

# 2021-2022 RiverRenew Stakeholder Advisory Group

Meeting No. 1

February 18, 2021





# SAG Meeting No. 1 Presentation Outline

 **Getting to Know the RiverRenew Stakeholder Advisory Group**

 **How Water Works in Alexandria**

 **History of RiverRenew**

 **Update on Ongoing RiverRenew Construction Projects**

 **Update on RiverRenew Tunnel Project**

**Break**

 **Meet Traylor-Shea**

 **RiverRenew Tunnel Project Construction Staging Areas**

 **Schedule and Next Steps**

 **Public Comment Period**

# Tonight's Speakers



**Caitlin Feehan**  
Program Director



**Justin Carl**  
Program Manager



**Traylor-Shea Joint Venture**  
Design-Build Team

# Virtual Meeting Best Practices

## Video

- **Camera turned on** for SAG members, when possible

## Audio

- **Microphones muted** unless speaking
- Avoid speaking over or interrupting each other (**see Ground Rules**)

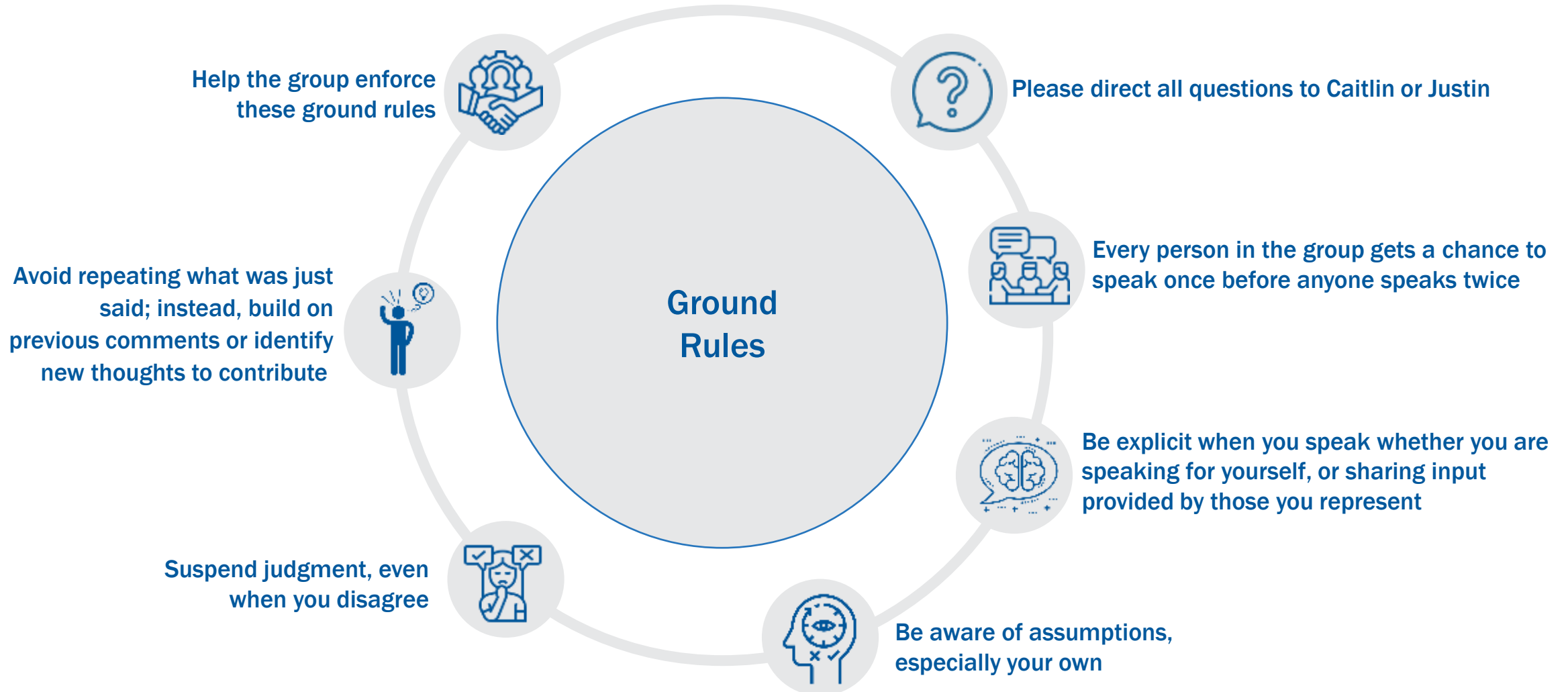
## Participation

- Questions for **SAG members only** will be taken **after each section**
- Please use the **“Raise Hand”** button to ask a question
- Questions will be **answered in the order received**
- **Public comment** will be taken at the end of the meeting. Each speaker will be allotted **3 minutes**



# Setting Ground Rules for a Productive SAG Meeting

Feedback from SAG Requested



An aerial photograph of a historic city, likely Pittsburgh, featuring a river in the foreground, dense residential buildings, and a prominent church steeple in the background. The image is overlaid with a semi-transparent blue filter.

# **Getting to Know the RiverRenew Stakeholder Advisory Group**

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# 2021-2022 RiverRenew Stakeholder Advisory Group At-a-Glance



**Morgan Babcock**

Eisenhower Partnership Nominee Carlyle or Duke St. Corridor



**Liz Birnbaum**

Carlyle or Duke St. Corridor



**Dan Bradfield –  
SAG Chair**

South Old Town



**Ailing Bressman**

Engineering or Construction  
Background



**Yvonne Callahan**

OTCA Nominee



**Mace Carpenter**

Tobacco Quay, Waterfront  
Residences, or Rivergate



**Mark McNutt**

Interest in RiverRenew



**Erik Olson**

NOTICe Nominee

## Charge:

- Review and **monitor construction/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:

- Established via City Council **Resolution No. 2959** in September 2020
- Term: **January 2021 – January 2022**



**Morgan Babcock**

Representing Outfalls 003/4

Nominated by Eisenhower Partnership



- Carlyle Council Manager and TMP Coordinator
- Extensive experience working with AlexRenew as partners in the Carlyle area
- Active member of Visit Alexandria, Alexandria Economic Development Partnership, Small Business Development Center, and Board Member of the Eisenhower Partnership





**Liz Birnbaum**

Representing Outfalls 003/4

Member residing in Carlyle Community or  
Duke Street Corridor



- Previous SAG participation: 2018 CSS SAG, 2019-2020 RiverRenew SAG
- Extensive background in rivers and clean water with more than 20 years experience in federal water policy
- Sits on the boards of the Potomac Conservancy and the Carlyle Towers condominium, and is a former Park and Recreation Commission member



**Dan Bradfield**

SAG Chair

Representing Outfall 002

Member residing in South Old Town



- 2021-2022 RiverRenew Stakeholder Advisory Group (SAG) Chair
- Previous SAG Member: 2019-2020 RiverRenew SAG
- Professional Engineer with degrees in Civil and Environmental Engineering
- Civil Engineer in the U.S. Air Force, working on large public works and smaller city-wide utility system projects





## **Ailing Bressman**

At-Large Member

Member with engineering or construction  
background



- Passionate about water issues and water conservation, with experience in water treatment plant design
- Holds a graduate degree in Environmental Engineering
- Recently received Engineer-in-Training designation (EIT)



**Yvonne Callahan**

Representing Outfall 002

Nominated by Old Town Civic Association  
(OTCA)



- Previous SAG participation: 2018 CSS SAG, 2019-2020 RiverRenew SAG
- Vice President of OTCA
- Actively involved in Old Town and equipped with a wealth of historical knowledge



## **Mace Carpenter**

Representing Outfall 001

Member residing in Tobacco Quay,  
Waterfront Residences or Rivergate



- Sits on North Old Town Independent Citizens' (NOTICE) Association and Rivergate Board of Directors
- Holds a graduate degree in public policy and political science
- Participated in RiverRenew 2018 and 2019 community listening sessions
- Active volunteer throughout the City





**Mark McNutt**

At-Large Member

Member with interest in RiverRenew



- Alexandria resident since 1975 and actively involved in local community associations and neighborhood groups
- Holds a degree in Economics of Natural Resource Development
- Interest in economics and city infrastructure



**Erik Olson**

Representing Outfall 001

Nominated by North Old Town  
Independent Citizens' (NOTICE)  
Association



- Previous SAG participation: 2018 CSS SAG, 2019-2020 RiverRenew SAG
- Extensive career in environmental policy & law, particularly water issues, including at the Natural Resources Defense Council, the USEPA, and the U.S. Senate
- Holds degrees from Columbia University and the University of Virginia School of Law

# Previous RiverRenew SAGs have Helped Shape the Program

## Major Outcomes of the 2017-2018 Long Term Control Plan Update SAG:



**Recommended Option B+** Unified Tunnel in LTCPU, subsequently approved by Virginia Department of Environmental Quality (VDEQ)



Supported **transfer** of program responsibility from the City to AlexRenew



Challenged team to reduce **overflow volume** at Outfall 001 and **extend** Outfall 001 to the Potomac River



Requested **climate change** to be considered in analysis



Noted Alexandria's historic character and to consider potential **impacts to historic structures**



Suggested investigating **affordability** strategies



# Previous RiverRenew SAGs have Helped Shape the Program

## Major Outcomes of RiverRenew Design SAG (2019-2020):



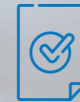
Promoted **Community Listening Sessions** to support public outreach associated with **Environmental Assessment** Process



Gave feedback on **tunnel routes** and **facility locations**



Requested additional studies and informational flyer on **climate change**



Supported development and approval of **Special Use Permits**



Provided input on first **rate increase**



Served as liaisons to community while AlexRenew completed **boring program**



Reviewed **shortlisting** criteria for design-build procurement



Saw **construction projects** begin at AlexRenew



Reviewed the development of **Request for Proposal Documents**



Provided significant input on site **best management practices**, **safety requirements**, and **soil handling/transportation plan**

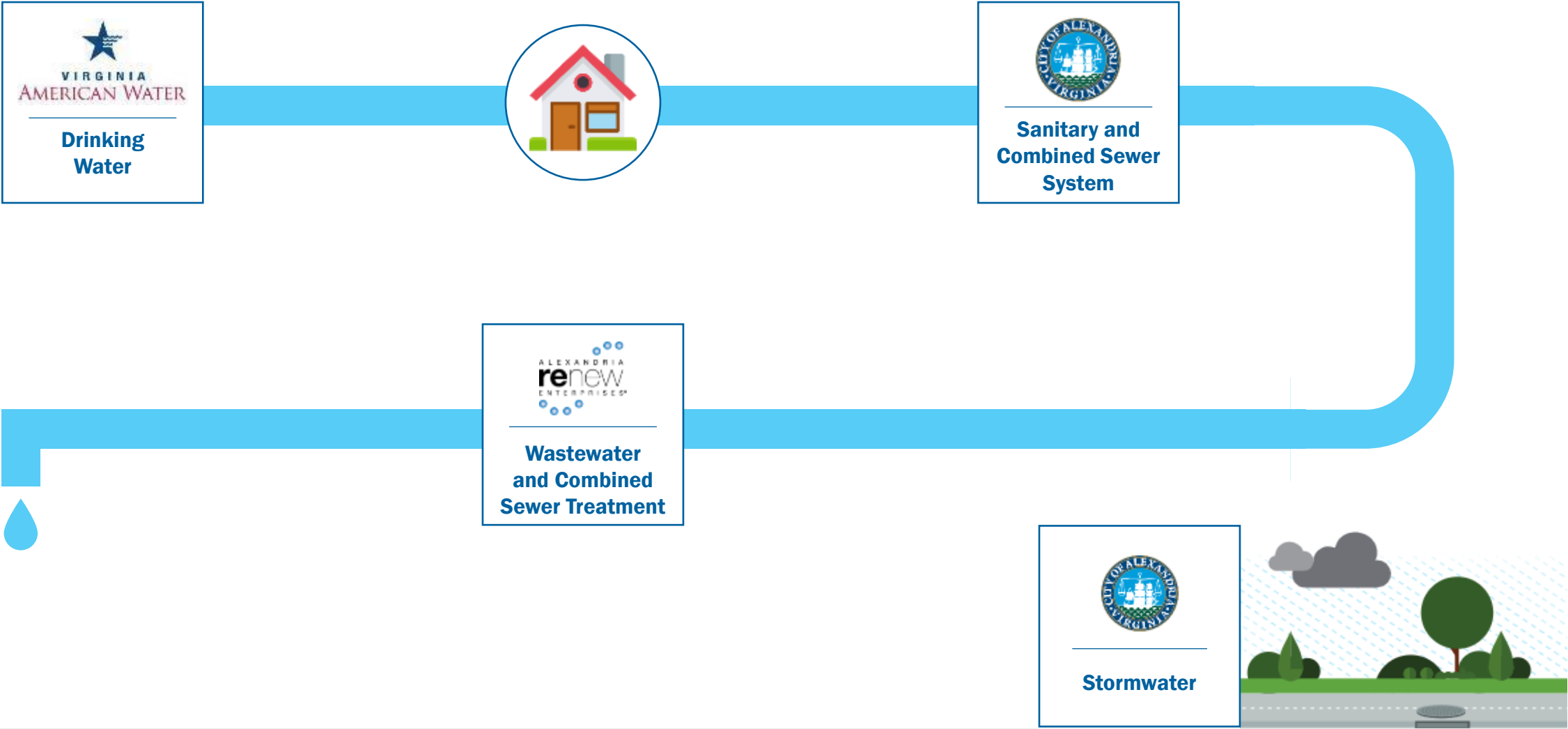


An aerial photograph of Alexandria, Egypt, showing a dense urban landscape with numerous buildings and green spaces. The city is situated along the Mediterranean Sea, with a large harbor area visible in the foreground. The title "How Water Works in Alexandria" is overlaid in white text on a dark background.

