

Design Services for Four Mile Run Storm
Sewer Upgrades

Commonwealth, Ashby, Glebe
Flood Mitigation

Public Meeting No. 1

February 21, 2023



Jacobs

Challenging today.
Reinventing tomorrow.



Ashby Street, July 25, 2020
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Agenda

Introduction

Flooding in the Project Area

Existing Storm Sewer System Capacity

Project Area Limits

Proposed Improvements

Construction Footprint on Commonwealth Ave

Schedule

Summary

Questions

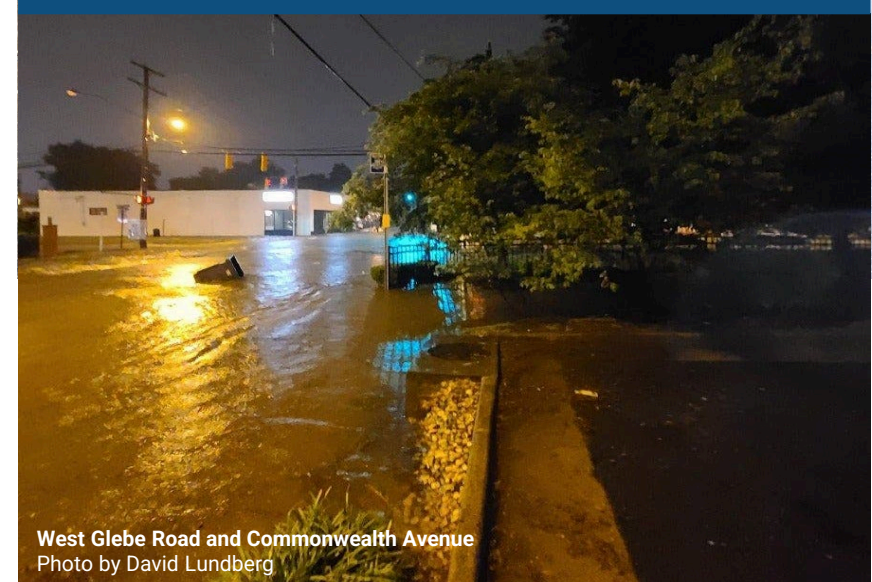


Jacobs

Challenging today.
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Introduction




- The City of Alexandria experiences frequent stormwater flooding at Commonwealth Ave and Ashby St, and Ashby St and E Glebe. Project is within the Four Mile Run (East) Watershed
 - Undersized storm sewer pipes for observed flooding events
 - Increased in storm intensity and frequency since time of original design and in recent years.

