79th Street Boat Basin

Located at West 79th Street and the Hudson River in the Borough of Manhattan

PDC Preliminary Review
December 16, 2024
Moffatt & Nichol with PS&S and Architecture Research Office

Project Size:

15.00 ac (In-Water Portion)
3,800 sf Dockhouse building footprint (Overwater coverage)



Goals

- Reconstruct the marina to meet current climate resiliency design guidelines
- Enhance navigability of the basin via increased water depths and restored debris/ice protection
- Deliver utilities, accessibility, safety and security that comply with modern codes and standards
- Expand the number of boating berths to address the 1000 person, 15-year waiting list
- Upgrade the Dockhouse to comply with full expanded facility program









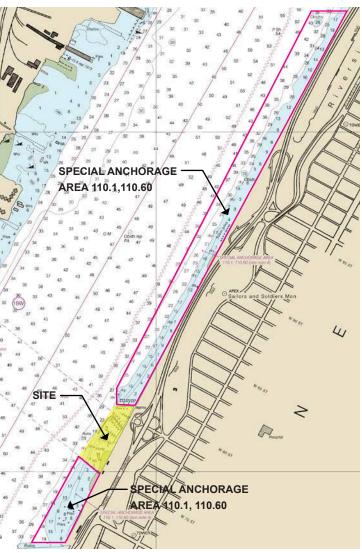




PDC Preliminary Design Review 79th Street Boat Basin | Project Location



NYCDPR dedicated mooring area (105.6 acres) denoted as "Special **Anchorage Area**" in the Federal Register Vol. 78, No. 161, Section 110.60



NOAA Chart 12341











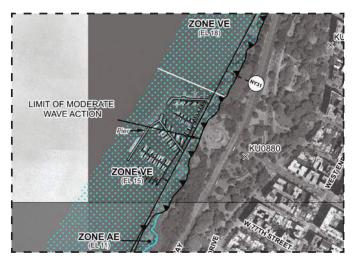
Flood Hazard Zones

2015 Preliminary 100-year Floodplain

1% Annual Chance Floodplain (100 Year Floodplain) The area that has a 1% chance of flooding in any given year.

2050s Projected 100-year Floodplain

The potential areas that could be impacted by the 100-Year flood in the 2050s based on projections of the high-estimate 90th percentile sea level rise scenario (NYC Panel on Climate Change (NPCC) 2015 data).



FEMA FIRM Map

Preliminary 2013 - FEMA FIRM Map: 3604970086G Zone VE (EL 15) Moderate wave action

2007 - FEMA FIRM Map: 3604970086F Zone AE (EL 10) Moderate wave action (not indicated)







