

#### COMMUNITY GREENING PROGRAM



#### Green Streets Public Design Meeting

March 31, 2022





## WHO'S IN THE ZOOM?

Please introduce yourself in the chat!

Thank you to our community members and the Core Team for joining us



<u>PRESENTERS</u>



LAUREL J SCHWAB, AICP SCHW CITY OF W WATERTOWN S

JAURICE SCHWARTZ, PE WESTON & SAMPSON

CAROLINE PASSALACQUA, EIT WESTON & SAMPSON

#### Other Project Core Team Members

- Steven Magoon, Assistant City Manager & Community Development & Planning Director
- Matthew Shuman, PE, City Engineer
- Steven Roy, Senior Technical Leader, Weston & Sampson
- Cambria Ung, Resident Core Team Member
- Rachel Danford, Resident Core Team Member
- Vana Pistoftzian, Resident Core Team Member

#### **ZOOM TIPS**



#### JOINING VIA PHONE?

Use \*9 to raise hand to ask for audio / video permission to ask questions or provide comments.

# **GROUND RULES AND ETIQUETTE**

- Help stay on schedule
- Be present/leave technology outside
- One speaker at a time
- Pause for others to unmute
- Assume positive intent
- Be solution and project focused
- Be respectful
- Think big!

## **MEETING OUTLINE**

- Project Background and Update
  - MVP Program
  - Project Scope & End Goal
  - Green Infrastructure Practices & Benefits
- Discussion of Preliminary Green Street Designs
- Opportunities for Further Engagement
- Next Steps

#### MUNICIPAL VULNERABILITY PREPAREDNESS (MVP) PROGRAM



# **2 PHASES OF MVP**

#### 1. MVP Planning Grant

- Define climate hazards
- Identify community vulnerabilities and strengths
- Develop and prioritize adaptation actions
- Received MVP designation in 2020

#### 2. MVP Action Grant

- Implement priority adaptation actions
  identified during the planning process
- This project is funded by an MVP Action Grant awarded in August 2021



#### COMMUNITY GREENING PROGRAM – SCOPE & END GOAL

 Collect environmental and demographic data (impervious coverage, tree canopy, Environmental Justice areas, concentration of renters, seniors, low-income residents, etc.)

- $\checkmark$  Complete Urban Heat Island assessment
- $\checkmark$  Establish Priority Equity Areas in the City based on collected data
- $\checkmark$  Identify 3 Green Streets and locations for 15 tree trenches
- Complete field investigations
- Develop **75% design** of green streets and tree trench locations
- $\Box$ Conduct accompanying public engagement

Project End Date: June 30<sup>th</sup>, 2022.

## **PRIORITY EQUITY AREAS**



Areas determined using data related to:

- 1. Climate vulnerable populations
  - Seniors
  - Children
  - Low-income residents
- 2. Environmental vulnerabilities
  - Highly impervious areas
  - Less tree cover
  - Known flooding concerns

## **GREEN STREET SELECTION**

- Dexter Ave, Francis Street, and Templeton Parkway meet these criteria:
  - Location within a defined **Priority Equity Area**
  - Soils can infiltrate/absorb stormwater
  - Existing **buffer space** between street and sidewalk
  - Elevated vulnerability to **urban heat**
  - Existing drainage system that can be **retrofitted** with green infrastructure





- 1. What are your primary interactions with the selected green streets (Dexter Ave, Francis Street, Templeton Parkway)?
  - a) I mostly drive through those streets.
  - b) I mostly walk or bike through those streets.
  - c) I drive and walk/bike equally on those streets.
  - d) I have little to no interaction with those streets.



- 2. Which do you value the most in street design?
  - a) Wide driving lanes
  - b) Plenty of street parking
  - c) Trees or green space between street and sidewalk
  - d) Bike infrastructure
  - e) Other respond in the chat!