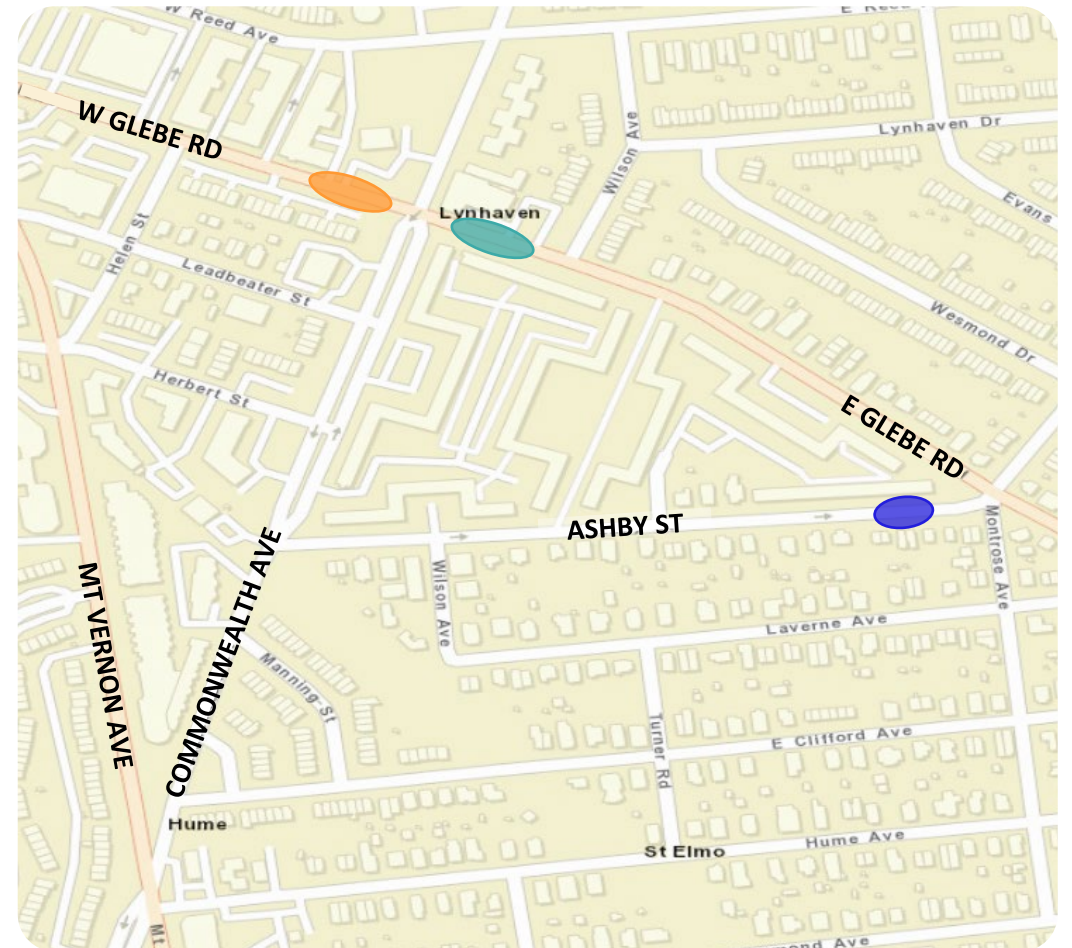


West Glebe Road and Commonwealth Avenue
Photo by David Lundberg

Flooding in the Project Area

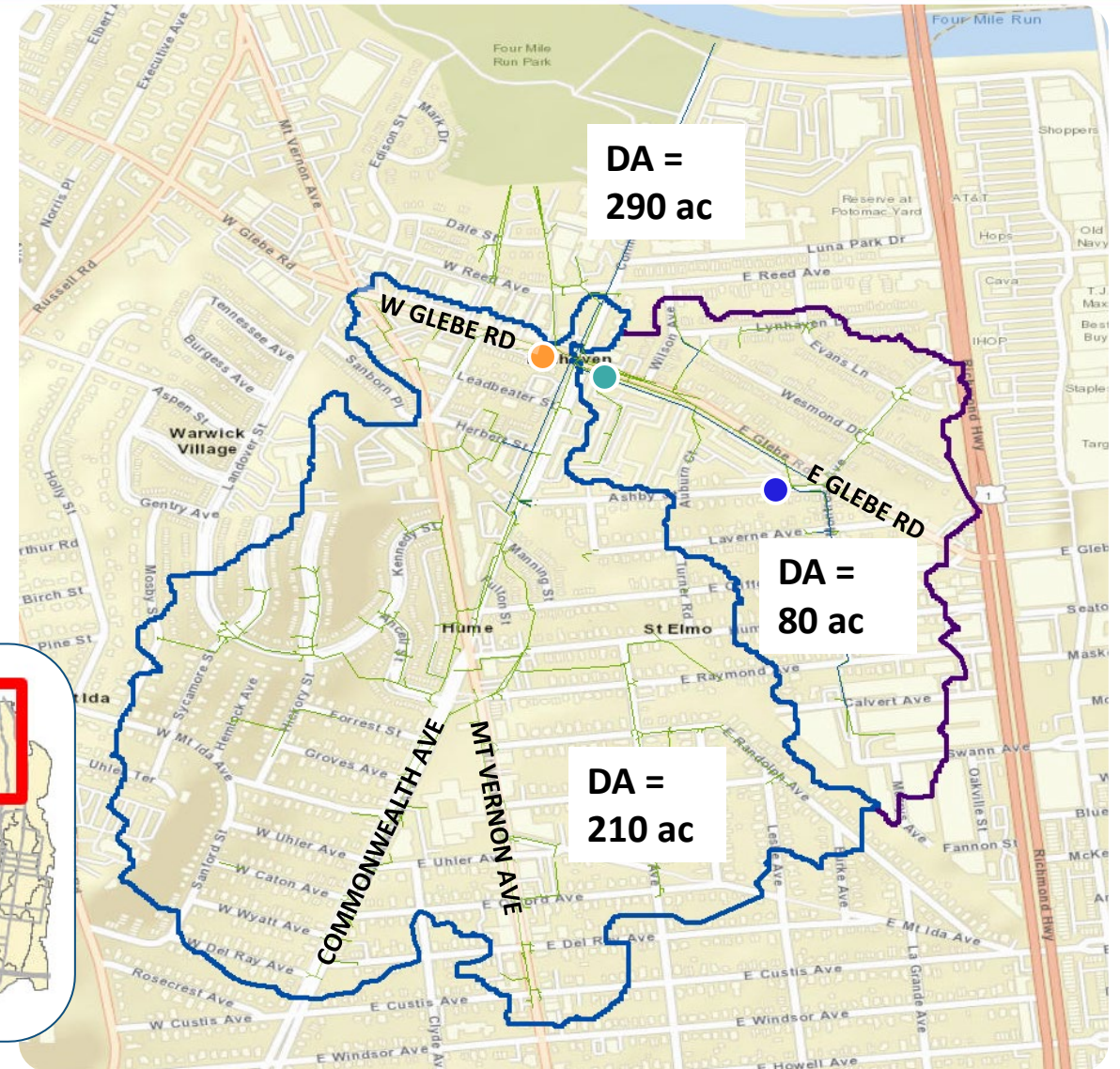
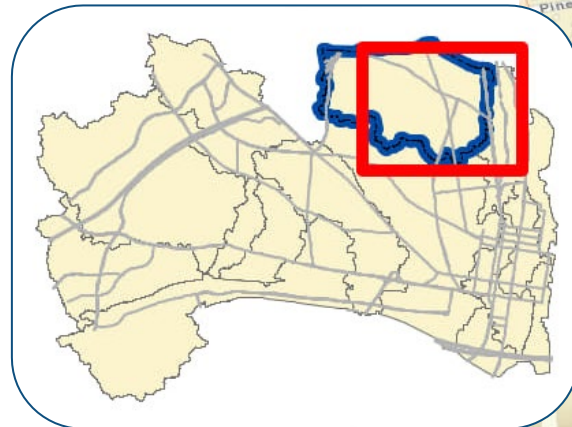
- Three areas of significant flooding within the northwest portion of the Four Mile Run watershed

-  Commonwealth Ave and W Glebe Rd
-  Commonwealth Ave and E Glebe Rd
-  Ashby St at E Glebe Rd



Flooding in the Project Area

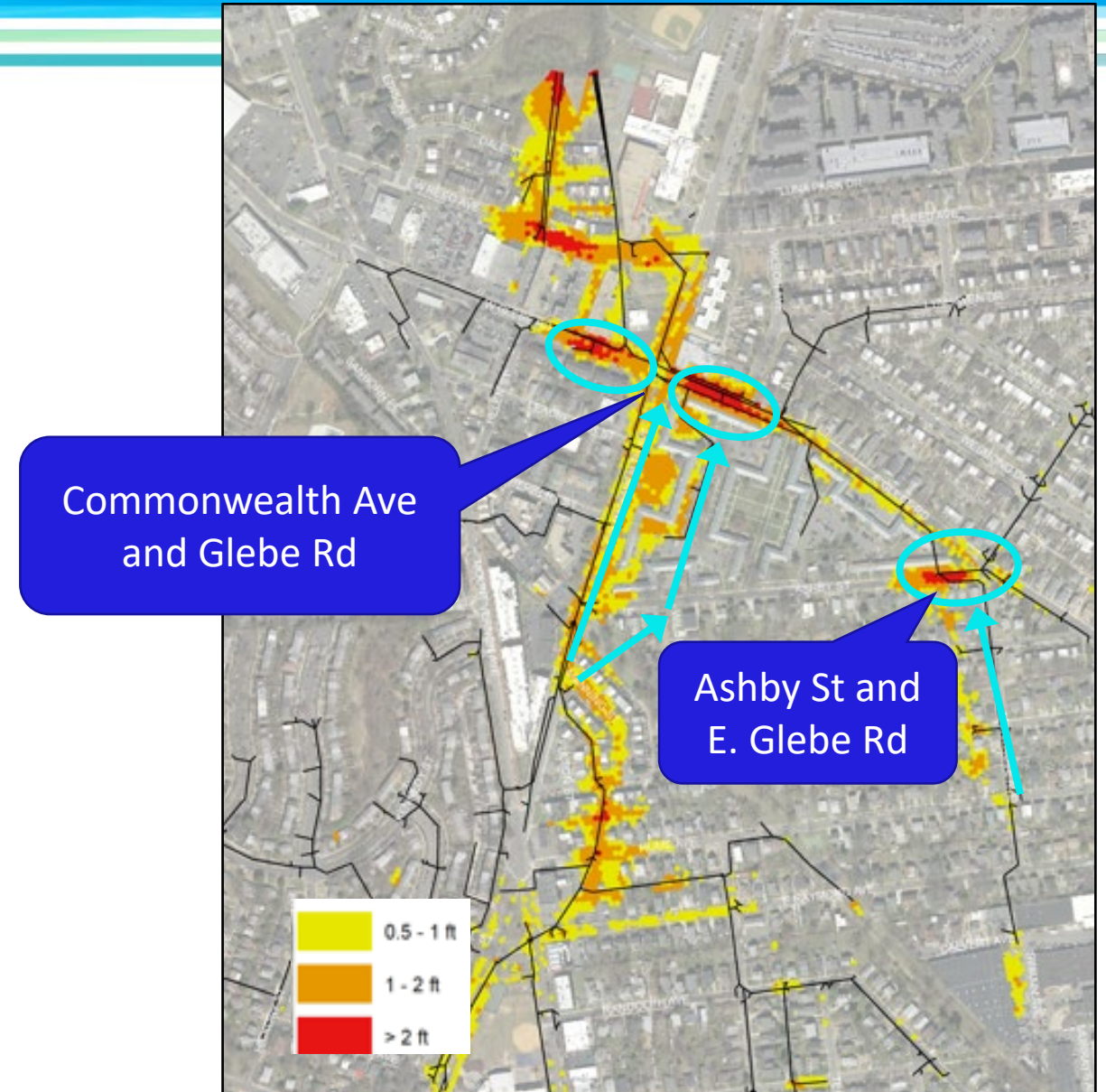
- Commonwealth Ave and W Glebe Rd
- Commonwealth Ave and E Glebe Rd
- Ashby St at E Glebe Rd
- Commonwealth Drainage Area
- E Glebe Drainage Area



