City of Alexandria, Virginia

Green Infrastructure Demonstration Project: Second Street

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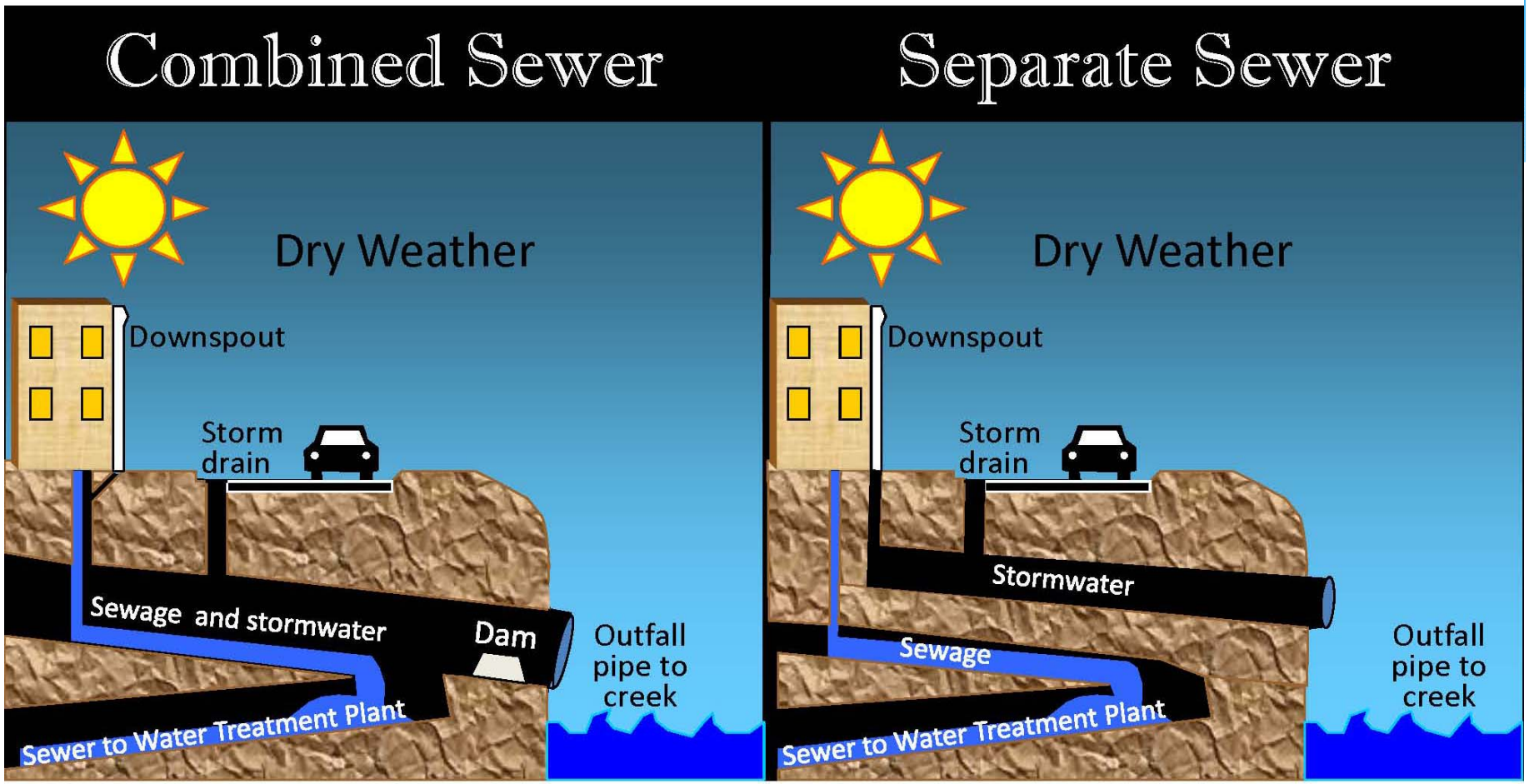
City of Alexandria, Virginia

PRESENTATION OUTLINE

1. What is a Combined Sewer?
2. Green Infrastructure: General Overview
3. Demonstration Project: Second Street

What is a Combined Sewer?