PDC Preliminary Design Review 79th Street Boat Basin | Flood Risk







1 And 2 Family Residential

Multi-Family Residential

Mixed Use

Open Space And Outdoor Recreation

Commercial

Institutional

Industrial

Parking

Transportation / Utilities

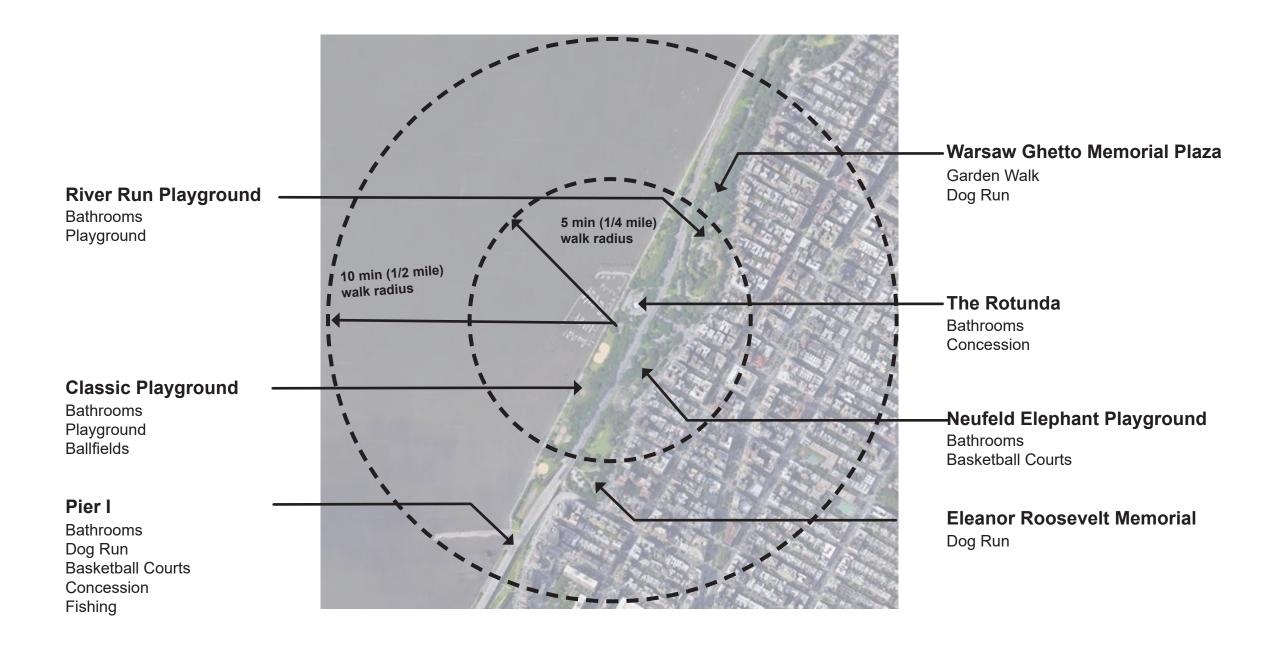






