REBUILDBYDESIGN

MEADOWLANDS

CITIZEN ADVISORY GROUP MEETING

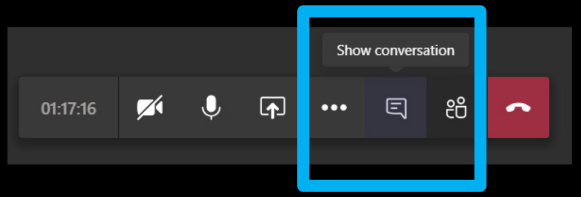
OCTOBER 28, 2020

AECOM

ON-LINE MEETING TECH SUPPORT
Teams Meeting Resources

+ All participants will be on mute for the meeting.

+ Question & Answer will be facilitated at the end of the meeting.
  Send us Your Questions by:
  Chat: Use the Teams Meeting.
  Click the Chat Icon and type in Chat Window
  Email: rbd-meadowlands@dep.nj.gov



Technical Troubleshooting Resources

+ Email: rbd-meadowlands@dep.nj.gov
+ View Project Information on the Website: www.rbd-meadowlands.nj.gov

AGENDA

1. Welcome + Introductions
2. Project Overview
3. Coordination Updates
4. Design Updates
5. Next Steps

NJDEP TEAM

DENNIS REINKNECHT
NJDEP (presenter)

LINDA FISHER
NJDEP (presenter)

KIM MCEVOY
NJDEP

ALEXIS TAYLOR
NJDEP (presenter)

TAYLOR COPPA
NJDEP

PEG MCBRIEN
WSP BERGER

CLAYTON CARLISLE
WSP BERGER

DESIGN TEAM

CHRISTOPHER BENOSKY
Project Executive,
AECOM (presenter)

DAVE BLAIR
Project Manager,
AECOM (presenter)

ANNA HOCHHALTER
Landscape Architect,
AECOM (presenter)

STEVE BIUSO
Design Manager,
AECOM

HOGAN EDELBERG
Landscape Architecture and
Urban Design, AECOM

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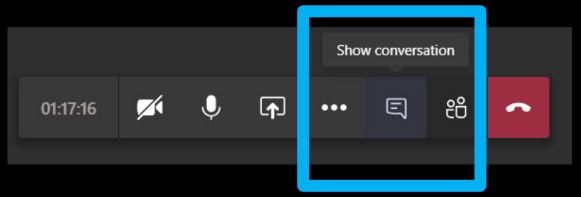

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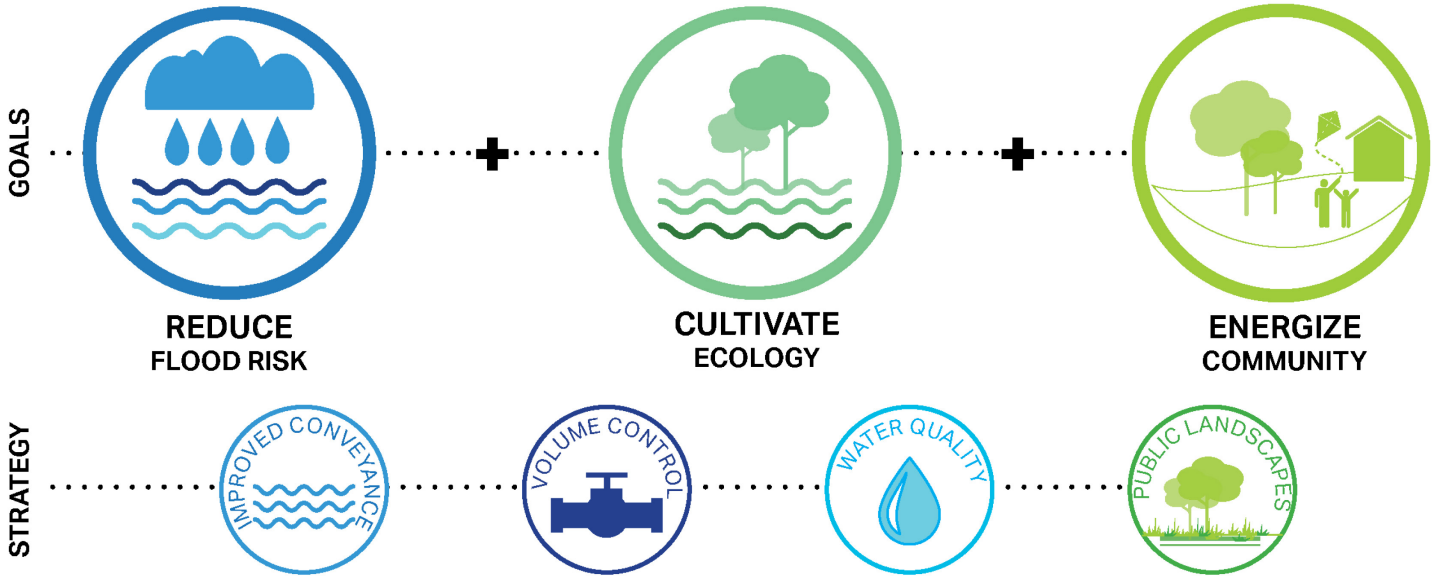
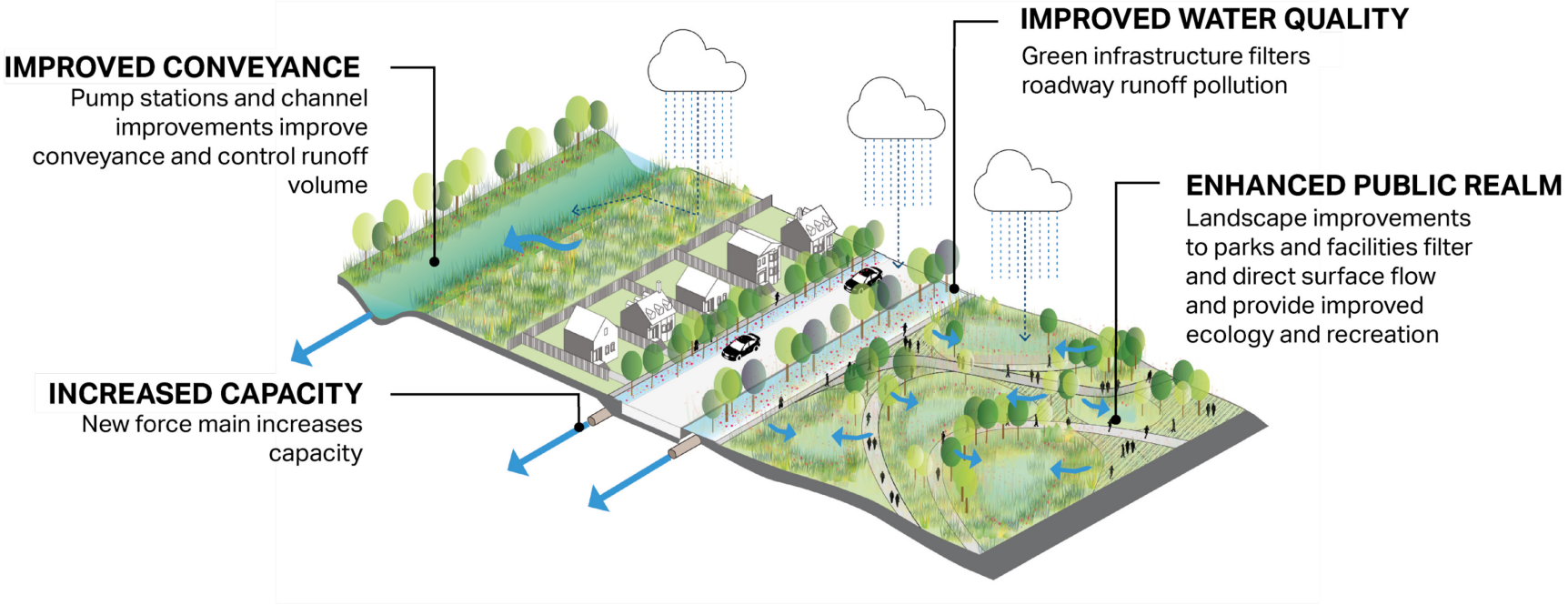
PROJECT OVERVIEW

ANNA HOCHHALTER, AECOM

The RBDM project meets the CDBG-DR Goals of addressing flood risk, increasing resiliency of communities + ecosystems, and reducing impacts to critical infrastructure, residences, businesses and ecological resources



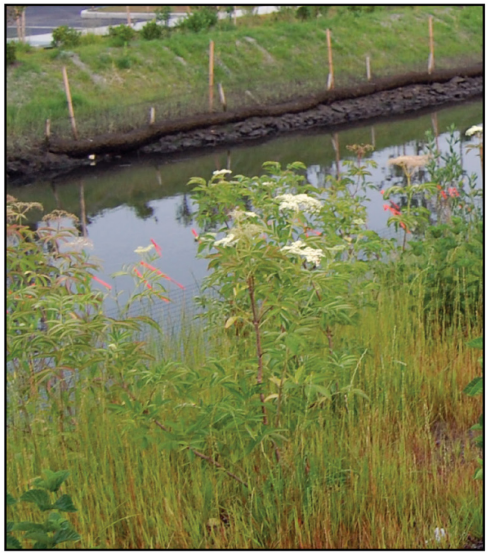
The project approach improves flood risk reduction through grey infrastructure, and enhances the landscape + public realm performance by improving water quality and parks+ open spaces



Flood Risk Reduction Strategy

PUMP STATIONS
Provide additional force to stormwater conveyance

STORMWATER FORCE MAIN
Increases capacity for conveyance

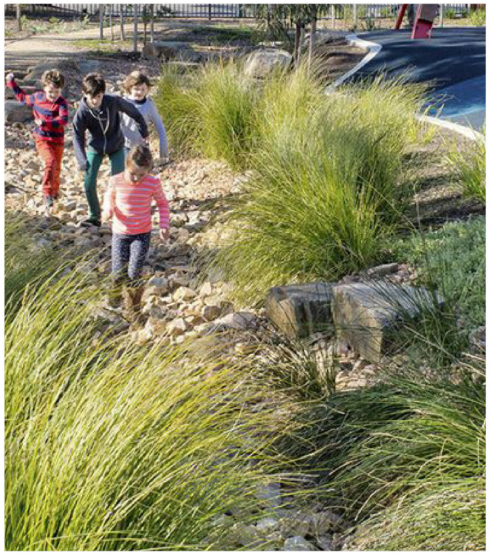


CHANNEL IMPROVEMENTS
Dredging + widening to improve conveyance

Landscape + Public Realm Strategy

NATIVE PLANTING
Planting native species improves ecological biodiversity and improves rain water uptake

GREEN INFRASTRUCTURE
Methods of filtering and slowing stormwater to improve water quality + reduce burden on drainage system



IMPROVED + NEW PARKS
Designing ecological, community + recreational benefits

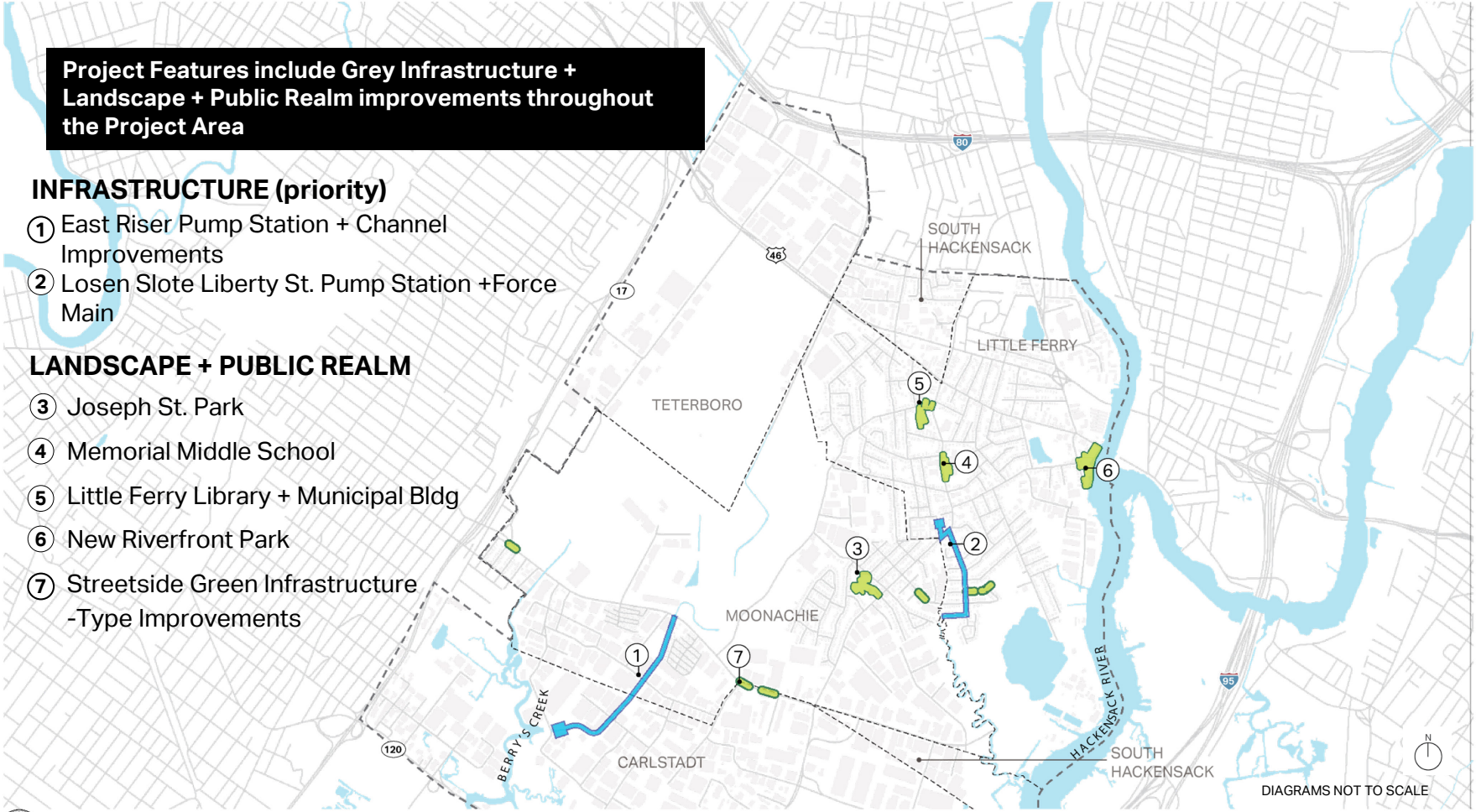
Project Features include Grey Infrastructure + Landscape + Public Realm improvements throughout the Project Area

INFRASTRUCTURE (priority)