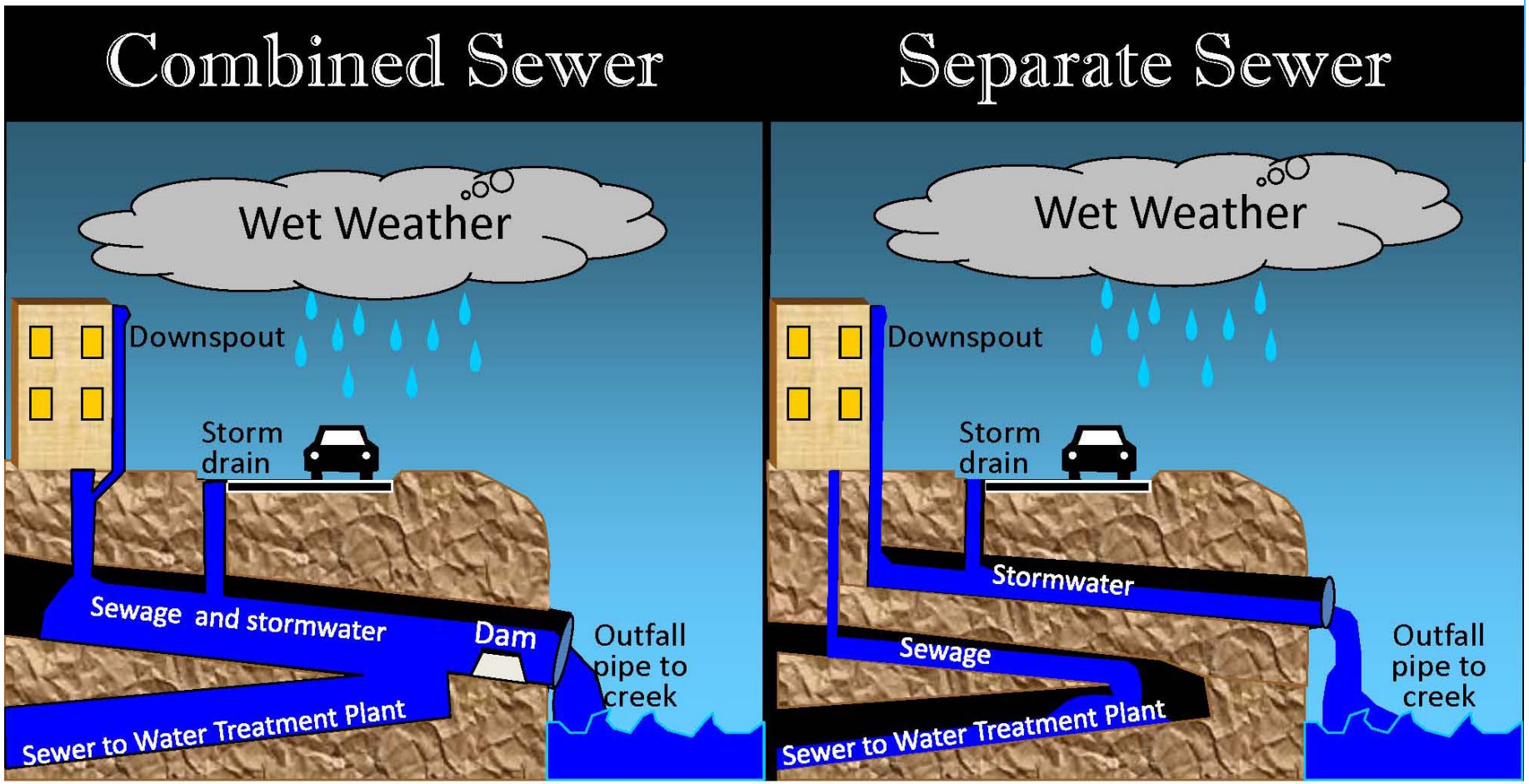


6.4% of Alexandria

93.6% of Alexandria

Photo/Graphics Source: www.phillyriverinfo.org

What is a Combined Sewer?