PDC Preliminary Design Review 79th Street Boat Basin | Surrounding Land Use





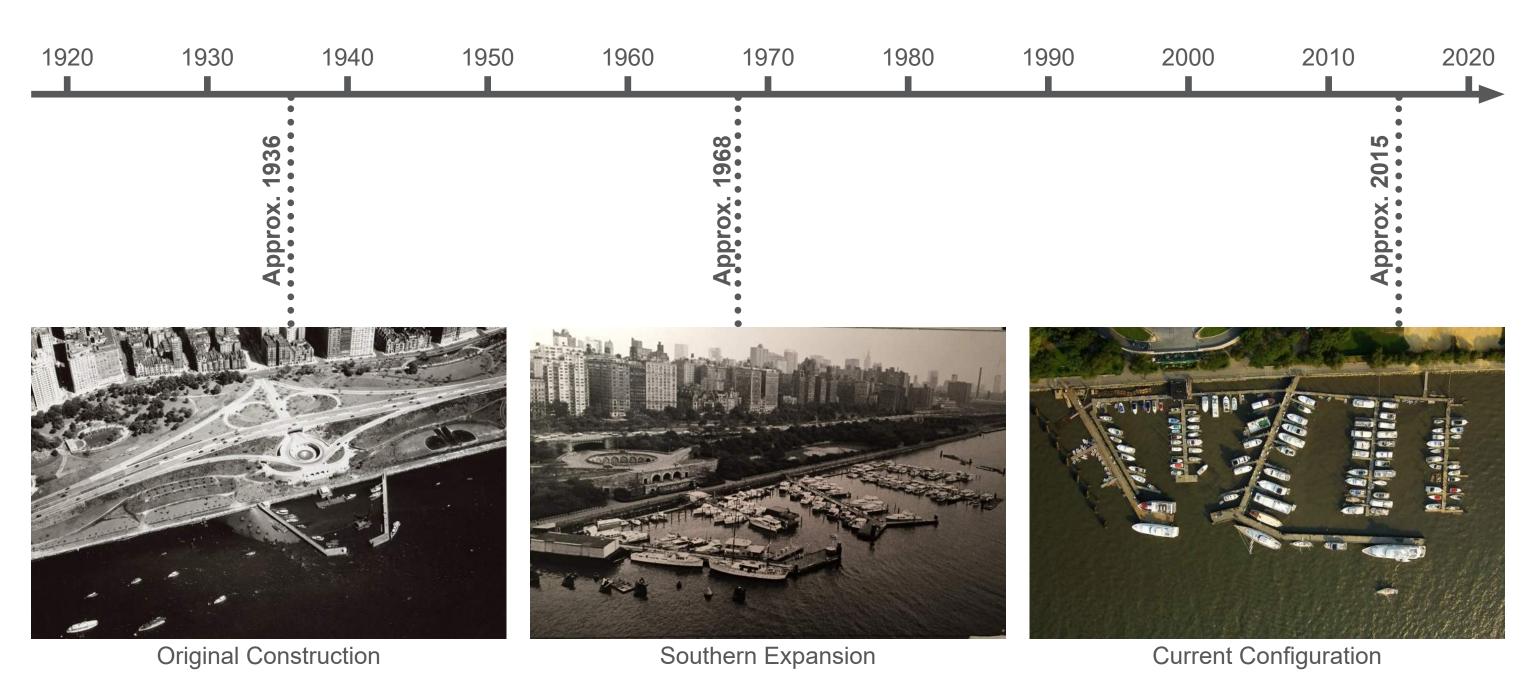








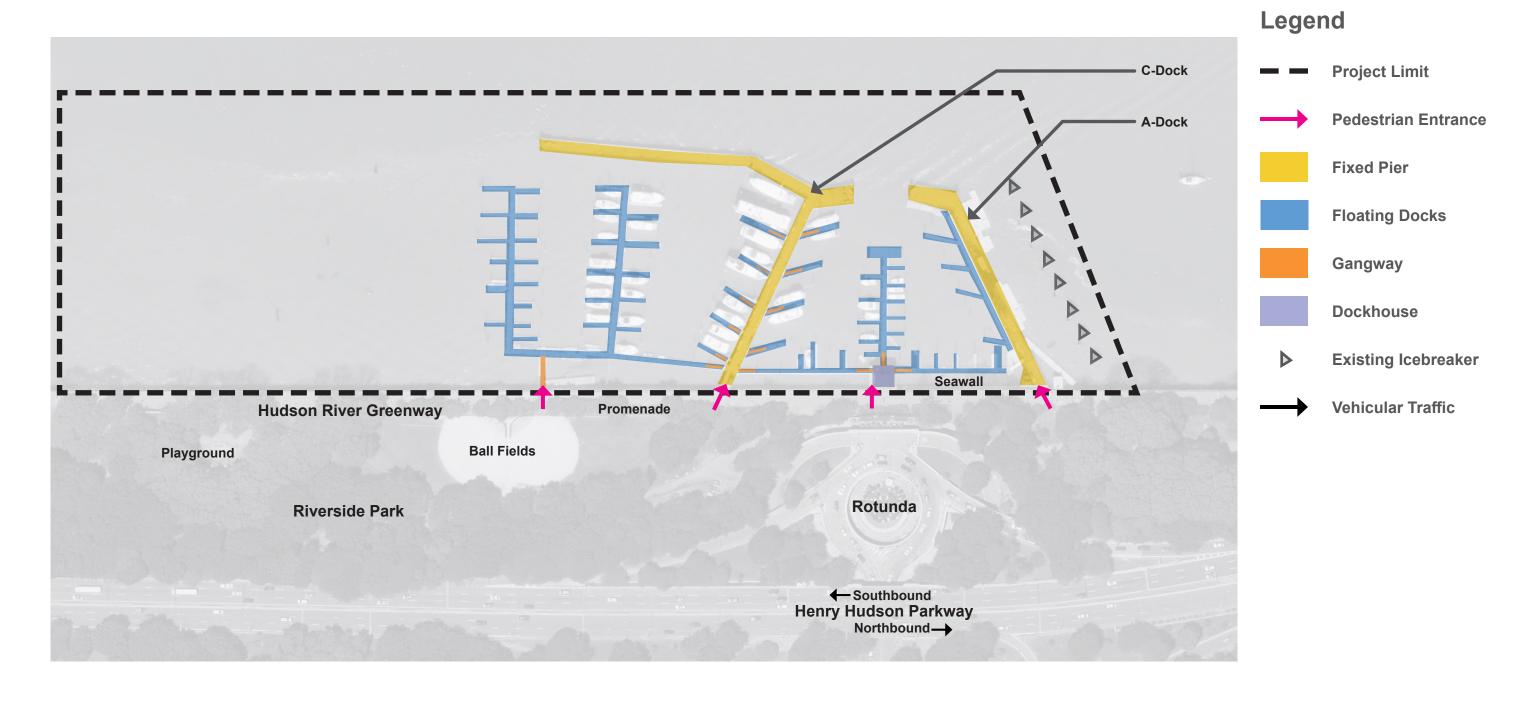










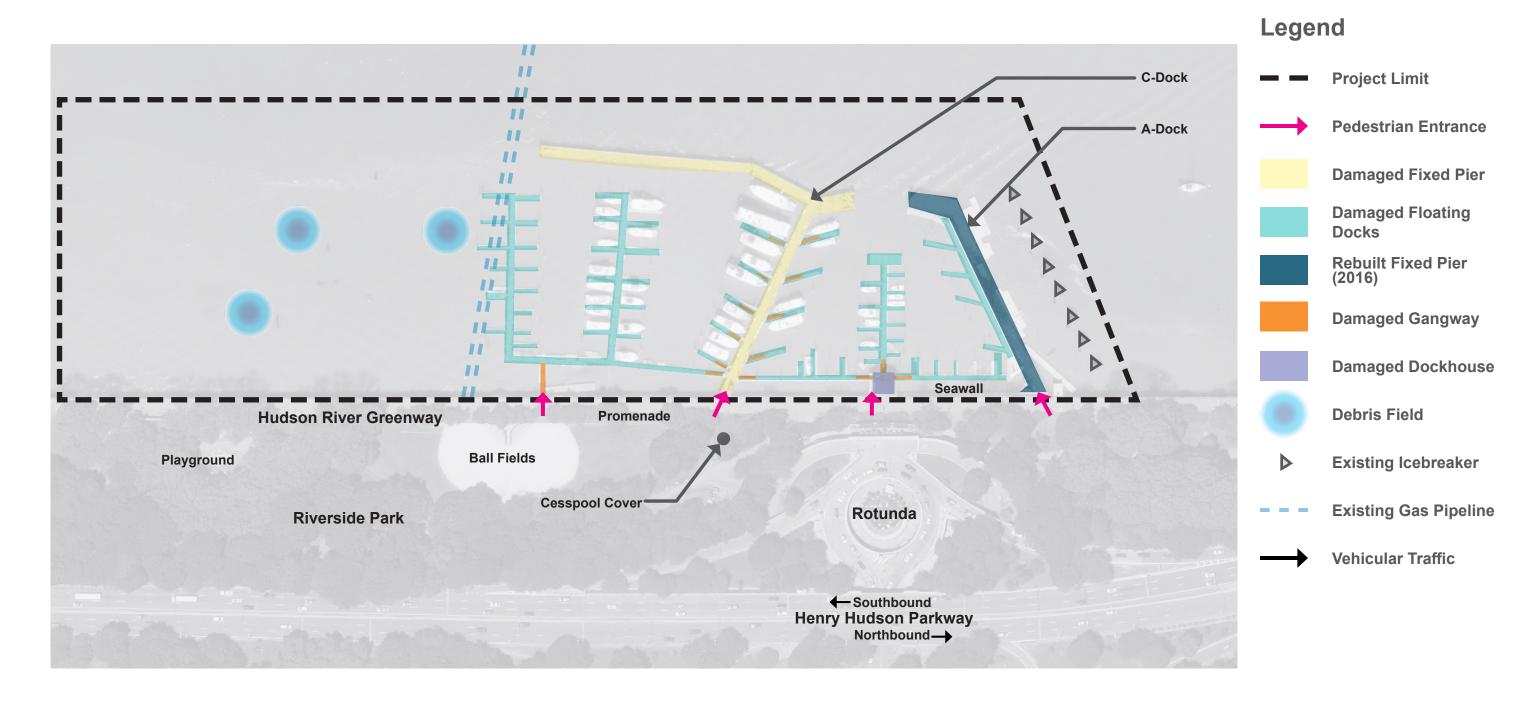








PDC Preliminary Design Review
79th Street Boat Basin | Existing Layout