1. East Riser Pump Station + Channel Improvements
2. Losen Slote Liberty St. Pump Station +Force Main

LANDSCAPE + PUBLIC REALM

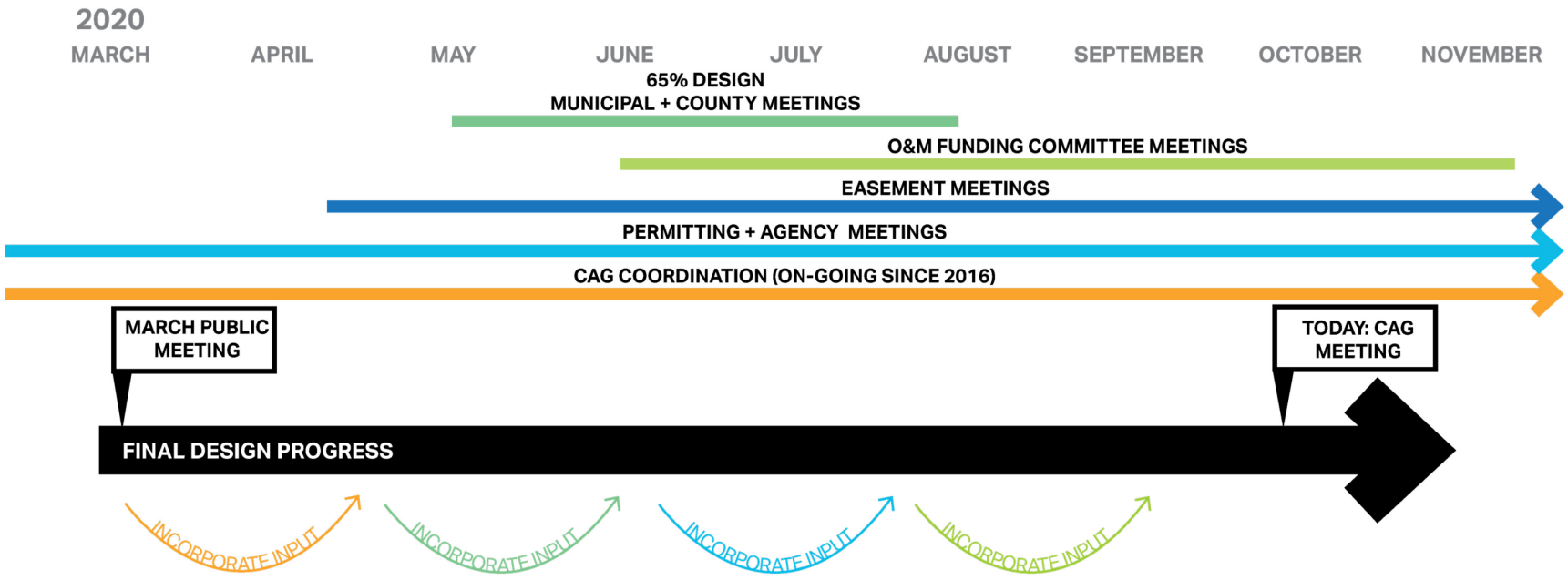
3. Joseph St. Park
4. Memorial Middle School
5. Little Ferry Library + Municipal Bldg
6. New Riverfront Park
7. Streetside Green Infrastructure -Type Improvements



COORDINATION UPDATES

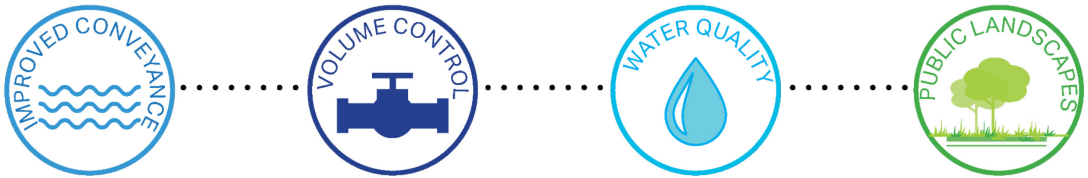
DAVID BLAIR, AECOM

ON-GOING COORDINATION



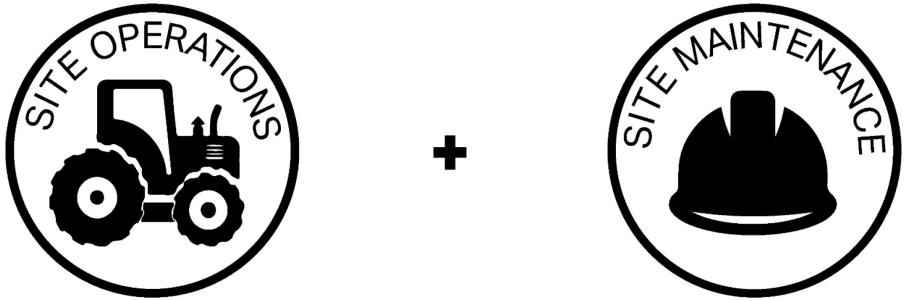
BALANCING PRIORITIES + BUDGET

BALANCING PRIORITIES

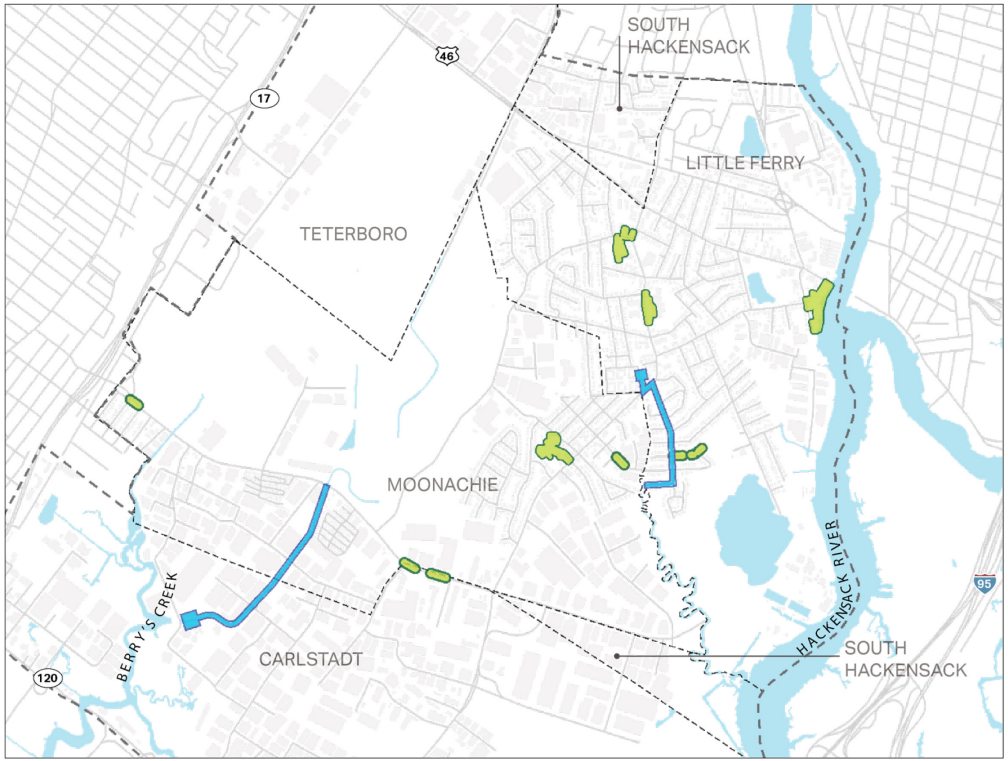


OPERATION & MAINTENANCE UPDATES

- Detailed discussions of operations tasks and frequency with Municipalities
- Municipal-led inter-agency coordination
- Long-term O&M agreements to be in place by end of 2020



Design models continue to be refined to support permitting



REDUCE
FLOOD RISK

Losen Slote modeling completed and confirmed no increase in water surface elevation downstream.

East Riser modeling is still in-process.

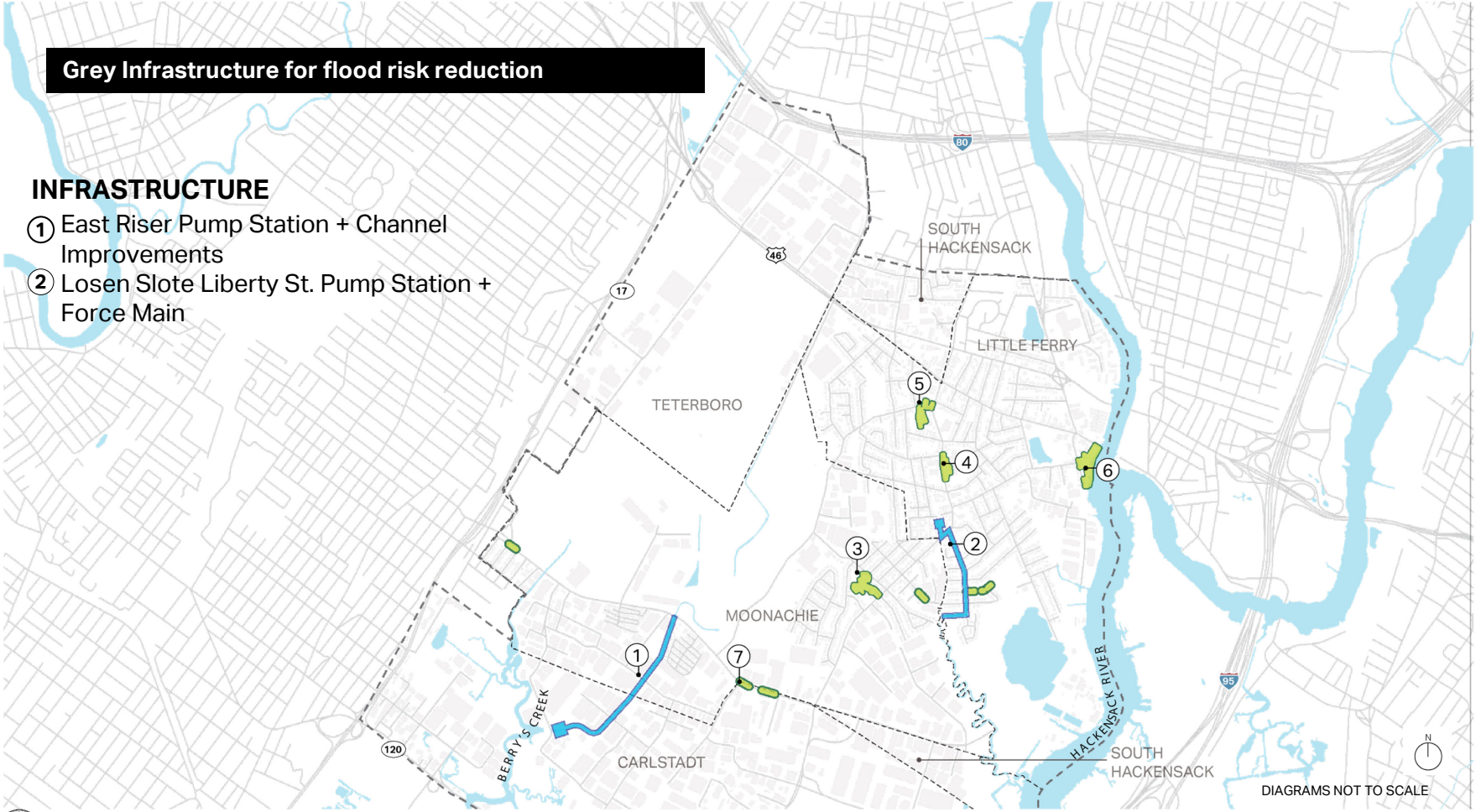
DESIGN UPDATES

DAVID BLAIR, AECOM
ANNA HOCHHALTER, AECOM

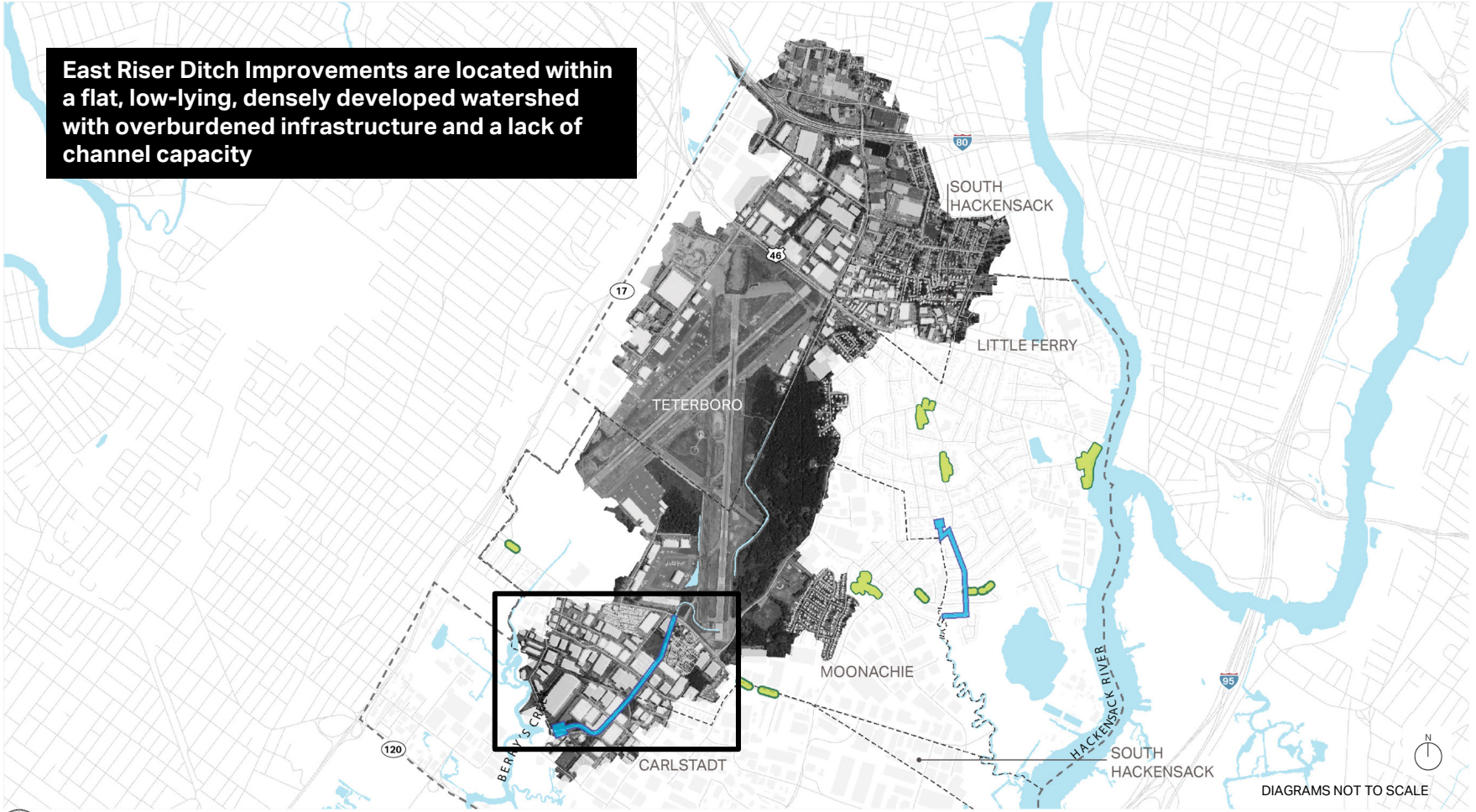
Grey Infrastructure for flood risk reduction