6.4% of Alexandria

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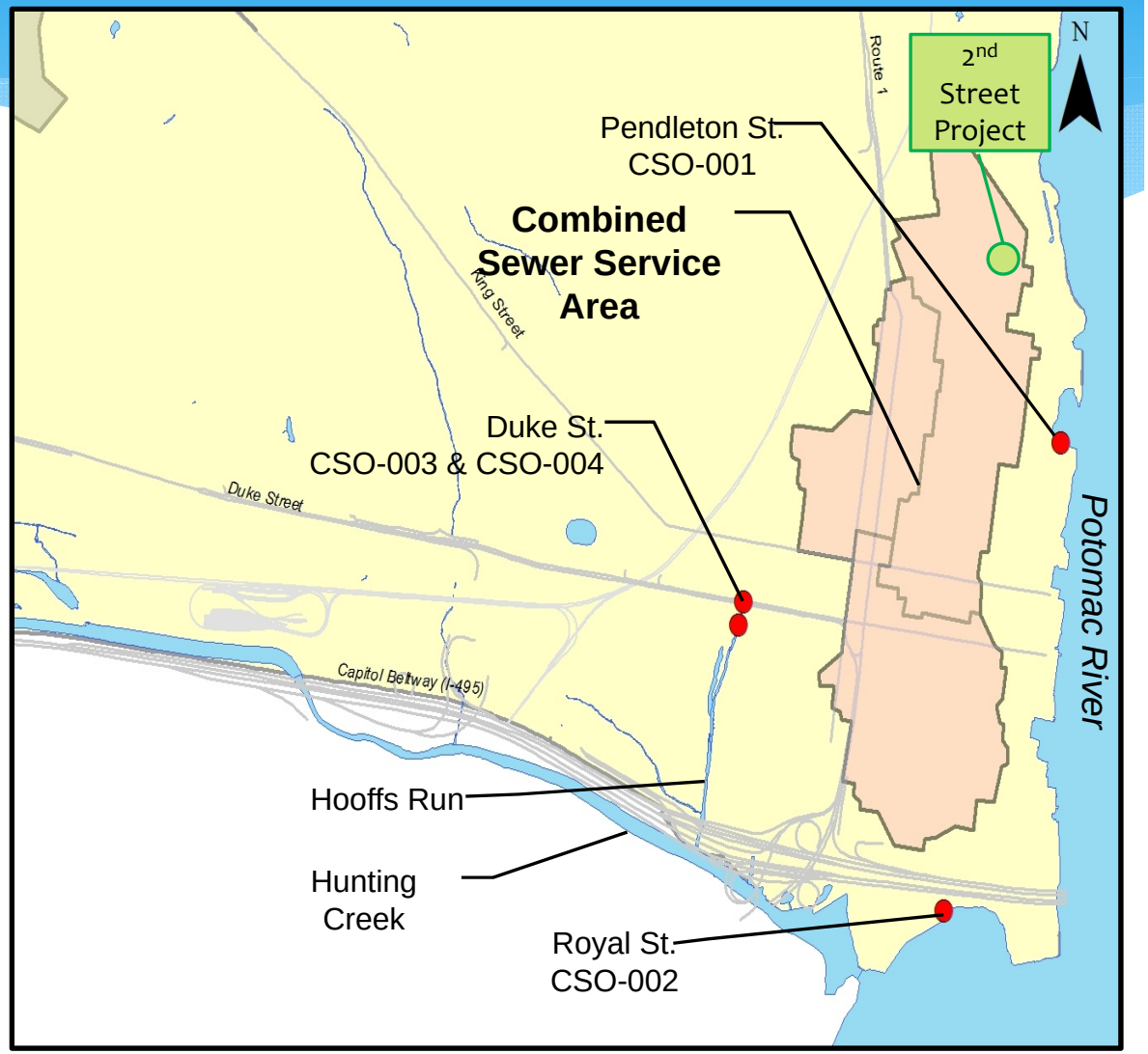
Photo/Graphics Source: www.phillyriverinfo.org

Combined Sewer Overflows (CSO's)

* Locations of combined sewer overflows (CSO's)