- 3. Are you familiar with the terms "green street" or "green infrastructure"?
  - a) Yes
  - b) No
  - c) I may have heard them before but could use a refresher

## WHAT IS A GREEN STREET?

 Green streets use green infrastructure practices, or vegetation, trees, and soils, to manage stormwater close to the source and limit the transport of stormwater pollution in traditional drainage systems.



#### **TYPICAL STREET**





#### OPPORTUNITY

IMPLEMENTATION

## **SELECT GREEN INFRASTRUCTURE PRACTICES**

Green Infrastructure practices chosen for the green street designs include:

- Bioretention
- Vegetated filter strips
- Tree trenches
- Infiltration trenches
- Street trees

Criteria for selecting BMPs:

- Available space within the right-of-way
- Soil conditions
- Existing tree canopy
- Maintenance concerns
- Co-benefits (create shade, provide traffic calming, improve pedestrian experience)

#### **GREEN INFRASTRUCTURE PRACTICES - BIORETENTION**

**BIORETENTION AREAS** use soils and plants to treat stormwater before it is infiltrated or discharged to the drainage system.





## GREEN INFRASTRUCTURE PRACTICES – VEGETATED FILTER STRIPS

**VEGETATED FILTER STRIPS** use soils and plants to treat stormwater before it discharges to the drainage system. They are typically smaller than bioretention areas and can be primarily grass or native, drought-tolerant plantings.





Image source: K. Hill via <u>Researchgate.net</u>

## **GREEN INFRASTRUCTURE PRACTICES – TREE TRENCHES**

**TREE TRENCHES** are designed to filter or infiltrate stormwater as well as add trees to the landscape. Stormwater captured by these systems provides water for the trees.



Tree Trench at 21 Edenfield Ave.

Source: Southeast New England Program (SNEP) Network

#### **GREEN INFRASTRUCTURE PRACTICES – INFILTRATION TRENCHES**

**INFILTRATION TRENCHES** use gravel and soils to infiltrate stormwater directly into the ground.

Smaller infiltration trenches retrofit existing catch basins, providing opportunity for infiltration while leaving the existing drainage system as an option for overflow during larger storm events.

#### UNDERGROUND INFILTRATION TRENCH: TOP-DOWN VIEW



#### STREET TREES

**STREET TREES** are an important green street element, and can help mitigate urban heat effects and improve air quality.

Tree planting is a solution where there is not adequate space for other green infrastructure practices.





Graphic Source: Trees for Watertown

Search by Species

Common or Scientific Name

Search by

Address

# QUESTIONS?



## PRELIMINARY GREEN STREET DESIGNS

- 1. DEXTER AVE
- 2. FRANCIS STREET
- 3. TEMPLETON PARKWAY

[going to add one of Ryan's renderings here]

## PRELIMINARY DESIGNS – WHAT IS/IS NOT CONSIDERED?

#### These designs consider:

- Surveyed street, sidewalk, and buffer strip widths
- Location of existing trees and utilities
- <u>Potential</u> for utilizing extra room in the right-of-way for green infrastructure

## These designs <u>do not</u> yet consider:

- Actual soil conditions
  - Further investigations scheduled
- Dimensional requirements (lane widths, corner radii, truck turns)
  - To be coordinated with police, fire, and local businesses
- ADA Accessibility
  - To be addressed as part of 75% design
- Long-term maintenance

## HOW WILL MY FEEDBACK BE INCORPORATED?

#### Looking for ideas that can be considered further as the project moves toward 75% design

- Can you think of a reason why the preliminary design might not work on a specific street?
  - How might the preliminary design affect your interactions with these streets?
    - Do the preliminary designs match your priorities for street design? Why or why not?



## **OPPORTUNITIES FOR FUTHER ENGAGEMENT**

- Pop-up shade parklets
- Site walks
- Public presentations to community groups





Complete site investigations (test pits)



Develop 75% design drawings by June 30<sup>th</sup>



Secure funding for final design and construction

# THANK YOU!

# TO STAY INVOLVED WITH PROJECT UPDATES, PLEASE VISIT:

https://resilient.watertownma.gov/category/community-greening-program