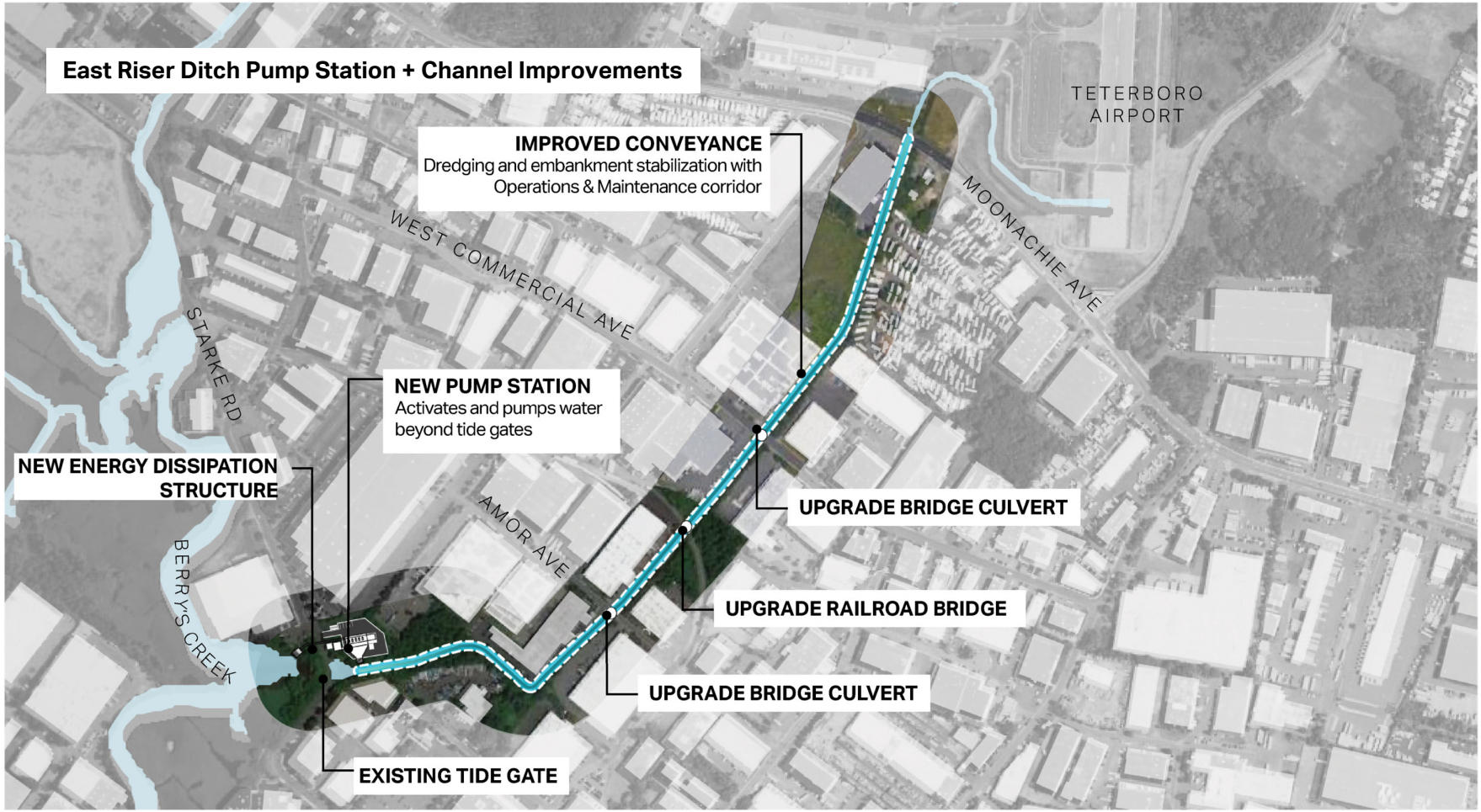
INFRASTRUCTURE

1. East Riser Pump Station + Channel Improvements
2. Losen Slote Liberty St. Pump Station + Force Main

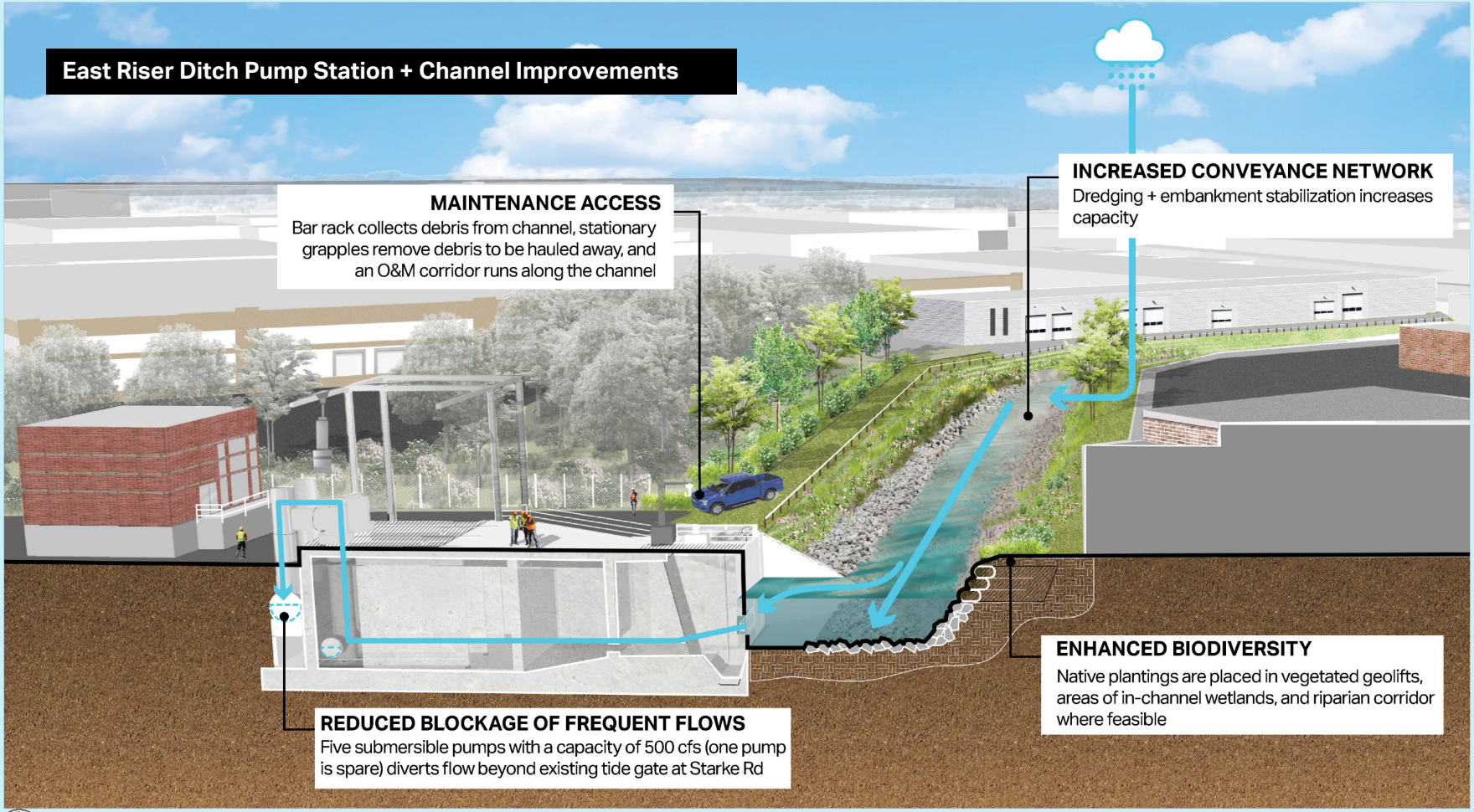


East Riser Ditch Improvements are located within a flat, low-lying, densely developed watershed with overburdened infrastructure and a lack of channel capacity

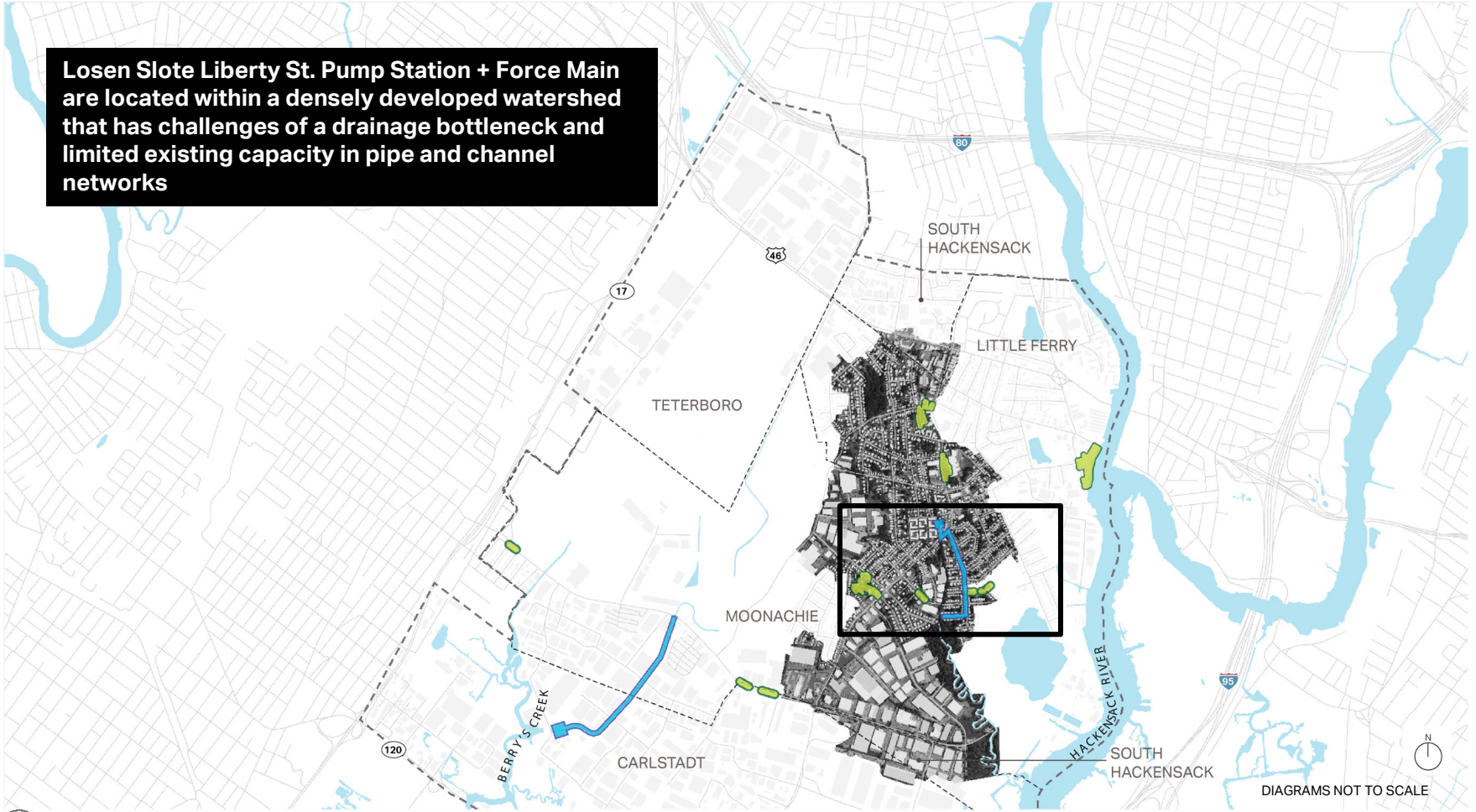



East Riser Ditch Pump Station + Channel Improvements
IMPROVED CONVEYANCE
Dredging and embankment stabilization with Operations & Maintenance corridor
NEW PUMP STATION
Activates and pumps water beyond tide gates
NEW ENERGY DISSIPATION STRUCTURE
UPGRADE BRIDGE CULVERT
UPGRADE RAILROAD BRIDGE
UPGRADE BRIDGE CULVERT
EXISTING TIDE GATE
TETERBORO AIRPORT
WEST COMMERCIAL AVE
MOONACHIE AVE
STARKE RD
AMOR AVE
BERRY'S CREEK

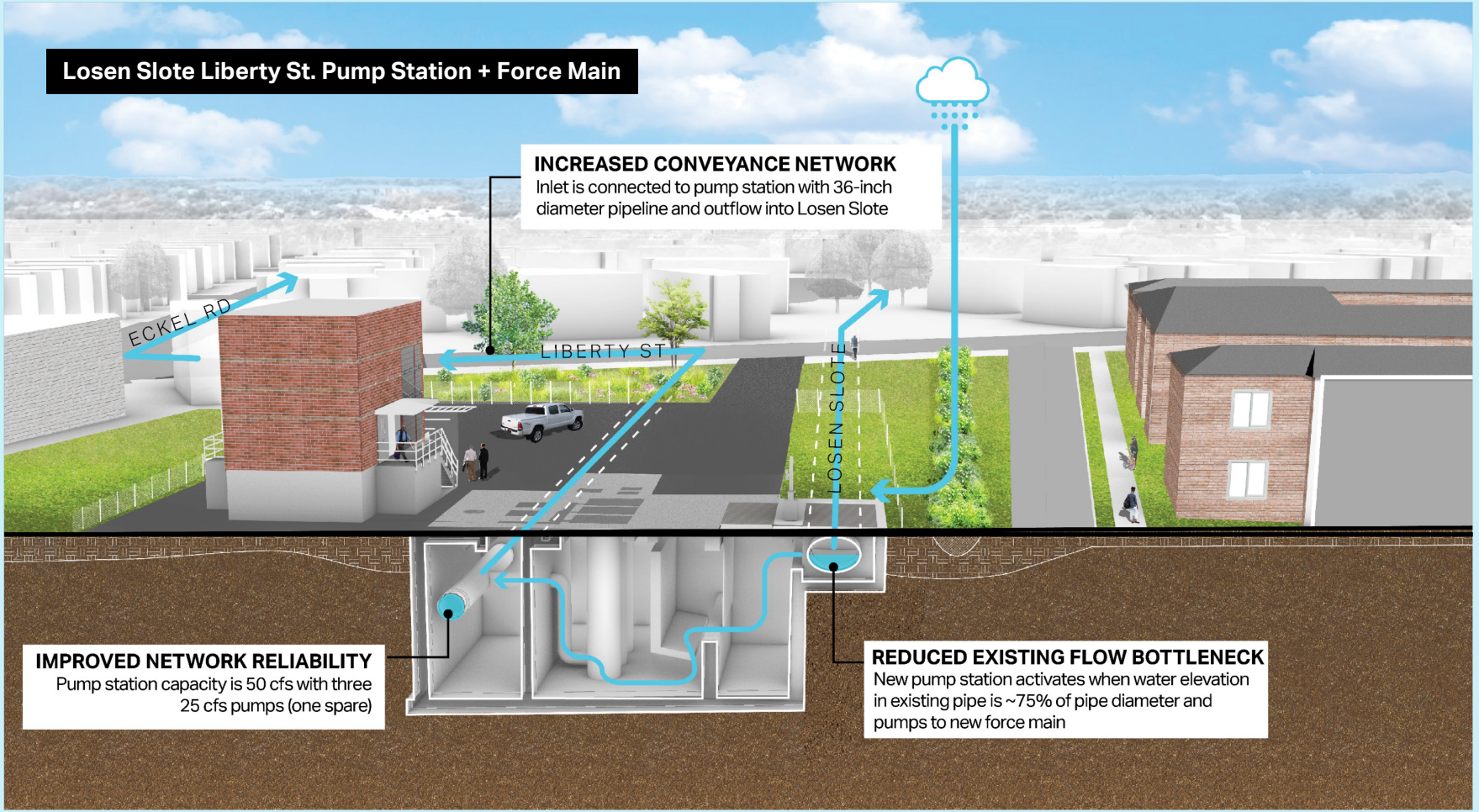
East Riser Ditch Pump Station + Channel Improvements