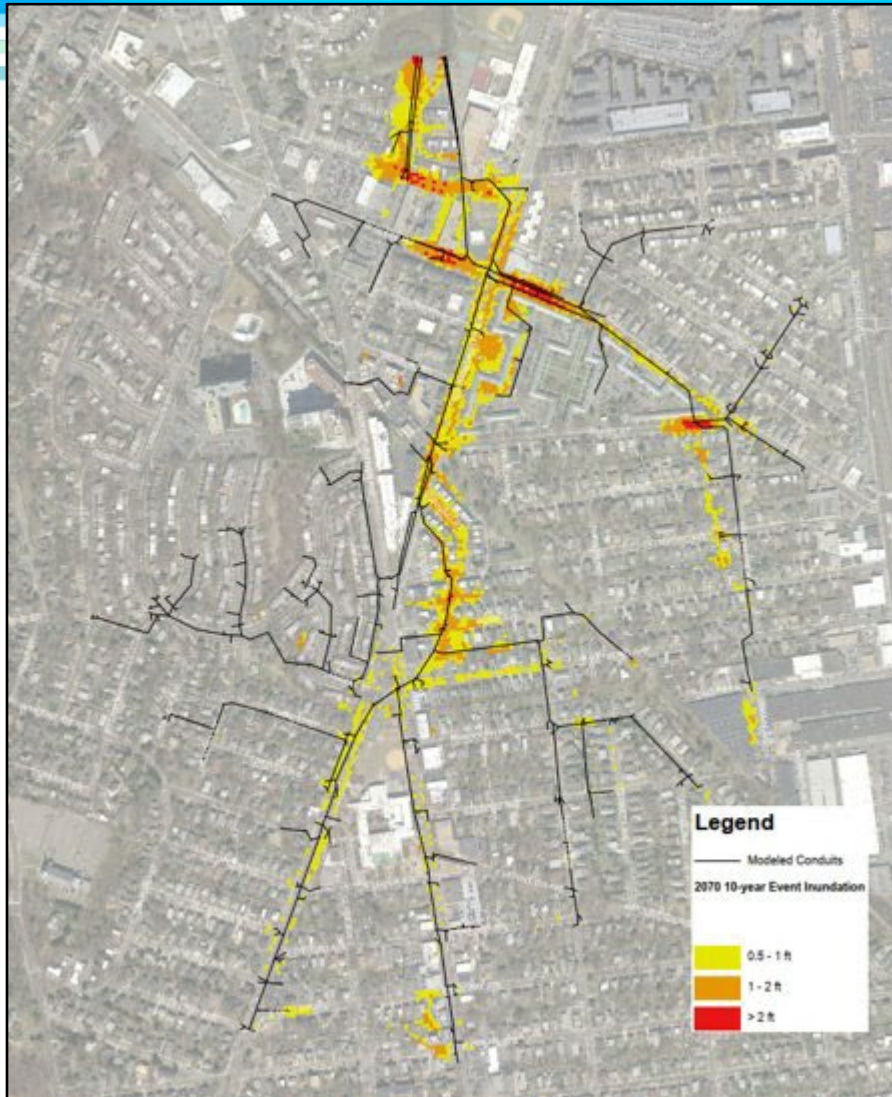
Flooding in the Project Area

Existing Conditions

- Current condition flooding with 10-year design storm, showing overland flow down streets and through back yards and parking lots, ending up at two flooded intersections