# How Water Works in Alexandria

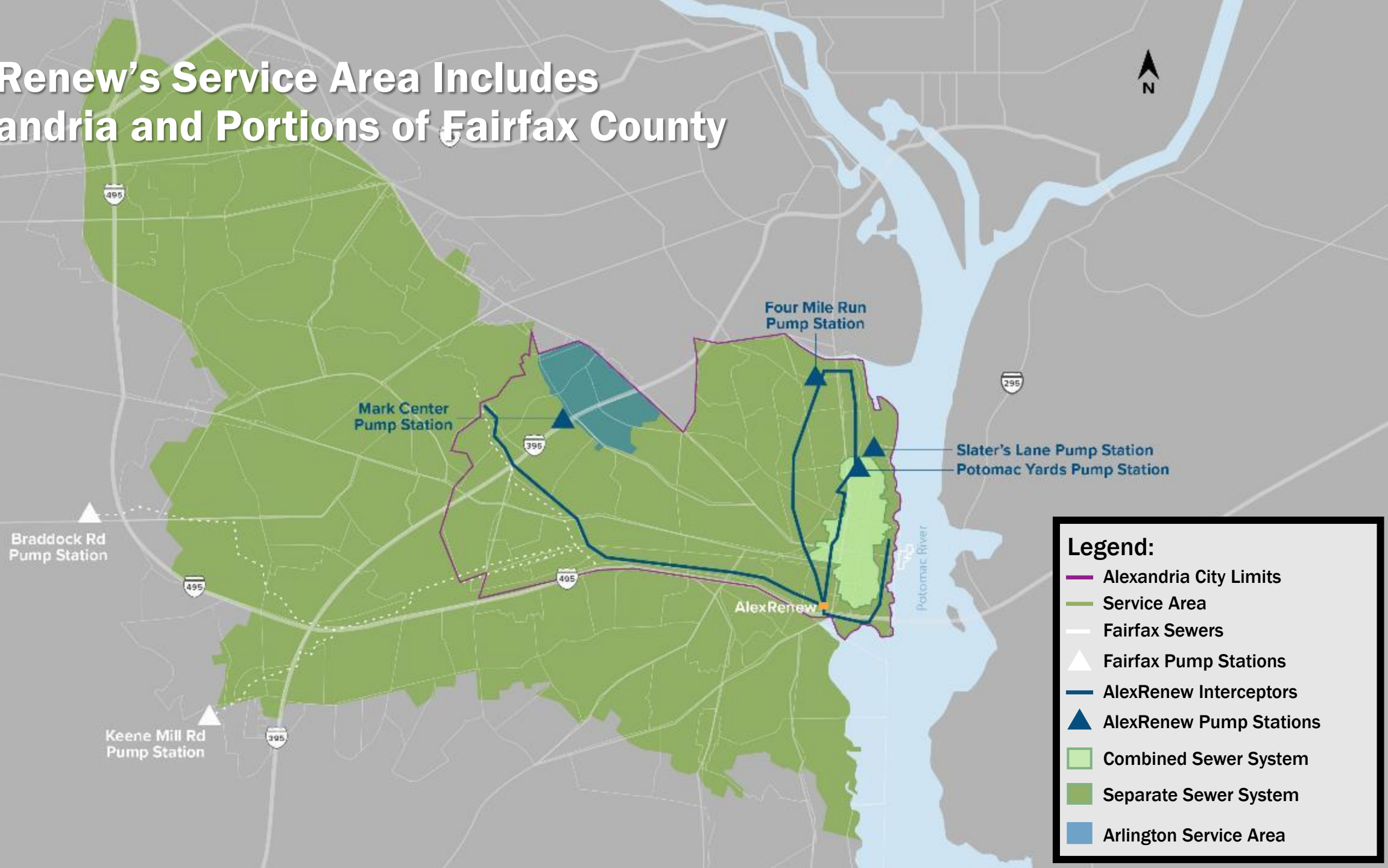
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# How Water Works in the City of Alexandria





# AlexRenew's Service Area Includes Alexandria and Portions of Fairfax County





# AlexRenew At-A-Glance

- Serves over 300,000 customers in Alexandria and Fairfax County
- Independent public entity created in 1952 by Alexandria City Council
- Led by a five-member citizen Board of Directors
- AlexRenew is primarily funded through sewer rates

**4** pumping stations throughout Alexandria

**4** combined sewer outfalls

**20** miles of sewer interceptors

**35** million gallons of wastewater treated every day at our wastewater treatment plant

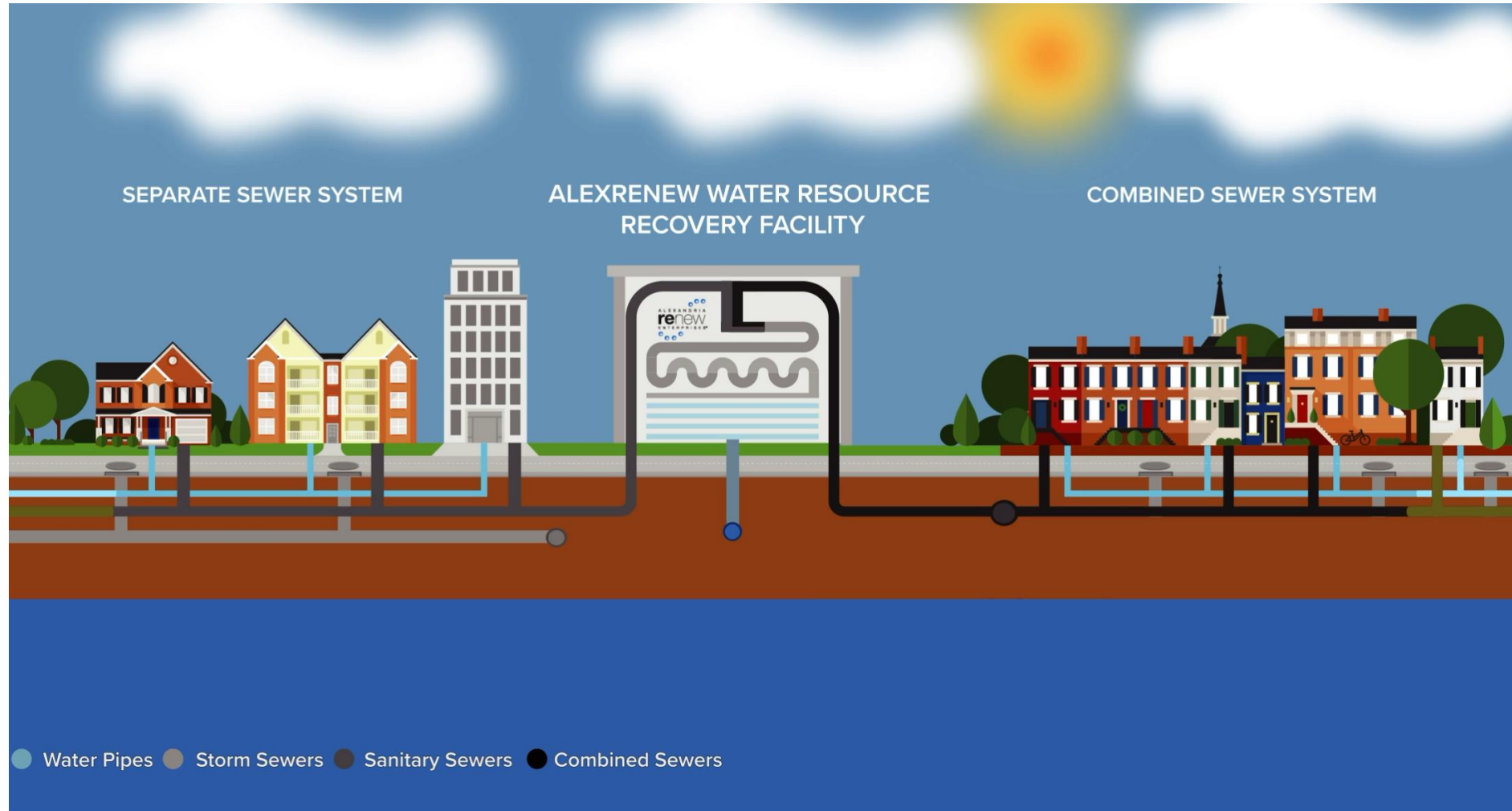




# History of RiverRenew

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# Alexandria is Served by Two Types of Sewer Systems



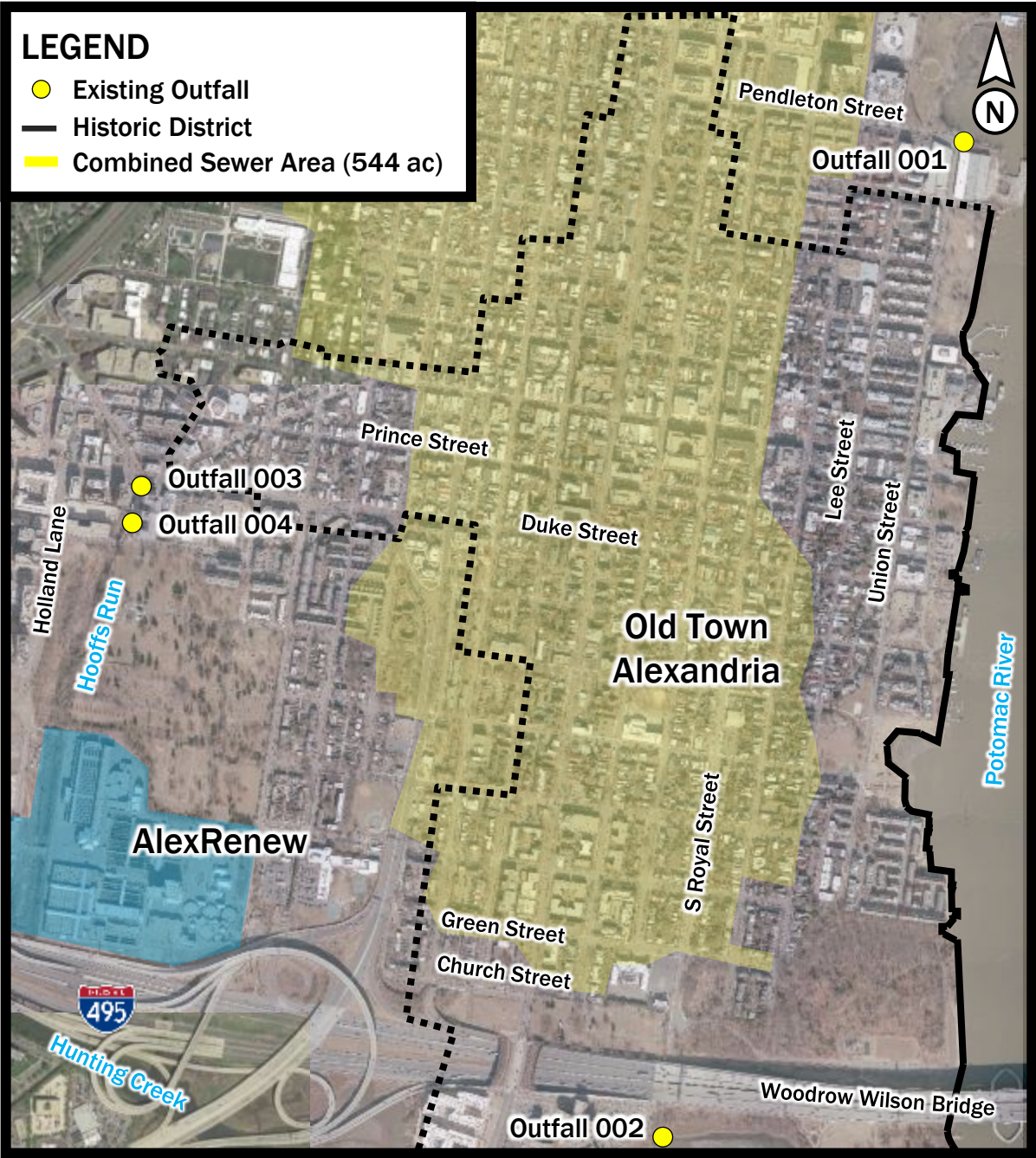


# Millions of Gallons of Rainwater Mixed with Sewage Pollutes Alexandria's Waterways Each Year via Four Outfalls

A 2017 Virginia law requires remediation of these outfalls by July 2025

Outfall	Overflow Volume (million gallons)*	Overflow Events*	2017 Law Requirement
001	46	37	4-6 overflows per year
002	40	46	80% bacteria reduction
003	25	70	99% bacteria reduction
004	17	45	99% bacteria reduction

\*Yearly average based on 2000-2016 climate period





**In June 2018, the City of  
Alexandria Transferred the  
Four Existing Outfalls and  
RiverRenew Ownership to  
AlexRenew**





# RiverRenew At-a-Glance

## RiverRenew Projects:

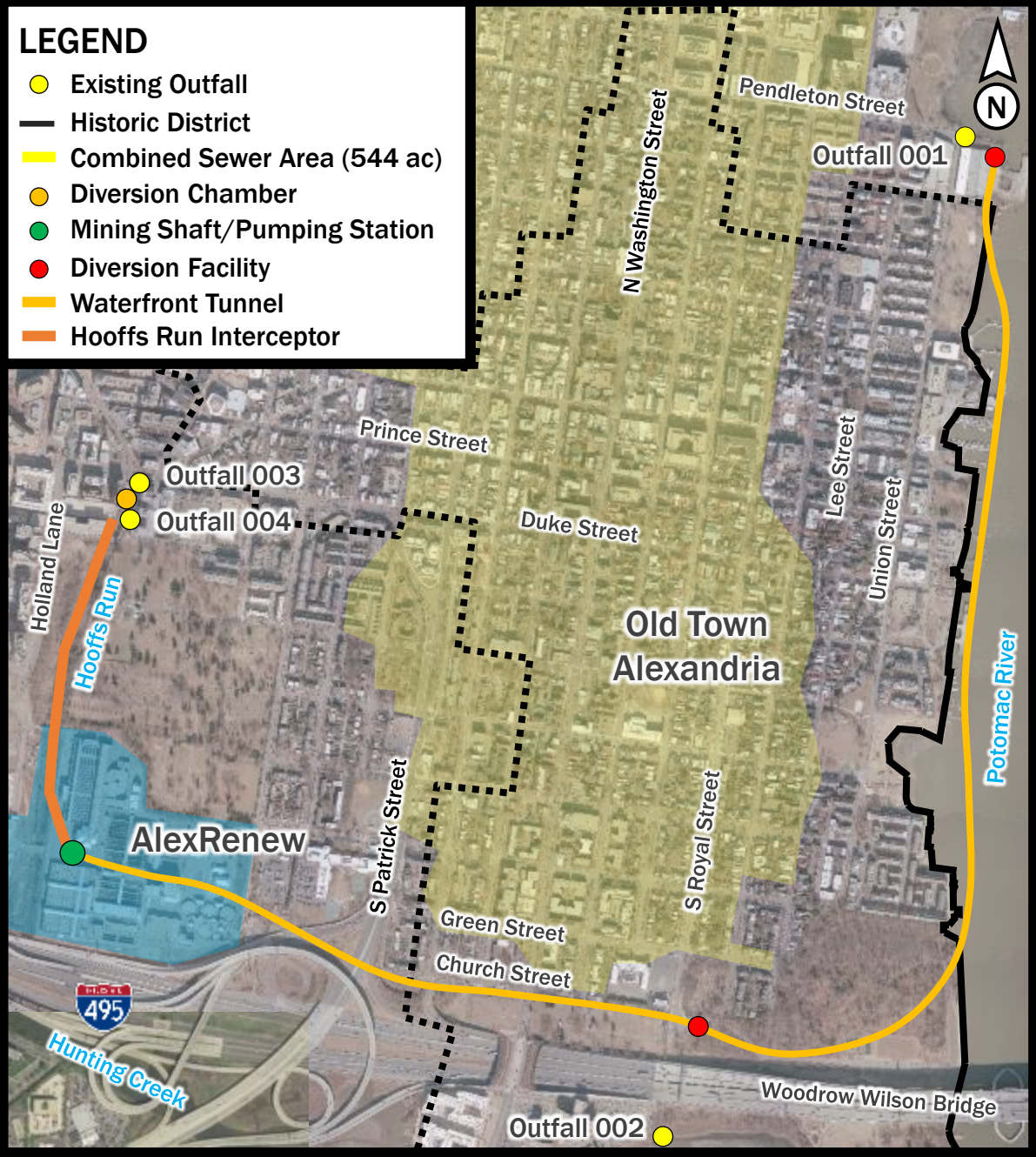
- Tunnel Project
- Building J Facilities Relocation and Decommissioning Project
- 108 to 116 Million Gallons per Day Project
- Site Security and Access Project

## RiverRenew Capital Cost:

- \$615 million

## RiverRenew Schedule:

- July 2018 – July 2025 (Substantial Completion of Tunnel Project)





# **SAG Homework!**

Meet Cloe and Watch RiverRenew's  
Motion Animation Video at  
[RiverRenew.com](http://RiverRenew.com)!