Losen Slote Liberty St. Pump Station + Force Main are located within a densely developed watershed that has challenges of a drainage bottleneck and limited existing capacity in pipe and channel networks



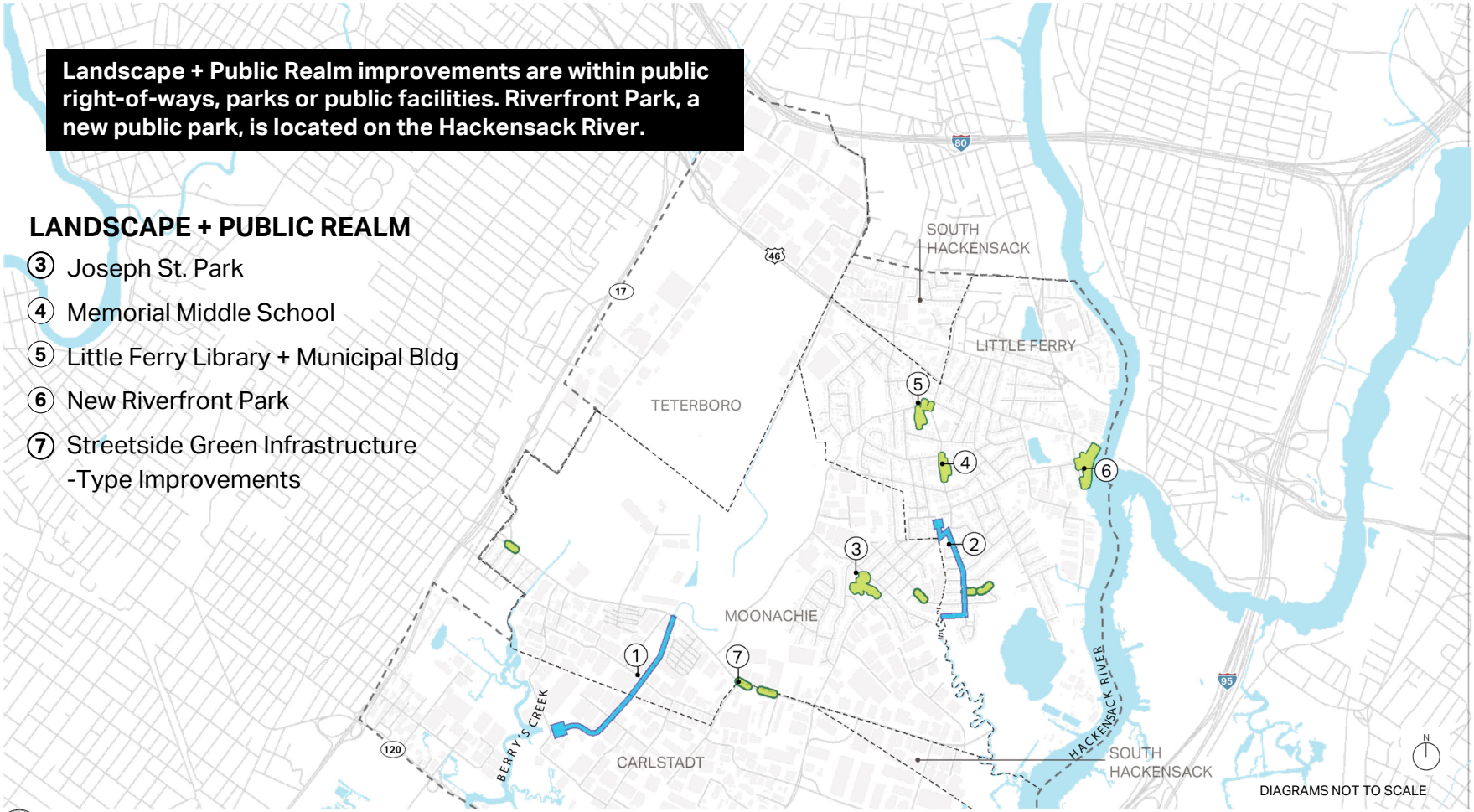

Losen Slote Liberty St. Pump Station + Force Main Design
NEW LIBERTY ST. PUMP STATION
Located near Lorena St. and Liberty St.
NEW FORCE MAIN
Runs ~2900 feet between Liberty St., Eckle Rd and Birch St.
NEW ENERGY DISSIPATION STRUCTURE
REMOVE DEFUNCT TIDE GATE HEADWALL
Existing abandoned tide gate to be removed and channel restored
VELOCK DR.
GERTZ AVE.
VELOCK DR.
PROSPECT AVE.
MADISON ST.
DEPEYSTER CREEK
LIBERTY ST.
LOSEN SLOTE
E JOSEPH ST
ECKLE RD.
MONROE ST.
BERTOLOTTO AVE.
BIRCH ST


Losen Slote Liberty St. Pump Station + Force Main
INCREASED CONVEYANCE NETWORK
Inlet is connected to pump station with 36-inch diameter pipeline and outflow into Losen Slote
ECKEL RD
LIBERTY ST
LOSEN SLOTE
IMPROVED NETWORK RELIABILITY
Pump station capacity is 50 cfs with three 25 cfs pumps (one spare)
REDUCED EXISTING FLOW BOTTLENECK
New pump station activates when water elevation in existing pipe is ~75% of pipe diameter and pumps to new force main

Landscape + Public Realm improvements are within public right-of-ways, parks or public facilities. Riverfront Park, a new public park, is located on the Hackensack River.

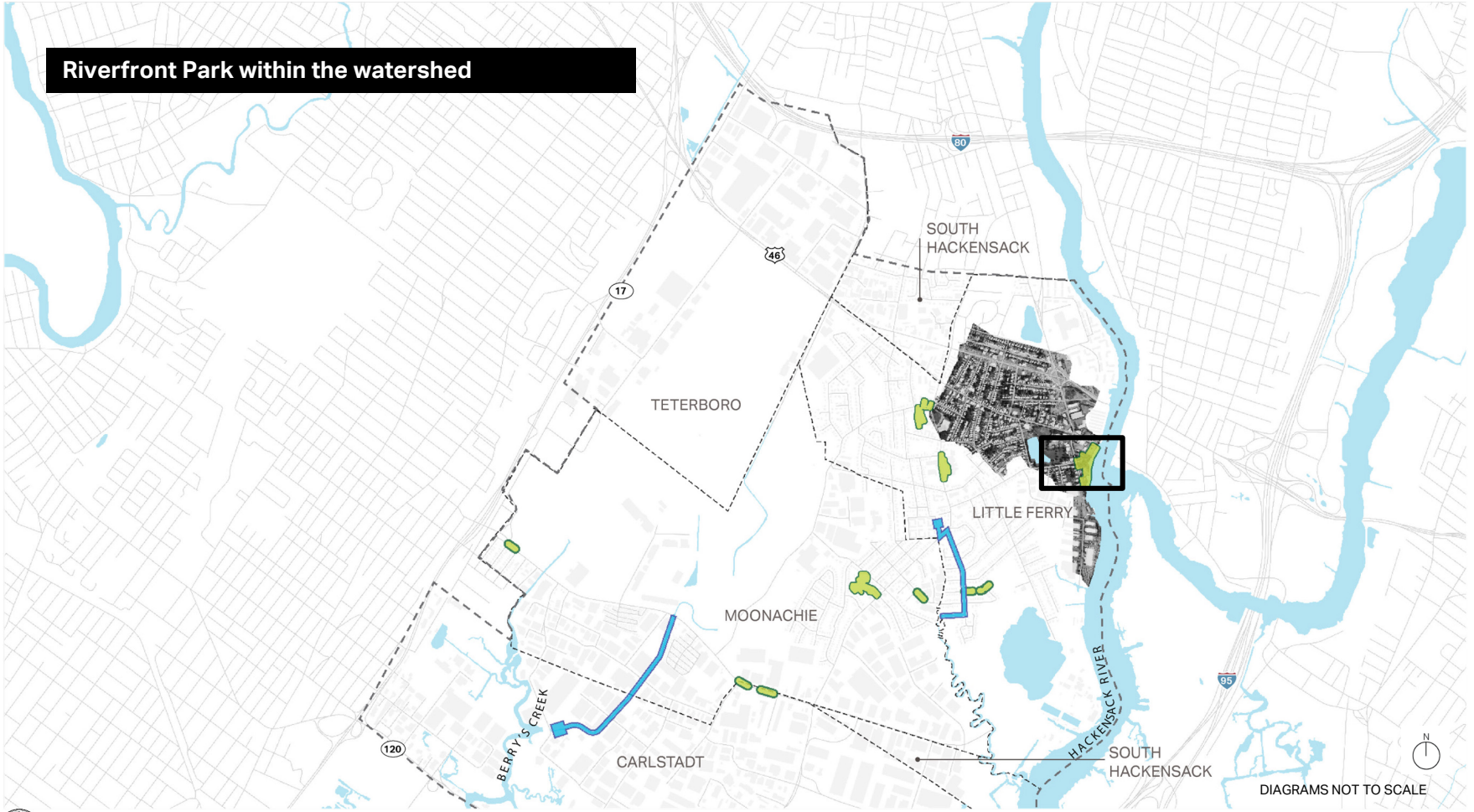
LANDSCAPE + PUBLIC REALM

3. Joseph St. Park
4. Memorial Middle School
5. Little Ferry Library + Municipal Bldg
6. New Riverfront Park
7. Streetside Green Infrastructure -Type Improvements



DIAGRAMS NOT TO SCALE

Riverfront Park within the watershed



Community input guided design decisions about program priorities and the character of the park planting, paving, screening and furnishings

UNDERSTANDING PRIORITIES
Activities to provide input on park program priorities

INFORMATIVE
Client + Design Staff shared information about the project

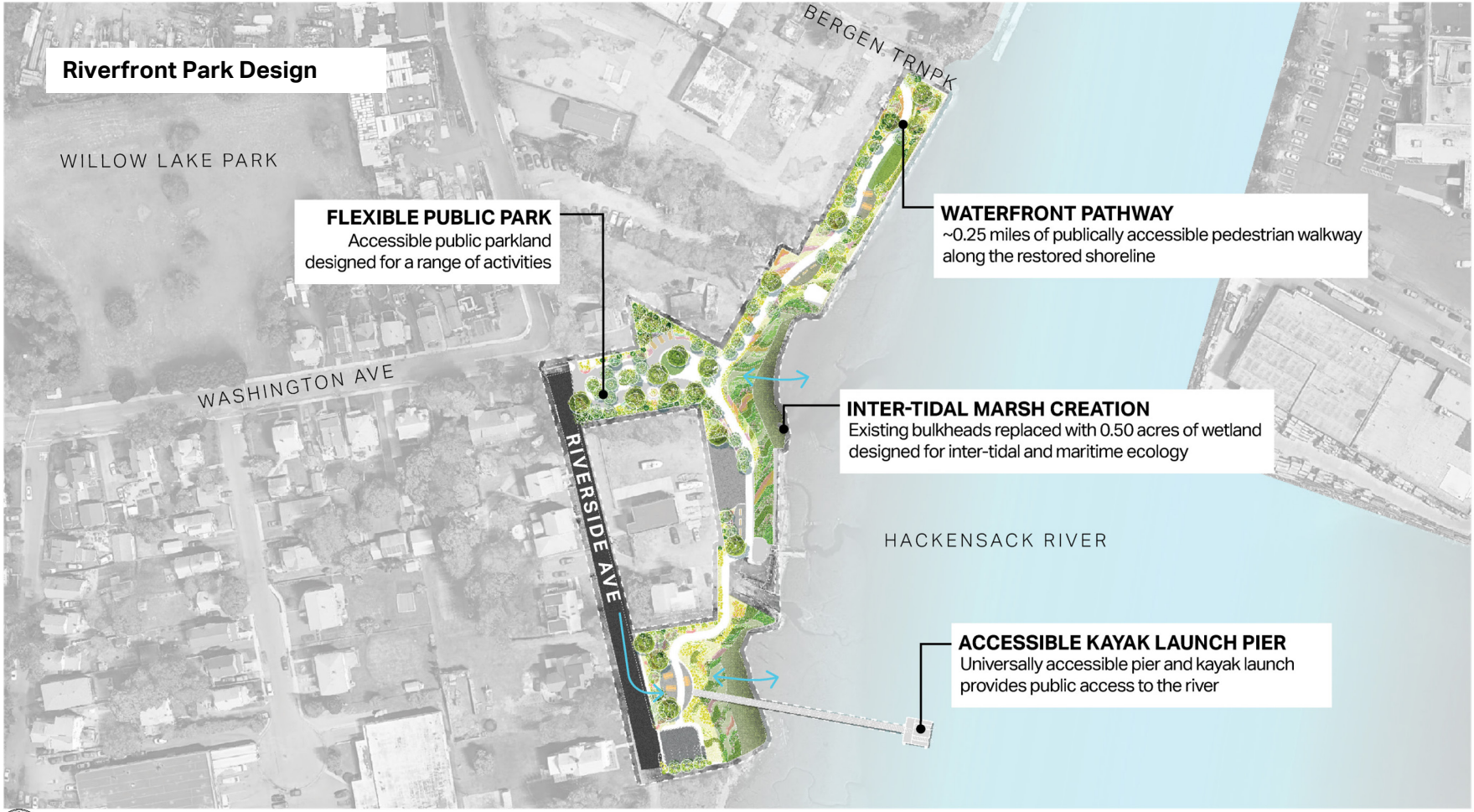
DISCUSSION-FOCUSED
Breakout groups to discuss park character


Riverfront Park contains waterfront access, tidal marsh creation and educational elements celebrating the river and history


