



Canarsie
Planning Committee Meeting #7

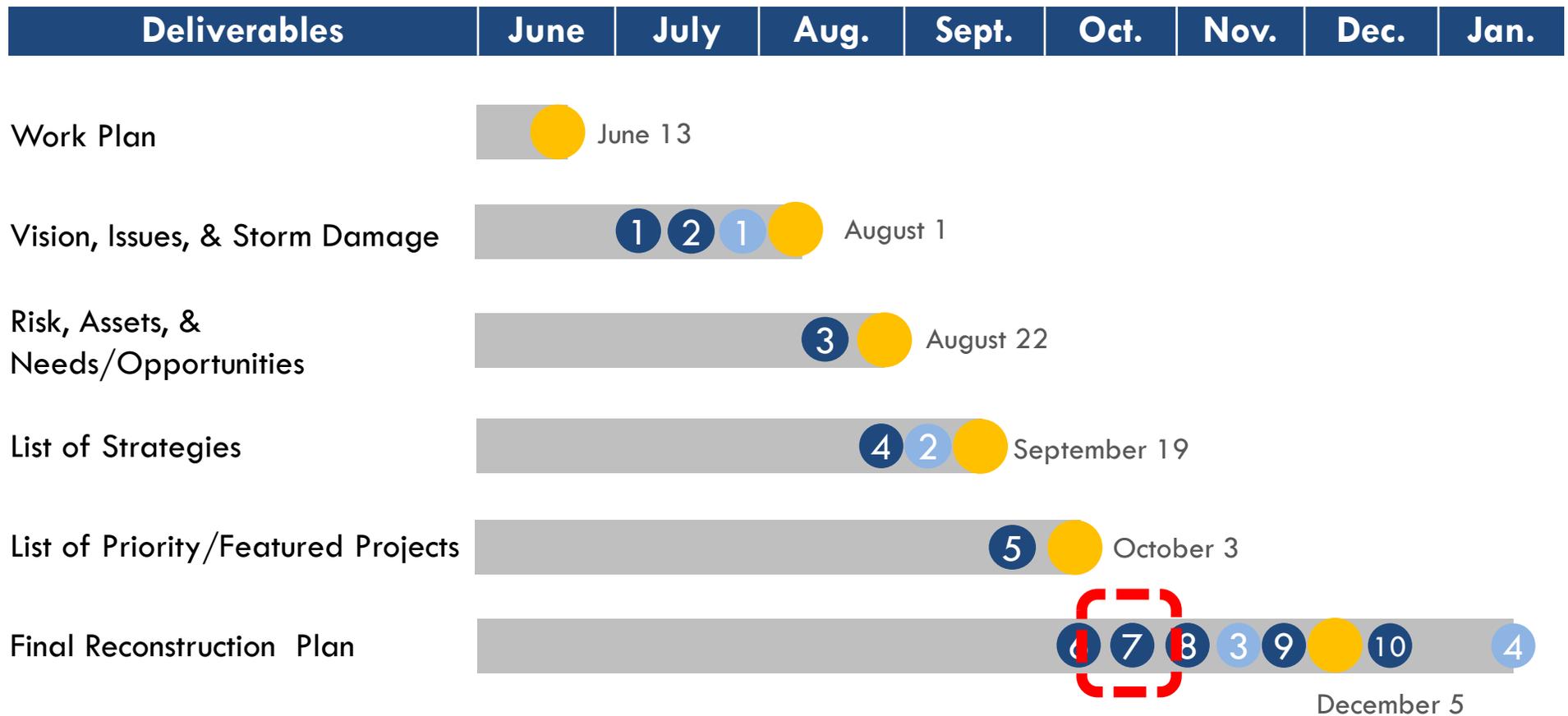
October 20, 2014

Agenda for Planning Committee Meeting #7

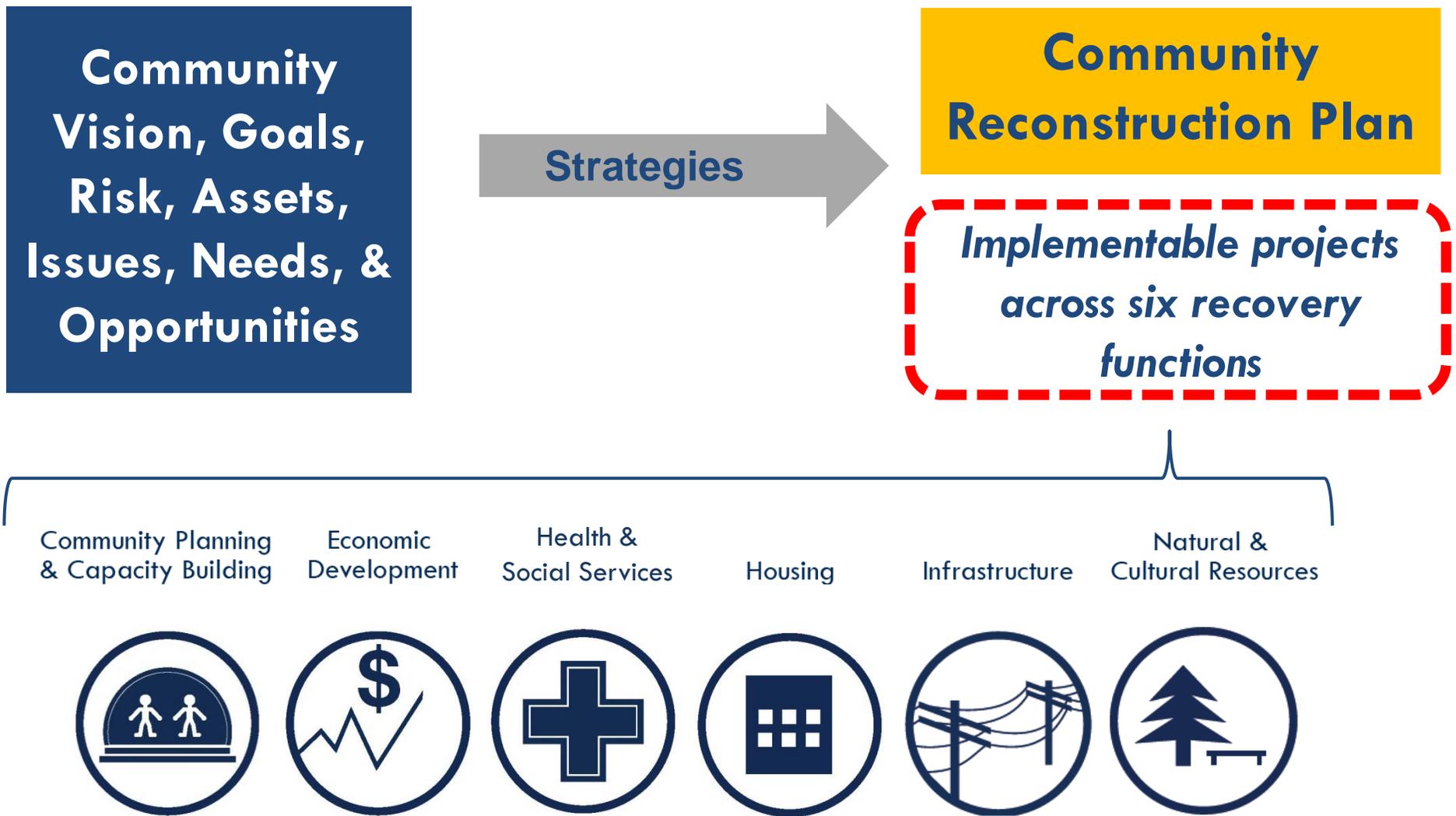
1. **NYRCR Program Update** **7:00pm**
2. **Generate Additional Projects**
 - a. Drainage 7:20pm
 - b. Housing 7:40pm
 - c. Transportation 8:00pm
3. **Coastal Protection/Shoreline Access Project Refinement** **8:20pm**
4. **Next Steps** **8:40pm**

NY Rising Community Reconstruction Program Schedule

- Planning Committee Meeting
- Public Meeting
- Deliverable Due Date



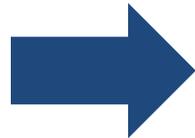
NY Rising Community Reconstruction Goals and Components



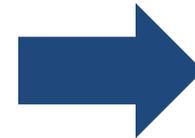
Project Development and Voting

Step #1: Develop and confirm list of projects

Information
around project
concepts and
considerations



Follow-up with
additional research,
based on Committee
feedback



Finalize list of
project ideas to
be presented to
the public at
Public Meeting
#3

Project Development and Voting

Step #2: Present projects to the public at Public Meeting #3

Public Meeting #3 Event from NYRCR Round I



Project Development and Voting

Step #3: Committee votes on projects to propose for CDBG-DR funding

Sample ballot from NYRCR Round I Community



**Rockaway West
Community Reconstruction Plan
Ballot**

This is your ballot for the submission of priority projects to New York State. Please select yes, no or abstain for every project, save the document, and see kmatheny@hraadvisors.com, bcalabrese@hraadvisors.com, cmuller@stormrecovery.ny.gov

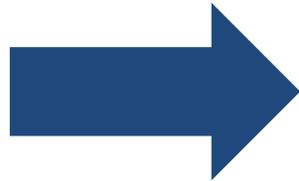
YES/NO/ABSTAIN	PROJECT	BRIEF DESCRIPTION
	(A) Implement Targeted Coastal Protection at Beach 88th Street	Capital costs for raised bulkhead, wetland restoration, and floodwalls/berms
	(B) Drainage Projects	Capital costs for 50 bioswales
	(C) Create Rockaway West Relief Center Hub(s)	Capital hardening costs and programming expenses for two years
	(D) Create Rockaway West Relief Satellites	Capital hardening costs and programming expenses for two years
	(E) Support Long-Term Ferry Operations	Operating expenses for two years (subject to revision)
	(F) Create a Rockaway Bike Share Program	Capital hardening costs and programming expenses for two years
	(G) Create Bus Circulator Service	Operating expenses for two years (subject to revision)
	(H) Streetscape Improvements at B108th Street & Beach Channel Drive	Capital hardening costs and programming expenses for two years
	(I) Build Harbor Park at B108th Street	Joint study with Five Towns to study road improvements along Rt. 878
	(J) Support National Grid Site Redevelopment	Operations expenses for workforce development programs, including emergency preparedness training
	(K) Issue RFP for Expansion of Health Services	Capital costs for infrastructure and two years of operating costs

Project Development and Voting Schedule

**Develop and
confirm list of
projects**

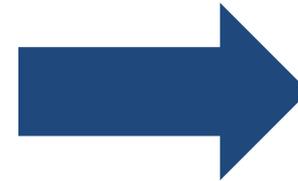
PC #7: Tonight
(Coastal Protection,
Shoreline Access,
Drainage, Housing, and
Transportation)

PC #8: 11/3
(Economic
Development,
Emergency Prep, &
Power)



**Present
projects to
public**

PE #3: 11/10



**Committee
votes on
projects**

PC #9: 11/17

Planning Committee Meeting #7 Goals & Outcomes

Goals:

1. Refine project list

Outcomes:

1. Updated list of projects and next steps for further project development

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Drainage



Strategy:

Improve wastewater & stormwater management

Project #1: Stormwater Capture Pilot Project(s)

- Reduce stormwater flooding at one or more targeted locations
- Target most vulnerable locations and/or locations where intervention is most easily implementable
- Pilot potentially replicable techniques which might include: bioswales, rain gardens, blue or green roofs, etc.