Flooding in the Project Area

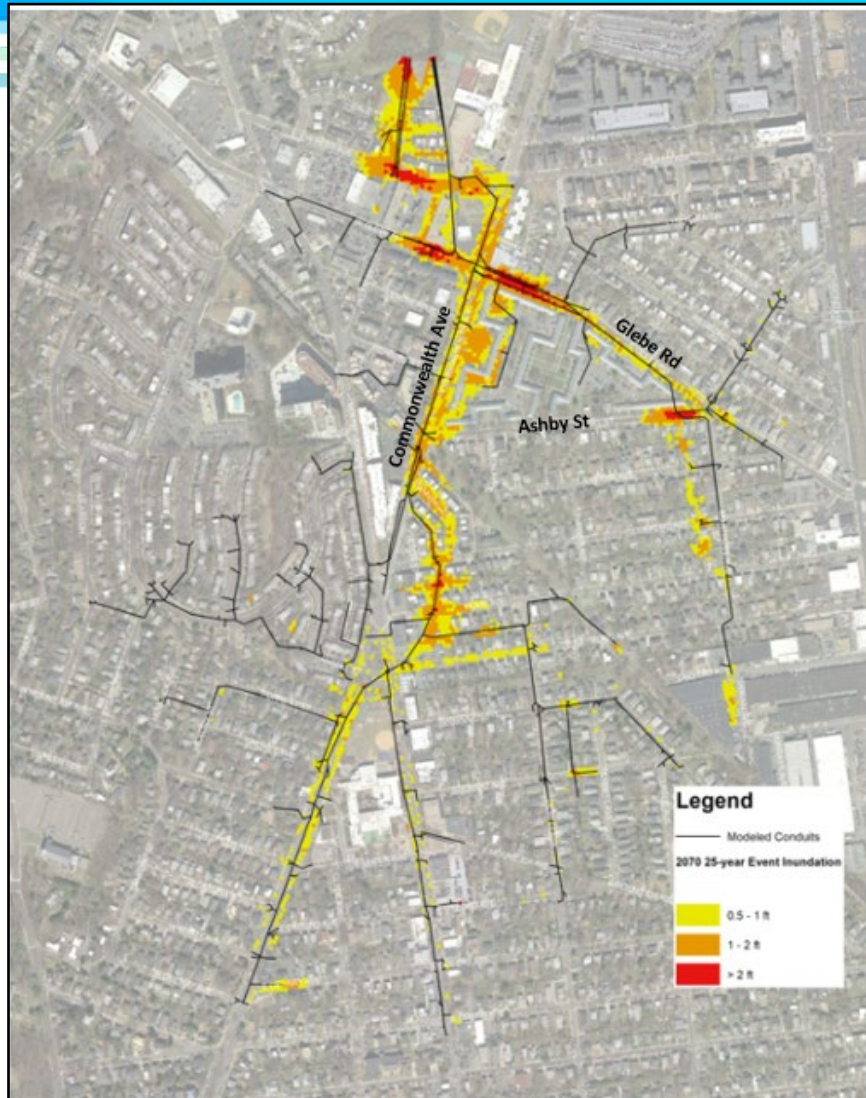


Current Storm Sewers with Future 10-Year Storm

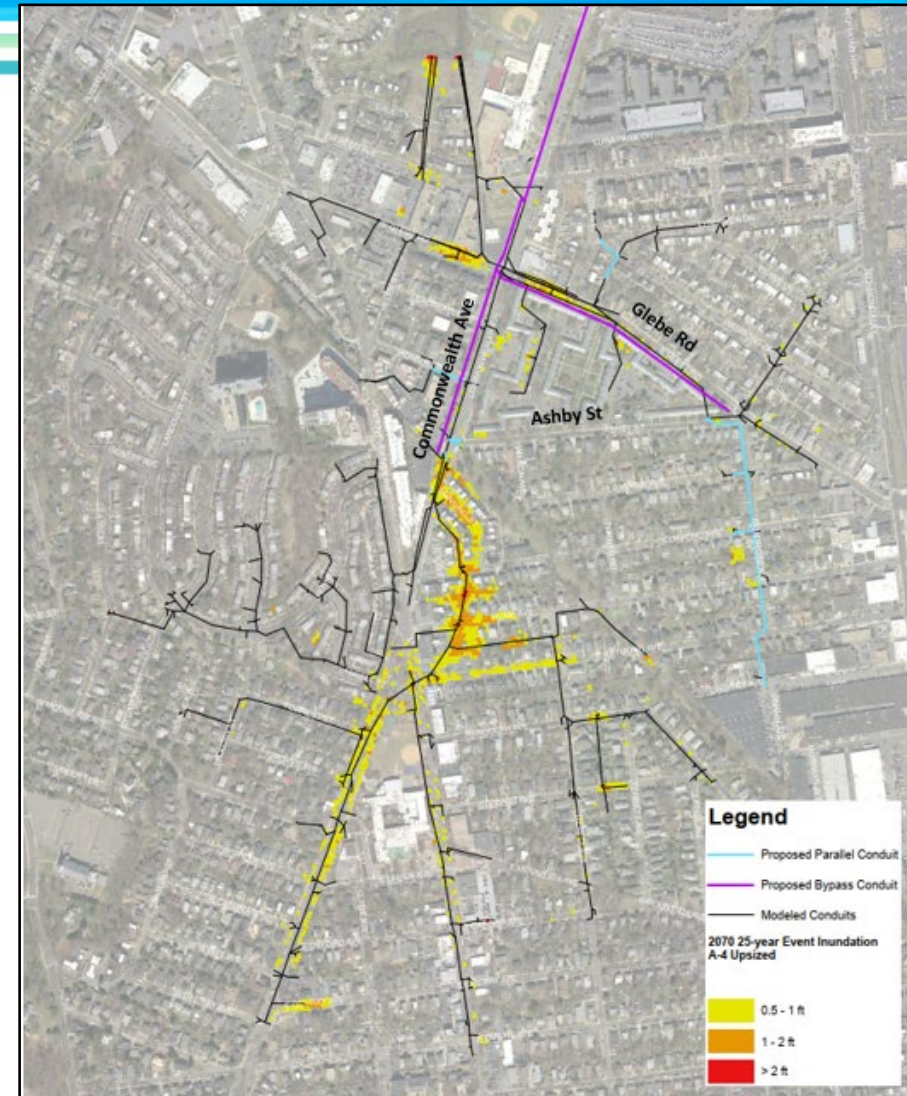


Proposed Conditions with Future 10-Year Storm

Flooding in the Project Area



Current Storm Sewers with Future 25-Year Storm

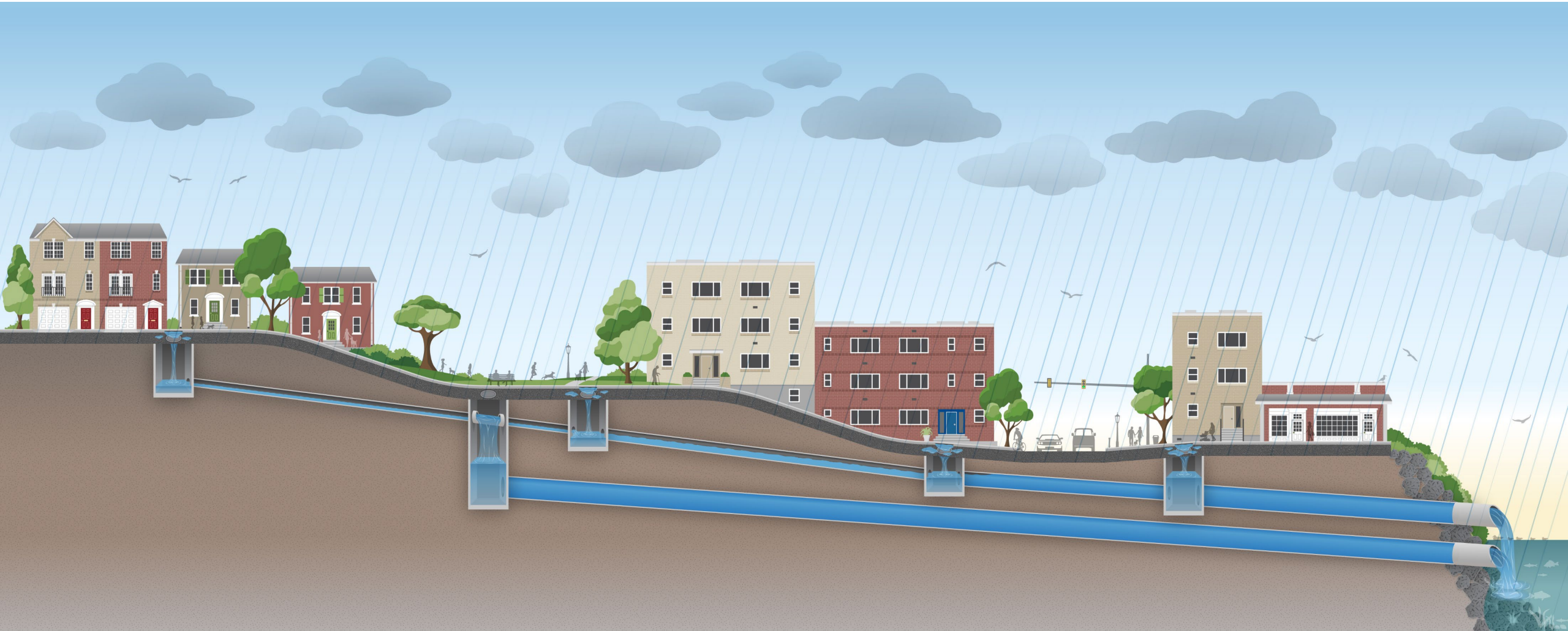


Proposed Conditions with Future 25-Year Storm

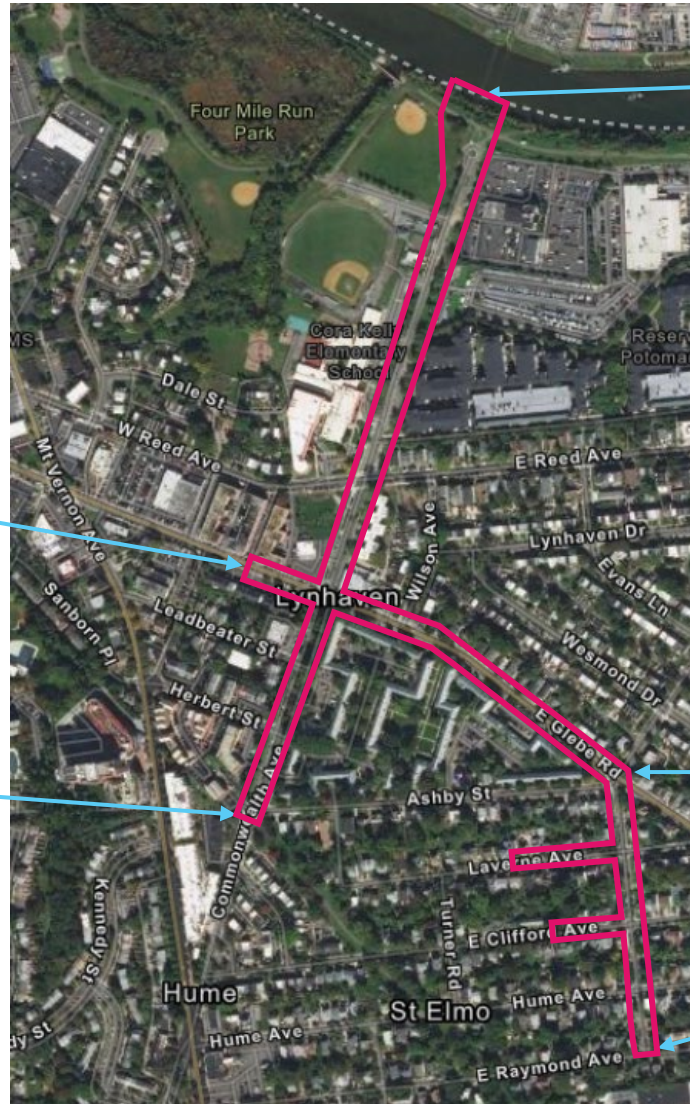
Storm Sewer System Capacity



Storm Sewer System Capacity - Solution



Project Area



Four Mile Run

Near 25 W Glebe Rd

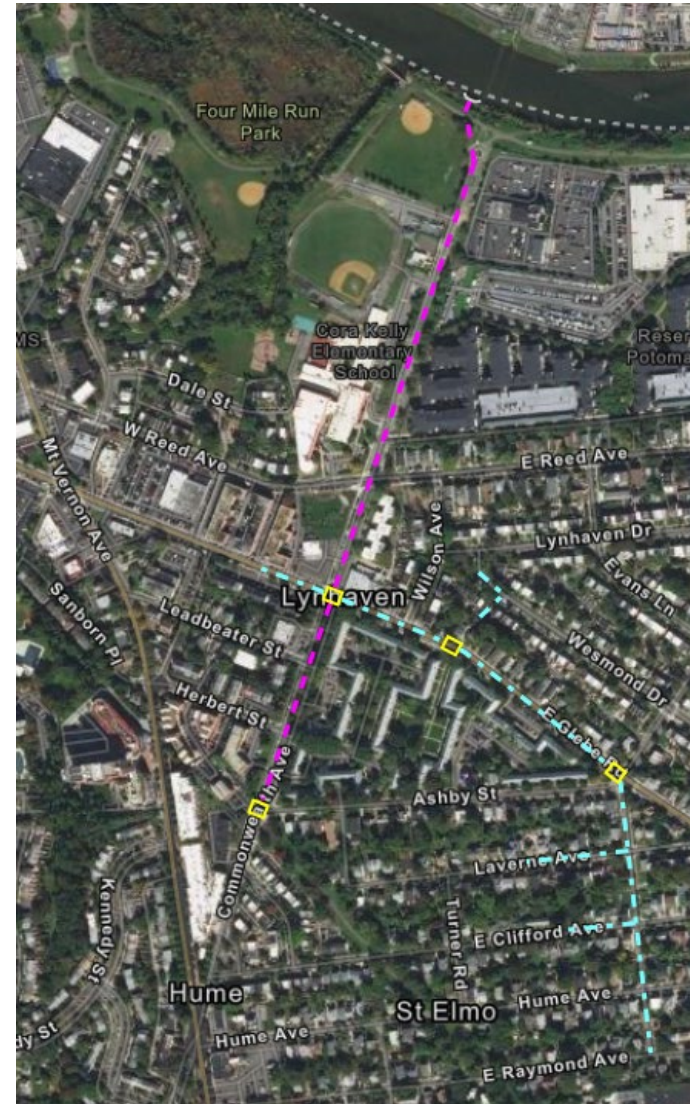
Commonwealth Ave and
Ashby Street

E Glebe Rd and
Ashby Street

Montrose Ave and
E Raymond Ave

Proposed Improvements