Riverfront Park contains waterfront access, tidal marsh creation and educational elements celebrating the river and history
Celebrate local history with cultural and ecological interpretive elements
Balance tidal marsh creation with community spaces


Lush native gardens with areas for quiet seating or small group gathering


Lush native gardens with areas for quiet seating or small group gathering
Linear seating
Lush woodland, wildflowers, and flowering plantings


Riverfront Park Design
WILLOW LAKE PARK
BERGEN TRNPK
WASHINGTON AVE
RIVERSIDE AVE
HACKENSACK RIVER
FLEXIBLE PUBLIC PARK
Accessible public parkland designed for a range of activities
WATERFRONT PATHWAY
~0.25 miles of publically accessible pedestrian walkway along the restored shoreline
INTER-TIDAL MARSH CREATION
Existing bulkheads replaced with 0.50 acres of wetland designed for inter-tidal and maritime ecology
ACCESSIBLE KAYAK LAUNCH PIER
Universally accessible pier and kayak launch provides public access to the river

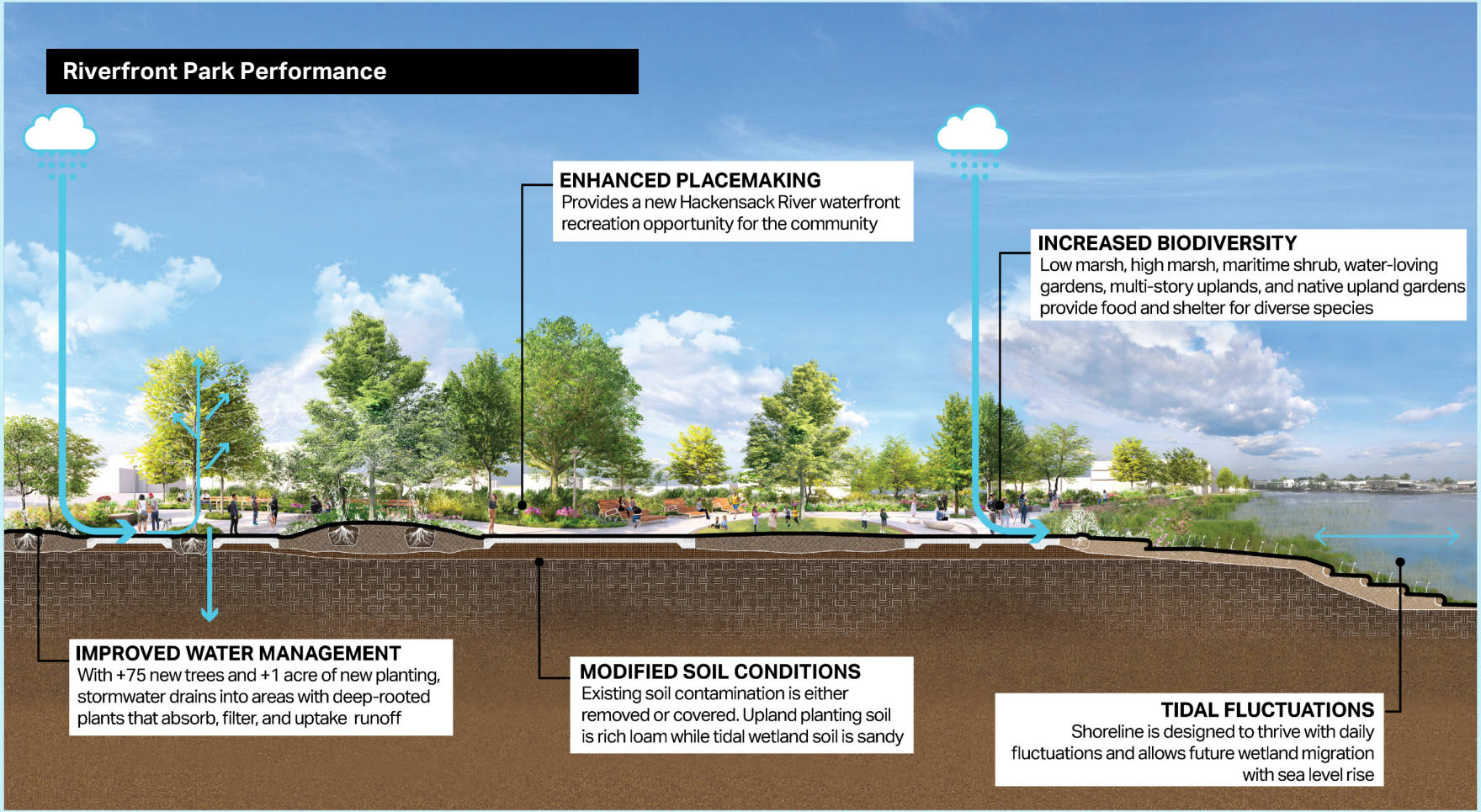

Public waterfront with seating designed for flexible community use


Public waterfront with seating designed for flexible community use
Open area supports daily use and special events
Hybrid natural/urban character

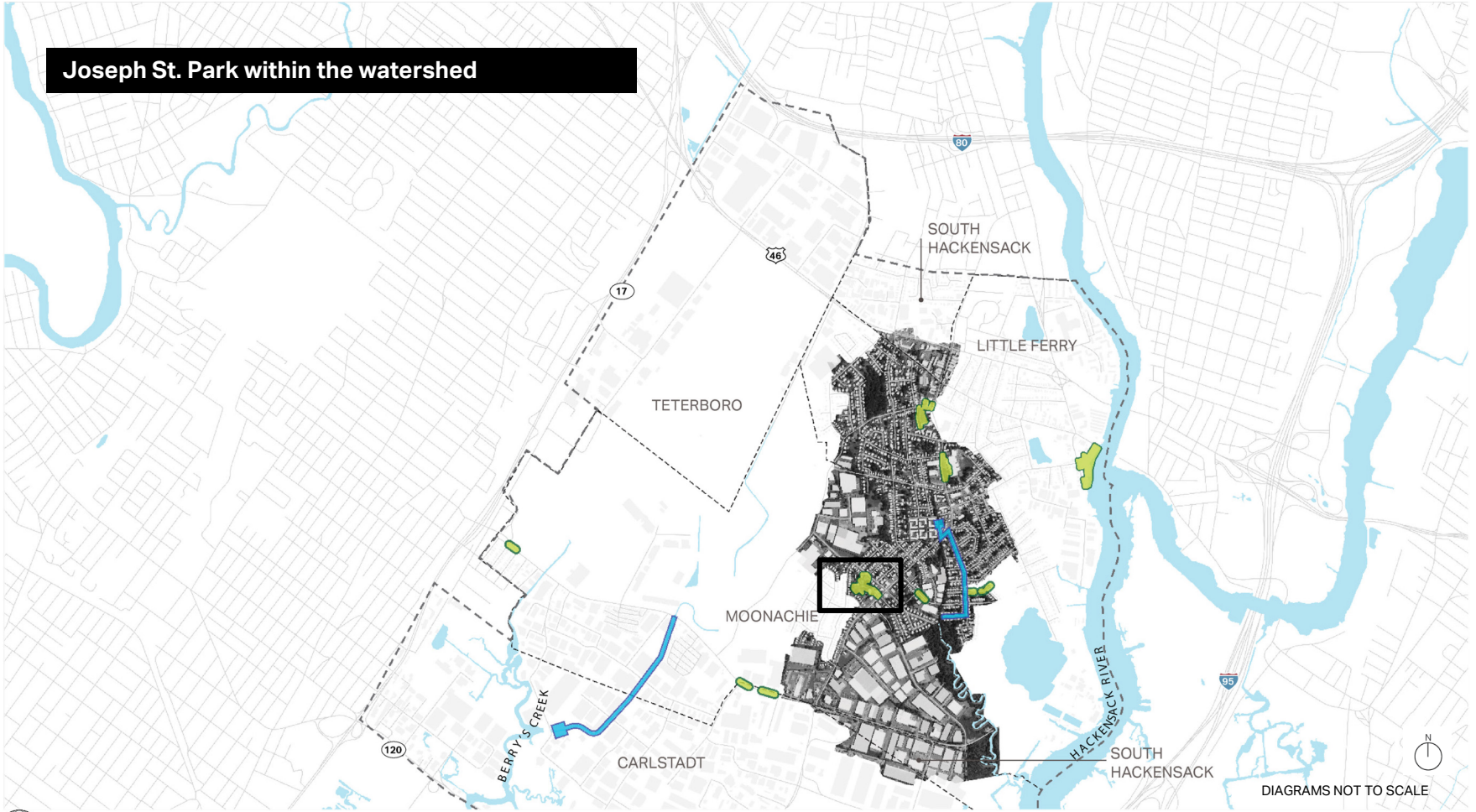

Kayak launch and pier provides direct water access over tidal marsh with nearby picnic areas and upland gardens
INTERTIDAL WETLANDS


Kayak launch and pier provides direct water access over tidal marsh with nearby picnic areas and upland gardens
Prioritize both tidal marsh creation and accessible kayak launch
Picnic areas with nearby parking
INTERTIDAL WETLANDS

Riverfront Park Performance

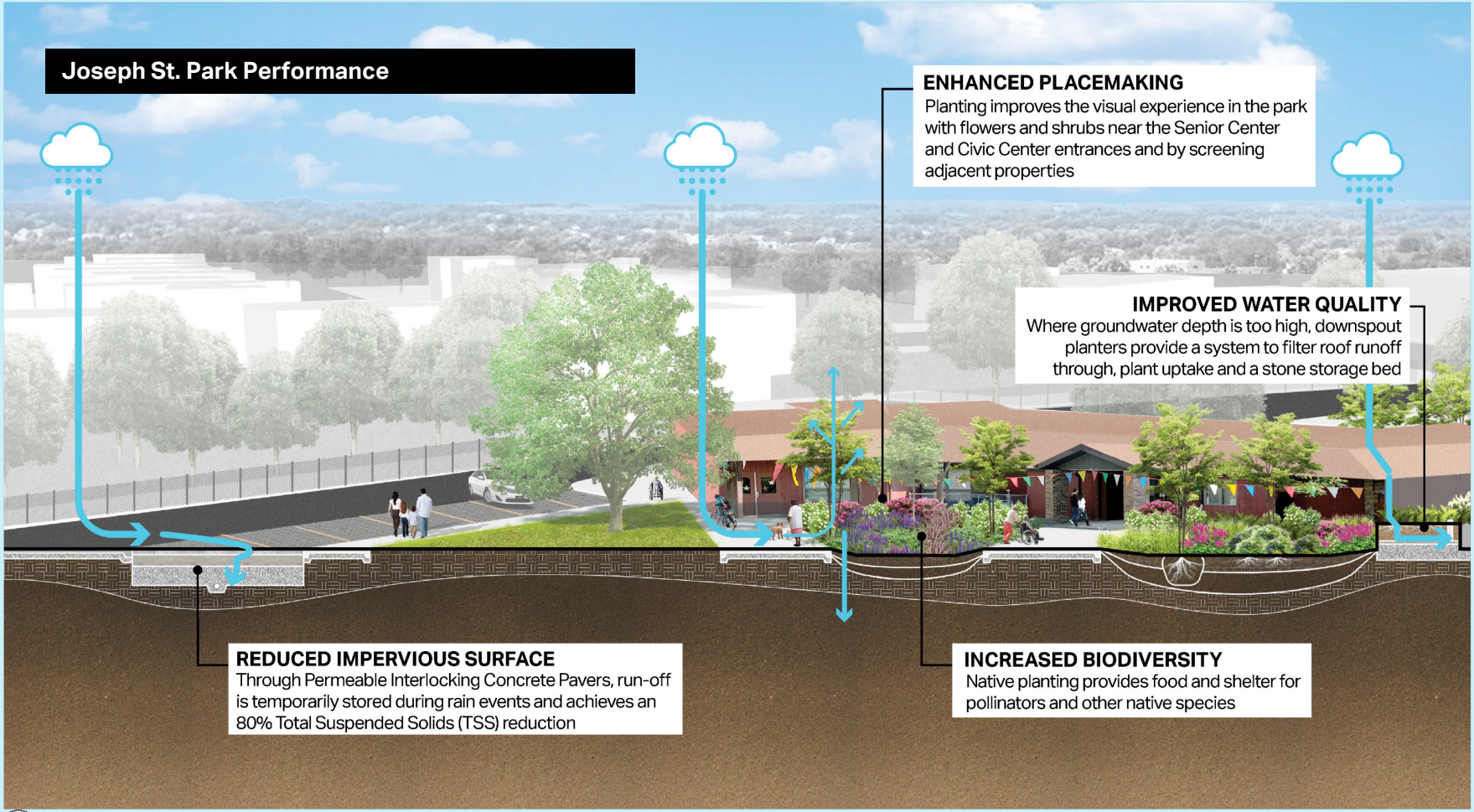


Joseph St. Park within the watershed




Joseph St. Park Design
ABSORPTION + REGRADING
Strategic areas of native planting gardens absorb stormwater runoff
EDSTAN DR
LANDSCAPE SCREENING
Trees, shrubs, and perennials provide visual interest and screening from adjacent property
JOSEPH ST
PARKING LOT FILTRATION + STORAGE
Permeable pavers within the parking stalls filter and temporarily collect parking lot runoff
MOONACHIE RD
ROOF RUN-OFF COLLECTION
Downspout planters collect and filter runoff through native planting