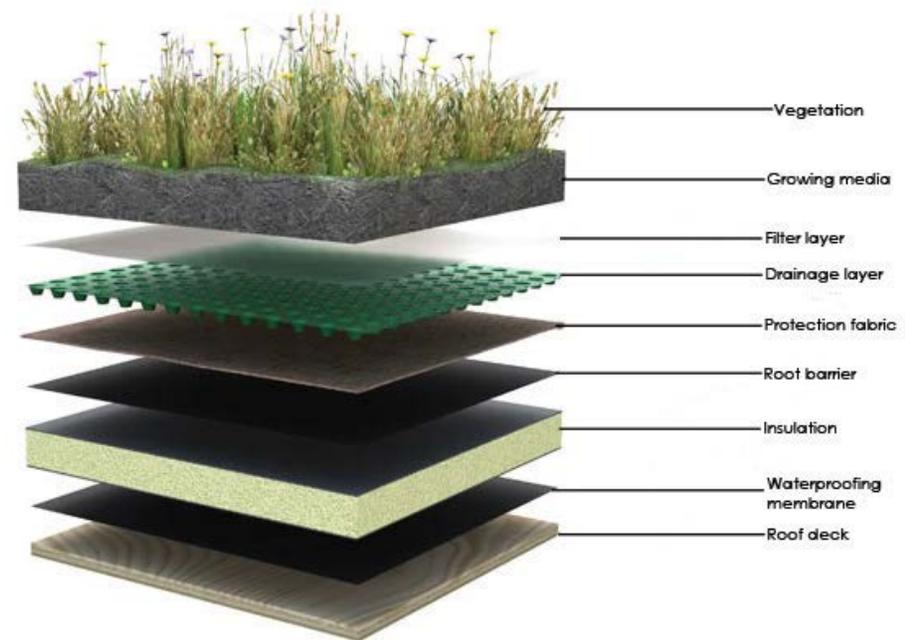


Diagram of a green roof

Project #1: Stormwater Capture Pilot Project(s)



Considerations

Coordination with NYC DEP, NYC DOT, and other agencies

Effectiveness of interventions

- Soil permeability
- Depth to groundwater
- Catchment area
- Effectiveness on a separated sewer system

Leveraging proximity of interventions to park / open space

Note: Stormwater capture interventions have no impact on depth of flooding for coastal storm surge. However, drainage improvements could improve the speed and efficiency of water draining after a storm event.

Project #1: Stormwater Capture Pilot Project(s)

PRECEDENTS



Church Avenue, Brooklyn
NYC DPR Stormwater Management Portfolio



Furmanville Avenue, Queens
NYC DPR Stormwater Management Portfolio



Seagirt Boulevard, Queens
NYC DPR Stormwater Management Portfolio



Seagirt Boulevard, Queens
NYC DPR Stormwater Management Portfolio
NYC DPR Stormwater Management Portfolio



Sagamore Street, Bronx
NYC DPR Stormwater Management Portfolio



Parking lot retrofit, Scottsbluff, Nebraska
Nebraska H2O

Project #1: Stormwater Capture Pilot Project(s)

OTHER POSSIBLE TECHNIQUES FOR PUBLIC OR PRIVATE SITES

Subsurface systems

Considerations

- Opportunity for reducing runoff from parking lots and other large paved areas
- Restrictions / limitations on their use in some public areas (public Right-of-Way)
- The city has siting requirements for where and how systems can be located
- Site conditions such as soil permeability and depth to groundwater or bedrock will drive the effectiveness or feasibility of such techniques

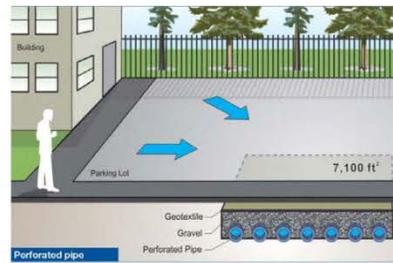


Figure 3-2: Construction of a perforated pipe system at NYCHA's Bronx River Houses in the Bronx.

Green Roofs & Blue Roofs

Considerations

- Opportunity for large roof areas
- May have minimal impact due to smaller volume of water captured

Examples



NYCDEP



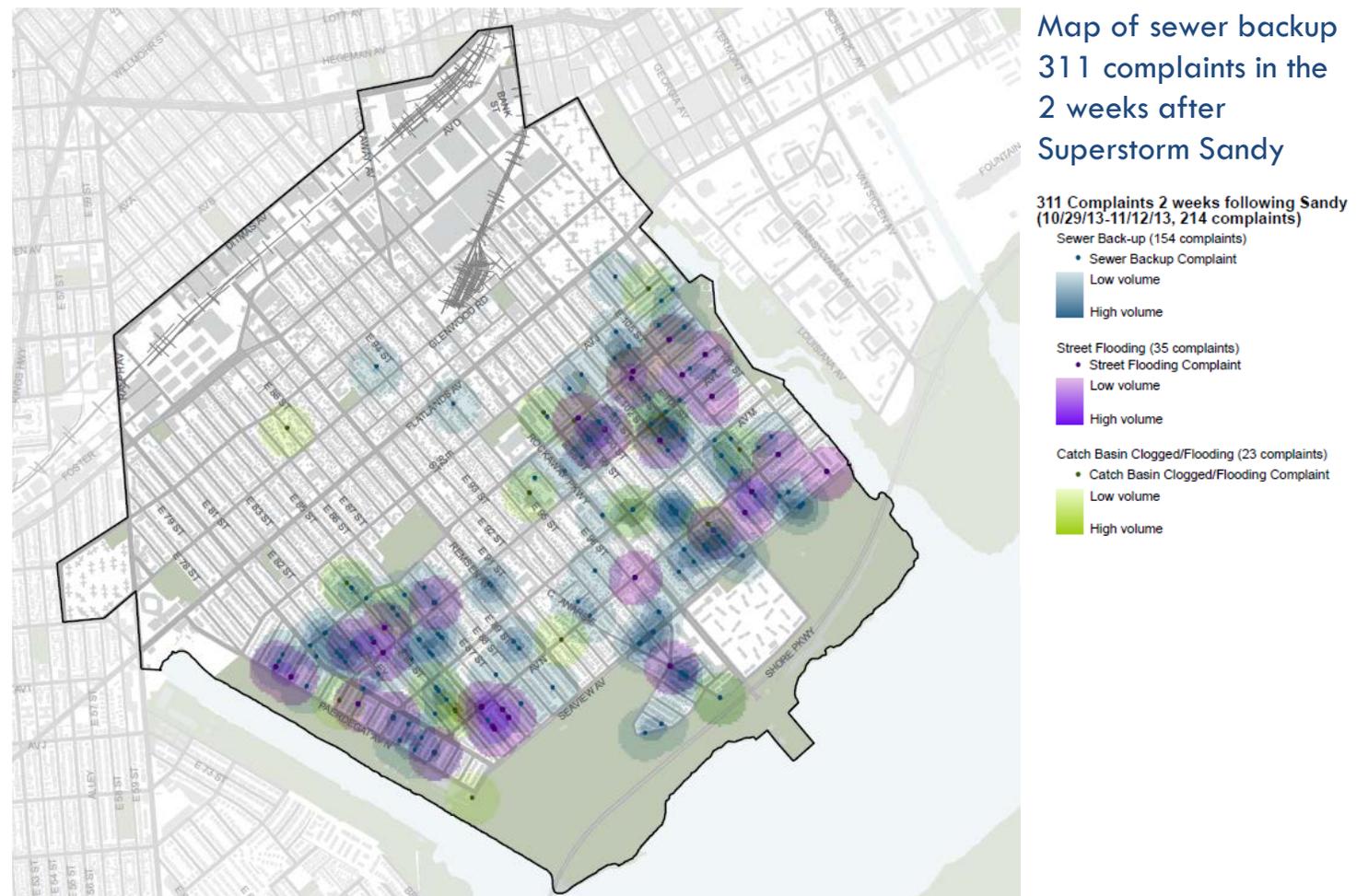
NYCDEP



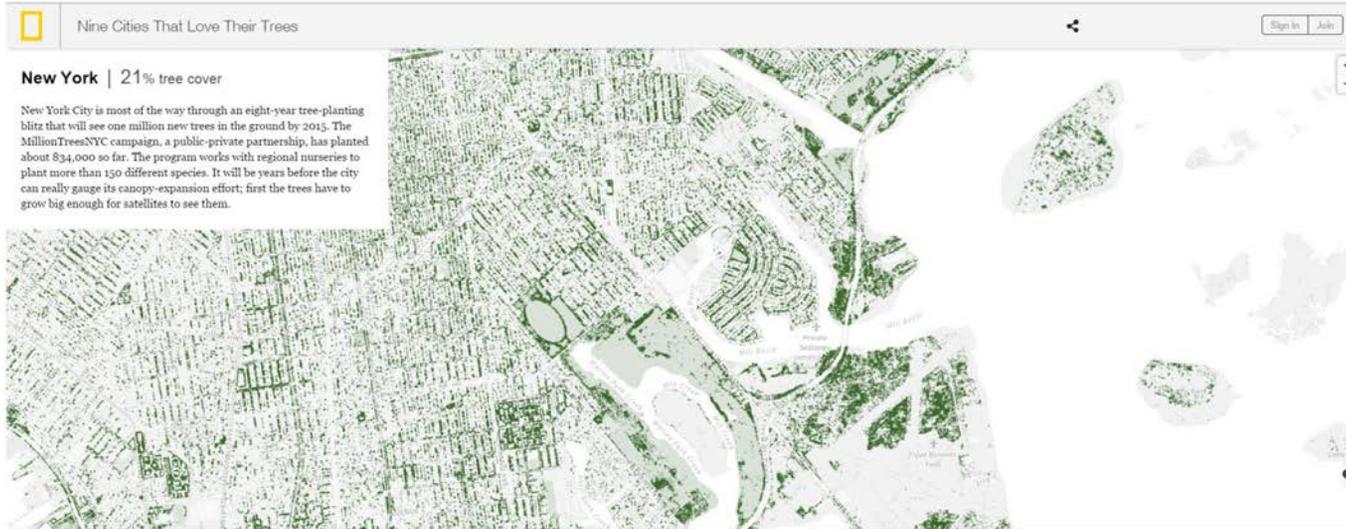
Inhabitat

Recommendation: Assessment of Area Sewer System and Improvements

Recommend that NYC DEP examine vulnerabilities of the Planning Area's sewer system and determine improvements to enhance its resiliency and lessen backup.



Other Project: Resilient Tree Plan



Source: "Nine Cities That Love Their Trees," National Geographic, 2012



Observed / Reported Issues:

- Street trees are an important part of the community's character (i.e. urban forest)
- Poorly maintained trees are a risk to safety and private and public infrastructure
- Existing trees may not be resilient to threats of climate change (street flooding, rising temperatures, etc.)

