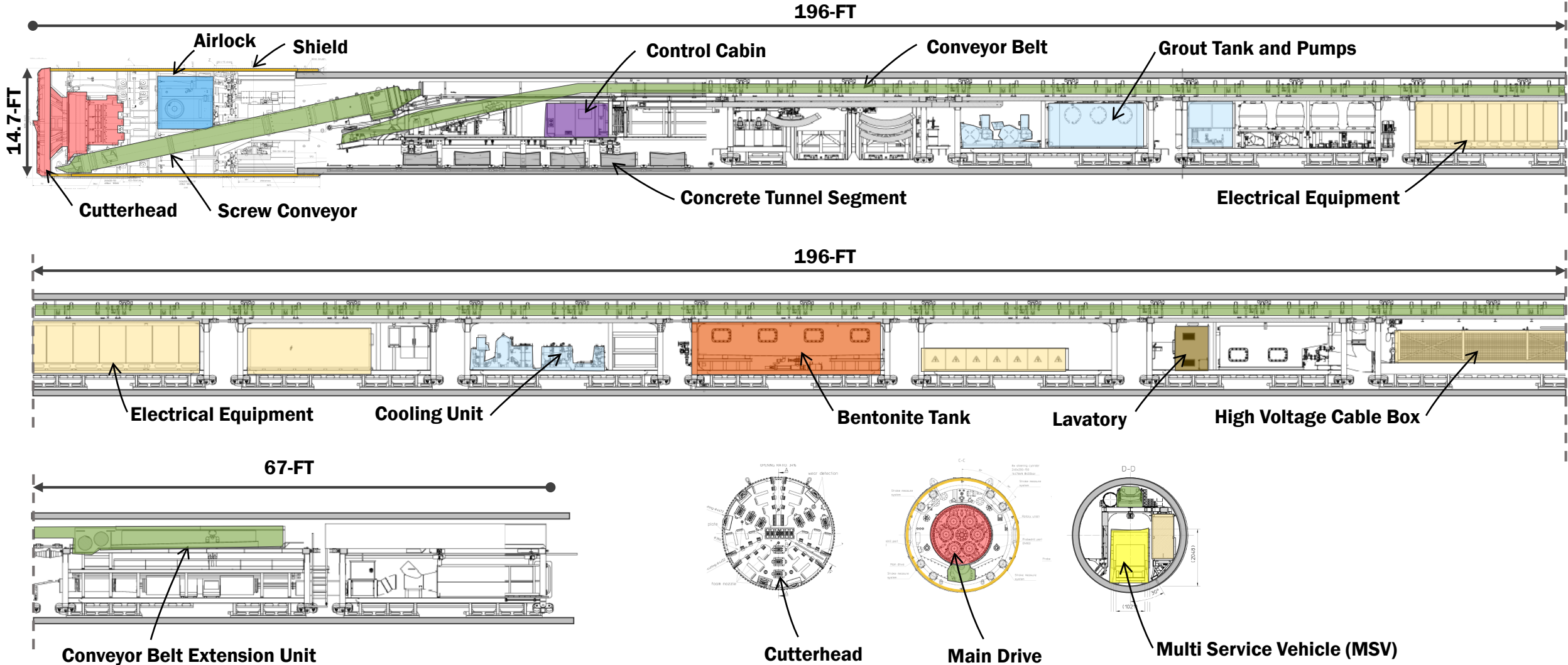
AlexRenew Site Six-Month Look-Ahead

Feb	Mar	Apr	May	Jun	Jul	
Construct Shaft Slurry Walls		Excavate Shafts			Assemble Tunnel Boring Machine	
						
<p>7am-6pm Mon-Fri</p>		<p>7am-11pm (variance) Hauling 7am-6pm Mon-Fri</p>			<p>7am-6pm Mon-Fri</p>	
<p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p>		<p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p>			<p>No anticipated impacts to sidewalks, bicycle routes, or travel lanes</p>	
<p>75 trucks/day</p>		<p>100 trucks/day</p>			<p>10 trucks/day</p>	
<p>Construct Shaft Slurry Walls</p>		<p>Excavate Pumping and Screening Shafts</p>			<p>Assemble Tunnel Boring Machine</p>	