[RiverRenew.com/Meet-Cloe](http://RiverRenew.com/Meet-Cloe)

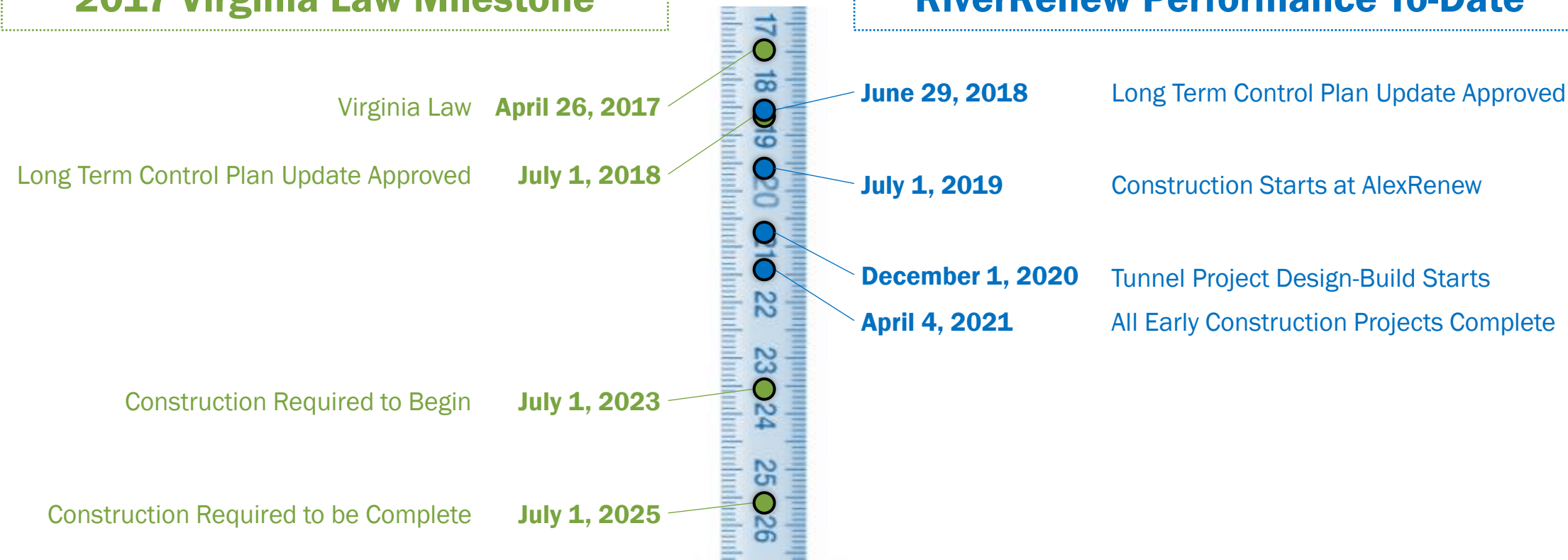
[RiverRenew.com/Solving-a-Century-Old-Problem](http://RiverRenew.com/Solving-a-Century-Old-Problem)



# Measuring Up to the 2017 Virginia Law Milestones

## 2017 Virginia Law Milestone

## RiverRenew Performance To-Date

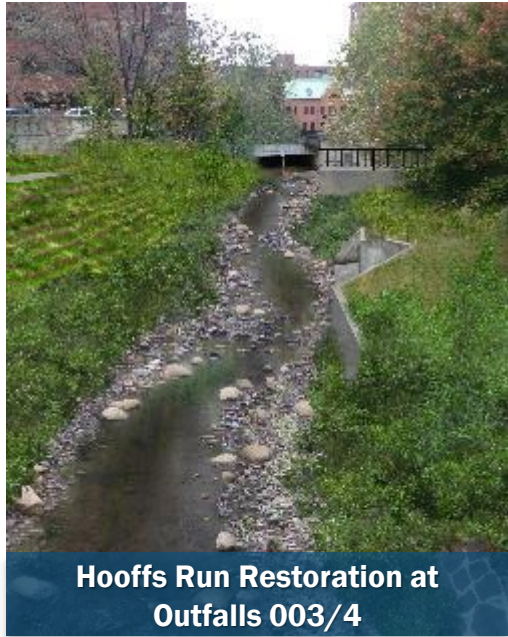




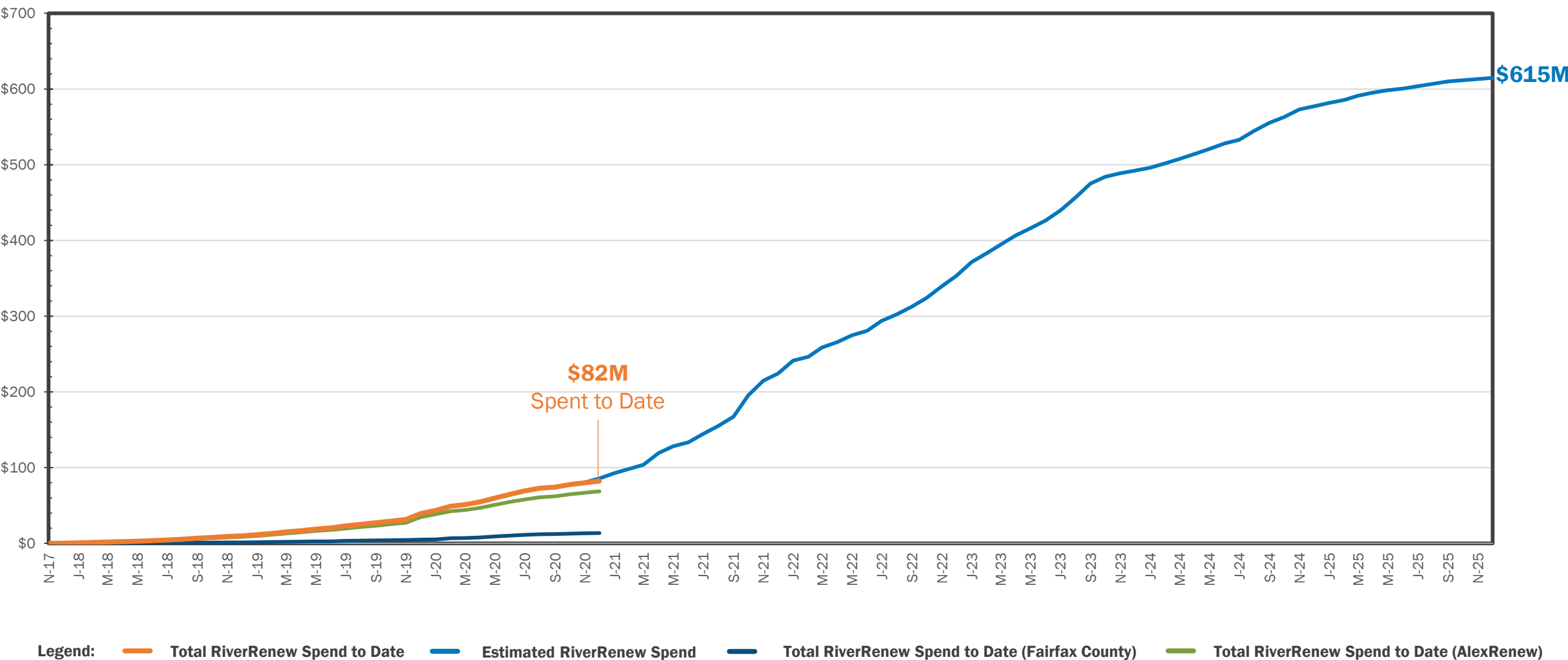
# RiverRenew will Improve Water Quality, Enhance Public Spaces, and Connect the Community to Our Waterways



(average over 2000 – 2016 study period)

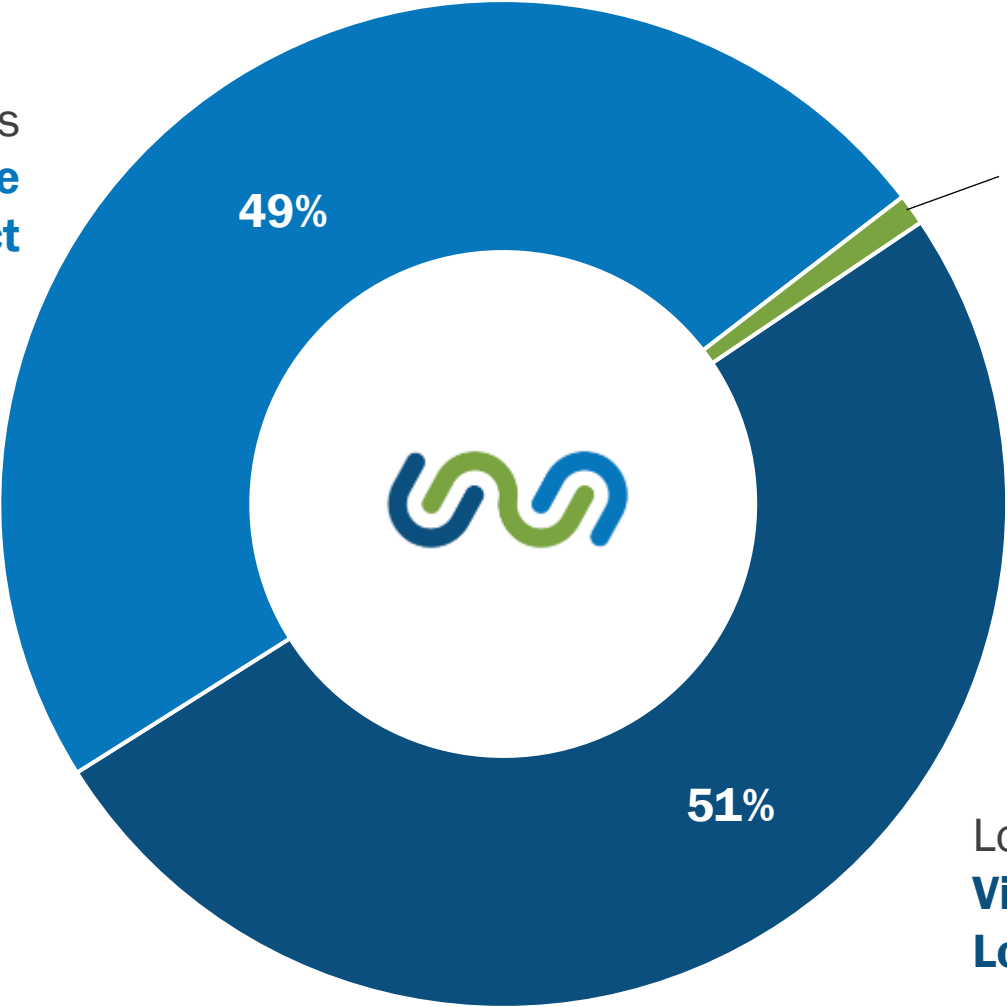


# RiverRenew Spending Plan



# AlexRenew has Solicited Funds from a Variety of Sources to Fund RiverRenew and Minimize Rate Impacts

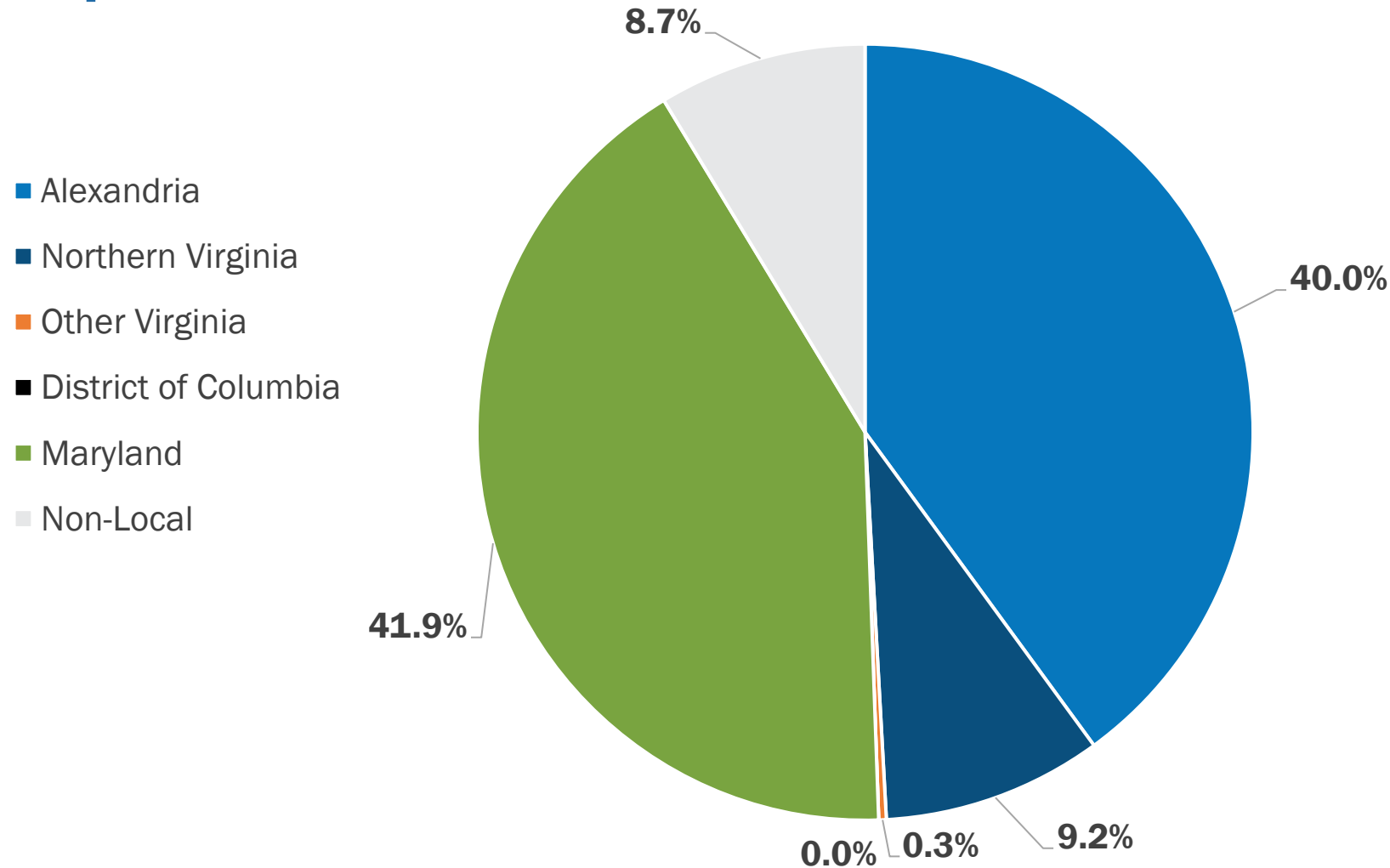
Low Interest Loan through EPA's  
**Water Infrastructure Finance  
and Innovation (WIFIA) Act**



**\$25 million grant** in April 2019.  
Seeking additional grant funding  
through Virginia General Assembly

Low Interest Loan through  
**Virginia Clean Water Revolving  
Loan Fund (VCWRLF)**

# Over 90% of RiverRenew Tunnel Project Work is Anticipated to be Conducted by Firms based in Alexandria or the Greater Washington Metropolitan Area



Note: Percentages based on total contract value, with the exception of allowances





A photograph of construction equipment at a site, featuring a Liebherr excavator on the left, a skid steer loader in the center, and a large ACECO excavator on the right. The background shows a brick building and trees. The image has a blue tint.