Other Project: Resilient Tree Plan

Precedent: TreeKIT

TreeKIT builds tools to help city dwellers measure, map, and collaboratively manage urban ecosystems. The project is focused on high density urban areas where the links between human and non-human health are most clearly evident. Mapping street trees introduces people to the neighborly “charismatic megafauna” (AKA trees) living on their city block and quietly contributing many ecosystem services and raising property values. Through TreeKIT’s educational mapping workshops, we aim to promote long term stewardship of the urban forest, one tree at a time.



Leaders & Volunteers survey street trees at “community mapping parties”
Source: TreeKit



Data on the mapped Trees are added to an interactive online map.
Source: TreeKit

Precedent: Hudson River Watershed Tree Resource Resiliency Toolkit

Primer on climate impacts and resiliency strategies for tree species of the Huron River watershed. This toolkit was created to help land managers and decision makers...

- Understand how climate is changing locally in the Huron River Watershed
- Understand the implications of how this will affect our local forest and tree resources
- Learn what we can do about anticipated climate change impacts on our trees and manage these resources for climate resiliency

Climate Resilient Communities

Trees of the Huron River Watershed in a Changing Climate

Red Maple *Acer rubrum*

Description
Red maple is one of the most widely distributed tree species in the Eastern US and is found in many types of forests and savannas in Michigan. It occurs on a broad range of sites. While historically it was primarily a wetland tree species, it is considered an aggressive colonizer of upland sites, responding well to disturbance. It has markedly increased in its range and abundance since the time of European settlement. It is moderately shade tolerant, sensitive to fire and moderately long-lived.

Change Maps for Red Maple!

Current Abundance Modeled Abundance- Modeled Abundance-

Climate Resilient Communities

Trees of the Huron River Watershed in a Changing Climate

White Oak *Quercus alba*

Description
White Oak is a very large, strong, long-lived tree. It is found throughout the lower peninsula of Michigan, however that is the northern limit of its range. White Oak is moderately shade tolerant but is poorly adapted to hard winter freezes. White Oak is found on a variety of well drained upland soils ranging from sandy to mesic. Oaks are among the tree species most valuable to wildlife due to the abundance of acorns that they produce which serve as a high quality food source.

Change Maps for White Oak!

Model Abundance- Model Abundance-

Description:

Tree survey to inventory and assess existing street trees and plan for creating and maintaining a more resilient urban forest.

Considerations:

- Coordination with NYC DPR (street tree census)
- A participatory survey could be an opportunity to engage and educate residents and stakeholders about what makes a resilient urban forest and street tree maintenance

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Housing

A photograph of a row of three-story brick townhouses. The buildings are made of red brick and feature multiple windows with white frames. Some units have balconies with metal railings and awnings. A white garage door is visible on the left. The street in front has a sidewalk, a few trees, and a dark car parked. The sky is clear and blue.

Strategy:

Make homes more physically and financially resilient

Needs identified at PE#1 and PE#2

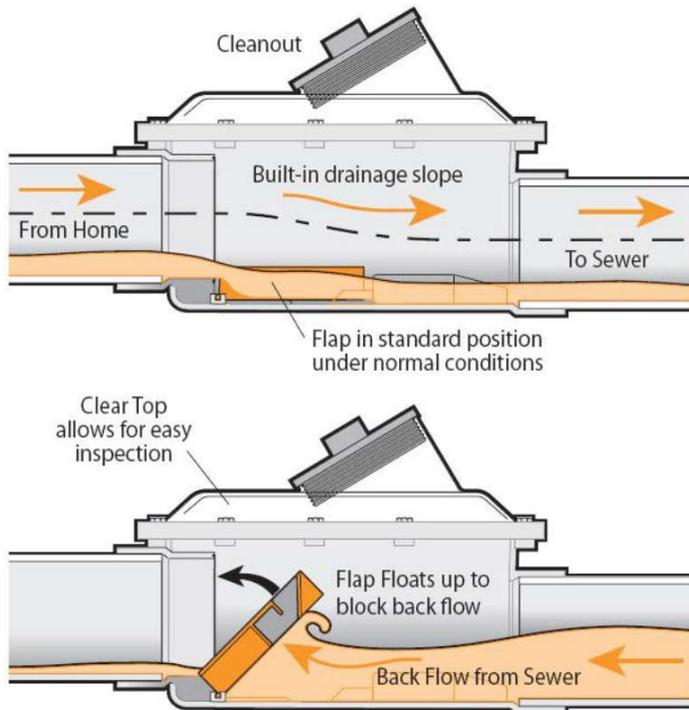
Technical assistance and information

- Recommendations on which resiliency measures to implement
- Information on best practices for homeowners

Capital for repairs

- Some funding to offset cost of repairs and resiliency mitigation

Example resiliency measures



Install check valves on stormwater and wastewater pipes



Connect rain barrel to roof leader to capture runoff before enters sewer



Information for homeowners

- Do not use water during storm
- Never pour cooking oil down drains

Existing and proposed recovery and resiliency programs

Rebuilding Resources

- Build it Back
- NYRising Buyout and Acquisition Programs
- SBA loans
- Private funding

Resiliency Improvements

A Stronger, More Resilient New York proposed to launch a **\$1.2 billion program** to provide incentives to owners of existing buildings in the 100-year floodplain.

Homeowner Assistance

Center for New York City Neighborhoods (CNYCN) is a non profit launched in 2008 to support homeowners and preserve affordable home ownership. Programs include:

1. Foreclosure prevention
2. Capacity building
3. Sandy relief
4. Technical assistance
5. Possible flood insurance program forthcoming



Critical issue: Rising insurance premiums

National Flood Insurance Program (NFIP)

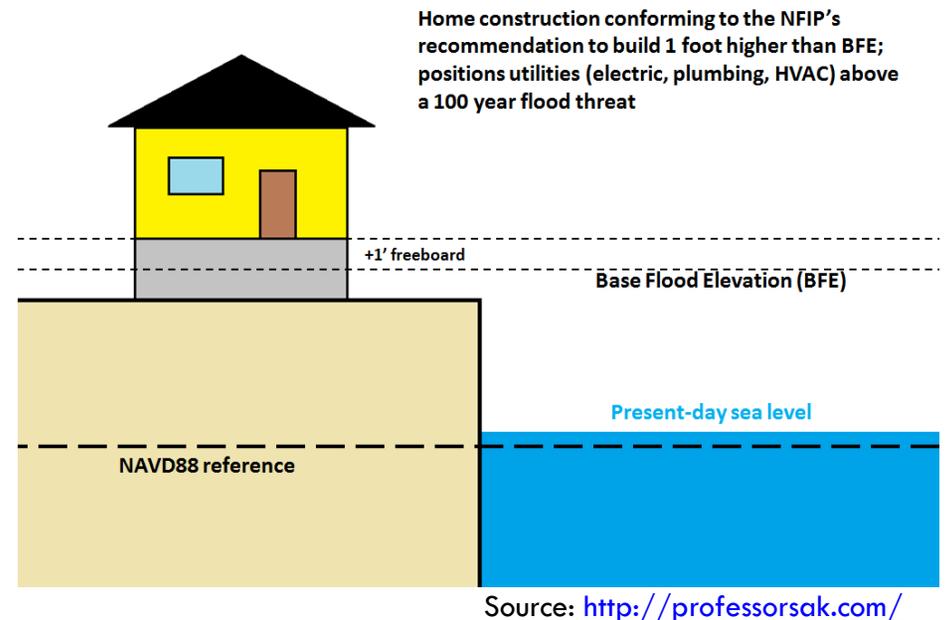
- Three components: to provide flood insurance, floodplain management and flood hazard mapping

Recent Rate Hikes

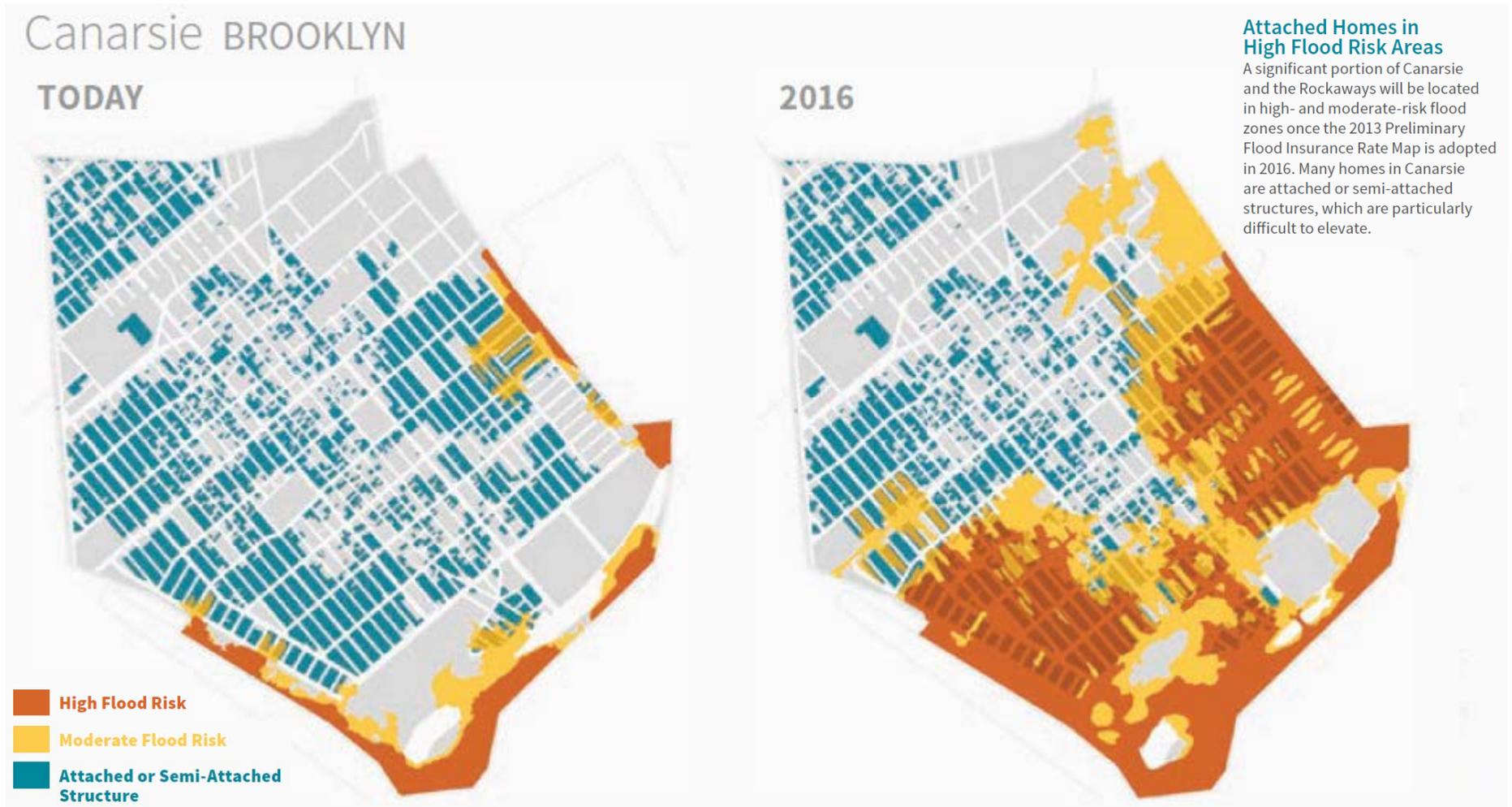
- 2012 NFIP reforms proposed to increase premiums – rates substantially higher for high risk, pre-FIRM structures.
- After Sandy, Homeowner Flood Insurance Affordability Act of 2014 repealed some provisions.