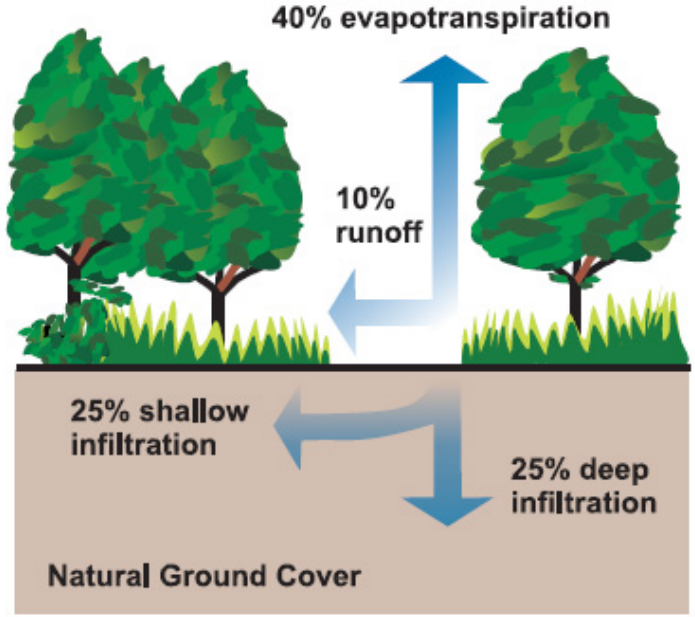


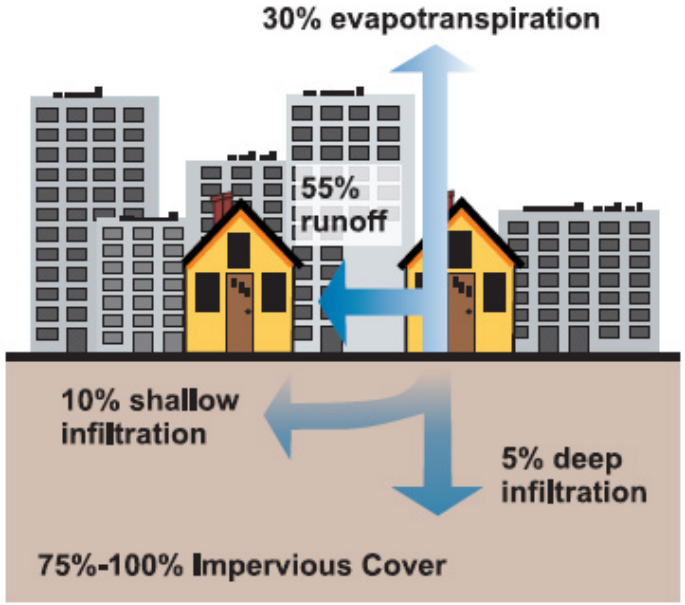
Green Infrastructure

* Reduces and treats stormwater at its source
* Promotes infiltration of runoff
* Delivers environmental, social, and economic benefits
* Treats rainwater as a resource

Green Infrastructure - Infiltration

* Stormwater management strategy that uses natural features to manage water and provide environmental and community benefits