- Commonwealth Improvements
- - - Montrose/Glebe Improvements
- Proposed Diversion Structures



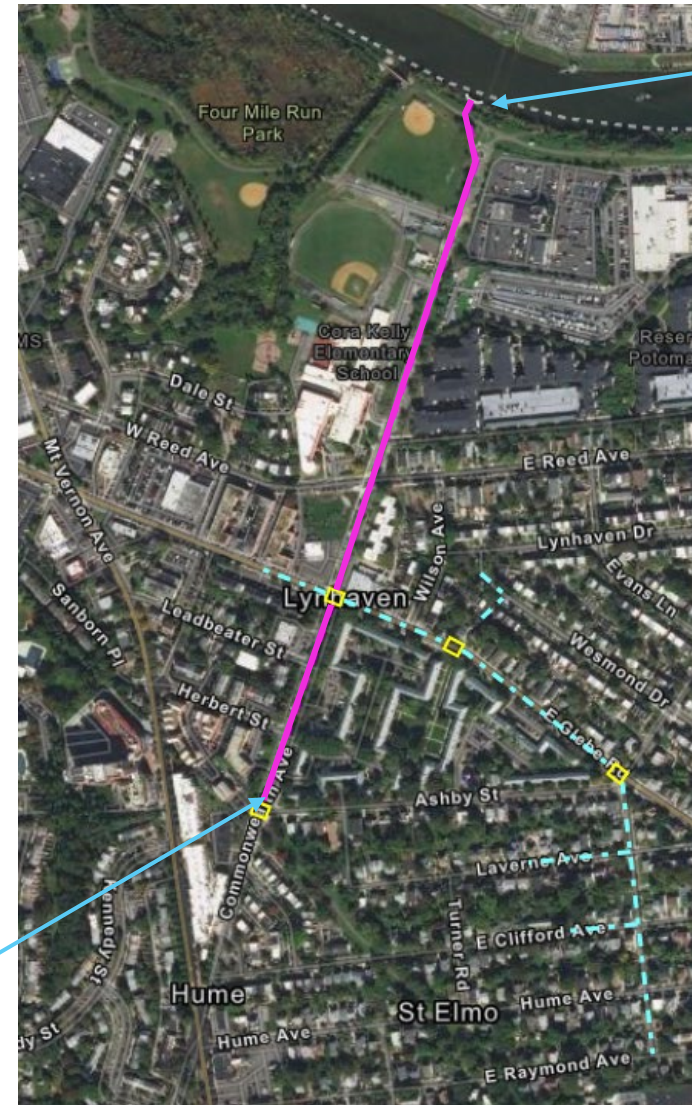
Proposed Improvements

--- Commonwealth Improvements

--- Montrose/Glebe Improvements

□ Proposed Diversion Structures

- 72-inch pipe from Ashby St to Glebe Ave
- 6-foot by 11-foot pipe from Glebe Ave to Four Mile Run



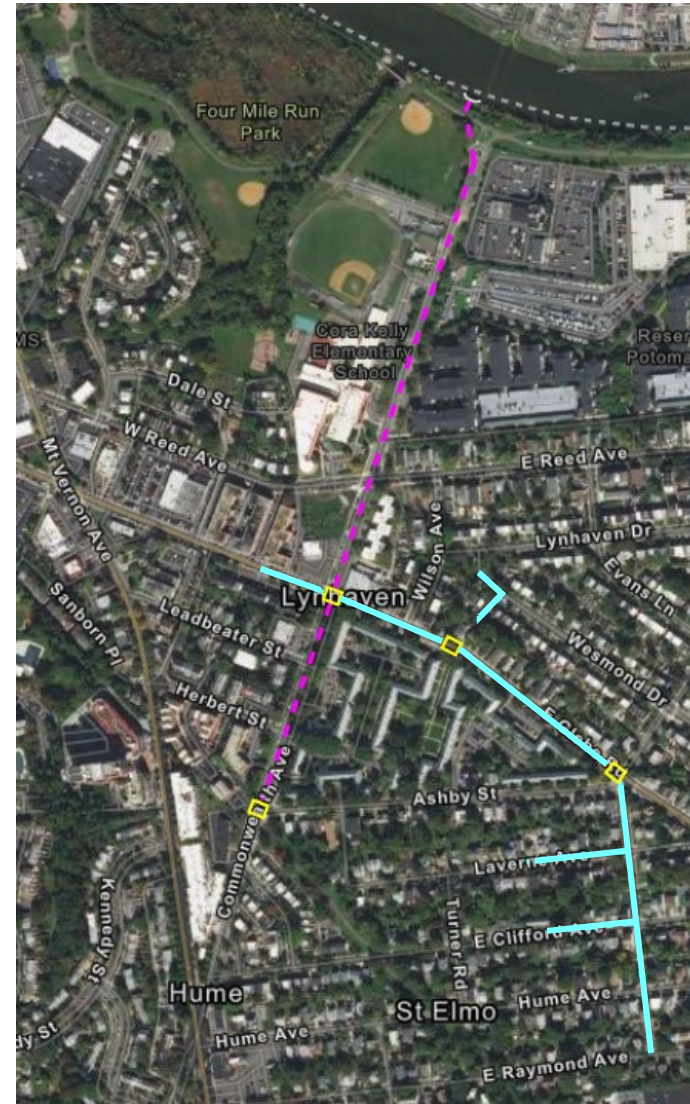
Four Mile Run

Commonwealth Ave and
Ashby Street

Proposed Improvements

- Commonwealth Improvements
- Montrose/Glebe Improvements
- Proposed Diversion Structures

- Increased pipe sizes along
 - W Glebe Ave
 - E Glebe Ave
 - Lynnhaven Dr
 - Montrose Ave
 - Laverne Ave
 - E Clifford Ave