How to Mitigate Rate Hikes

- Raise building above flood elevation or fill in basement
- Participate NFIP's Community Rating System



Critical issue: Rising insurance premiums



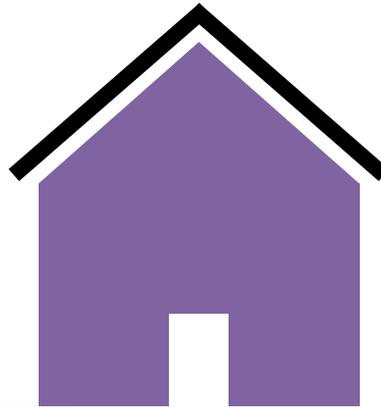
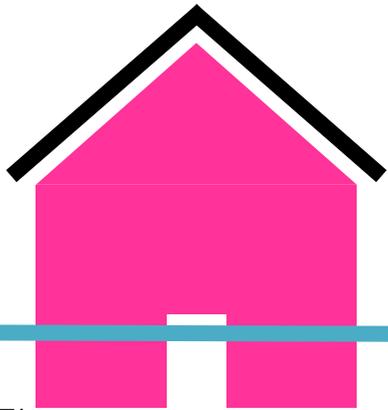
Critical issue: Rising insurance premiums

Example:

\$9,500
Annual Premium

\$1,410
Annual Premium

\$427
Annual Premium



**Base Flood
Elevation (BFE)**

4 Feet Below BFE

At BFE

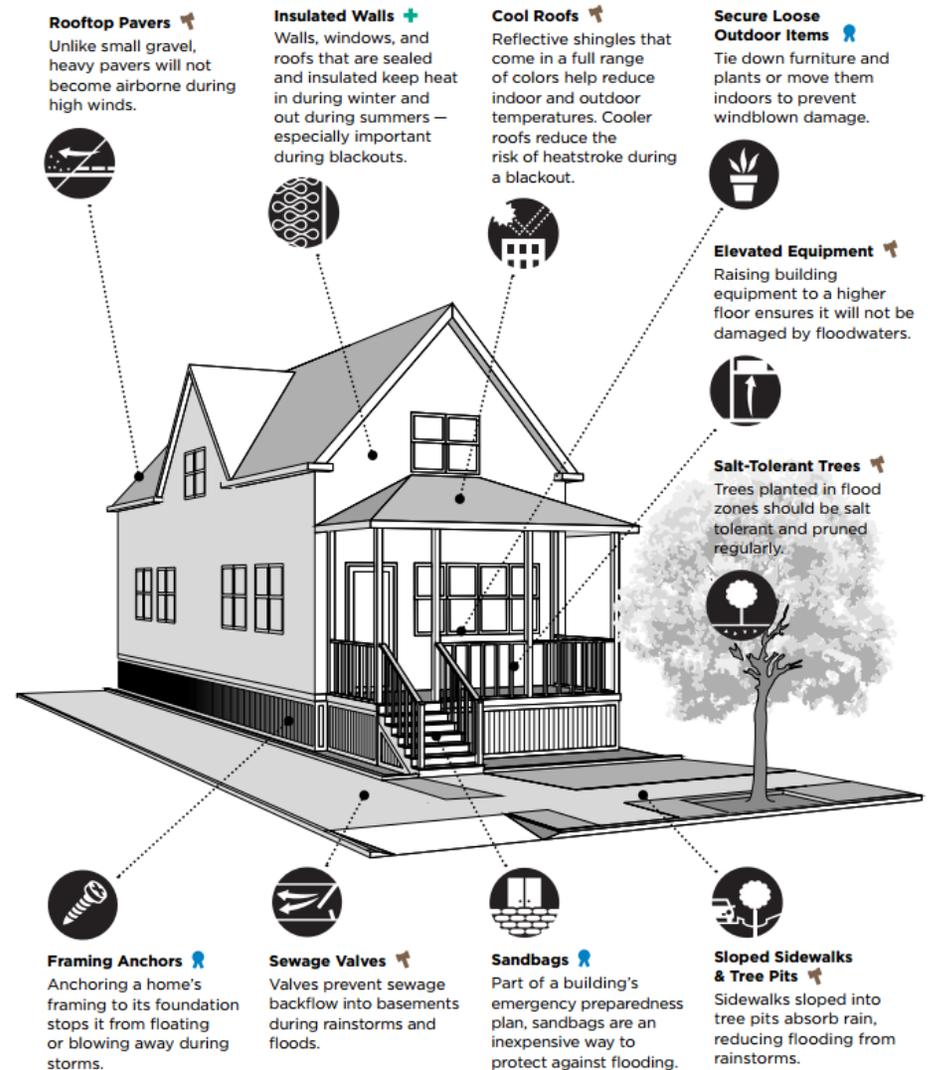
3 Feet Above BFE

Approach: Information, technical assistance, and funding

Information for residents around how to protect homes against flooding (e.g., information clearinghouse online)

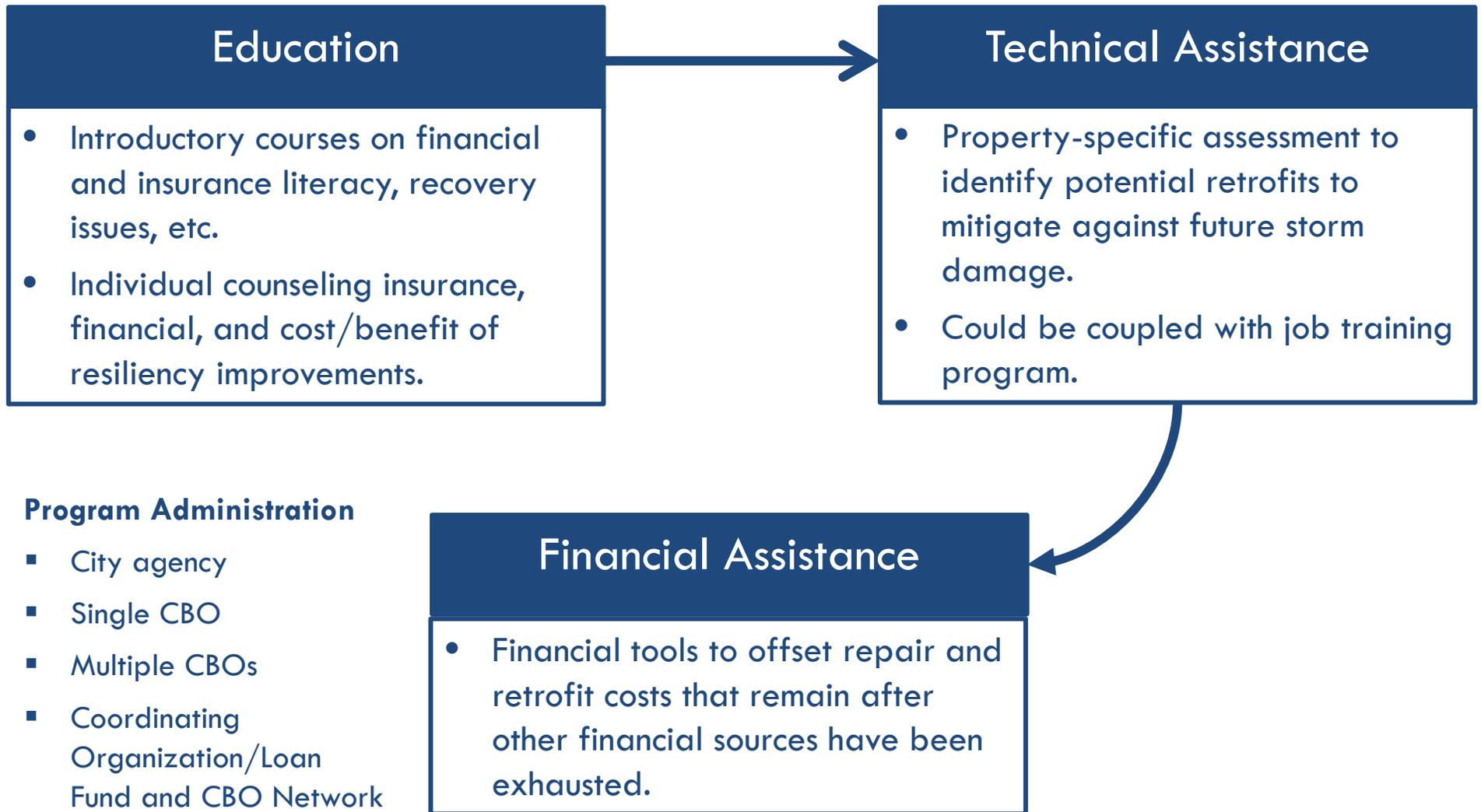
Resiliency audits that identify specific measures to enhance a home's resiliency

Funding to make select recommended repairs and resiliency improvements



Source: "Building Resiliency Task Force Report," Urban Green Council, <http://urbangreencouncil.org/content/projects/building-resiliency-task-force>

Potential project framework



Discussion

1. Where do residents currently obtain information about repairs and improvements?
2. How much of a concern are rising insurance premiums?