Source: EPA

Green Infrastructure - Examples

Bioretention

Urban Bioretention

Permeable Pavements

Green Roofs

Tree Canopy

Rain Barrels

Tree Boxes

STREETSCAPE CONCEPT

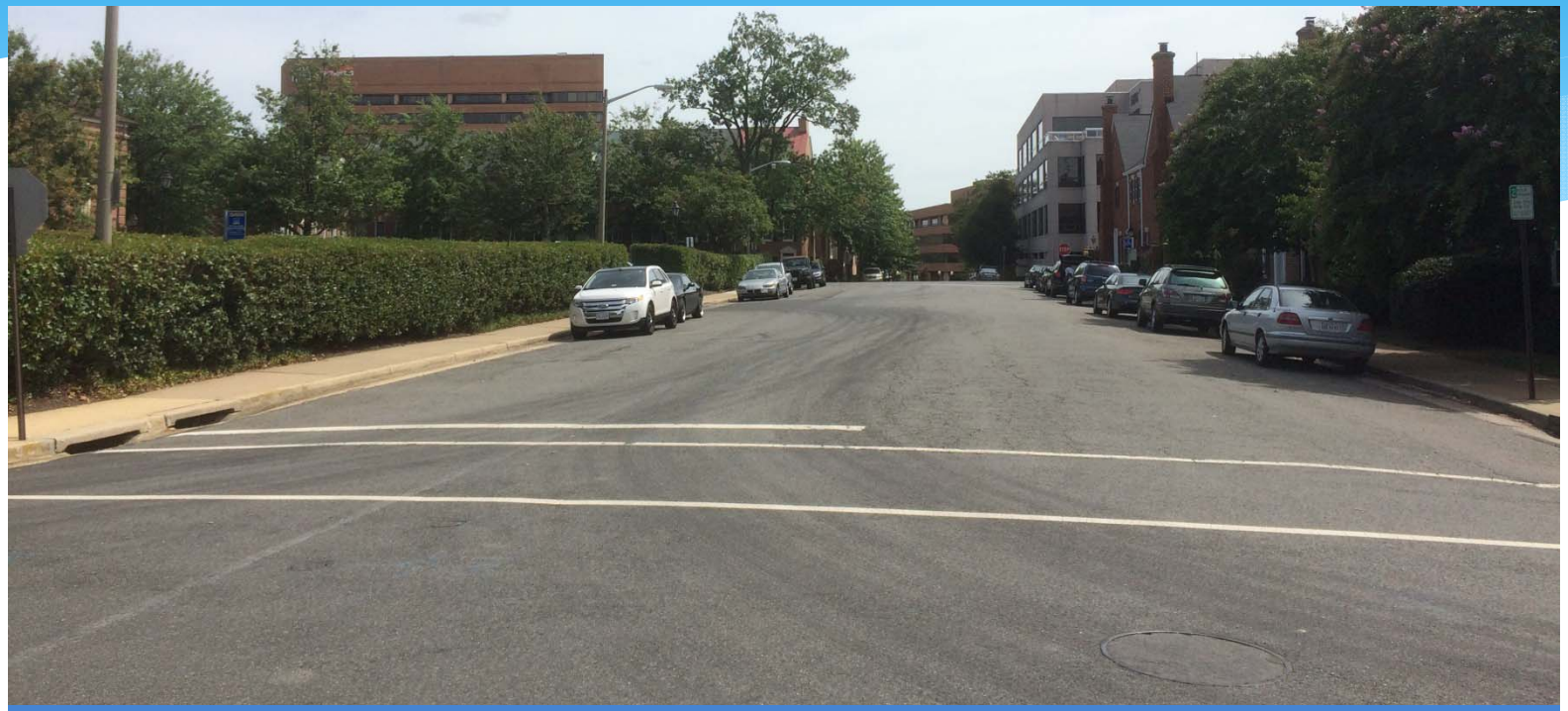
Green Infrastructure Demonstration

* 50 Sites Evaluated
  - Ranked using criteria
  - Held Strategy Meetings with City Stakeholders
  - Completed soil and utility evaluations
  - Selected 2 sites for GI demonstration projects
    - Project #1 - Second Street
    - Project #2 - Powhatan Street

Existing Second Street

Existing Powhatan Street

Why Second Street?



Existing Second Street (Looking East)

* Pavement wider than needed
* Public right-of-way available

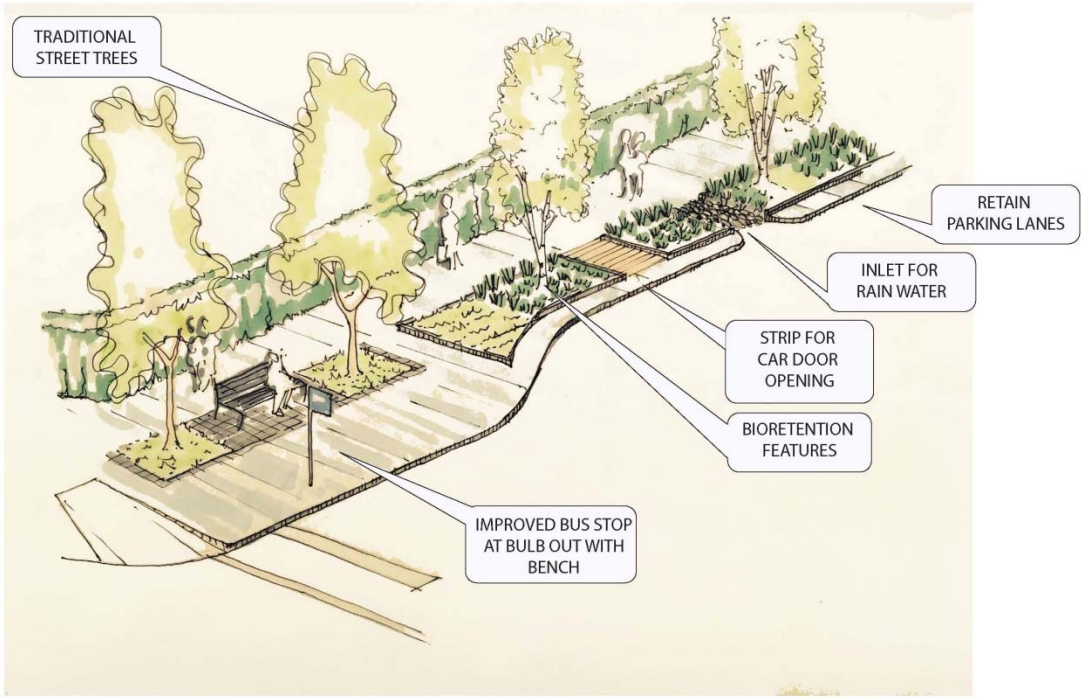
Why Second Street?