Joseph St. Park Performance



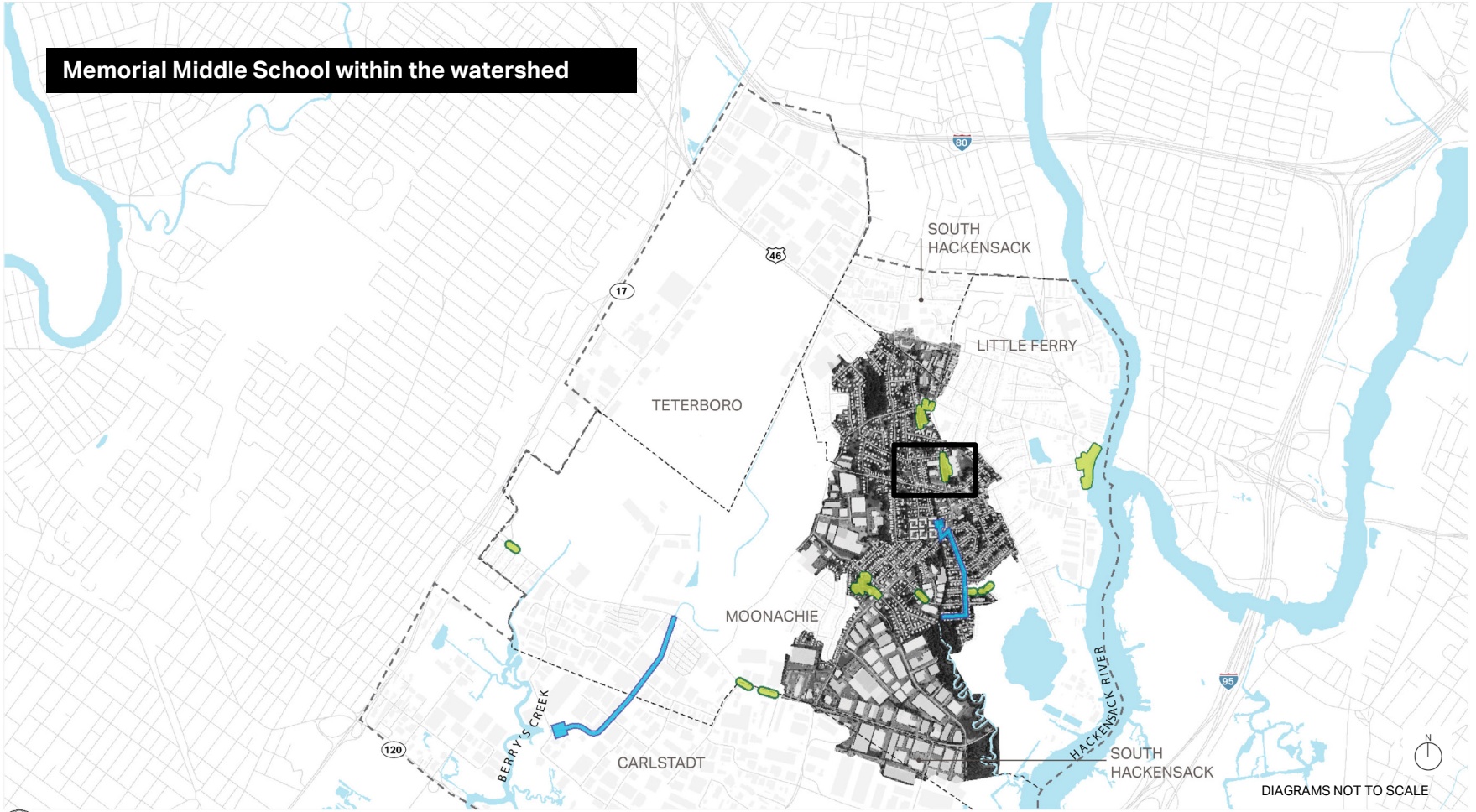
ENHANCED PLACEMAKING
Planting improves the visual experience in the park with flowers and shrubs near the Senior Center and Civic Center entrances and by screening adjacent properties

IMPROVED WATER QUALITY
Where groundwater depth is too high, downspout planters provide a system to filter roof runoff through, plant uptake and a stone storage bed

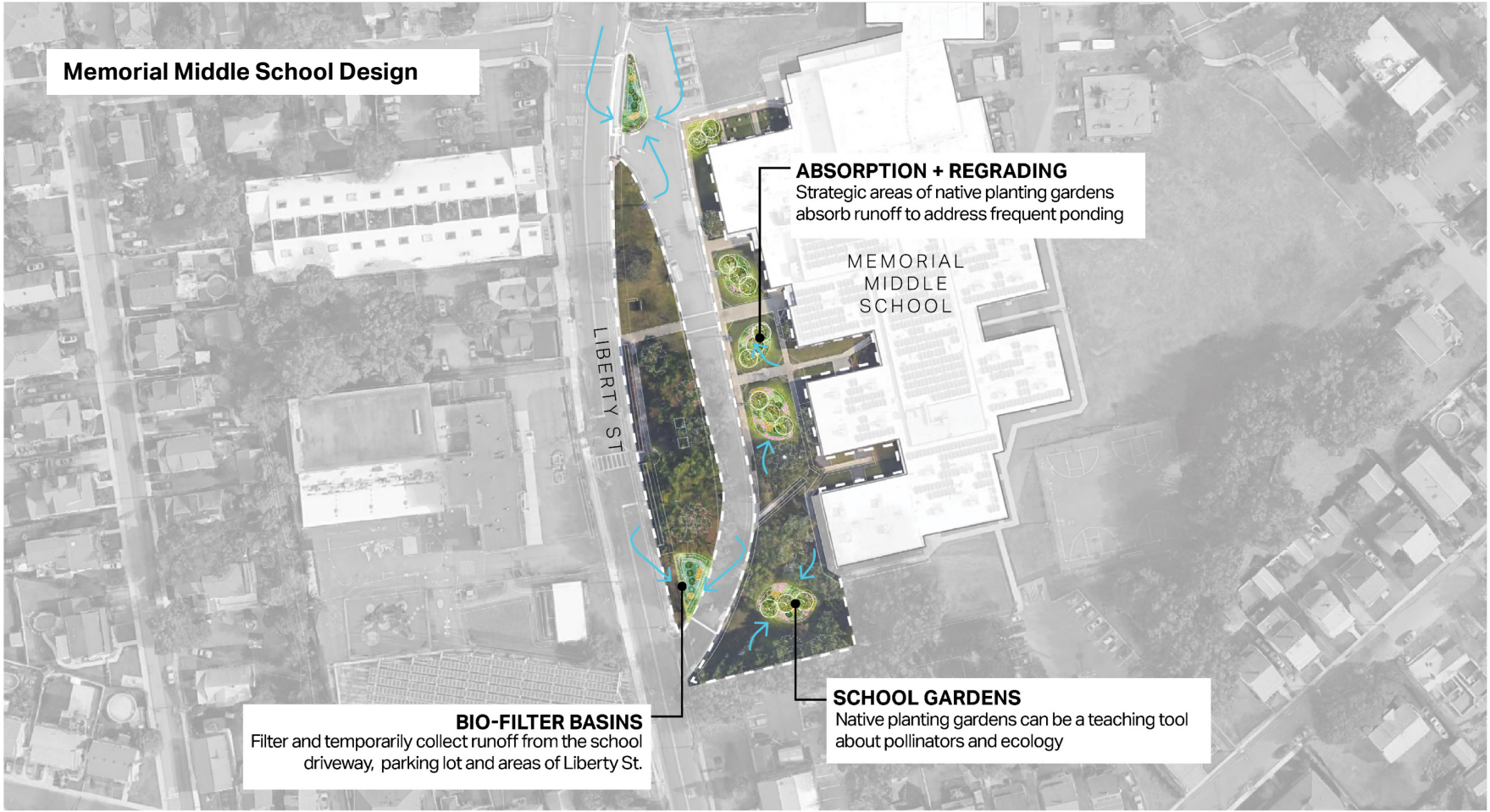
REDUCED IMPERVIOUS SURFACE
Through Permeable Interlocking Concrete Pavers, run-off is temporarily stored during rain events and achieves an 80% Total Suspended Solids (TSS) reduction

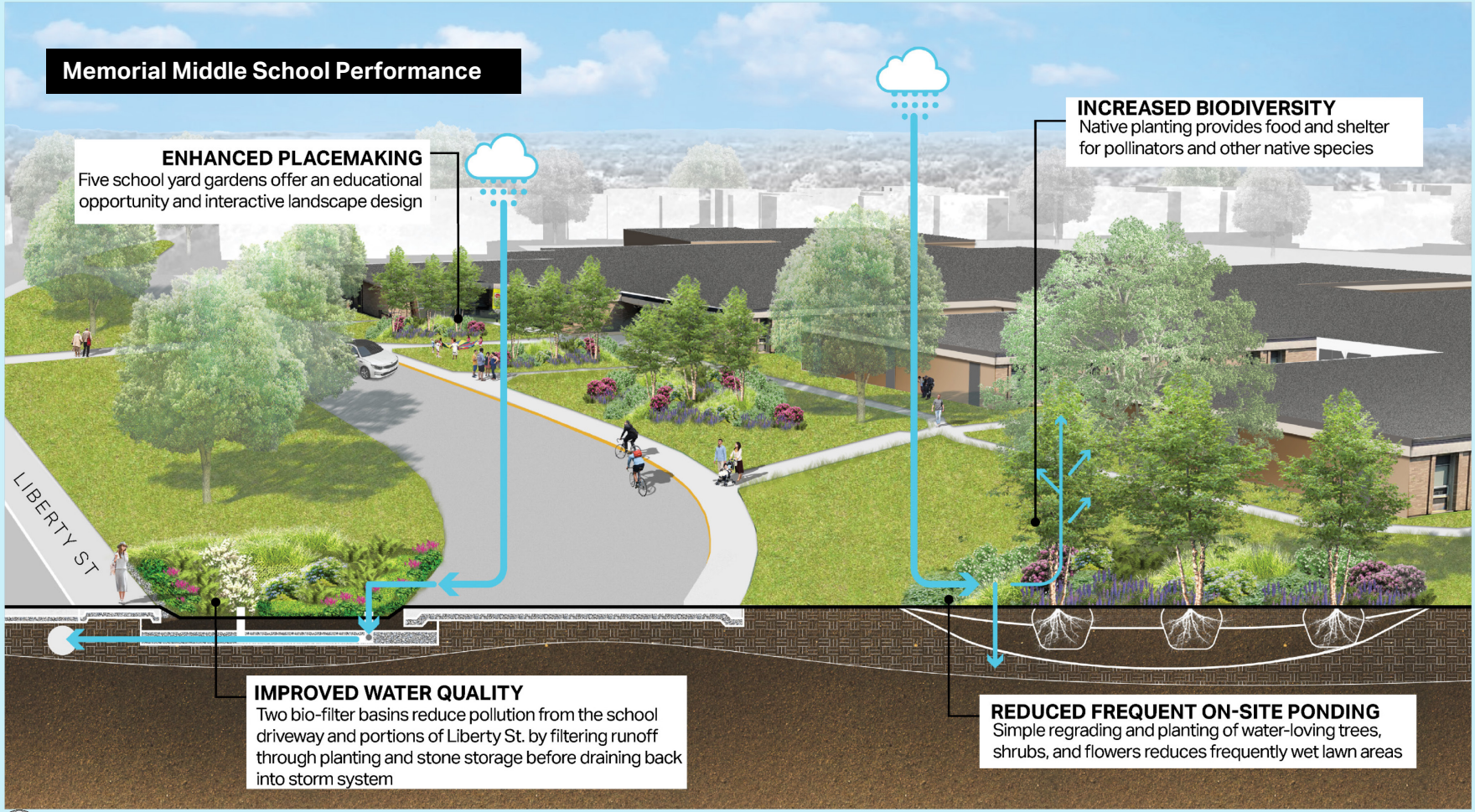
INCREASED BIODIVERSITY
Native planting provides food and shelter for pollinators and other native species