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Transportation



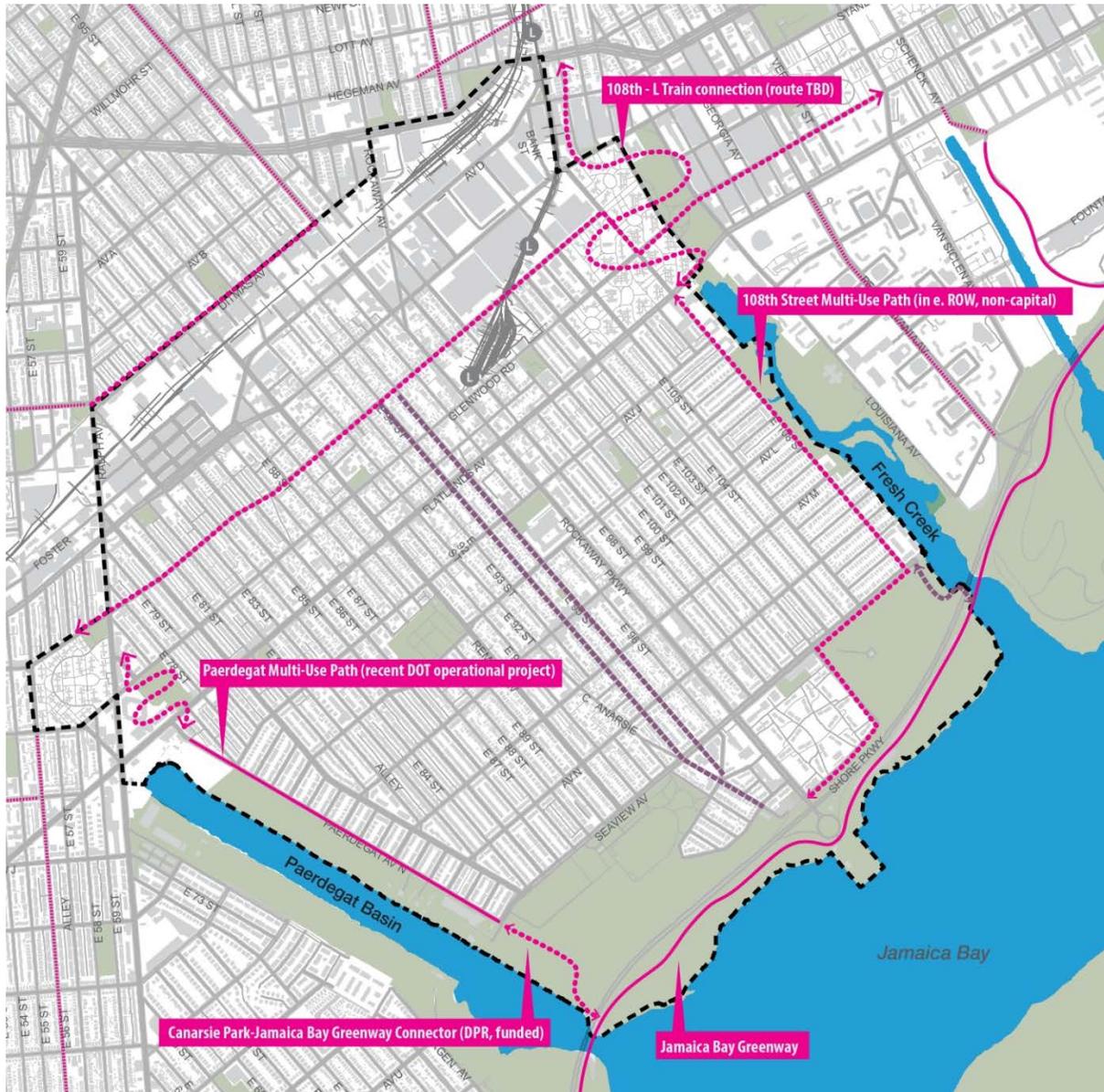
Strategy:

Improve access between residents and economic and natural resources

Existing Conditions – L Train Station, Rockaway Parkway



Existing Projects & Plans – Bike Lanes



- Existing Multi-use paths & protected bike lanes
- ⋯ Existing bike lanes & sharrows
- ⋯⋯ Multi-use paths & bike routes being considered
- - - - Multi-use paths & bike lanes studied and deemed not desired and/or feasible

Based on NYC DOT 2014 Bike Map and 9/24 meeting with NYC DOT Greenway

Note: Projects shown here are based on NY Rising Team meeting with NYC DOT. They are preliminary in nature and continuously evolving.

Bike/Pedestrian Enhancements

Pedestrian



Approaches to better connect the Community to the shoreline:

- Dedicated on-street lane or paths (physically separated from traffic)
- Clearly designated crosswalks
- Benefits
 - Enhance safety, comfort, mobility for cyclists and pedestrians
 - Create bikeway network

Bike Lanes and Paths



Traffic Calming to Integrate Resilient Streetscaping, Improve Accessibility & Create Safe Streets

Curb Extension & Mid-Block Street Narrowing



- Expansion of the curb line into the roadway
- Results in street narrowing when constructed on both sides of the roadway

Benefits

- Calms traffic by physically and visually narrowing the roadway
- At a corner, slows turning vehicles and emphasizes the right of way of pedestrians
- Shortens crossing distance, reducing pedestrian exposure
- Creates sidewalk space and space for public amenities

Street Seats & Sidewalk Plaza

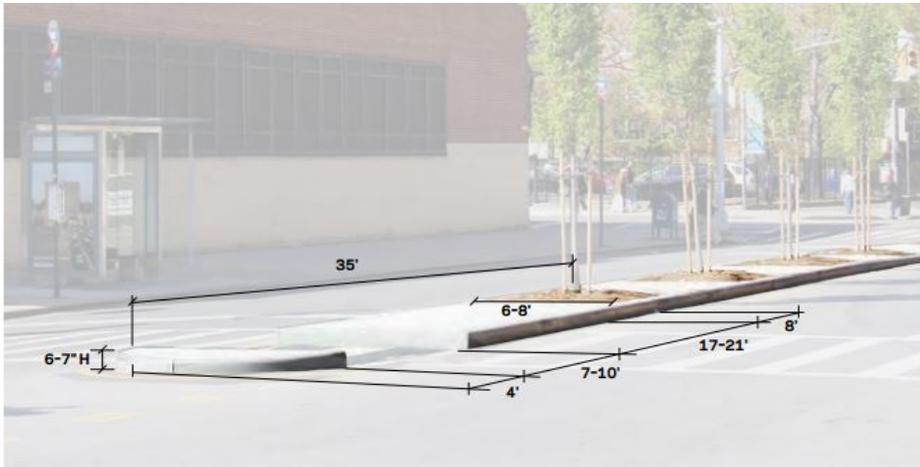


Considerations

- May impact street drainage or catch basin location
- May require loss of parking

Traffic Calming to Integrate Resilient Streetscaping, Improve Accessibility & Create Safe Streets

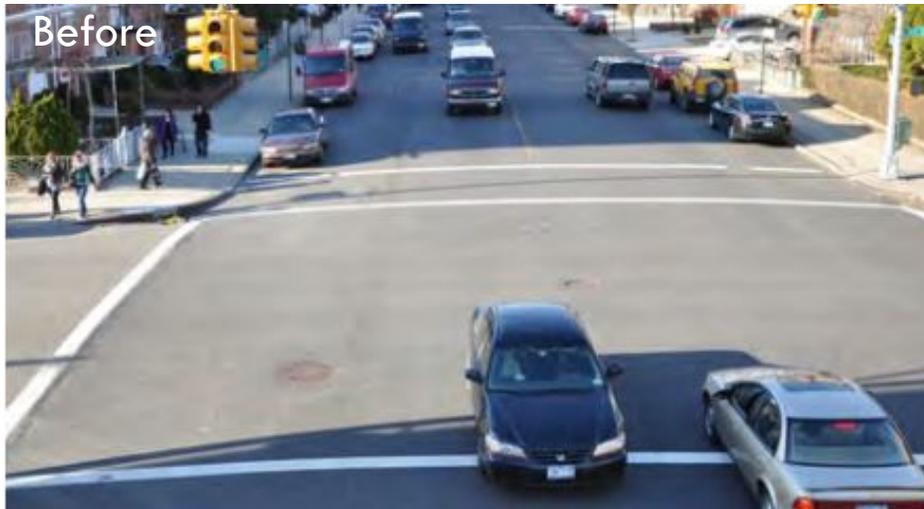
Median



- Raised area between traffic lanes
- Benefits
 - Reduces risk of left-turn and vehicle head-on collisions
 - Calms traffic by narrowing roadway
 - Enhances pedestrian safety by reducing crossing distances
 - Can serve as pedestrian walkway
 - Can incorporate trees or plantings or other forms of stormwater capture
- Considerations
 - Landscaping or stormwater source controls require a partner for ongoing maintenance
 - May prevent left turns

Traffic Calming to Integrate Resilient Streetscaping, Improve Accessibility & Create Safe Streets

Lane Narrowing & Lane Removal



- Reduces lane width or eliminates a lane
- Benefits
 - Reduces opportunities for speeding and aggressive driving, reducing the number and severity of crashes
 - Allows other uses on roadway (pedestrian/cyclist access, assigned turn lanes, bus lanes, extended sidewalks, etc...)
 - Organizes the roadway, clearer instructions for drivers, cyclists, and pedestrians
- Considerations
 - Traffic analysis required
 - Commercial loading and other uses should be considered
 - Effects on turning should be tested

Traffic Calming to Integrate Resilient Streetscaping, Improve Accessibility & Create Safe Streets

Marked Crosswalks



- Emphasize crosswalks: elevated, lighting
- Benefits
 - Improves drivers' awareness of pedestrian crossing
 - Alert drivers they are entering a slower-speed
 - Convenient pedestrian circulation
- Considerations
 - May impact street drainage or require catch basin relocation

Potential Project:

Transportation Study to Explore Circulation and Parking Conditions

Study would assess and propose options for:



- Safety at pedestrian crosswalks and intersections and reduction of traffic speeds
- Parking conditions, including consideration for the potential benefits of new parking structure(s), particularly along commercial corridors and near the Rockaway Parkway L train subway and bus station
- Access along commercial corridors, and toward the Canarsie shoreline
- Streetscape conditions, including the need for improvements to enhance public rights-of-way for all users
- Existing and future public transportation options, including strategies to make public transportation more widely available and appealing
- Traffic conditions, including ways to improve traffic flow

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COASTAL PROTECTION

A scenic view of a coastal area. In the foreground, there's a body of water with some rocks and driftwood. The middle ground shows a line of green trees and bushes. In the background, there's a clear blue sky with a bright sun in the top left corner, creating a lens flare effect. The overall scene is bright and clear.

Strategy: **Reduce vulnerability** to coastal flooding
and sea level rise

Project #1: Paerdegat Integrated 100-Year Surge Protection

PROTECTION FROM A 100 YEAR STORM SURGE



NY Rising Community Reconstruction Program
Canarsie Planning Area

□ Planning Area

■ Surge Protection

— Berm

— Floodwalls + Deployables

- Protects to elevation of 12 NAVD88
 - 1% annual chance of storm event + 1' freeboard
- Includes:
 - 2,900 linear feet of berms
 - 1,500 linear feet of floodwalls (+ deployables)
 - Stormwater retention/detention areas
- Would require:
 - Private property acquisition or easements
 - Pumps to remove water in case of overtopping

Note: All numbers approximate.