* Minimal utility conflicts
* Available downstream storm system
* Minimal disruption to residents and traffic flow
* Post-project parking will meet existing demand

Existing Second Street (Looking West)

Why Second Street?

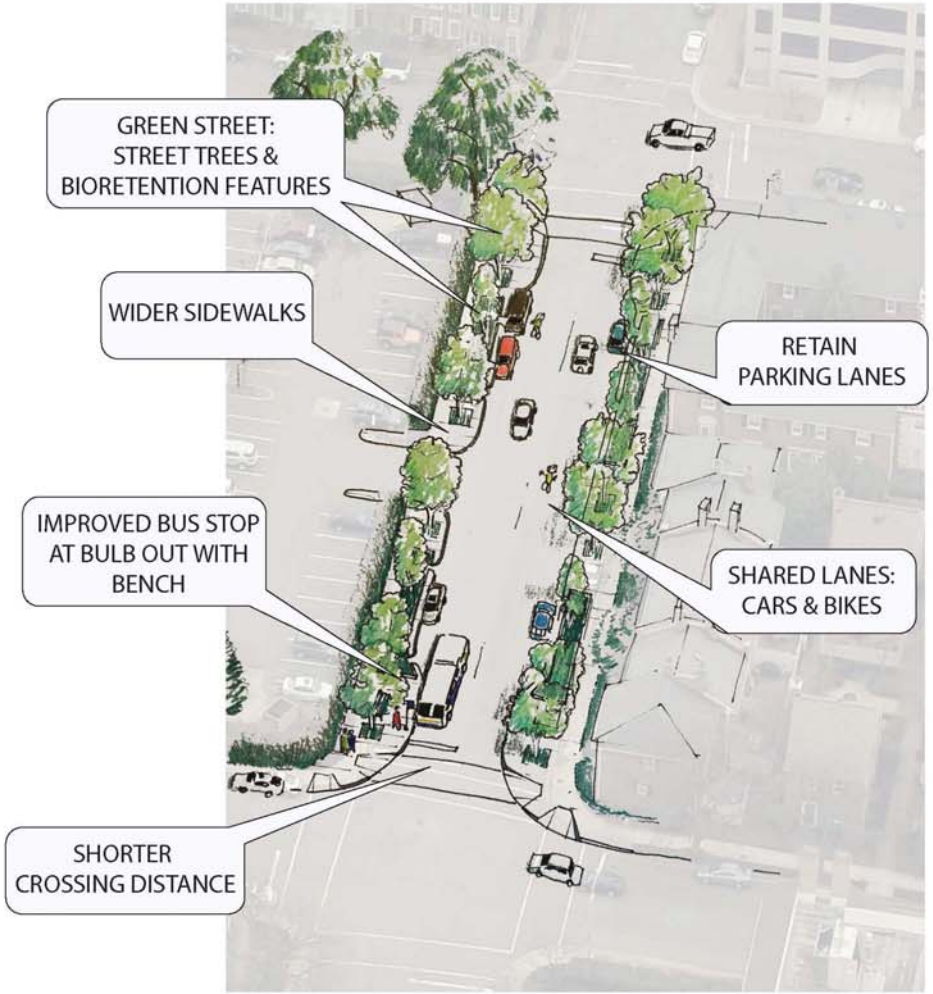
* Opportunity to incorporate:
  - Street Trees
  - Traffic calming measures
  - Shorter crosswalks
  - ADA Improvements at Bus Stops



PROPOSED

Second Street - Concept

EXISTING



PROPOSED

Second Street – Concept (Existing Condition)

Second Street – Concept (Proposed Condition)

Second Street – Concept (Proposed Condition)