Memorial Middle School within the watershed

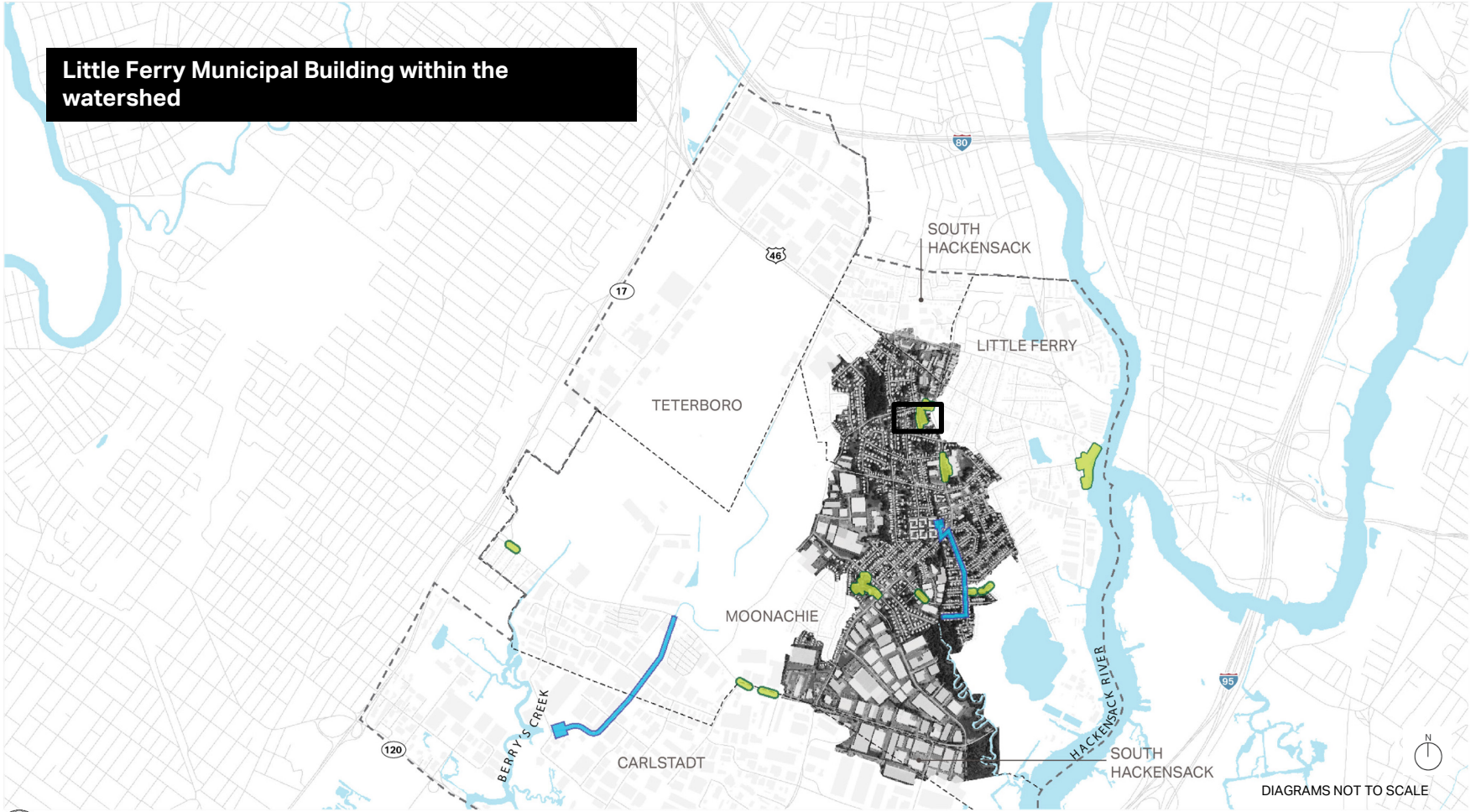


Memorial Middle School Design



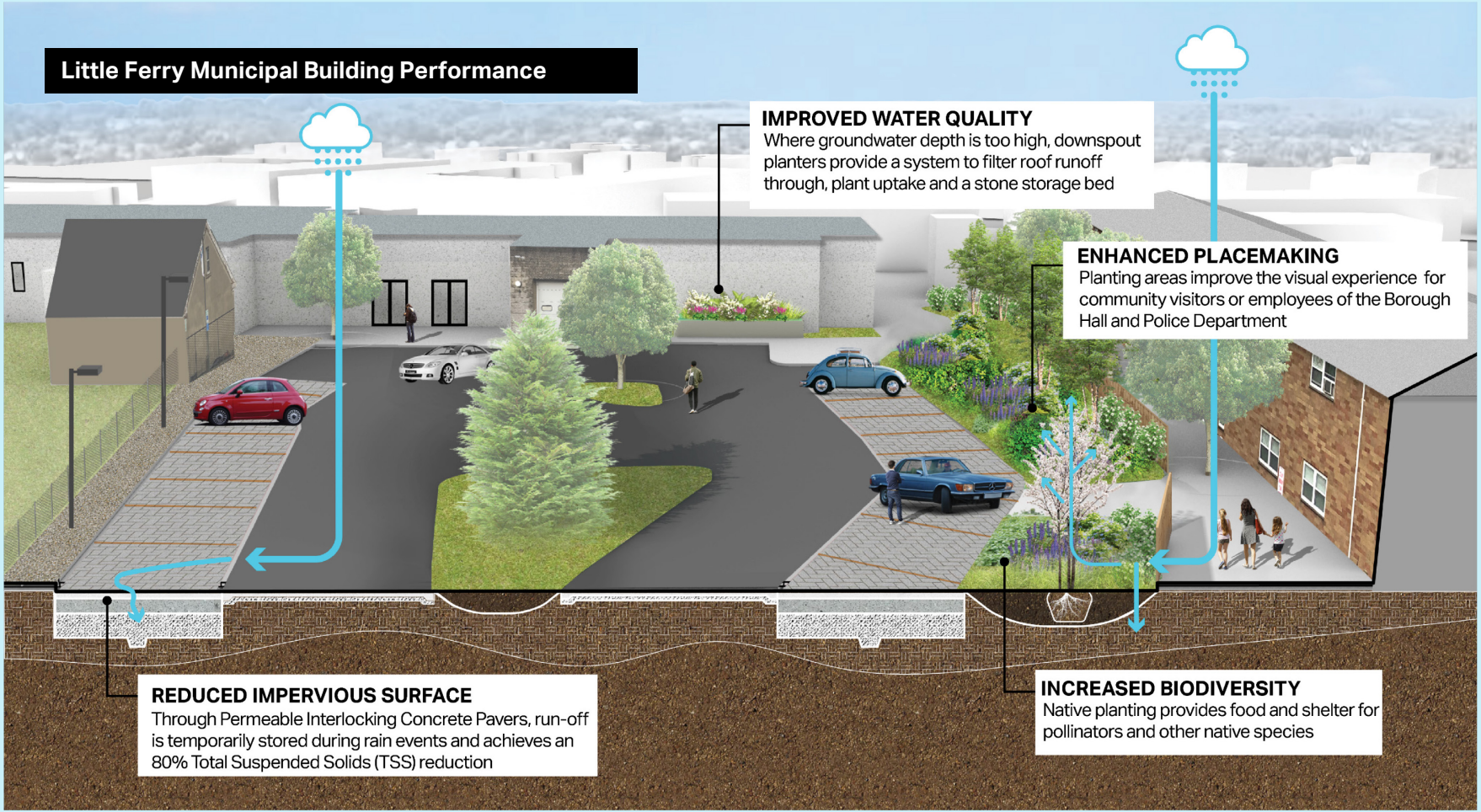

Memorial Middle School Performance
ENHANCED PLACEMAKING
Five school yard gardens offer an educational opportunity and interactive landscape design
INCREASED BIODIVERSITY
Native planting provides food and shelter for pollinators and other native species
LIBERTY ST
IMPROVED WATER QUALITY
Two bio-filter basins reduce pollution from the school driveway and portions of Liberty St. by filtering runoff through planting and stone storage before draining back into storm system
REDUCED FREQUENT ON-SITE PONDING
Simple regrading and planting of water-loving trees, shrubs, and flowers reduces frequently wet lawn areas

Little Ferry Municipal Building within the watershed

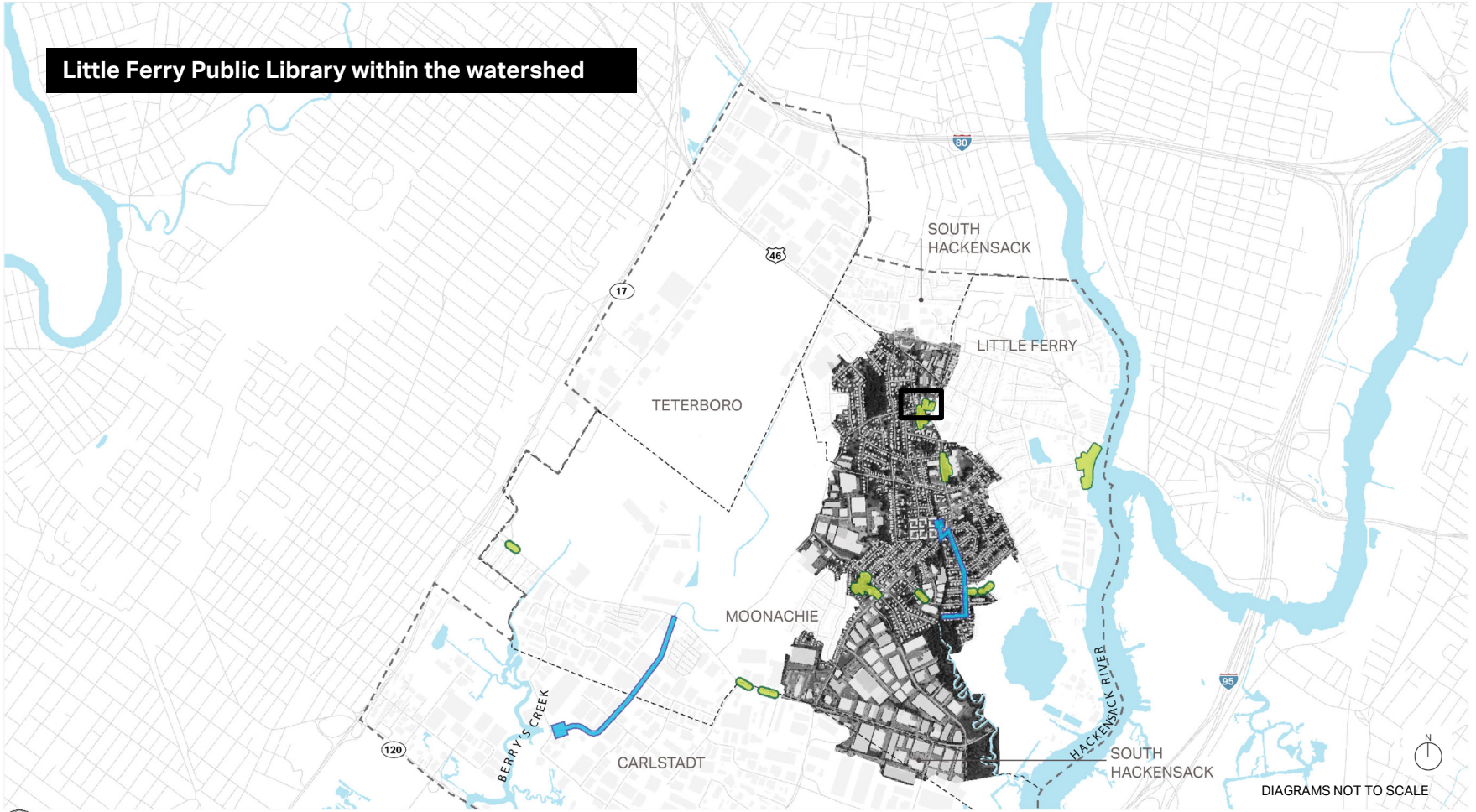


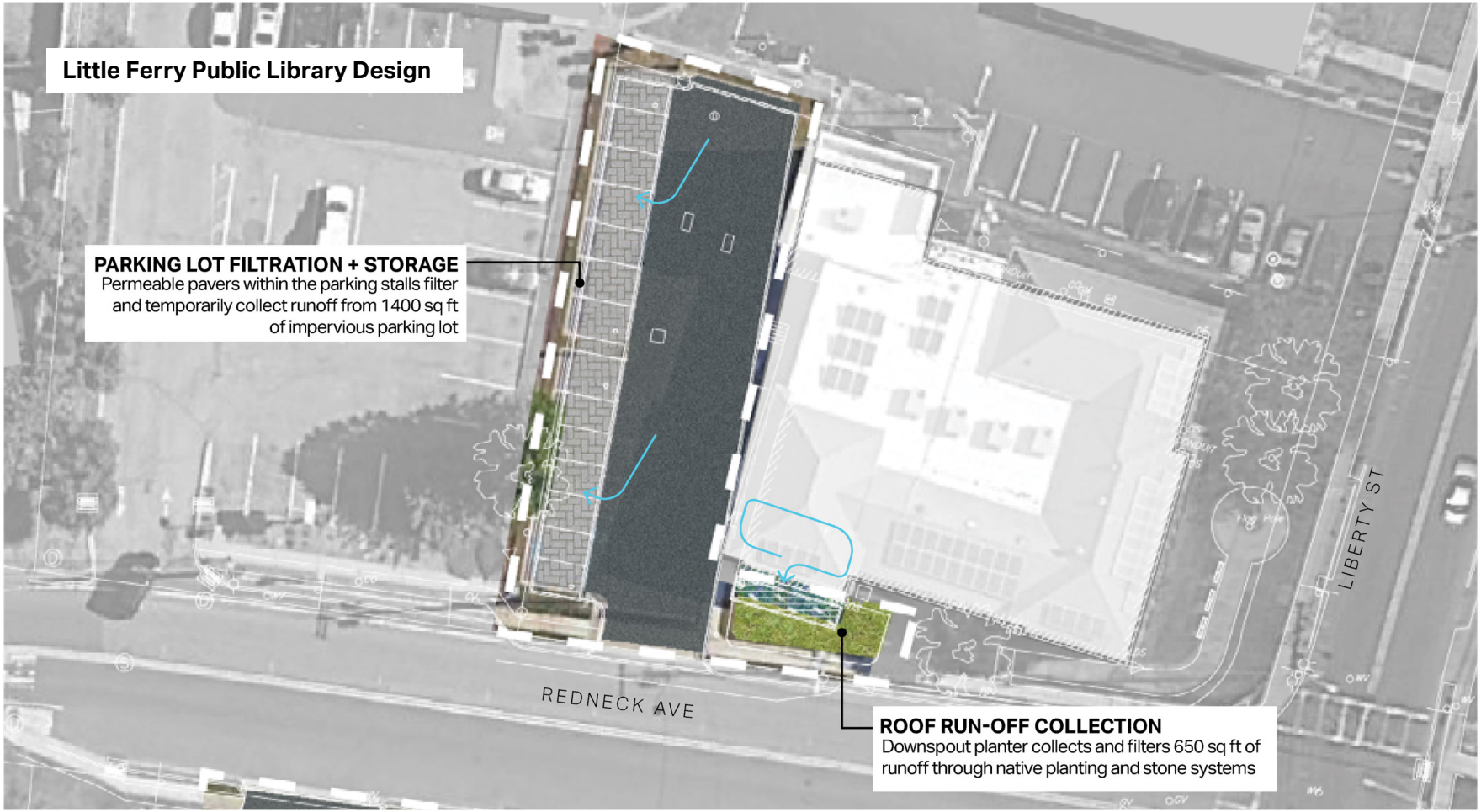

Little Ferry Municipal Building Design
REDNECK AVE
LIBERTY ST
PARKING LOT FILTRATION + STORAGE
Permeable pavers within the parking stalls filter and temporarily collect parking lot runoff
ABSORPTION + REGRADING
Regrading and planting an existing swale reduces existing ponding issues
LANDSCAPE SCREENING
Trees, shrubs, and perennials provide visual interest
ROOF RUN-OFF COLLECTION
Downspout planter collects and filters 850 sq ft of runoff through native planting and stone systems

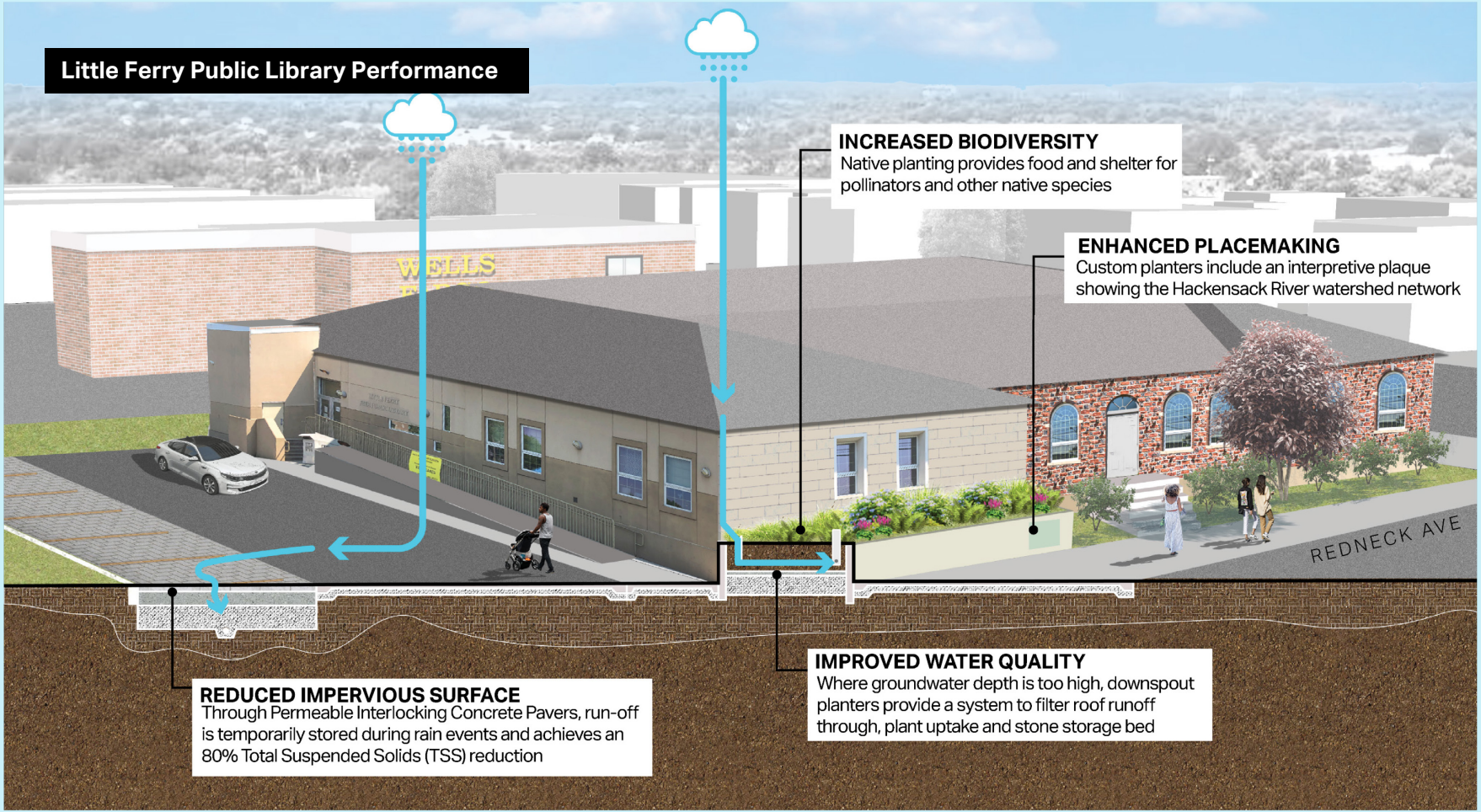
Little Ferry Municipal Building Performance