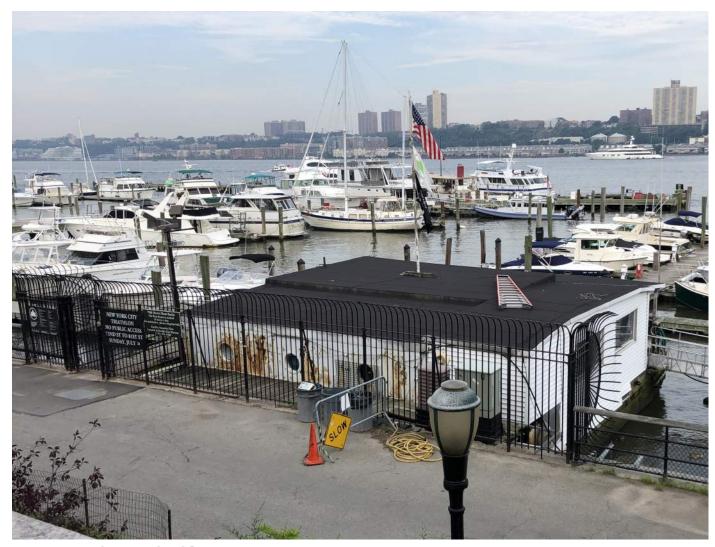






PDC Preliminary Design Review
70th Street Post Pagin | Existing

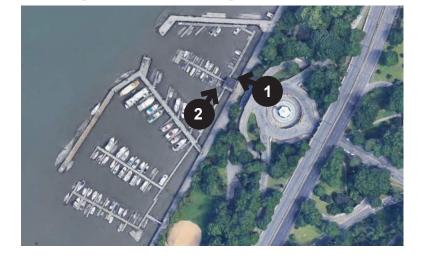
79th Street Boat Basin | Existing Layout and Site Analysis



1 - View from Café Looking West



2 - View from Floating Dock Looking North