# Update on Ongoing RiverRenew Construction Projects

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# Map of Ongoing and Complete RiverRenew Projects



Robinson Terminal  
North Warehouse  
Demolition

Royal Street Site  
Investigations and  
Tree Clearing

Holland Lane Lot

## AlexRenew Projects:

- Building J Facilities Relocation and Decommissioning
- 108 to 116 Million Gallons Per Day
- Site Security and Access



# Summary of Ongoing and Complete RiverRenew Projects to Pave the Way for the Tunnel Project

## Projects at AlexRenew



Relocation of building uses and building demolition

Jul 2019 – Apr 2021

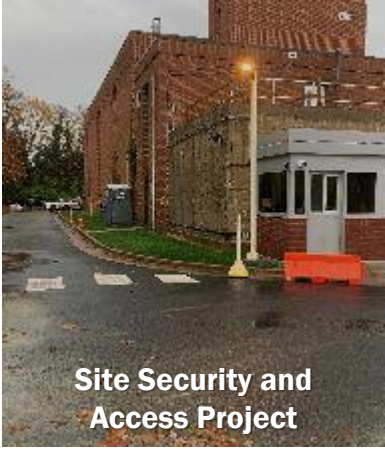
95% Complete



Increase of primary pumping capacity to 116 million gallons per day

Aug 2019 – Dec 2020

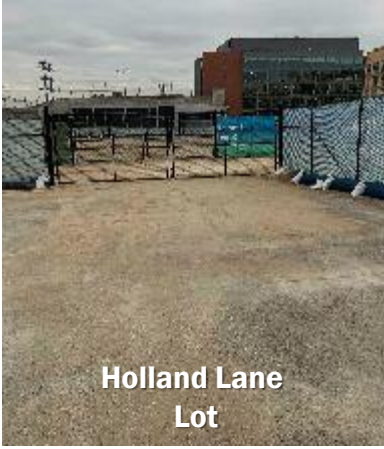
Complete



Upgrades to existing access and security systems

Aug 2019 – Dec 2020

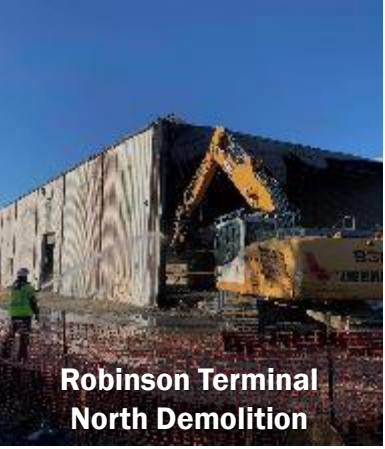
Complete



Preparation of vacant lot for staging of Tunnel Project materials and equipment

Sept 2020 – Jan 2021

Complete



Demolition of existing warehouse to prepare site for Tunnel Project

Nov 2020 – Dec 2020

Complete



Site investigations and tree clearing activity to prepare site for Tunnel Project

Nov 2020 – Feb 2021

Complete

## Other Work



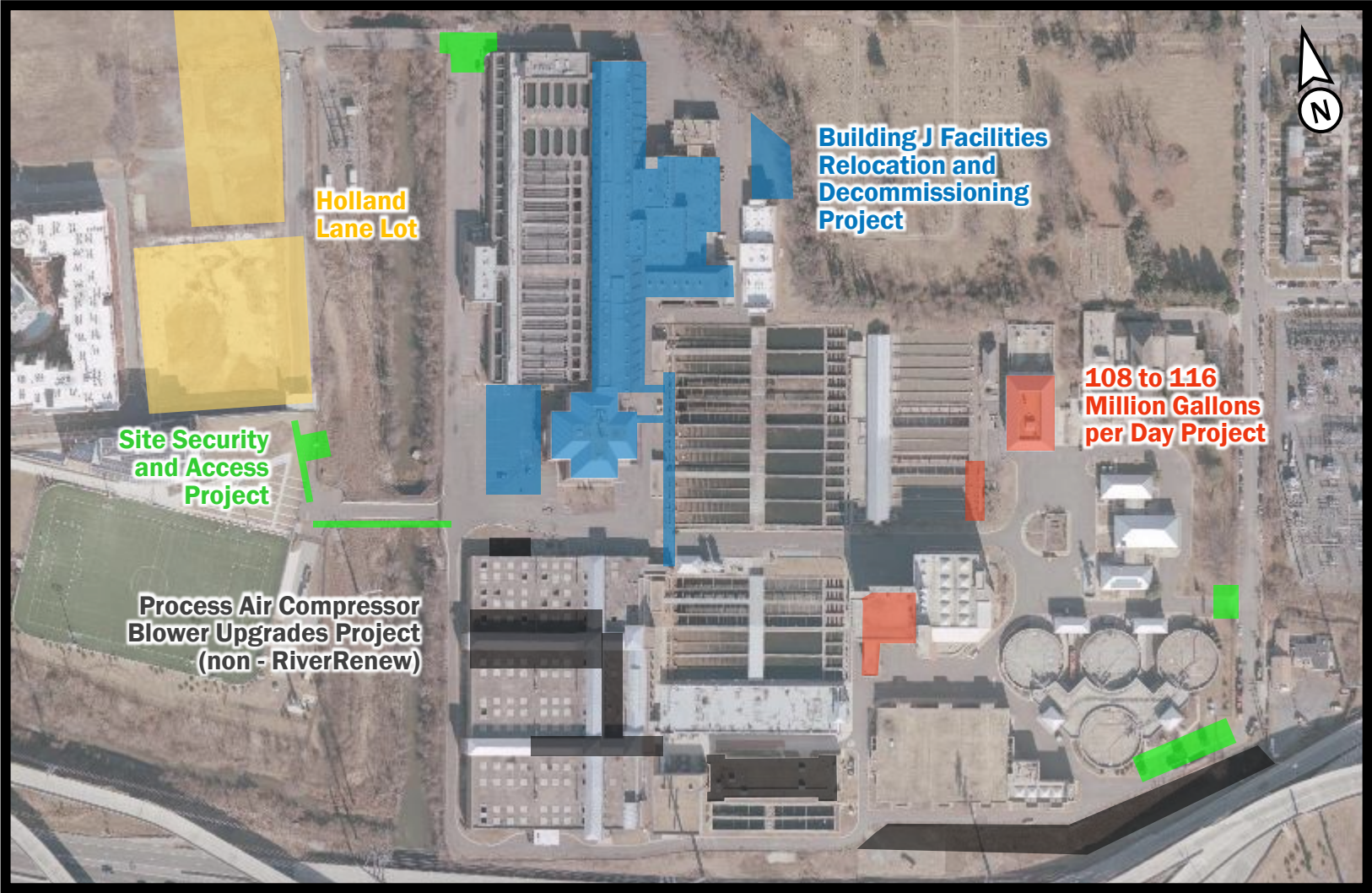
# Most of AlexRenew's Campus has Been Under Construction Since July 2019



Holland Lane Lot



New Laboratory



New Guard Booth



New Pump Assembly





**The 108 to 116  
Million Gallons per  
Day Project was  
Completed on  
December 11, 2020**

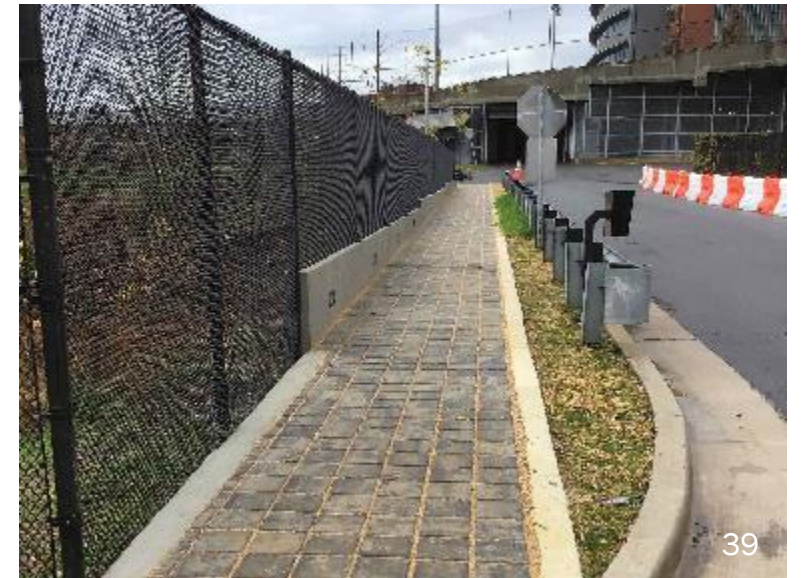


## Building J Demolition is On-Schedule





# Site Security and Access Improvements are Complete





# Preparation of Holland Lane Lot is Complete







**Robinson Terminal North Warehouse  
Demolition was Completed in December 2020**



# Royal Street Site Investigations and Tree Clearing are Complete







# **Update on RiverRenew Tunnel Project**

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# RiverRenew Tunnel Project At-a-Glance

## Tunnel Project Components:

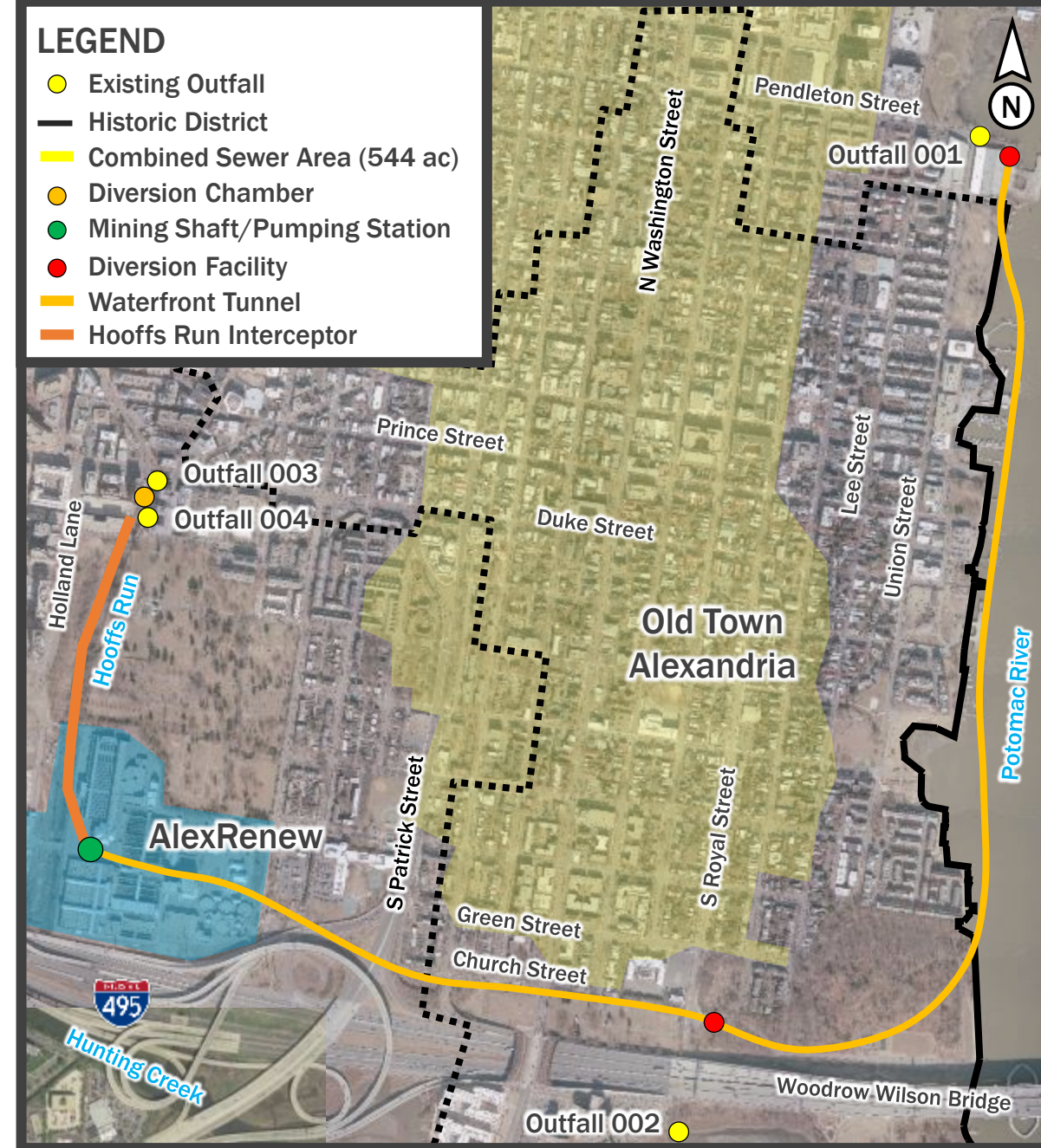
- Two-mile-long, 12-foot-wide Waterfront Tunnel approximately 100 feet below ground;
- Diversion facilities to direct 130 million gallons of combined sewage into the tunnel system
- Half-mile-long, six-foot-wide Hooffs Run Interceptor
- Pumping stations housed in two large shafts
- Superstructure to house pumping station equipment

## RiverRenew Tunnel Project Construction Cost:

- \$454.4 million

## RiverRenew Tunnel Project Schedule:

- December 2020 – July 2025 (Substantial Completion of Tunnel Project)