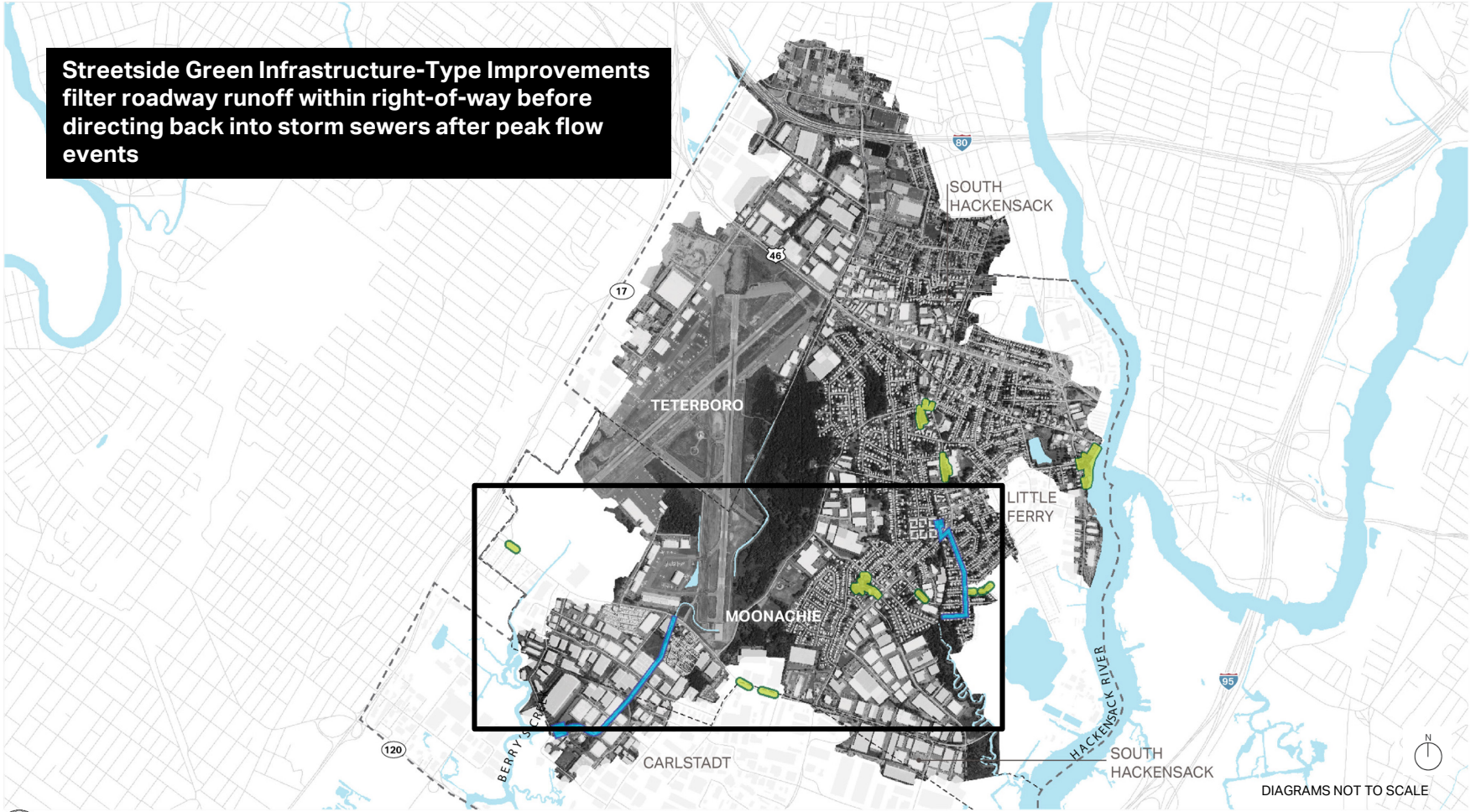
Little Ferry Public Library within the watershed

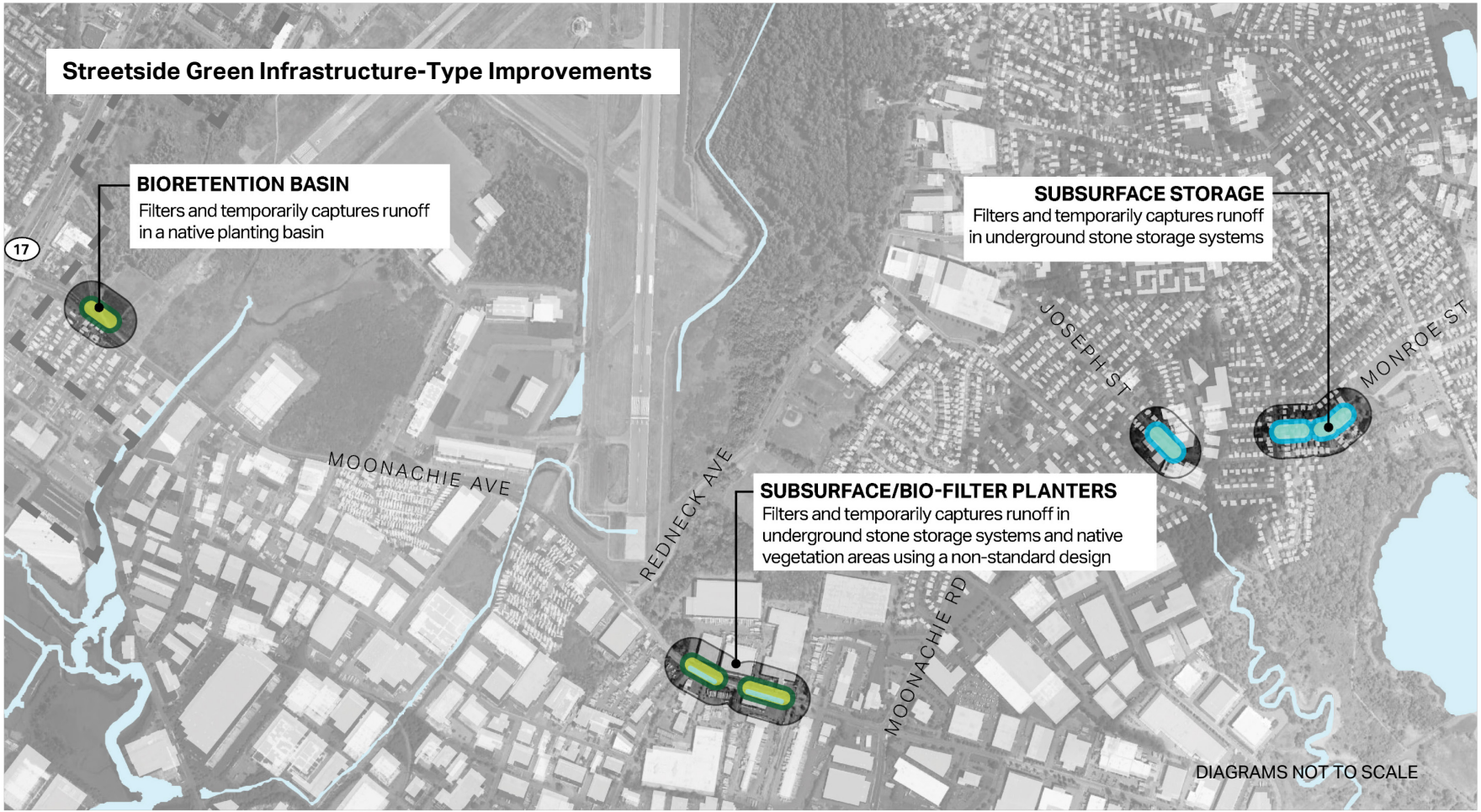



Little Ferry Public Library Design
PARKING LOT FILTRATION + STORAGE
Permeable pavers within the parking stalls filter and temporarily collect runoff from 1400 sq ft of impervious parking lot
REDNECK AVE
LIBERTY ST
ROOF RUN-OFF COLLECTION
Downspout planter collects and filters 650 sq ft of runoff through native planting and stone systems


Little Ferry Public Library Performance
INCREASED BIODIVERSITY
Native planting provides food and shelter for pollinators and other native species
ENHANCED PLACEMAKING
Custom planters include an interpretive plaque showing the Hackensack River watershed network
REDNECK AVE
REDUCED IMPERVIOUS SURFACE
Through Permeable Interlocking Concrete Pavers, run-off is temporarily stored during rain events and achieves an 80% Total Suspended Solids (TSS) reduction
IMPROVED WATER QUALITY
Where groundwater depth is too high, downspout planters provide a system to filter roof runoff through, plant uptake and stone storage bed

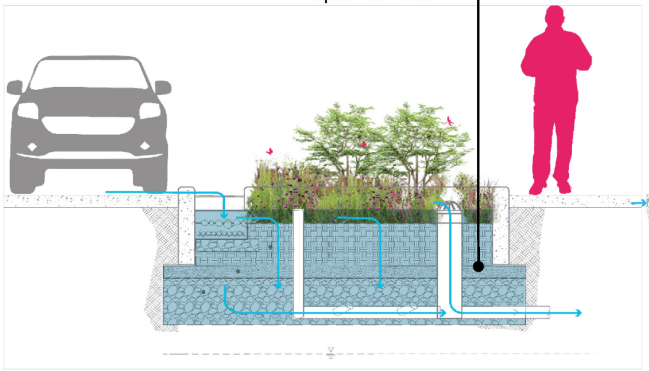
Streetside Green Infrastructure-Type Improvements filter roadway runoff within right-of-way before directing back into storm sewers after peak flow events




Streetside Green Infrastructure-Type Improvements
BIORETENTION BASIN
Filters and temporarily captures runoff in a native planting basin
17
SUBSURFACE STORAGE
Filters and temporarily captures runoff in underground stone storage systems
JOSEPH ST
MONROE ST
MOONACHIE AVE
REDNECK AVE
SUBSURFACE/BIO-FILTER PLANTERS
Filters and temporarily captures runoff in underground stone storage systems and native vegetation areas using a non-standard design
MOONACHIE RD
DIAGRAMS NOT TO SCALE

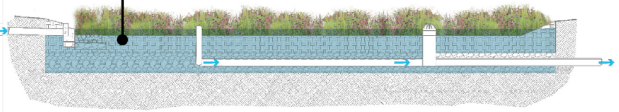
Streetside Green Infrastructure-type Performance

REDUCTION IN TSS POLLUTION
Through non-standard designs, runoff is filtered through a stone layer and native vegetation uptakes water



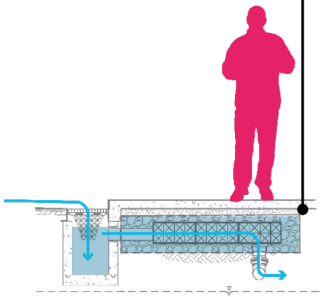
BIO-FILTER PLANTERS

REDUCES PEAK FLOW RUN-OFF
Temporarily stores and filters runoff during storm events to lessen the burden on infrastructure



BIORETENTION BASINS

DETENTION + FILTRATION
Captures and treats roadway run-off underground before draining back into storm system after 72 hours

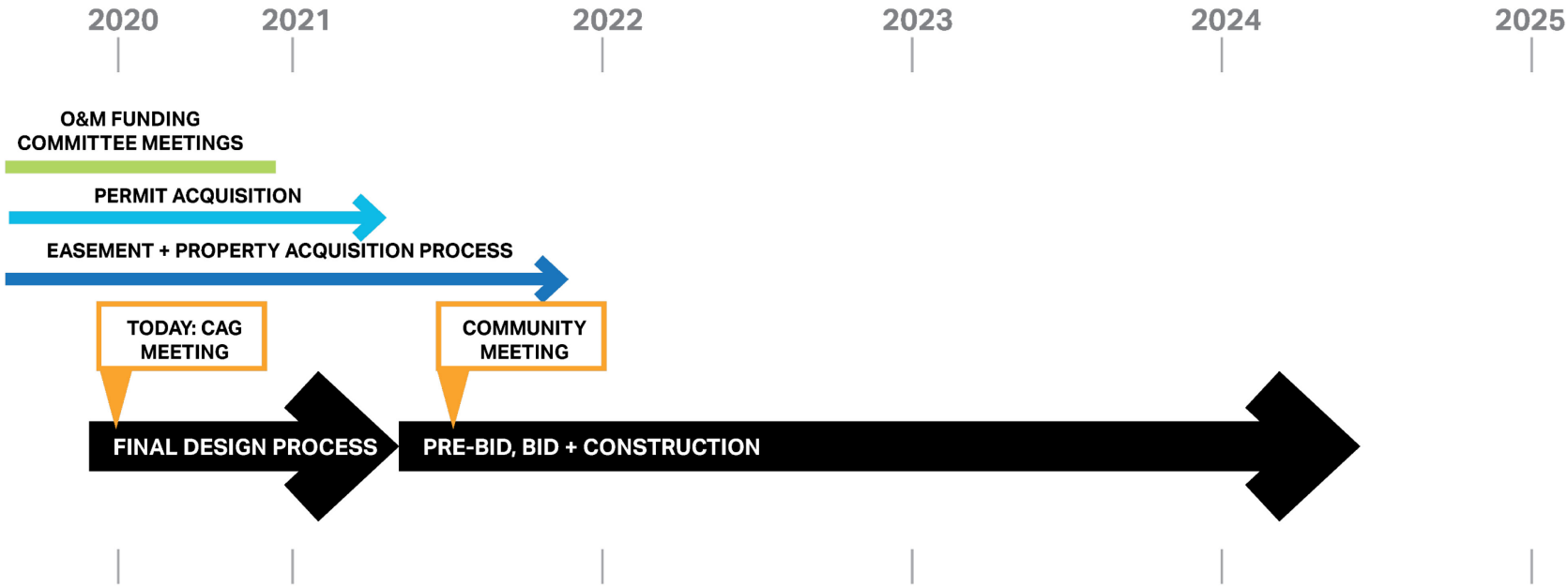


SUB-SURFACE STORAGE

NEXT STEPS

DAVE BLAIR, AECOM
ALEXIS TAYLOR, DEP

PROJECT NEXT STEPS



LONG-TERM CAG GOALS

- What do you envision for the future of the CAG after the project design completion?
- In what ways will you want to be involved?
- How might you help facilitate the completion of the full vision of RBDM?
- RBDM developing additional materials to support future/on-going efforts

EDUCATE

ENGAGE

LEVERAGE

Question & Answer

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