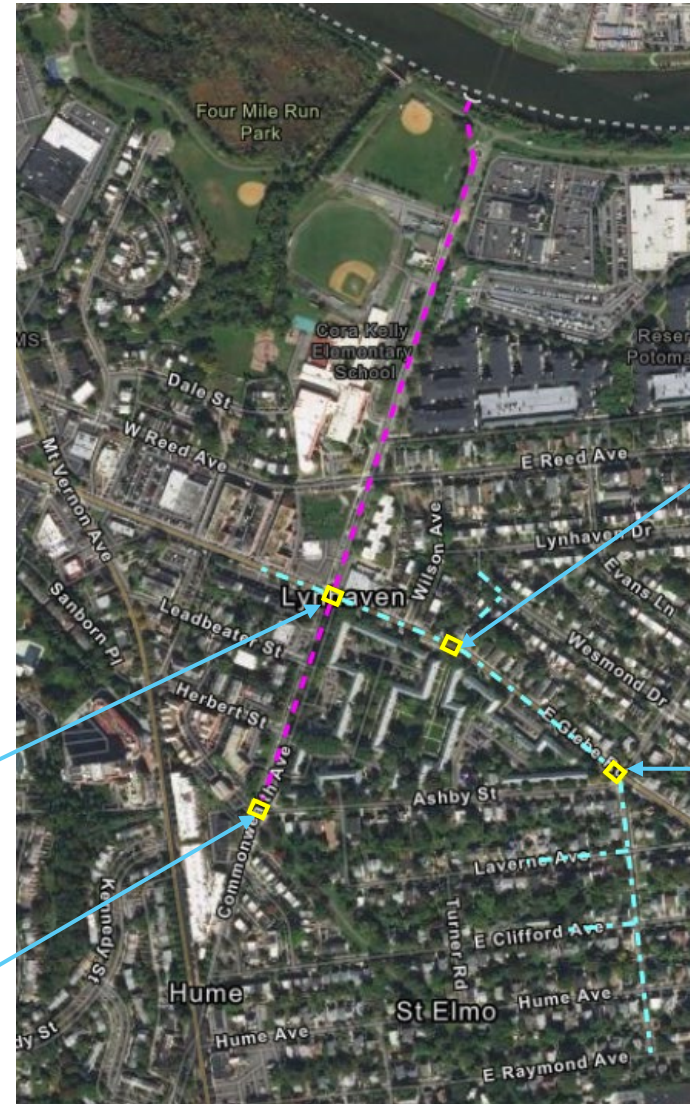
Proposed Improvements

- Commonwealth Improvements
- Montrose/Glebe Improvements
- Proposed Diversion Structures