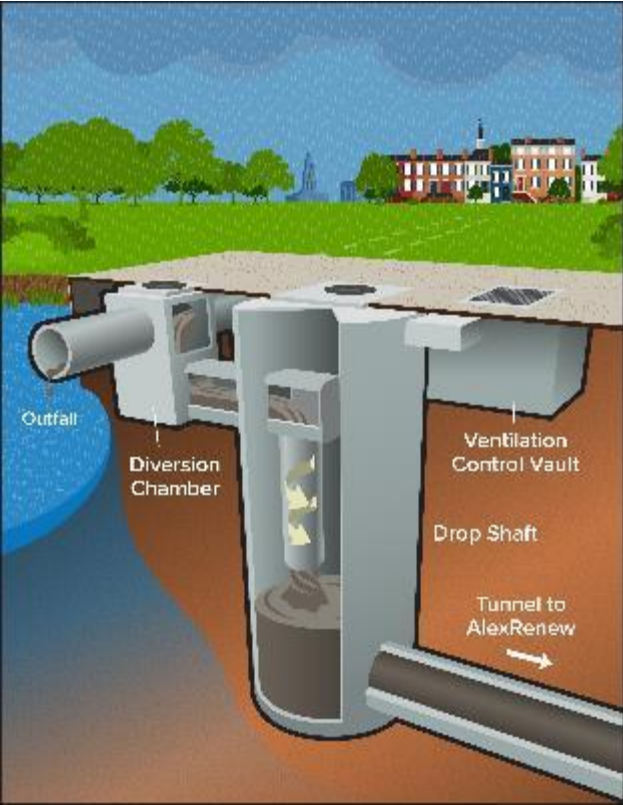




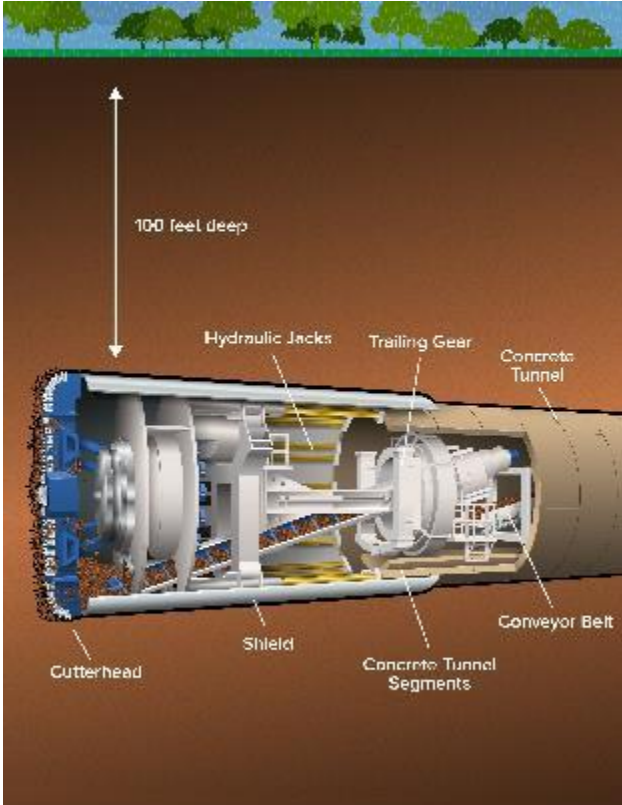
# Major RiverRenew Tunnel Project Components

## Waterfront Tunnel

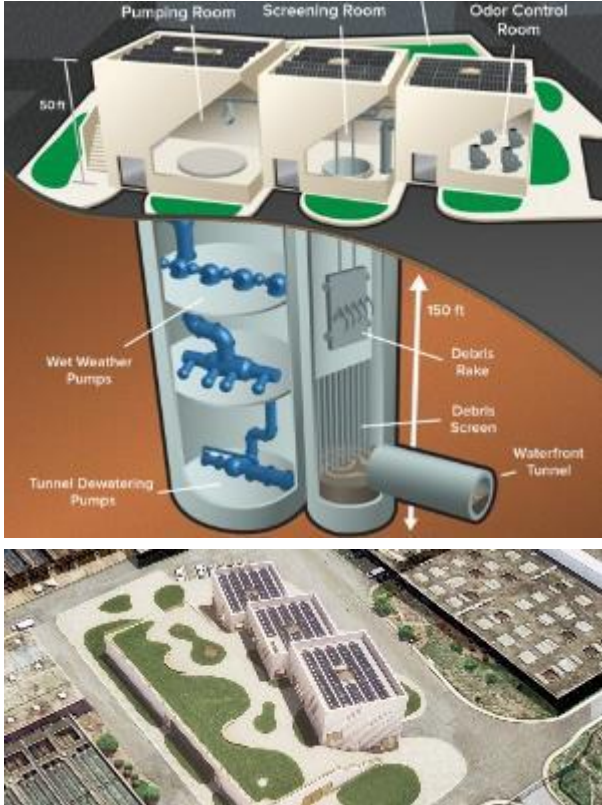
### Diversion Facilities



### Tunnel Boring Machine



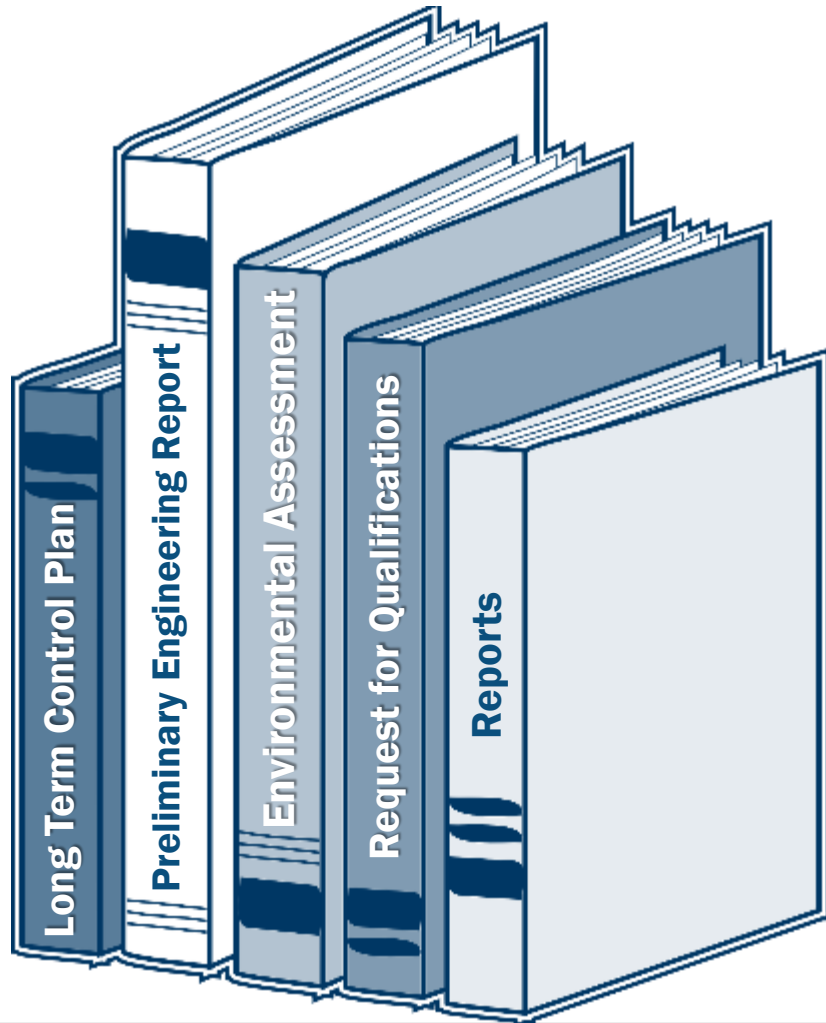
## Tunnel Dewatering and Wet Weather Pumping Station



## Hooffs Run Interceptor



# Over the last 3 years, AlexRenew has Developed Documents and Completed Third Party Coordination to Serve as the Contractual Foundation for the Tunnel Project



Request for Proposal Documents

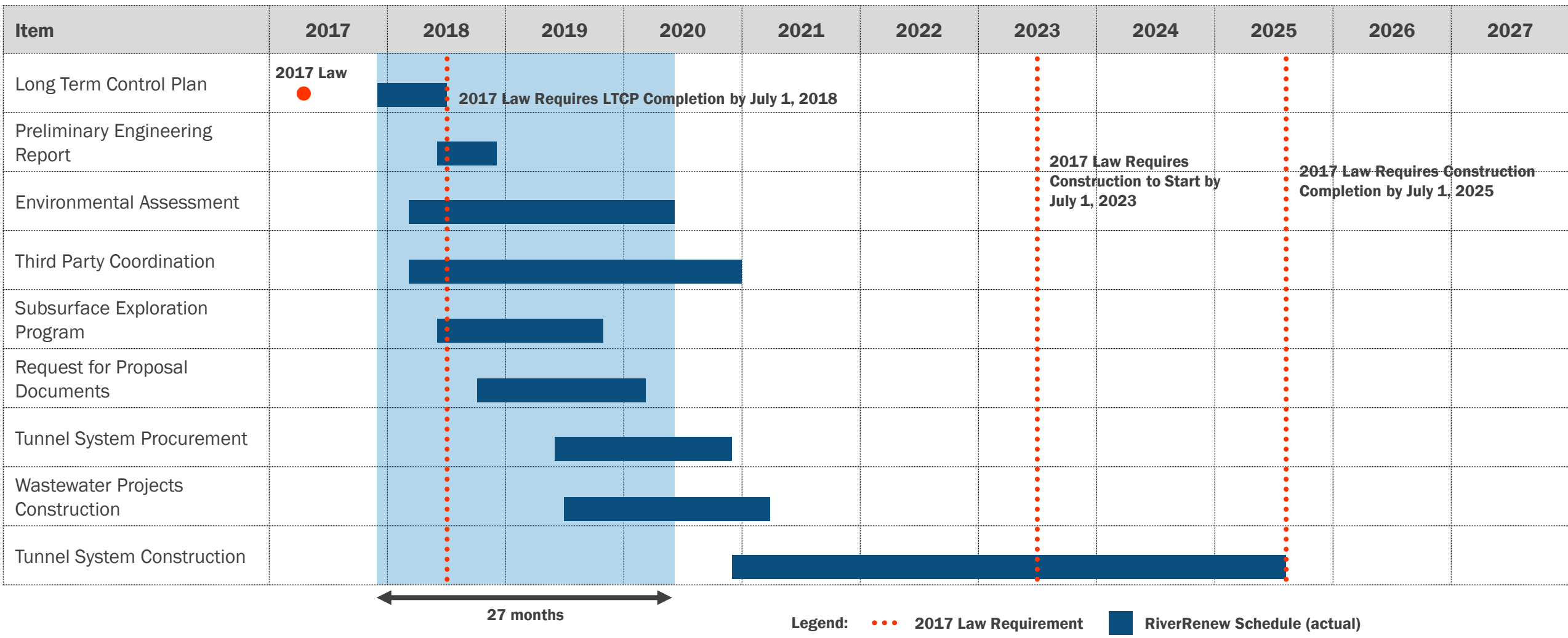
**96**  
borings  
completed

**32**  
permits  
approved

**9**  
easements

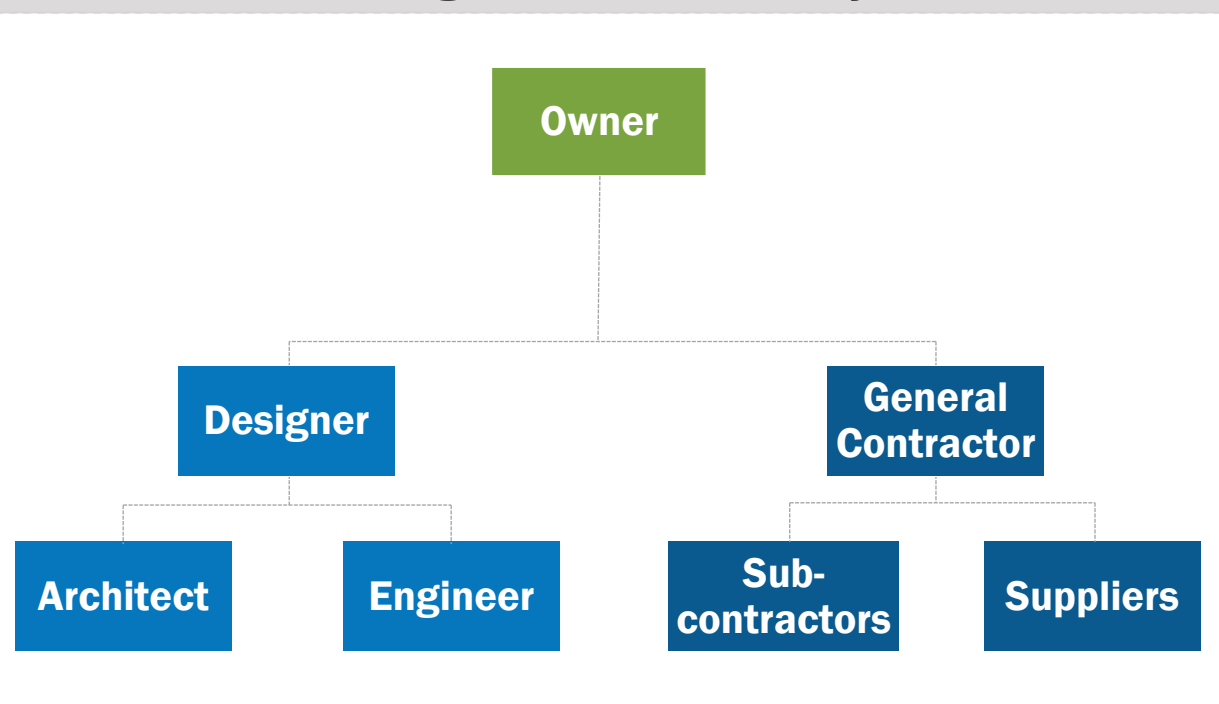


# The 2017 Law Significantly Accelerated the RiverRenew Tunnel Project Planning and Preliminary Design Phases

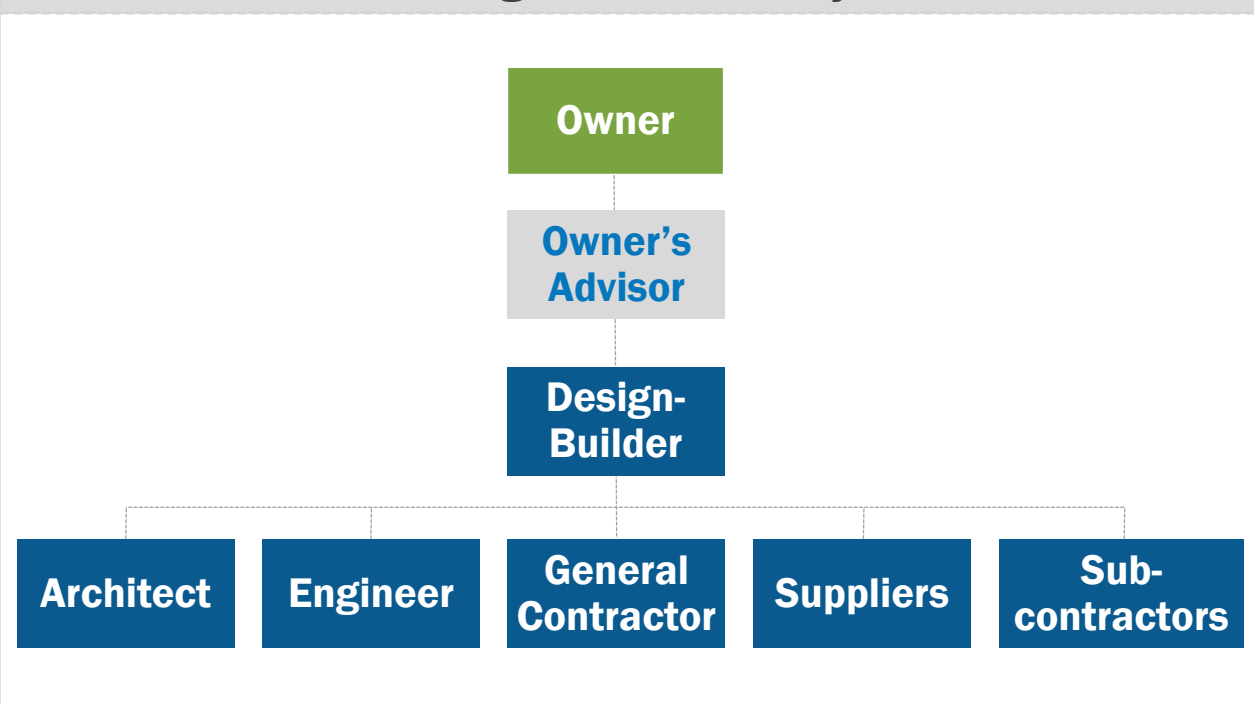


# Design-Build Project Delivery Integrates the Designer and Contractor into a Single Team

Design-Bid-Build Delivery



Design-Build Delivery





# Key Benefits of Design-Build Project Delivery



## Direct relationship between Contractor and Designer

- Fosters collaboration, teamwork, and innovation
- Owner does not manage the design/construction interface