Note: Pictures representative of upcoming construction work

Major Components of the RiverRenew Tunnel Boring Machine



Tunnel Boring Machine Fabrication Update

Shield, Main Drive, and Cutterhead



Tunnel Boring Machine Front Shield



Main Drive



Cutterhead

Tunnel Boring Machine Fabrication Update

Airlock



Airlock



Compression/Decompression Chamber



Decompression Chamber

Tunnel Boring Machine Fabrication Update

Trailing Gear



Gantry 1

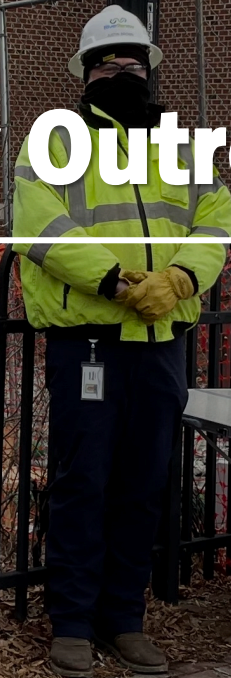


Gantry 4



Gantry 8

Community Outreach



Thank You to City Council for Extending the Term of the RiverRenew SAG for an Additional Year

2022-2023 SAG Representation and Members:



Morgan Babcock
Eisenhower Partnership
Nominee



Mace Carpenter
Tobacco Quay, Waterfront
Residences, or Rivergate



Liz Birnbaum
Carlyle or Duke St.
Corridor



Mark McNutt
Interest in RiverRenew



Dan Bradfield (SAG Chair)
South Old Town



Seeking Applicants
Interest or expertise in
diversity, race, and social
equality



Seeking Applicants
Engineering or
Construction Background



Erik Olson
NOTICe Nominee



Yvonne Callahan
OTCA Nominee

Charge:

- Review and monitor construction and program progress
- Communicate progress to the community by leveraging existing networks
- Identify concerns and receive input from the public
- Provide recommendations regarding mitigation of construction impacts

Other Information:

- SAG representation to remain the same
- Term: Feb 2022 – Feb 2023
- SAG can be extended to Feb 2024 (three years from first meeting)

Alexandria's Flood Mitigation and Water Quality Projects

City of Alexandria's Separate and Combined Sewer Systems



Legend

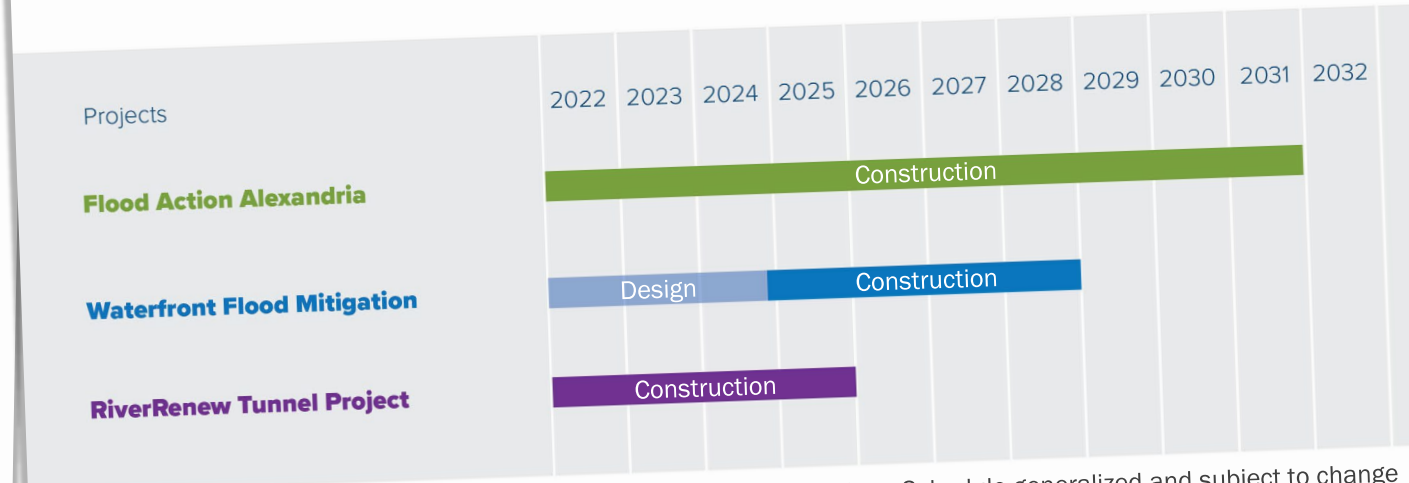
- TWO PIPES** SEPARATE SANITARY SEWER SYSTEM: one pipe for stormwater, one pipe for sewage
- ONE PIPE** COMBINED SEWER SYSTEM: one pipe to carry both stormwater and sewage
- Existing Combined Sewer Outfall** (Orange dot)
- Flood Action Alexandria storm sewer improvement project** (Green dot)
- Waterfront Flood Mitigation project area** (Blue shaded area)
- AlexRenew wastewater treatment plant** (Purple shaded area)
- RiverRenew tunnel project** (Purple line)