Project #1: Paerdegat Integrated 100-Year Surge Protection

Precedents



Berms



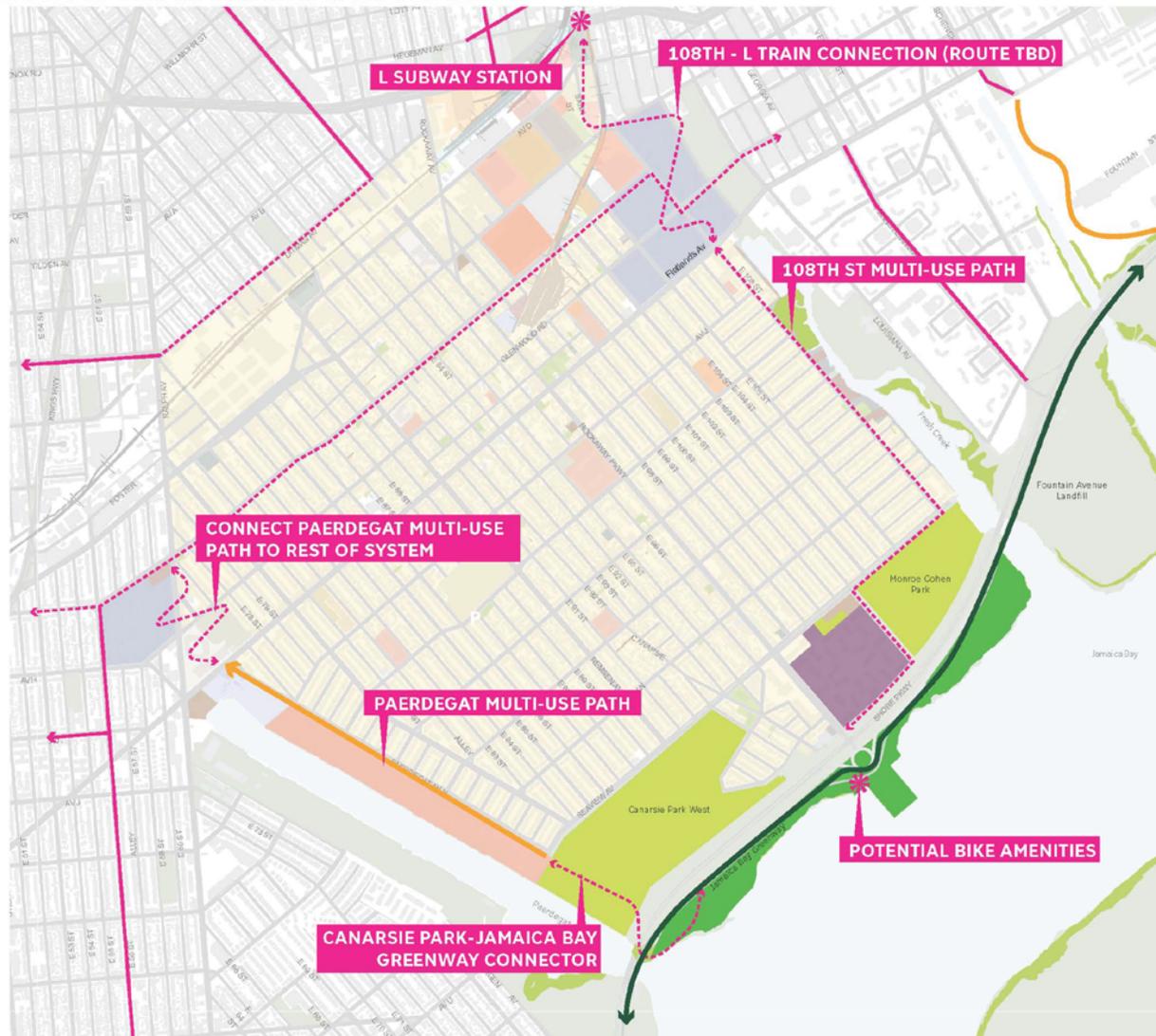
Floodwalls



Deployable walls

Project #2: Canarsie Pier & Beach Restoration Plan

BIKE AND PEDESTRIAN IMPROVEMENTS



- Jamaica Bay Greenway
- Existing multi-use paths + protected bike lanes
- Existing bike lanes + sharrows
- - - Multi-use paths + bike routes being considered
- * Access opportunity

New York City Department of City Planning, MAPpluto v13.1; Buildings; Street Centerlines



Project #2: Canarsie Pier & Beach Restoration Plan

BIKE AND PEDESTRIAN IMPROVEMENTS



Project #2: Canarsie Pier & Beach Restoration Plan

CANARSIE PIER: PROJECT PLAN



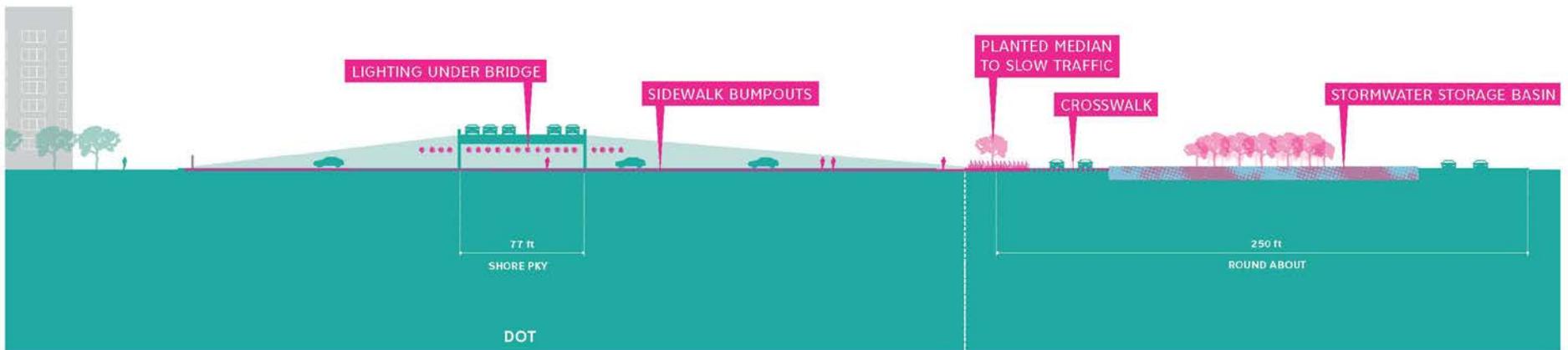
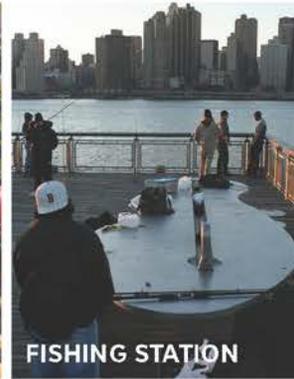
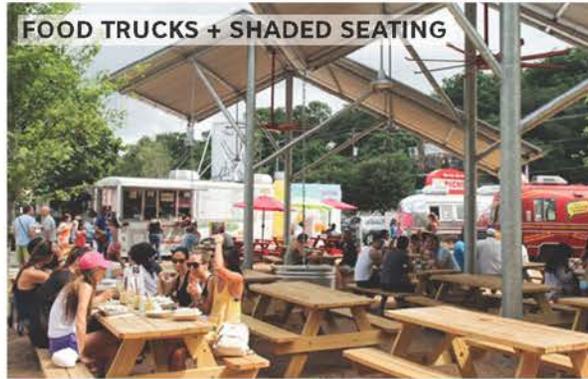
Project #2: Canarsie Pier & Beach Restoration Plan

CANARSIE PIER: EXISTING (A)



Project #2: Canarsie Pier & Beach Restoration Plan

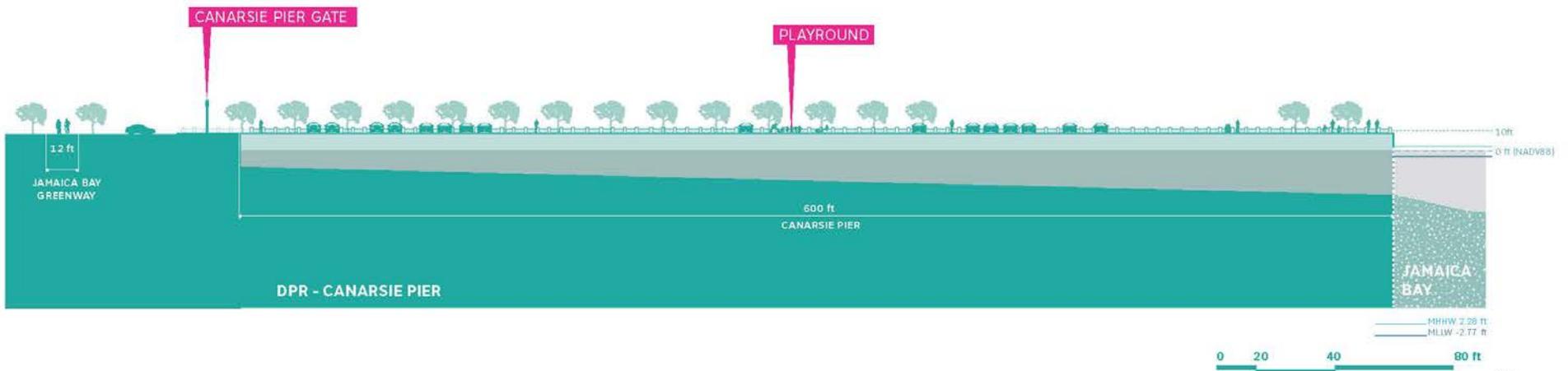
CANARSIE PIER: PROPOSED (A)



0 20 40 80 ft

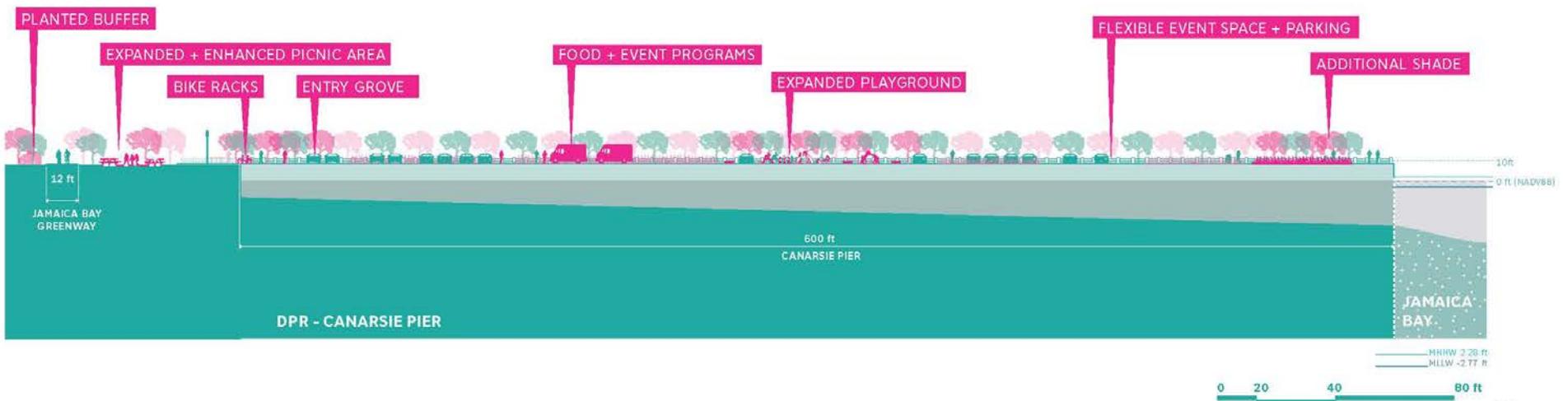
Project #2: Canarsie Pier & Beach Restoration Plan

CANARSIE PIER: EXISTING (B)



Project #2: Canarsie Pier & Beach Community Plan

CANARSIE PIER: PROPOSED (B)