## Single Point of Responsibility

- Reduces owner exposure to claims and cost overruns
- Majority of responsibility shifted to Design-Builder



## Shorter Project Delivery and Construction Durations

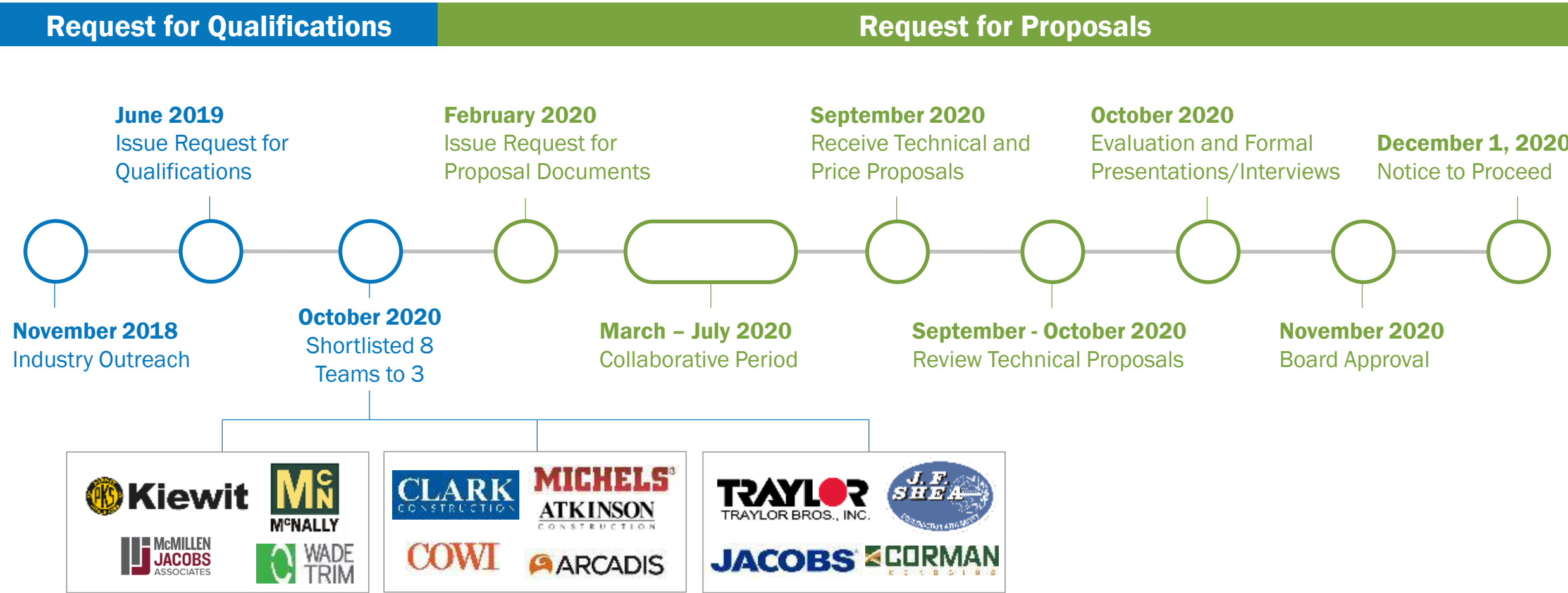


## Owner Obtains Early Knowledge of Project Price



## Owner can Consider Non-price Factors in Selection

# RiverRenew Tunnel Project Procurement Timeline





# Proposals Included a Technical Component and Price Component, Weighted Equally

## Technical Evaluation Factors



Team Organization and Commitment



Design and Construction Plan



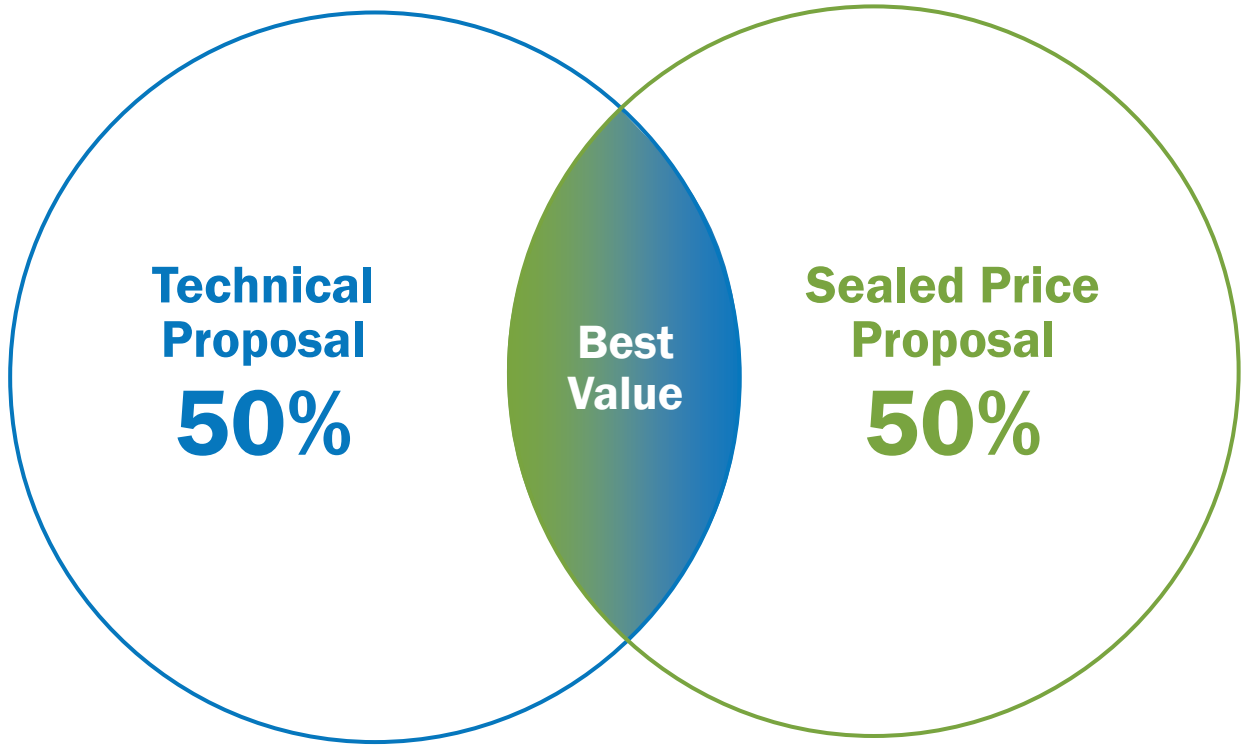
Community Impact Mitigation Plan



Design and Construction Schedule



Maintenance of Plant Operations and Systems Integration





# Traylor-Shea was Selected as the Design-Builder for the Tunnel Project in November 2020



Work began on the **\$454.4M** project in Dec 2020



Core Project Team from **Blue Plains Tunnel**:  
Engineering News Record's Top Project of 2016



## Strong Local Presence

- Traylor headquartered in Alexandria, VA
- Shea headquartered in Washington, DC
- Local Jacobs offices throughout metro area



Extensive experience in construction of **tunnels, combined sewer structures, and pumping stations**



**History of team working together** (Traylor, Shea, and Jacobs)



**TRAYLOR**  
TRAYLOR BROS., INC.

ch2m now  
**JACOBS**





**Break**

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A close-up, black and white photograph of a large, industrial metal gear. The gear's teeth are prominent, and several large bolts are visible along its circumference. The lighting is dramatic, highlighting the metallic texture and the sharp edges of the teeth.

# Meet Traylor-Shea

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# Mike Krulc is Traylor-Shea's Project Director for the Tunnel Project



**Resident of Alexandria, VA**



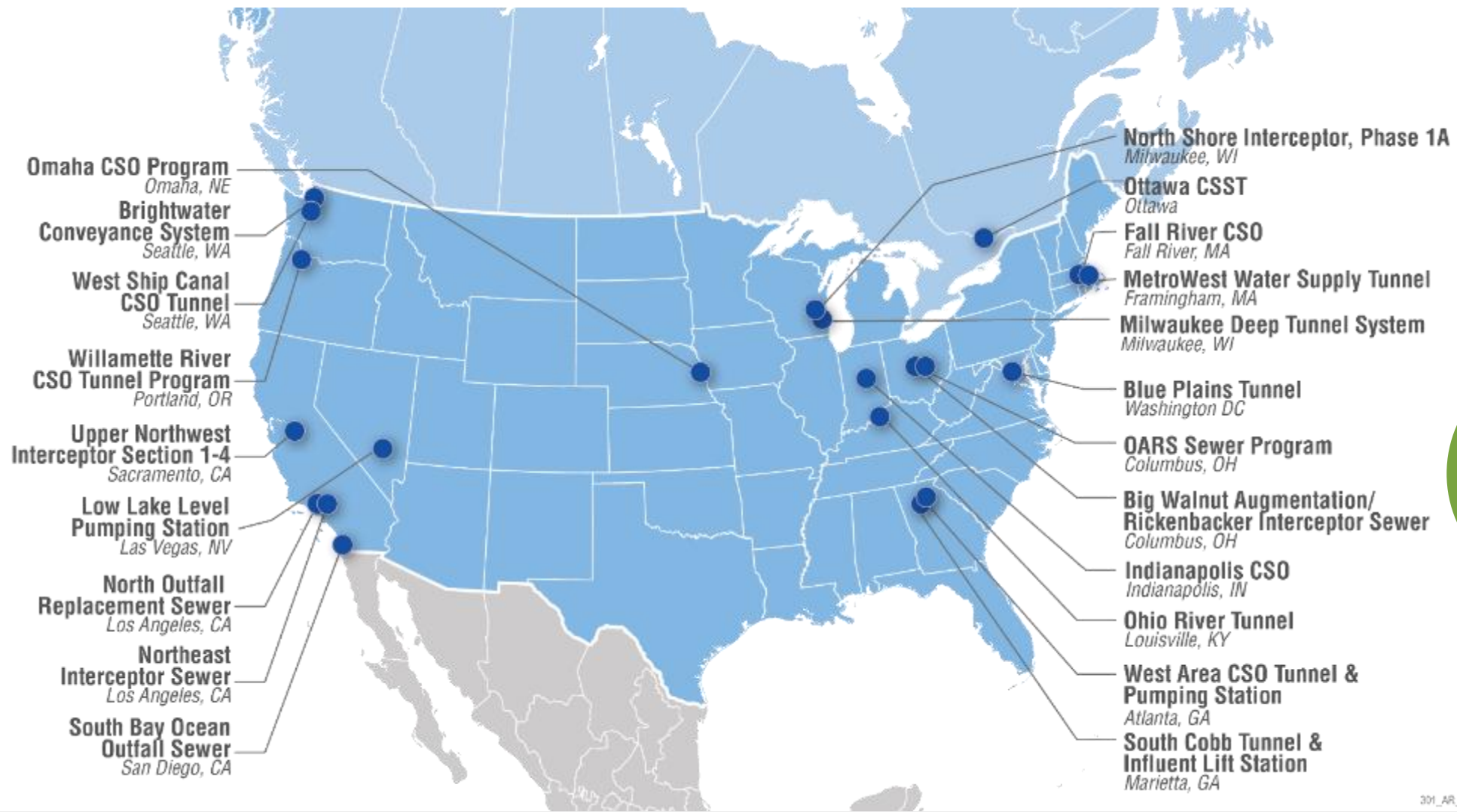
**20 years underground  
construction experience,  
18 with Traylor**



**Experience building  
tunnels for water, sewer,  
transit, and wine caves**



# Traylor-Shea has an Extensive History of Working Together in the United States on Projects Similar to RiverRenew



Traylor +  
Shea  
**30**  
years

Traylor +  
Jacobs  
**20**  
years



301\_AR\_WDC\_4



## Traylor-Shea's First Project Together was North Outfall Replacement Sewer, Los Angeles, 1989



# Key Traylor-Shea Tunnel Project Personnel



**Jean-Marc Wehrli**  
Project Manager



**Paula Nacif**  
Scheduler



**Rich Taylor**  
Design Coordinator



**Shae Quigley  
Duddempudi**  
Field Engineer



**Samer Sadek**  
Design Manager



**Ryan Nelson**  
Pump Station  
Construction Manager



# Meet Jean-Marc: Traylor-Shea's Project Manager



**Jean-Marc Wehrli**  
Project Manager

**Local experience as Project Manager on the Purple Line**



**20 miles of tunnel work valued at \$1.5B**



**24 years of underground construction experience**



# Meet Paula Nacif: Traylor-Shea's Scheduler

**Local experience as Project Scheduler on the Purple Line**

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**Implemented the first project controls department for Miami Dade Airport**

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**Passionate about improving lives through new infrastructure**

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**Paula Nacif**  
Scheduler



# Meet Rich Taylor: Traylor-Shea's Design Coordinator



**Rich Taylor**  
Design  
Coordinator

**11 years of experience  
in underground design  
and construction**



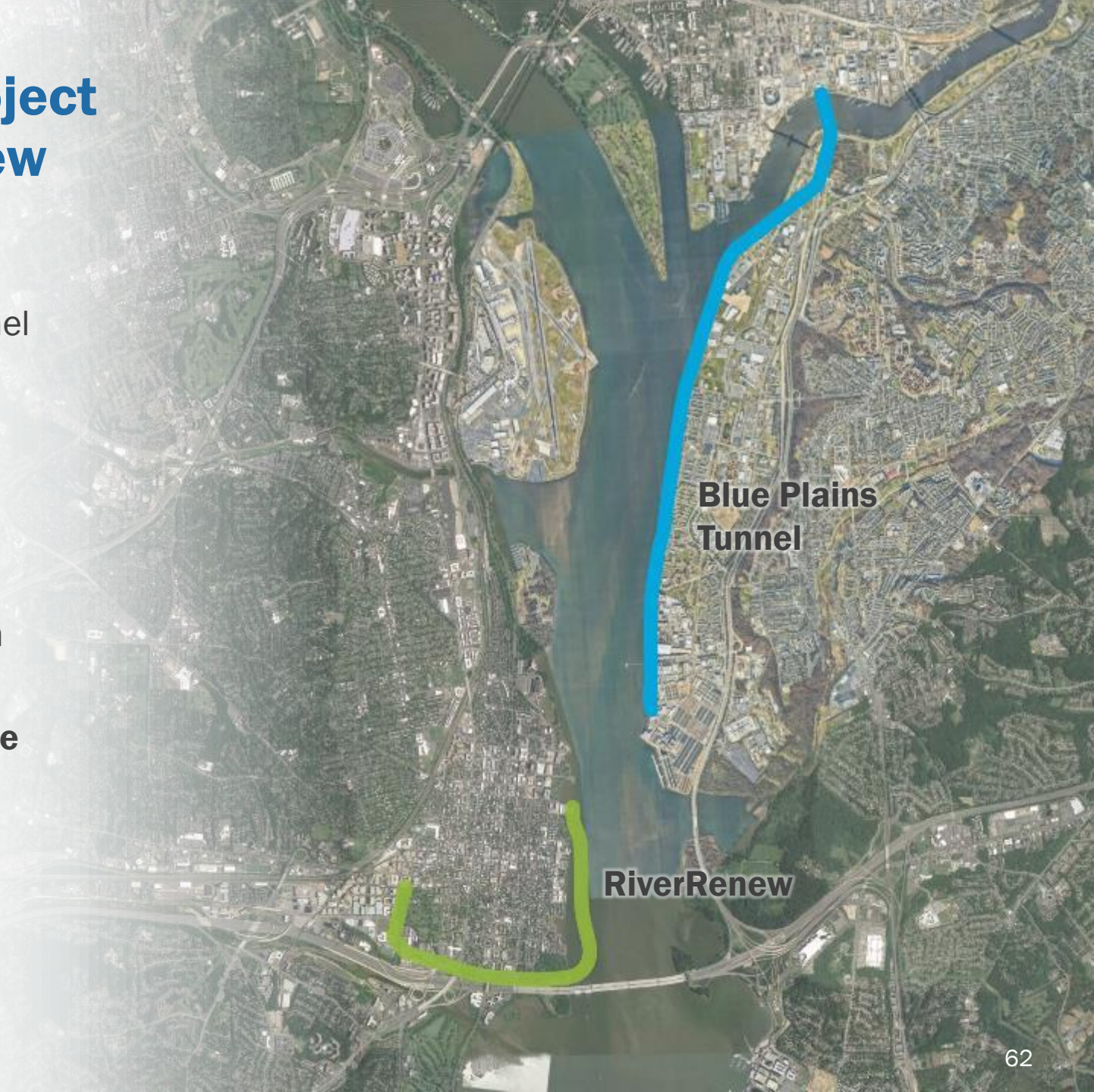
**Design coordinator for  
sections of Purple Line**