■ Four proposed diversion structures

Commonwealth Ave and
Glebe Ave

Commonwealth Ave and
Ashby Street

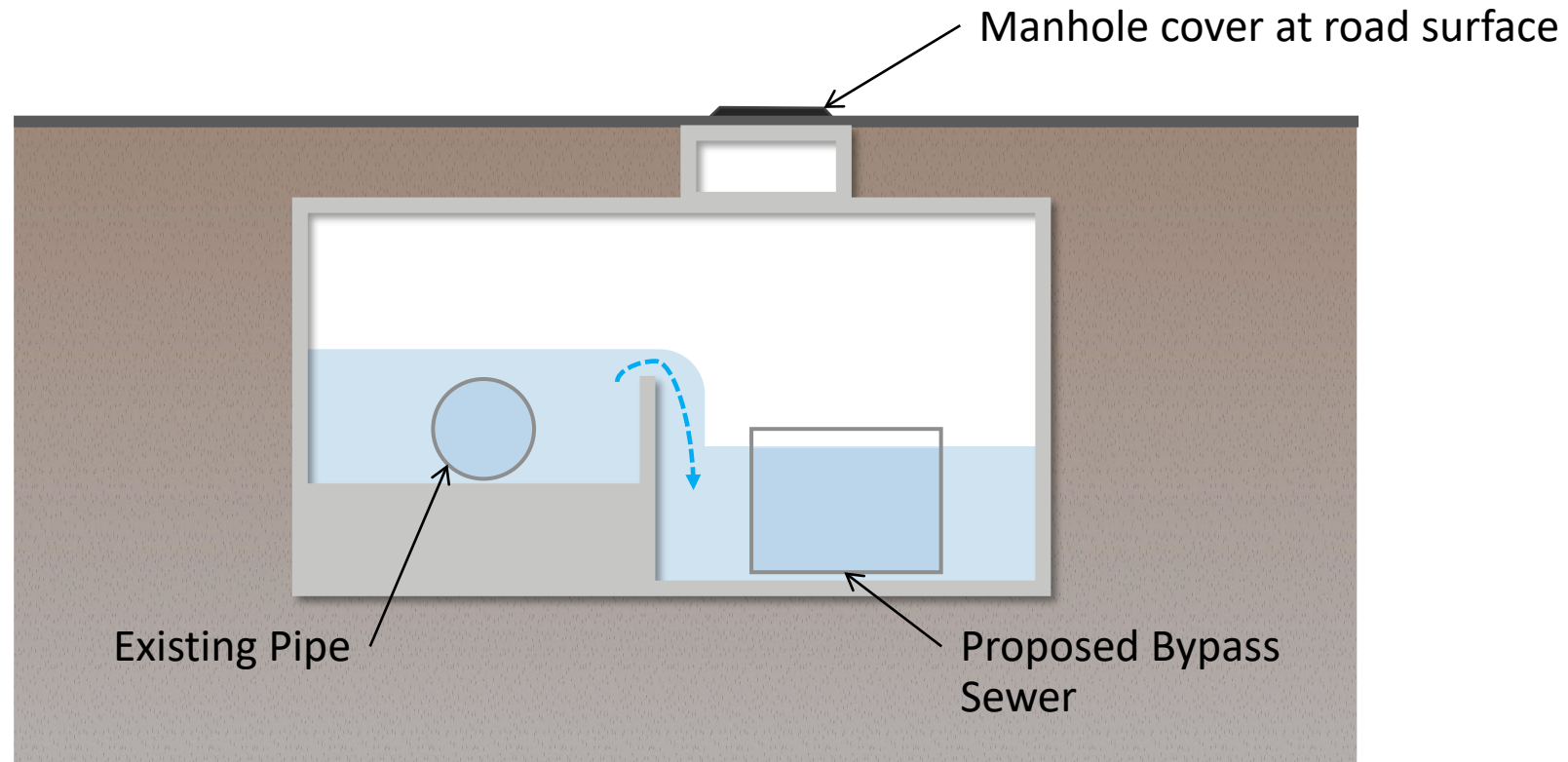


E Glebe Ave
upstream of
Wilson Ave

E Glebe Ave and
Montrose St

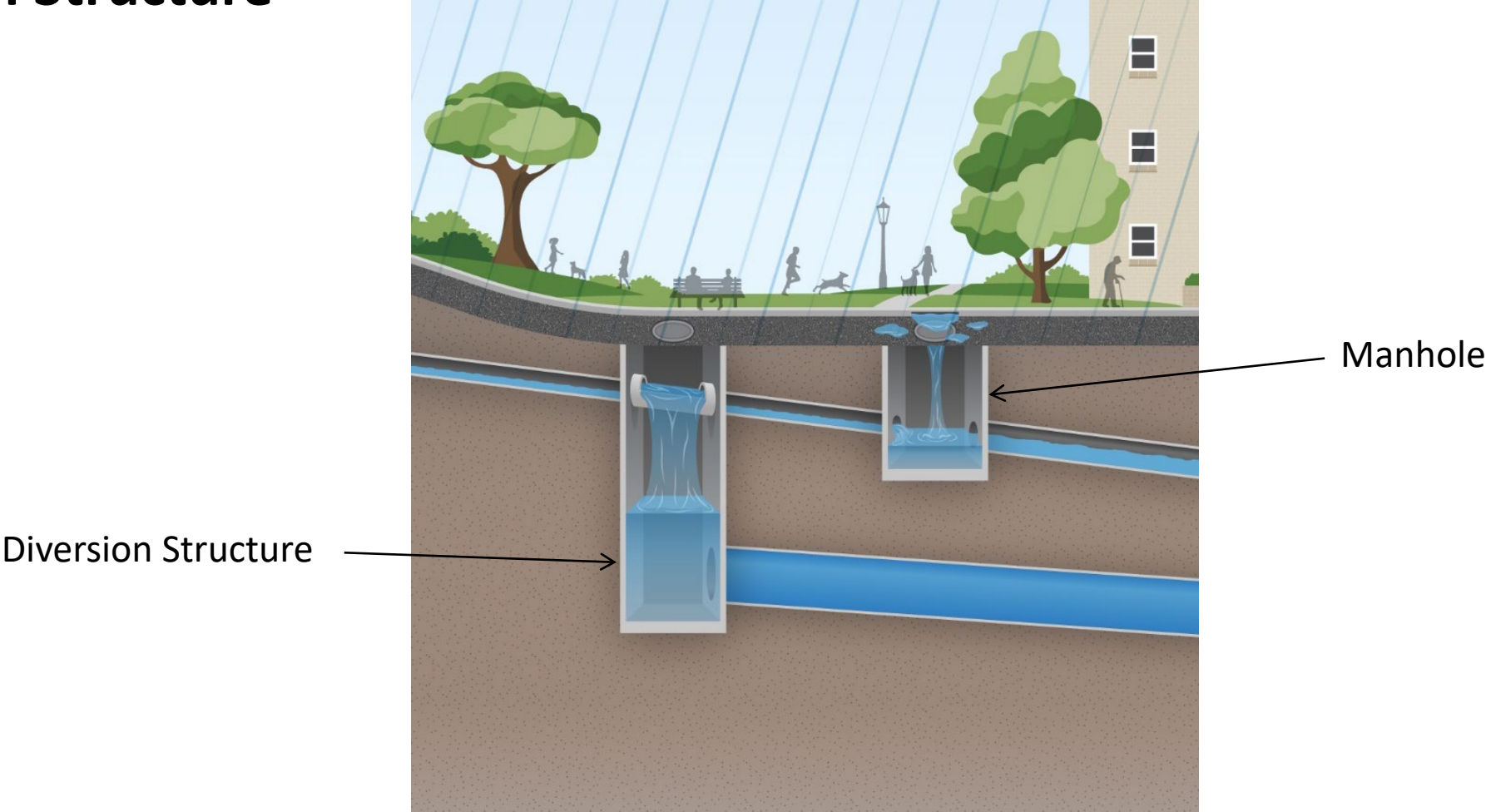
Proposed Improvements

Diversion Structure



Proposed Improvements

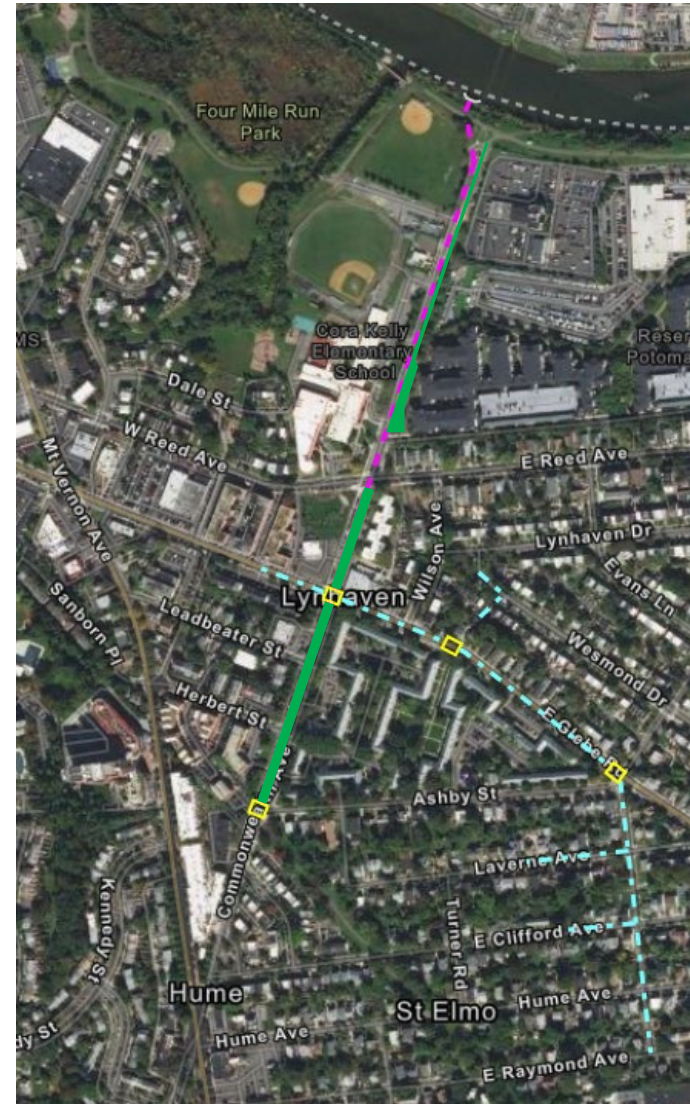
Diversion Structure



Proposed Improvements

Green Infrastructure

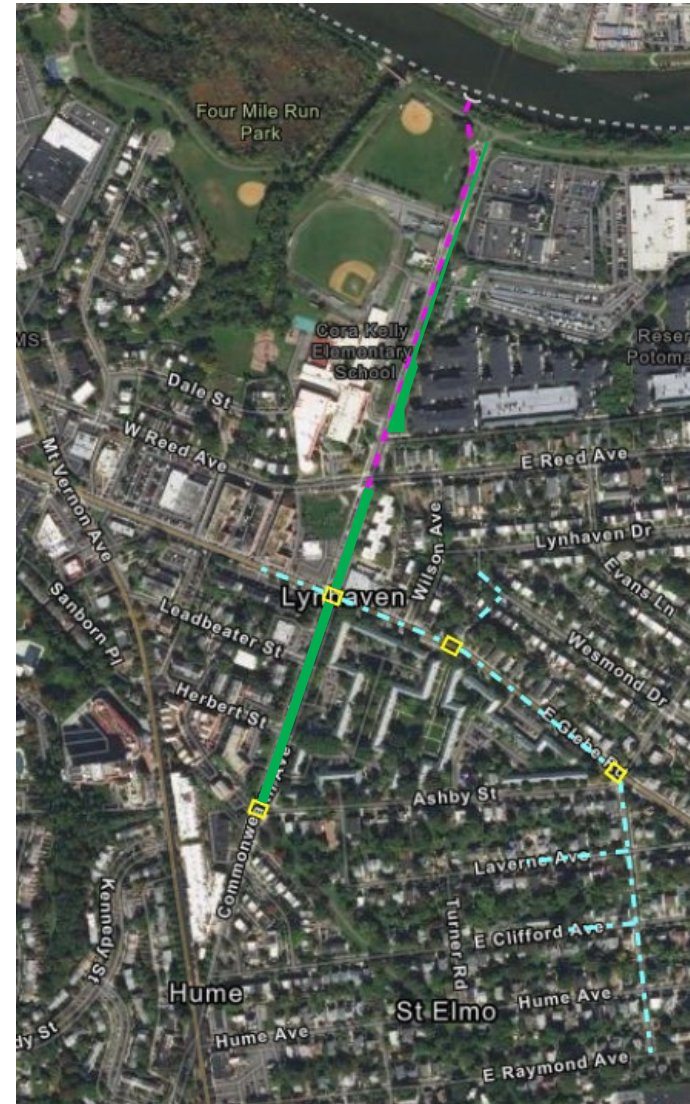
- Green infrastructure along Commonwealth Ave



Proposed Improvements

Green Infrastructure

- Portions of the Commonwealth Ave median from Ashby St to Reed Ave



Proposed Improvements

Intersection Improvements at E Glebe and Montrose

- Intersection improvements at E Glebe and Montrose Road to improve traffic and pedestrian safety.
- Additional public outreach will be scheduled for traffic improvements
- Safe Routes to Schools improvements