Project #2: Canarsie Pier & Beach Restoration Plan

CANARSIE BEACH: NORTH SECTION: EXISTING



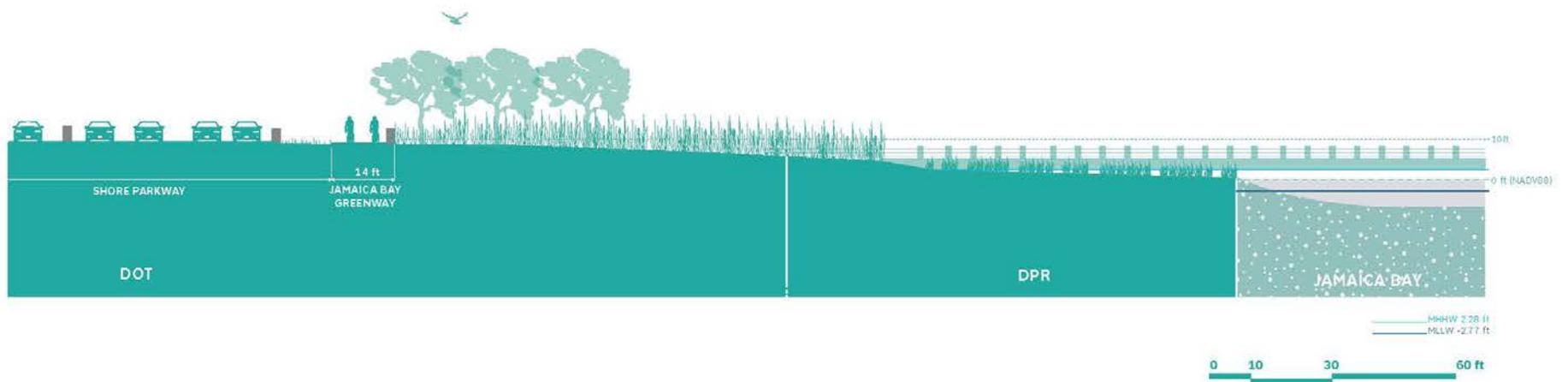
Project #2: Canarsie Pier & Beach Restoration Plan

CANARSIE BEACH: NORTH SECTION: PROPOSED



Project #2: Canarsie Pier & Beach Restoration Plan

CANARSIE BEACH: SOUTH SECTION: EXISTING



Project #2: Canarsie Pier & Beach Restoration Plan

CANARSIE BEACH: SOUTH SECTION: PROPOSED



Project #2: Canarsie Pier & Beach Restoration Plan

Questions to consider

- Are any programs / uses missing?
- How valuable is parking on the pier?
- Does this meet your vision for the pier area?

CANARSIE PIER: PROJECT PLAN



Project #3: Fresh Creek Restoration & Resiliency

SHORELINE ACCESS & RESTORATION OPPORTUNITIES



- NYC Department of Parks and Recreation
- National Parks Service
- NYC Housing Authority
- Existing wetlands
- Shoreline access opportunities
- Ecologically enhanced revetment
- Wetland restoration opportunities
- Enhance park
- Street end gardens
- Greenway expansion

New York City Department of City Planning, MAPPluto v13.1; Buildings; Street Centerlines



Project #3: Fresh Creek Restoration & Resiliency

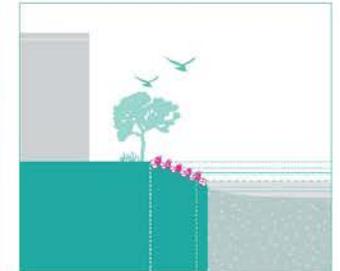
CANARSIE / FRESH CREEK - SHORELINE ACCESS AND RESTORATION PROPOSALS



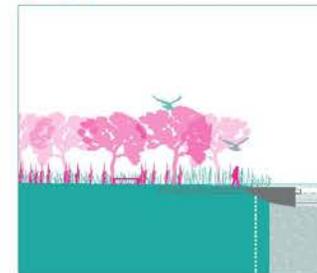
01- FRESH CREEK



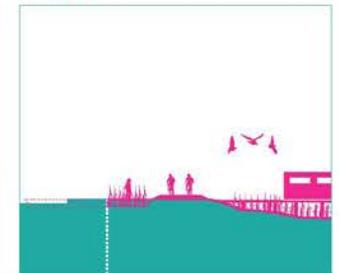
02- SHORE GARDENS



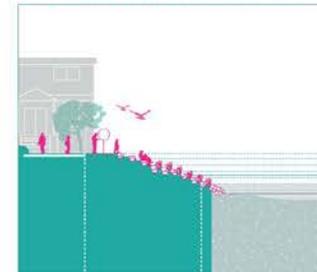
03- AVE K



04- AVE L



05- STREET END SHORELINE GARDEN

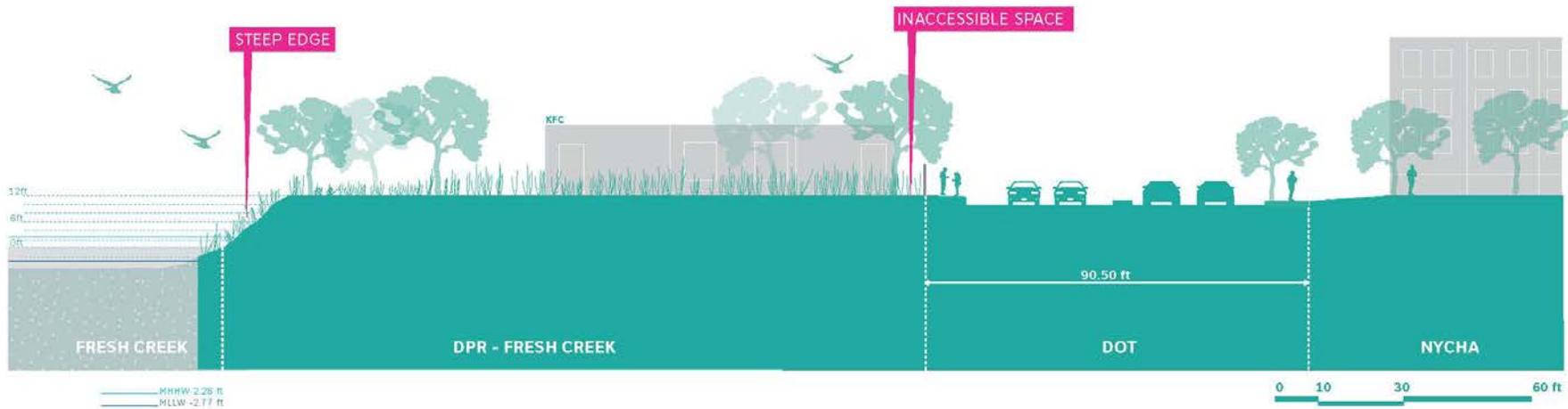


06- SEAVIEW PIER



Project #3: Fresh Creek Restoration & Resiliency

NORTH ACCESS: EXISTING



Project #3: Fresh Creek Restoration & Resiliency

NORTH ACCESS: PROPOSED



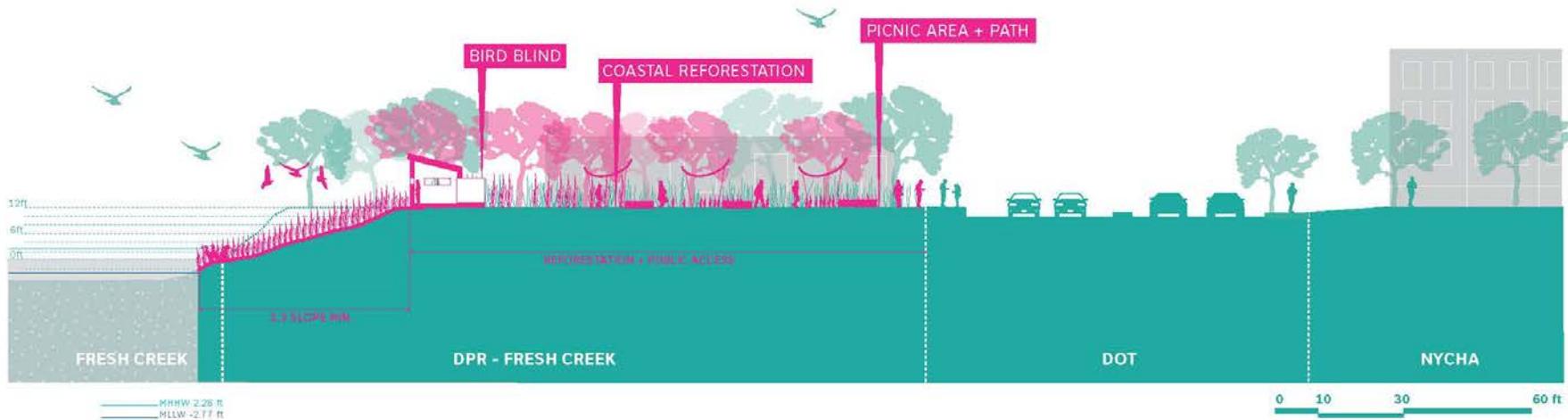
PICNIC



SALT MARSH



BIRD BLIND



Project #3: Fresh Creek Restoration & Resiliency

SHORE GARDENS ECO-REVIETMENT: EXISTING



Project #3: Fresh Creek Restoration & Resiliency

SHORE GARDENS ECO-RETVEMENT: PROPOSED



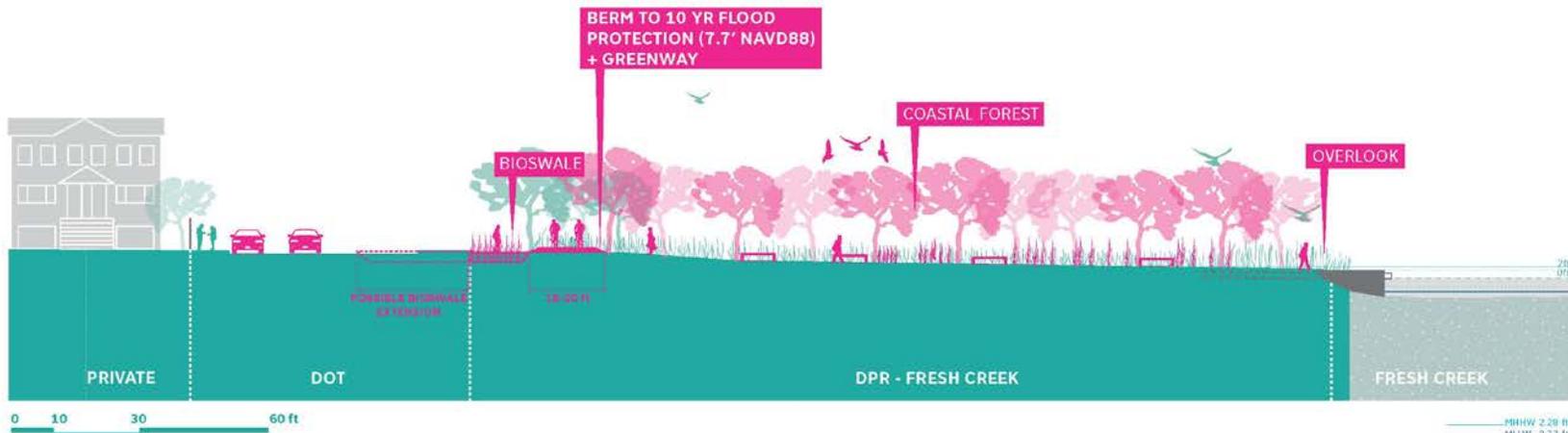
Project #3: Fresh Creek Restoration & Resiliency