# Traylor's Blue Plains Tunnel Project is Very Similar to the RiverRenew Tunnel Project

- **Constructed in the same ground** using a tunnel boring machine (Lady Bird)
- Lady Bird mined the **23-ft diameter, 4.5-mile-long tunnel in 23 months**
- Tunnel mined from an **active wastewater treatment plant**
- Coordinated with **concurrent pumping station construction**
- Completed with **no impacts to Consent Decree milestones**
- **Under budget**
- 1.4 million man-hours with **zero lost time incidents**
- Numerous national and international **awards**





# Meet Shae Quigley Duddempudi: Traylor-Shea's Field Engineer



**Shae Quigley  
Duddempudi**  
Field Engineer

**Joined Traylor  
4.5 years ago**



**Local experience  
as Field Engineer  
on the Purple Line**



**Overseas  
philanthropic work  
with *Bridges to  
Prosperity* program**



# Meet Samer Sadek: Traylor-Shea's Design Manager

**Over 27 years of experience in underground project design**

**Technical background in soft ground tunneling design and construction**

**Experience in Design-Bid-Build procurement delivery methods**



**Samer Sadek**  
Design Manager





# Corman Kokosing is a Key Traylor-Shea Construction Partner

- **Extensive experience in:**
  - Structural concrete/steel
  - Mechanical
  - Equipment setting
  - Startup and commissioning
- **Strong local manpower resource**
- **Past experience in the City of Alexandria**
- **Experience working with Traylor on similar projects**

**Strong local  
presence  
for the past  
99 years**





# RiverRenew Tunnel Project Construction Staging Areas

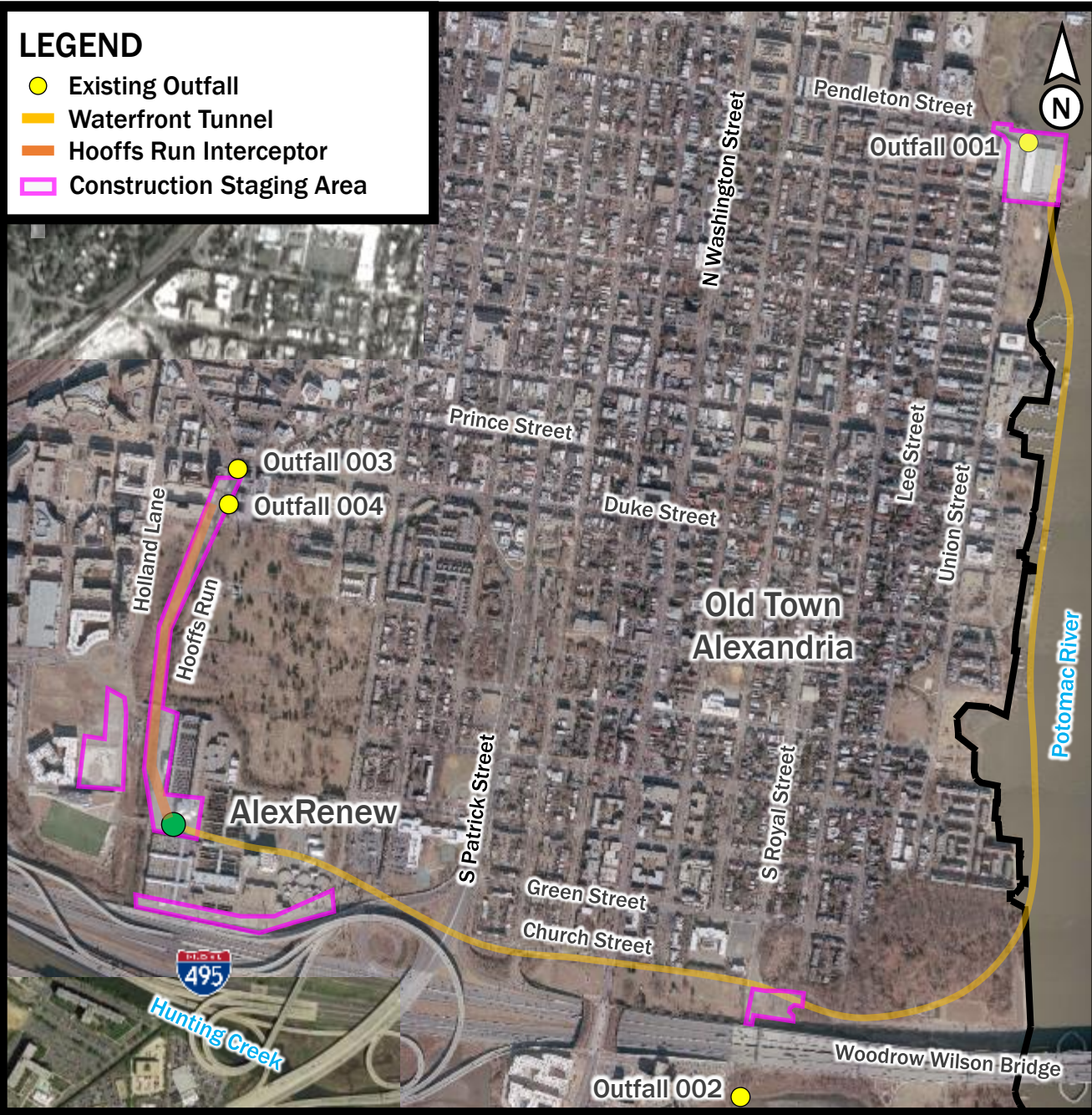
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We're setting the stage for  
healthier waterways.  
Thank you for being our partner.  
www.riverrenew.org

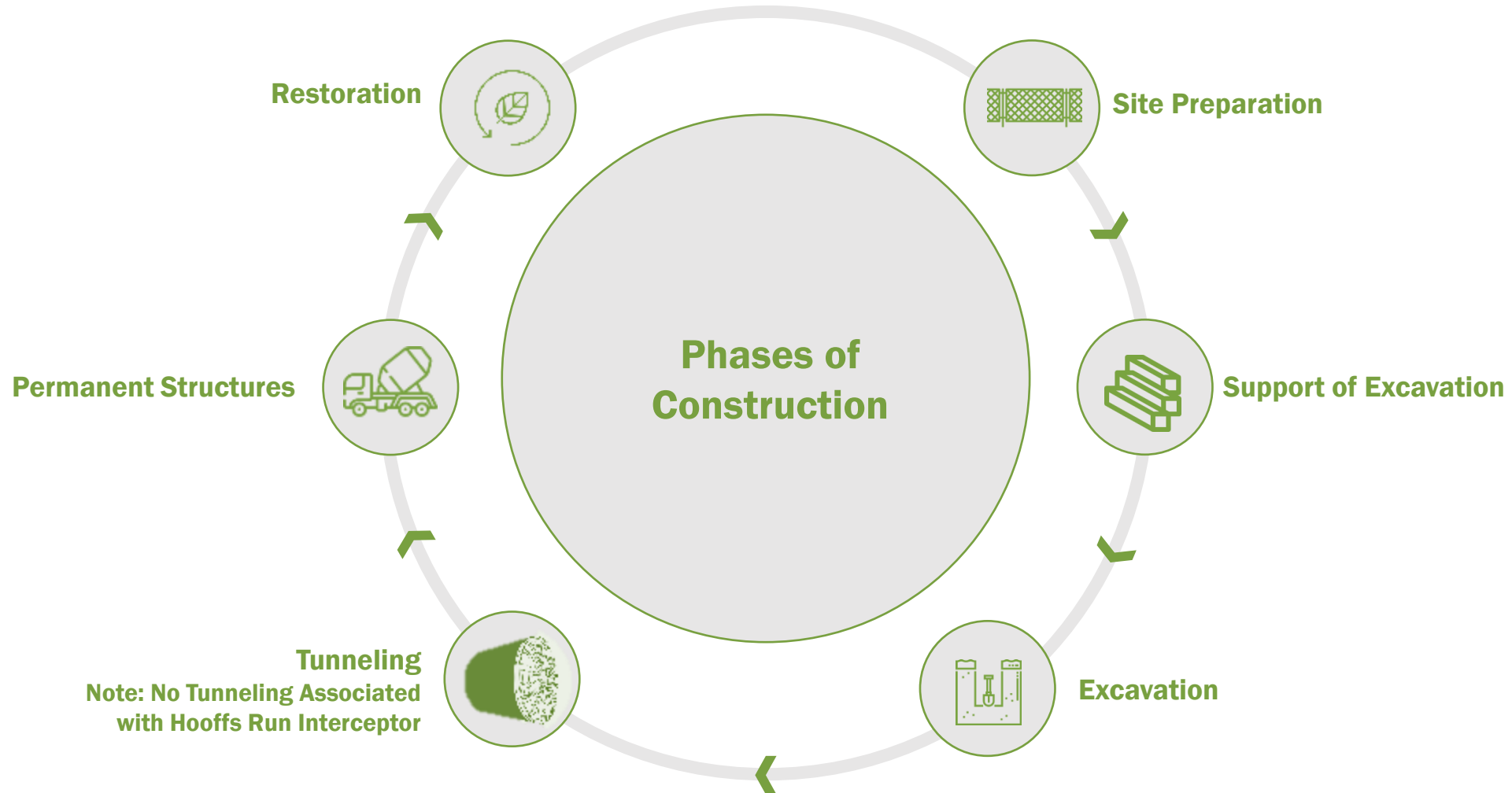
We're setting the stage for  
healthier waterways.  
Thank you for being our partner.  
www.riverrenew.org