Major Projects

Project Goals

<p>Flood Action Alexandria</p>	<p>Increase storm sewer capacity to reduce flooding during intense storm events</p>
<p>Waterfront Flood Mitigation</p>	<p>Minimize nuisance flooding caused by high tides in the Potomac River and undersized storm sewers</p>
<p>RiverRenew Tunnel Project</p>	<p>Improve the health of Alexandria's waterways by capturing and treating combined sewer overflows</p>

Schedule for Alexandria's Flood Mitigation and Water Quality Projects



Note: Schedule generalized and subject to change

Additional Questions and Contact Information

Flood Action Alexandria

Stormwater Flooding
Contact the City of Alexandria at (703) 746-6499 or visit alexandriava.gov/stormwater



Waterfront Flood Mitigation

Tidal Flooding
Contact the City of Alexandria at (703) 746-4122 or visit alexandriava.gov/waterfront



AlexRenew and RiverRenew

Sewage Treatment
Call AlexRenew at (703) 721-3500 or visit AlexRenew.com/contact-us



RiverRenew Tunnel Project
Call the Construction Hotline at (800) 234-6592 or visit RiverRenew.com/contact-us



AlexRenew Awarded 2022 NACWA Award for National Environmental Achievement in Public Information and Education: Educational Program



**National Environmental
Achievement
AWARDS**



CLOE
The Tunnel Boring Machine
WAYNE
The Cranes
EDIE
The Excavator
BLAKE & BRIAN
The Backhoe Brothers
CECE
The Concrete Mixer
TODD
The Heavy Hoist
ELAINE
The All-Terrain Crane
SAM
The Street Sweeper



2022
NACWA National
Environmental Achievement
AWARD WINNER FOR
PUBLIC INFORMATION & EDUCATION:
EDUCATIONAL PROGRAM



CLOE AND FRIENDS SAVE THE WATERWAYS

*In a world where millions of gallons of combined sewage pollute Alexandria's waterways every year...
One community must come together to support the construction of a massive tunnel project...
And one team must make sure every Alexandrian understands what it takes to protect our rivers and streams.*

"My kids love Cloe!"
-Stakeholder Advisory Group Member

"Can we get flames on the real thing?"
-Mayor of Alexandria

★★★★★

"This morning and from my roof, I enjoyed watching Edie the Excavator taking down the walls!"
-Community Member






1800 Linerick Street | Alexandria, VA 22314
RiverRenew is a program owned and implemented by Alexandria Renew Enterprises.



Scan to
watch our
movie trailer!

Stay Engaged on RiverRenew Progress!



Spot the Equipment at AlexRenew Banner

Take a look! Our team is digging deep underground, preparing to launch the machine that will dig the Waterfront Tunnel. Use your phone to scan the QR codes below and learn more about each step!

@ Limerick Street Soccer Field

Cloe's Corner

[riverrenew.com/
community/
cloes-corner](http://riverrenew.com/community/cloes-corner)

Sip 'n See Events

**Hooffs Run: Tues 10-1
Pendleton St: Weds 10-1**



**Sign Up for
Construction
Alerts**

[riverrenew.com/
construction/
alerts](http://riverrenew.com/construction/alerts)

Check out our Time-Lapse Cameras



Upcoming Community Events



Let's talk tunnels with RiverRenew engineers and contractors.

RiverRenew Virtual Community Listening Session
Wednesday, January 26
6:00-8:00 p.m.

[REGISTER NOW](#)

Building for the future of Alexandria's waterways

RiverRenew.com  



ALEXANDRIA
EARTH DAY
April 2022 TBD



Community Listening Sessions
July 2022

@ Pendleton St, Royal St, Hooffs Run, & AlexRenew



Public Comment Period

Concrete pour for shaft slurry wall at AlexRenew



RiverRenewTM

INVESTING IN HEALTHIER WATERWAYS FOR ALEXANDRIA