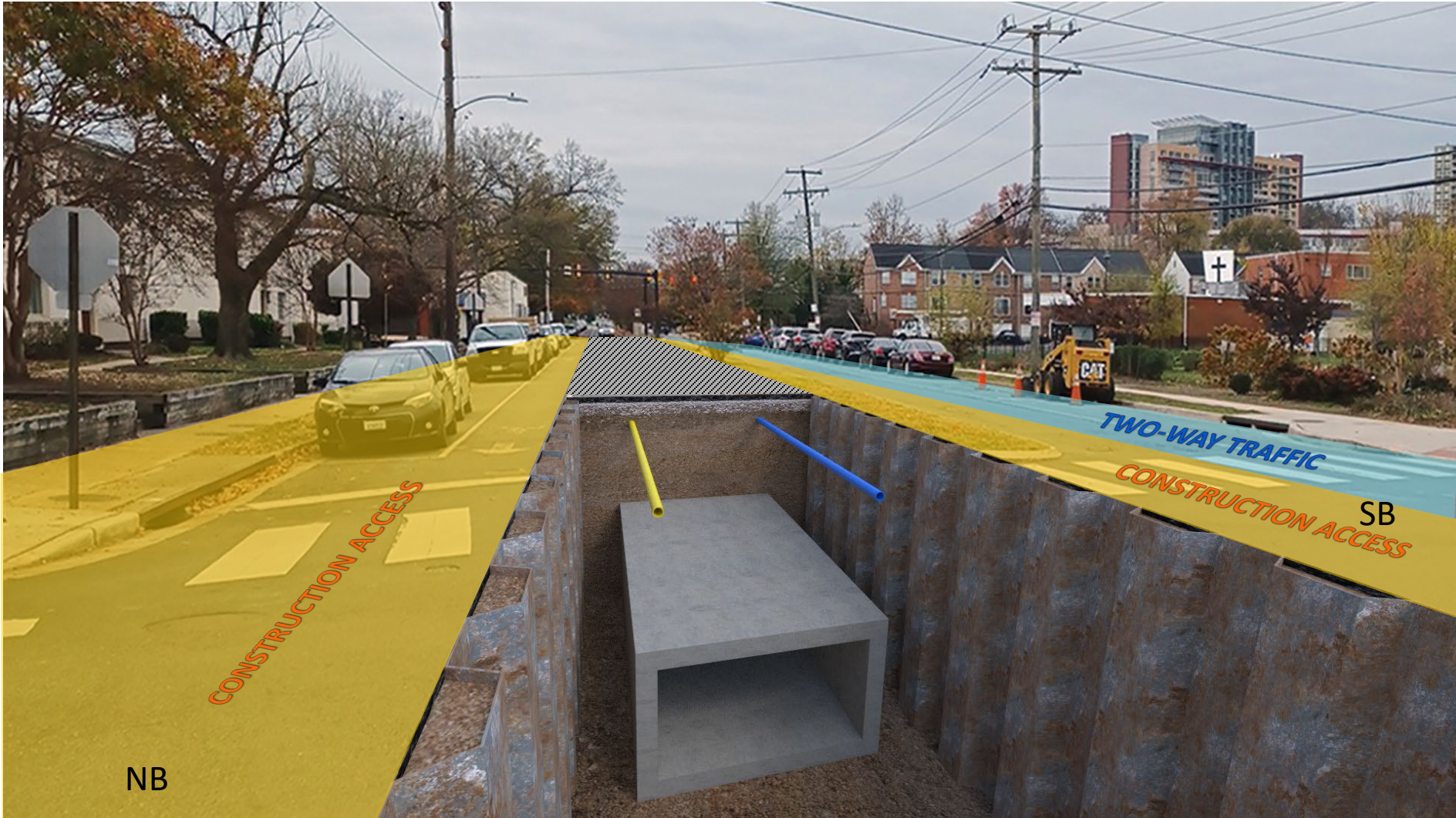


Construction on Commonwealth Ave



Intersection at Commonwealth Ave and Reed Ave

Construction on Commonwealth Ave



Intersection at Commonwealth Ave and Reed Ave

Construction on Commonwealth Ave



Intersection at Commonwealth Ave and Reed Ave

Construction on Commonwealth Ave

Example of Sewer Construction

- Sheet piling and shoring



Construction on Commonwealth Ave

Example of Sewer Construction

- Barriers and travel lanes



Construction on Commonwealth Ave

Example of Sewer Construction

- Mobile engines



Construction on Commonwealth Ave

Key Public Stakeholders

■ Residents

- Maintain property access during construction.
- Minimize impacts to parking and investigate temporary parking alternatives.
- Coordinate and communicate hours of operations for maintenance of traffic, noise, and accessibility concerns.
- Minimize and communicate any impacts to utilities.
- Maintain pedestrian traffic in and around neighborhoods.

Construction on Commonwealth Ave

Key Stakeholders

■ Schools

- Maintain property access during construction.
- Coordinate and maintain pick up and drop off
- Maintenance of traffic for bus routes, staff and pickup/drop off.
- Coordinate and communicate hours of operations for maintenance of traffic, noise, and accessibility concerns.
- Minimize and communicate any impacts to utilities.
- Maintain pedestrian traffic

Construction on Commonwealth Ave

Key Stakeholders

■ Commuters

- Maintenance of traffic plan to provide minimal disturbance to daily traffic
- Communicate detours, traffic controls, temporary signaling

■ Parks

- Coordinate trail impacts and provide detours if necessary
- Minimize impacts to park, trail and boat launch, and maintain access

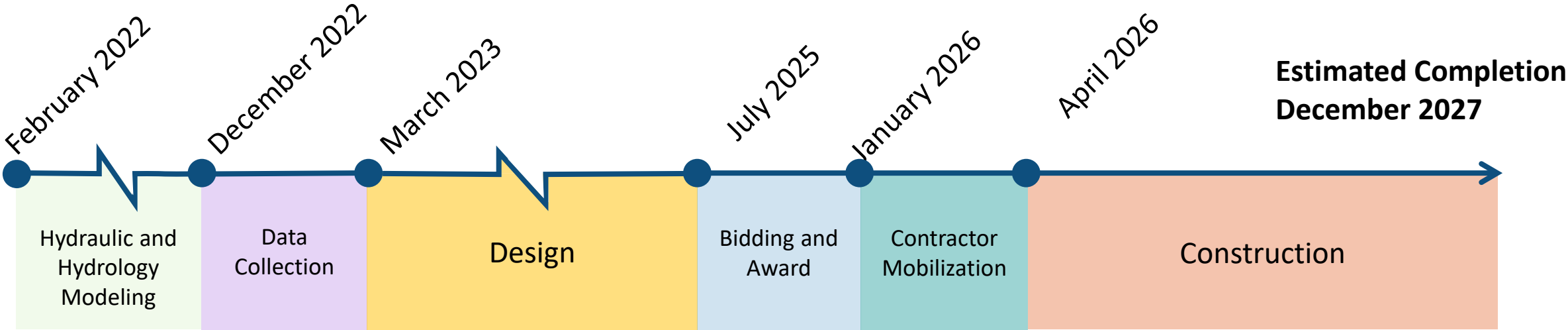
Construction on Commonwealth Ave

Key Stakeholders

- **Business Owners**

- Maintain access and minimize disruption
- Coordinate traffic impacts
- Coordinate and communicate hours of operations for maintenance of traffic, noise, and accessibility concerns.
- Minimize and communicate any impacts to utilities.

Schedule



Summary

- Project designed to reduce flooding at problem areas of Commonwealth and Glebe, and Ashby and Glebe
- Storm Sewer capacity will be increased along Commonwealth from Ashby St, to new outfall at Four Mule run; along E Glebe from Ashby St to Commonwealth; along Montrose Rd from E Raymond to Ashby St; and along Lavern Ave and E Clifford Ave side Streets
- Project impacts will require maintenance of traffic, parking impacts and utility relocation. City will maintain communication as design progresses and throughout construction operations.

Questions

Open Discussion

Contact: Jonathan.whiteleather@alexandriava.gov

Meeting recording will be posted to City website