CANARSIE / FRESH CREEK - AVENUE K SLR ADAPTATION- EXISTING



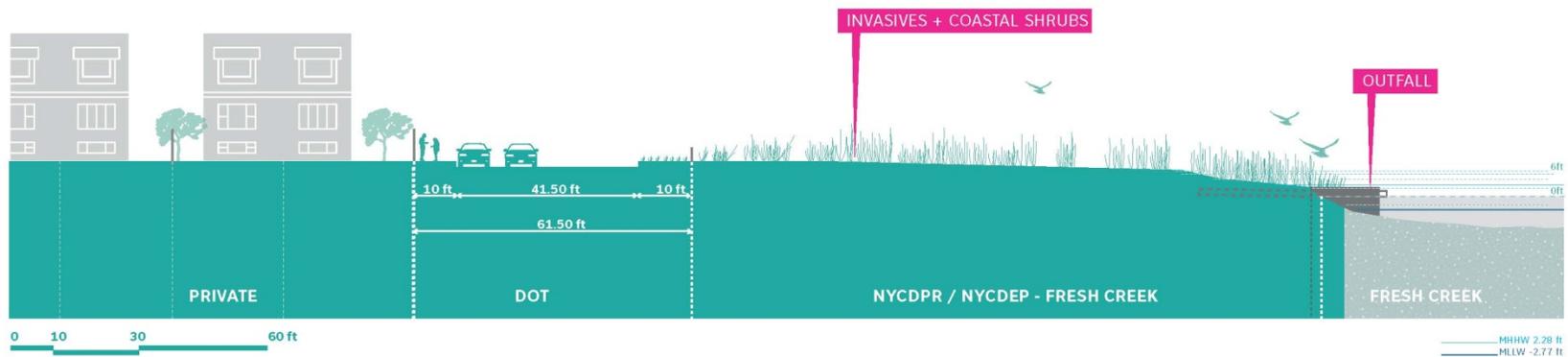
Project #3: Fresh Creek Restoration & Resiliency

CANARSIE / FRESH CREEK - AVENUE K SLR ADAPTATION- PROPOSED



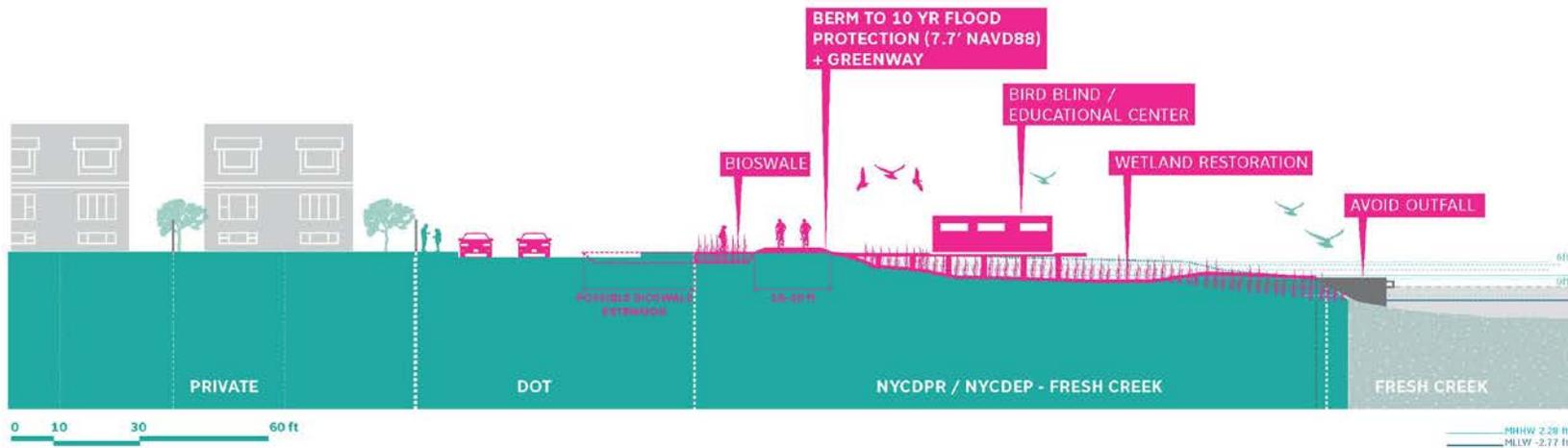
Project #3: Fresh Creek Restoration & Resiliency

CANARSIE / FRESH CREEK - AVENUE L SLR ADAPTATION- EXISTING



Project #3: Fresh Creek Restoration & Resiliency

CANARSIE / FRESH CREEK - AVENUE L SLR ADAPTATION- PROPOSED



Project #3: Fresh Creek Restoration & Resiliency

STREET END SHORELINE GARDEN: EXISTING



Project #3: Fresh Creek Restoration & Resiliency

STREET END SHORELINE GARDEN: PROPOSED



Project #3: Fresh Creek Restoration & Resiliency

SEAVIEW PIER GREENWAY ACCESS: EXISTING



Project #3: Fresh Creek Restoration & Resiliency

SEAVIEW PIER GREENWAY ACCESS: PROPOSED



Project #3: Fresh Creek Restoration & Resiliency

01: Fresh Creek ★★

★ = benefit

- Community Benefit: Shoreline access
- Environmental Benefit: Ecosystem restoration

02: Shore Gardens ★★

- Environmental Benefit: Ecosystem restoration
- Protection Benefit: Erosion

03: Avenue K ★★★

- Community Benefit: Shoreline access
- Environmental Benefit: Ecosystem restoration
- Protection Benefit: 10-year storm surge, sea level rise, and stormwater management

04 :Avenue L ★★★

- Community Benefit: Shoreline access
- Environmental Benefit: Ecosystem restoration
- Protection Benefit: 10-year storm surge, sea level rise, and stormwater management

Project #3: Fresh Creek Restoration & Resiliency

05: Street End ★★

★ = benefit

- Community Benefit: Shoreline access
- Environmental Benefit: Shoreline stabilization

06: Seaview Pier ★★

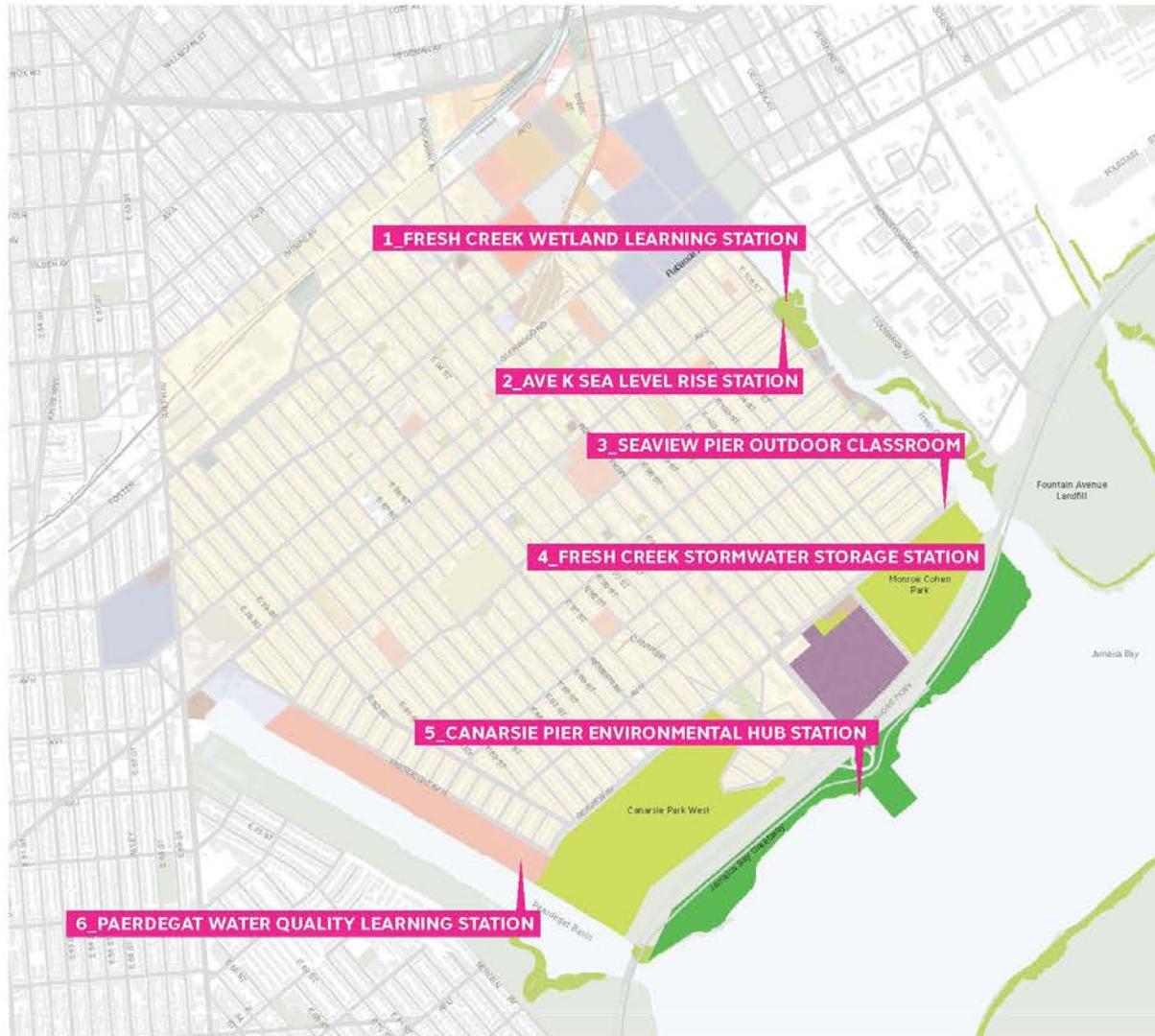
- Community Benefit: Shoreline access and fishing pier
- Protection benefit: Erosion and stormwater management

Question:

Which of these phases would you like to see implemented as pilot projects?

Project #4: Canarsie Youth Education Program

CANARSIE YOUTH ENVIRONMENTAL EDUCATION PROGRAM



Agenda for Planning Committee Meeting #7

1. NYRCR Program Update 7:00pm
2. Generate Additional Projects
 - a. Drainage 7:20pm
 - b. Housing 7:40pm
 - c. Transportation 8:00pm
3. Coastal Protection/Shoreline Access Project Refinement 8:20pm
4. **Next Steps 8:40pm**

Next Steps

1. Refine list of Proposed & Featured Projects
2. Committee Meeting #8: Monday, November 3rd
 - Comprehensive project review in advance of public meeting
3. Public Meeting #3: Monday, November 10
 - Public feedback on projects
4. Committee Meeting #9: Monday, November 17th
 - Vote on projects

Questions?



Thank you.