# Tunnel Project Work will Occur within Designated Construction Staging Areas



# Phases of Construction for RiverRenew Tunnel Project





# Site Preparation. Establishment of the Construction Staging Area



**Fencing and Scrim**



**Silt Fence**



**Inlet Protection**



**Working Surface**



**Site Security**



**Air Monitoring**



**Office Trailers**



**Aerial View**



# Support of Excavation. Installation of Structures to Support the Ground

## Shaft Support of Excavation (Slurry Wall)



## Other Support of Excavation



Note: No Shafts Associated with Hooffs Run Interceptor



# Excavation. Digging and Removal of Materials





# Permanent Structures. Installation of Concrete and Other Components





# Site Restoration. Leaving a Lasting Legacy for the Community

## Site Grading



## Landscaping



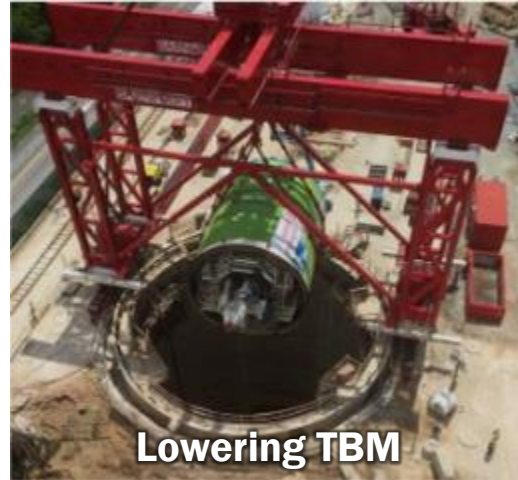


# Tunneling. Excavation and Erection of Waterfront Tunnel



**Tunnel Construction Site**

AlexRenew CSA only



**Lowering TBM**

AlexRenew CSA only



**Tunnel Segments**

AlexRenew and Holland Lane CSAs only



**Tunnel Loci**



**Bucket Lift**

AlexRenew CSA only



**Handling Excavated Soil**

AlexRenew CSA only



**Removing TBM**

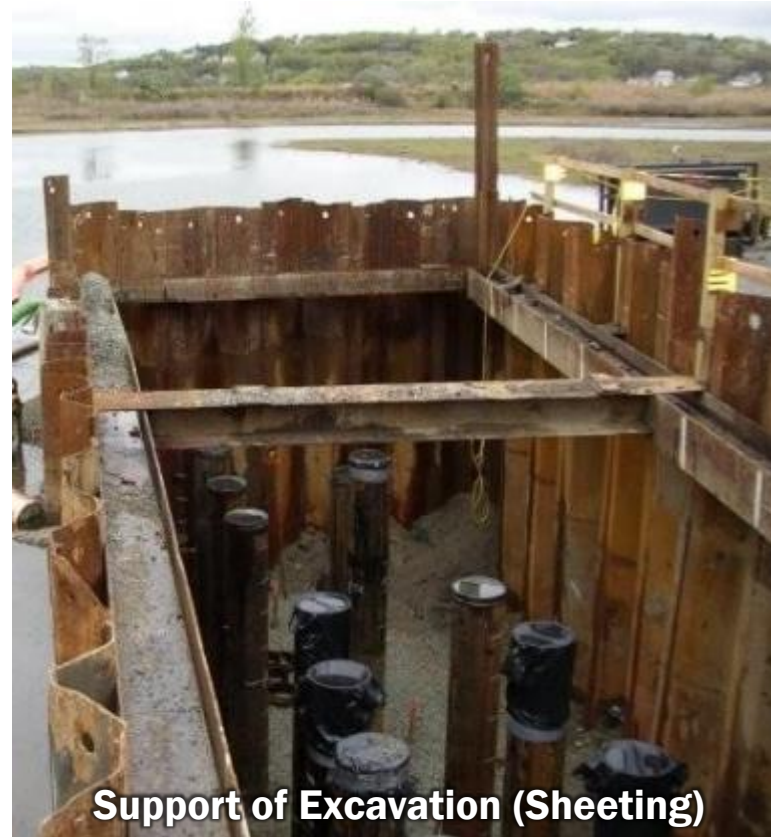
Pendleton Street CSA only



**Finished Tunnel**

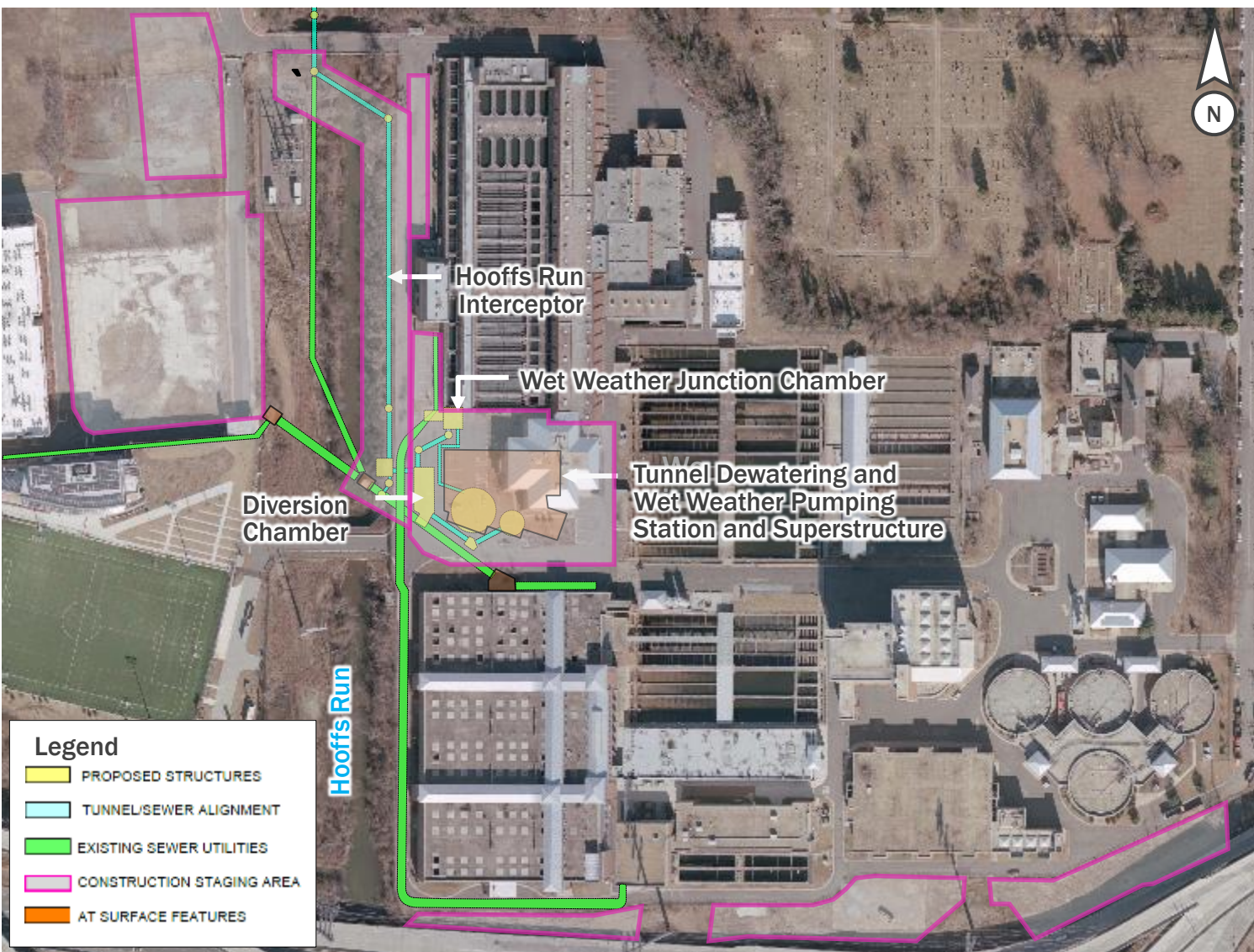


# Hooffs Run Interceptor Cut and Cover Construction

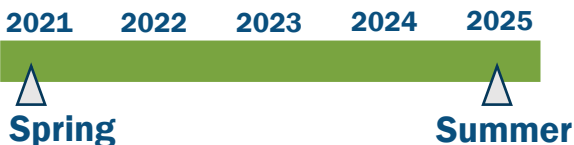




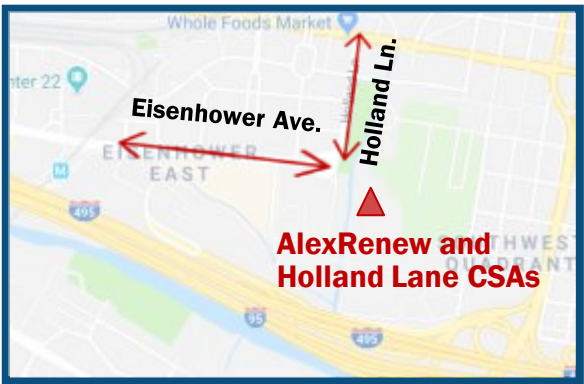
# Overview of AlexRenew and Holland Lane Construction Staging Areas



## Schedule and Work Hours



## Hauling Information



**35**

trucks per day on average

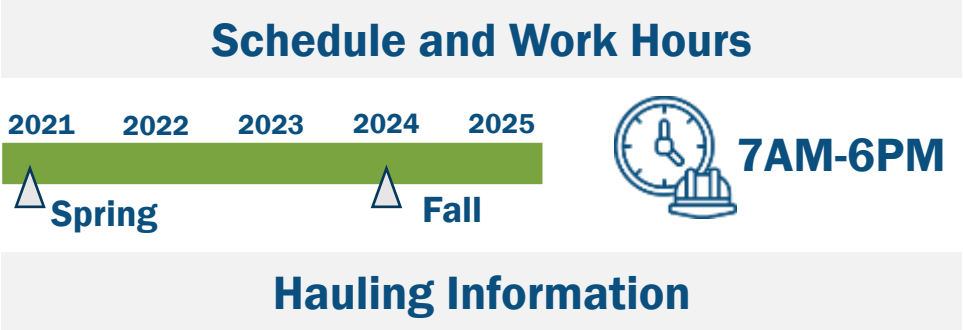
Haul routes are subject to approval by the City



Rendering of site after construction is complete



# Overview of Pendleton Street Construction Staging Area



**40**  
trucks per day on  
average

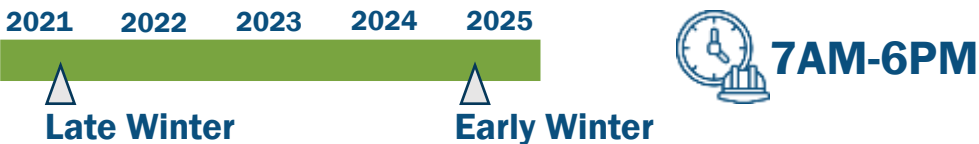
*Haul routes are subject  
to approval by the City*



# Royal Street Construction Staging Area



## Schedule and Work Hours



## Hauling Information



**30**  
trucks per day on average

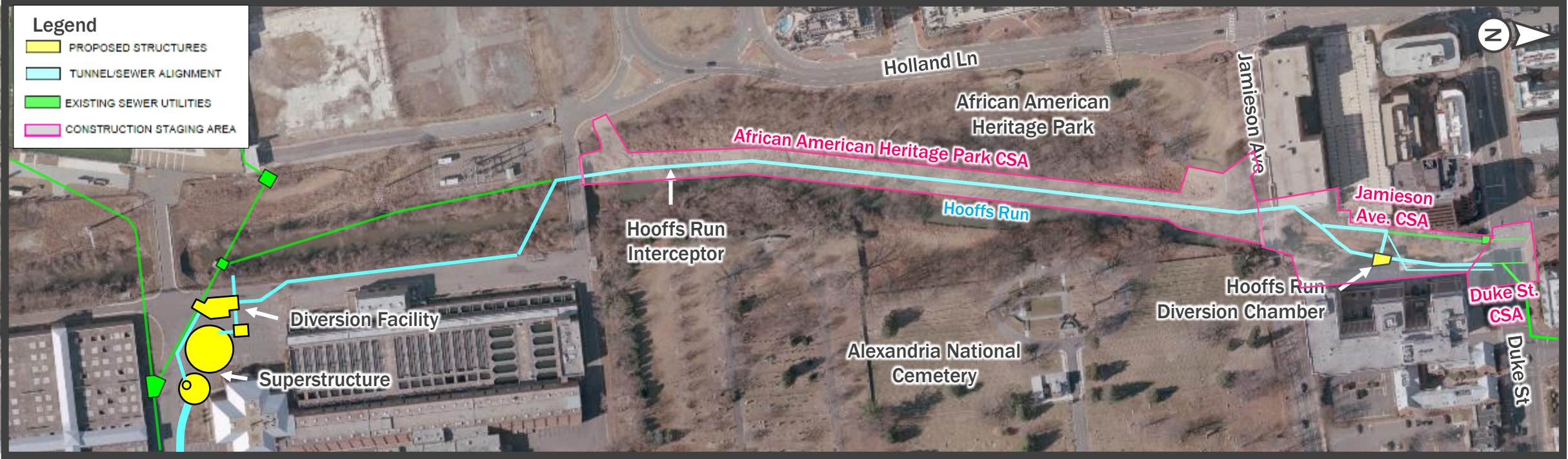
*Haul routes are subject to approval by the City*



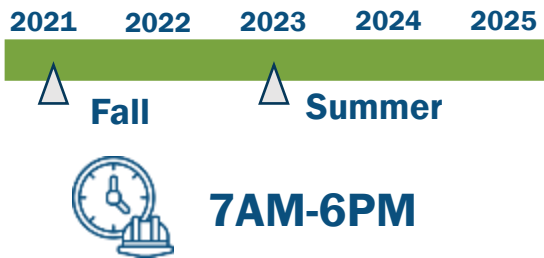
Rendering of site after construction is complete



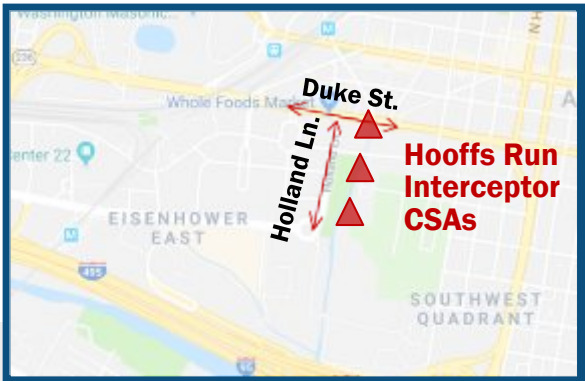
# Hooffs Run Interceptor Construction Staging Areas



## Schedule and Work Hours



## Hauling Information



**20**

trucks per day on average

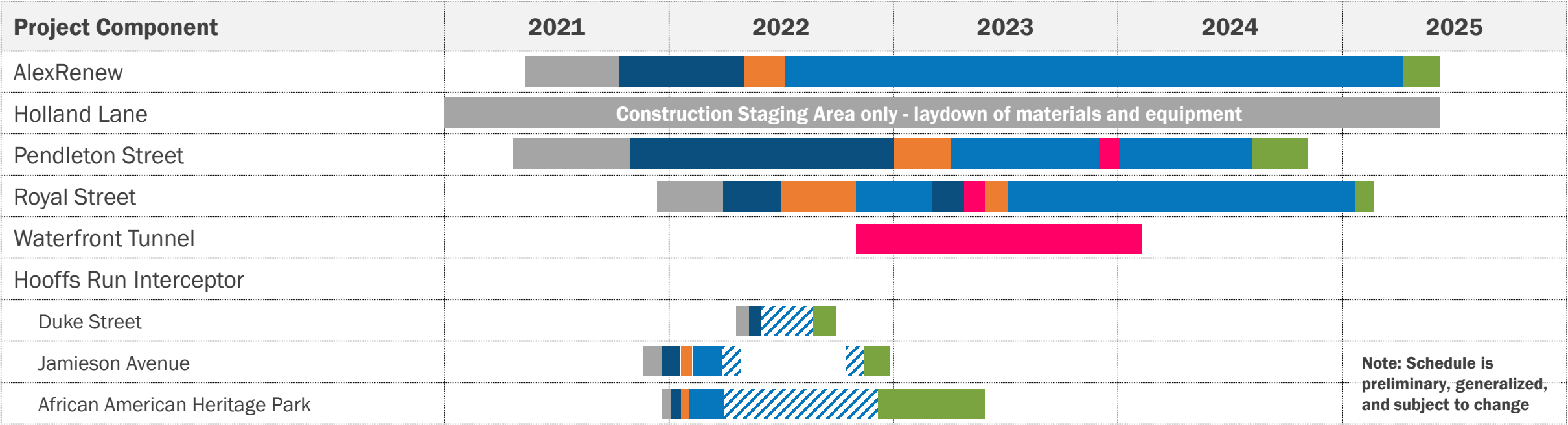
Haul routes are subject to approval by the City



Rendering of site after construction is complete



# Summary of Tunnel Project Schedule and Phases of Work





# RiverRenew Tunnel Project Community Outreach Channels



## Community Meetings

- Council-Board Workgroup
  - RiverRenew Stakeholder Advisory Group
  - Community Listening Sessions
- \*First event is February 25



## Community Days

- Groundbreaking Ceremony
- TBM Unveiling Ceremony
- Waterfront Tunnel Tours
- Hooffs Run Restoration Day
- Mining Operations Completion Celebration
- Construction Completion Celebration



## Digital Communications

- RiverRenew.com
- #TunnelTakeoverTuesday
- *The River Renewer*



## Community Events

- Water Discovery Day
- W.A.T.E.R Fund Events
- Stream Clean ups
- Earth Day



## Education

- Cloe's Corner
- Storybook Series
- Brochures and Fact Sheets



## Other Outreach Channels

- RiverRenew Construction Hotline
- Traffic Alerts
- Time-lapse Cameras



# Next Steps

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# 2021-2022 Proposed RiverRenew SAG Meeting Topics (Draft)

## Feedback from SAG Requested



# Schedule and Next Steps

Upcoming Meetings	Next Steps
<ul style="list-style-type: none"><li>• Next meeting April 15, 2021, 7-9pm</li><li>• Register to attend the February 25 Community Listening Session</li></ul>	<ul style="list-style-type: none"><li>• Homework: Meet Cloe and learn more about RiverRenew at <a href="http://RiverRenew.com">RiverRenew.com</a></li><li>• Help promote February 25 Community Listening Session</li><li>• Reach out with community feedback or questions</li><li>• Follow AlexRenew on Facebook and Twitter</li><li>• Sign up for <i>The River Renewer</i></li></ul>



A black and white photograph of a person kayaking on a body of water. The person's hands are visible on the left, gripping a dark paddle. The paddle is positioned diagonally across the frame, with the blade partially submerged in the water, creating a wake. The water surface is textured with ripples and small waves. The overall tone is monochromatic and serene.

# Public Comment Period

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To learn more, visit [www.RiverRenew.com](http://www.RiverRenew.com)