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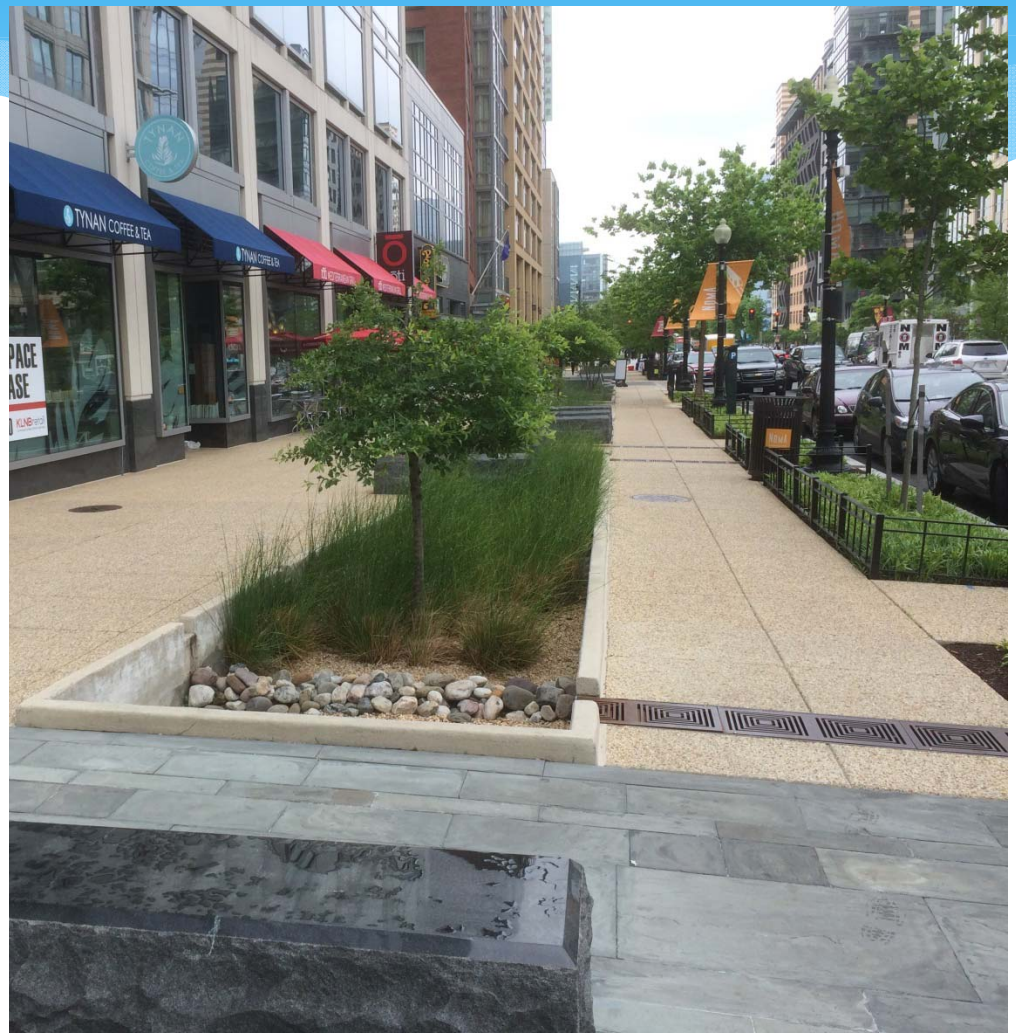
Second Street – Concept (Proposed Condition)

Second Street – Concept (Proposed Condition)

Second Street – Bioretention

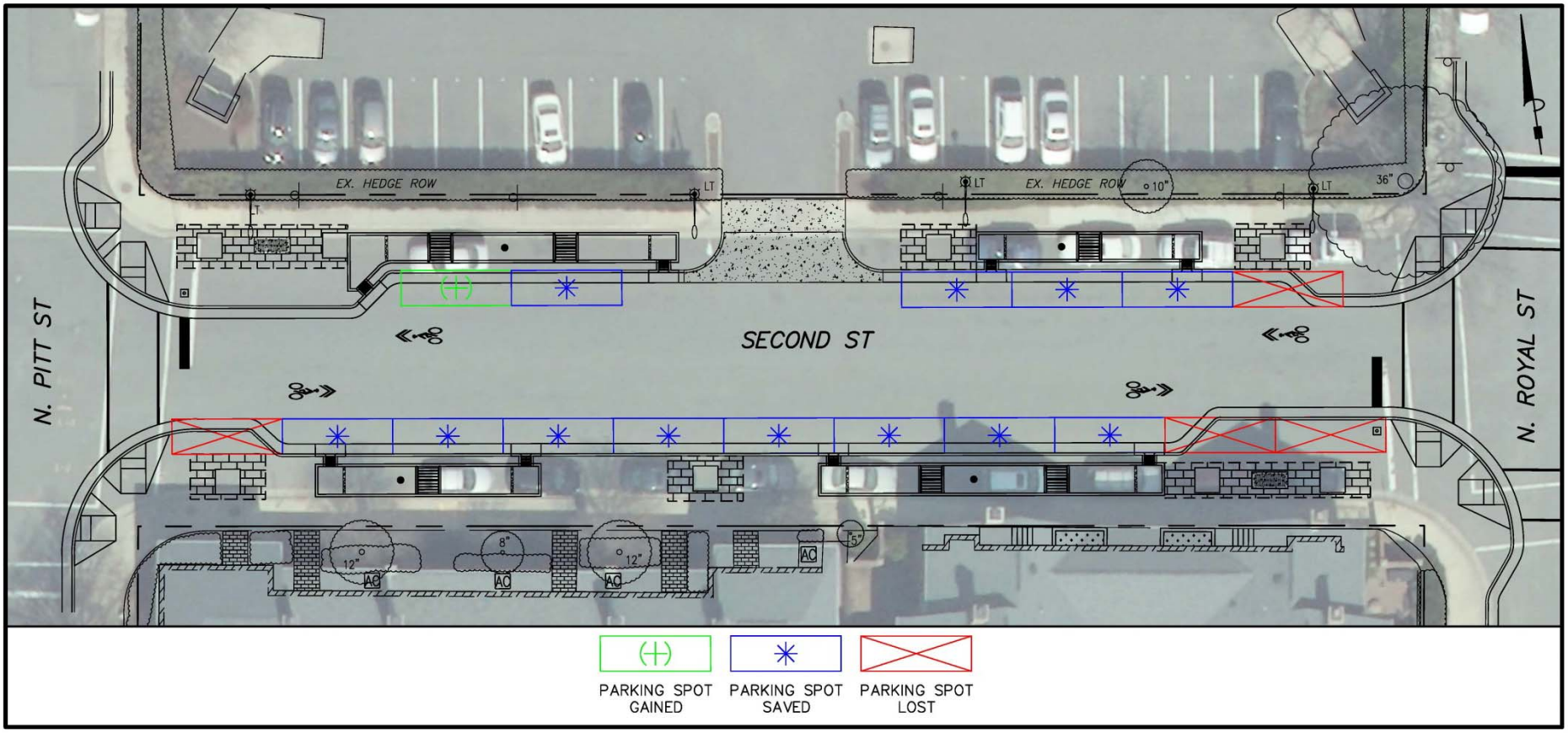
Location: Washington DC - The Yards; Design by AECOM



Location: Washington DC – NOMA District

Second Street – Bioretention

Second Street – Parking Impacts



Second Street – Property Impacts

Northside looking West (Canal Place)

Southside looking East (Watergate)

Second Street – Next Steps

- Gather community input
  - October 17th, 2016 Public Meeting
  - October 27th, 2016 Old Town North SAP Advisory Group Meeting
- Develop concepts based on input
  - November 2016
- Confirm updates with the community
  - December 2016

Second Street – Timeline

* Proceed with formal design
  – January 2017 thru October 2017
* Construction Procurement
  – October 2017 thru March 2018
* Construction
  – March 2018 thru October 2018

Contact Information

* Old Town North – Small Area Plan, Point of Contact:
  - **Nancy J. Williams; Assistant Director**
    Department of Planning and Zoning,
    703.746.3858, Nancy.Williams@alexandriava.gov
  - OTN SAP Webpage - www.alexandriava.gov/86032

* Combined Sewer – Long Term Control Plan, Point of Contact:
  - **Erin Bevis-Carver, PE; Civil Engineer IV**
    T&ES/Sanitary Infrastructure Division,
    703.746.4154, Erin.BevisCarver@alexandriava.gov
  - Combined Sewer Webpage - https://www.alexandriava.gov/Sewers

* Second Street Project, Point of Contact:
  - **Brian Meli, PE; Civil Engineer III**
    Department of Project Implementation
    703.746.4110, Brian.Meli@alexandriava.gov
  - Second Street Project Updates: https://www.alexandriava.gov/85470