1 - View from C-Dock Pier Looking Northeast



2 - View from C-Dock Looking South

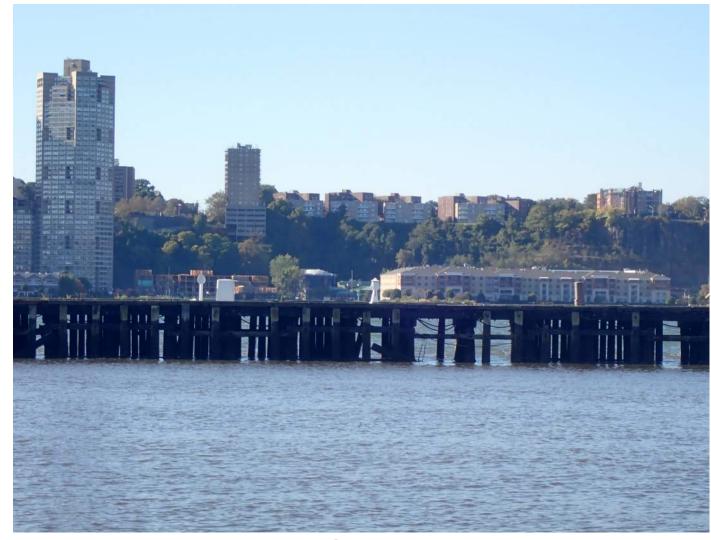












1 - View Looking West at Wave Screen



2 - View from Promenade Looking Southwest









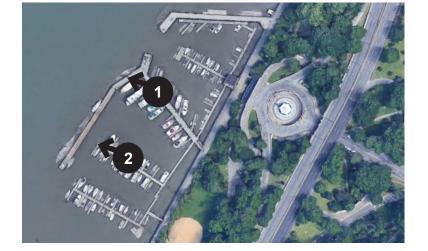




1 - C-Dock at Low Tide



2 - D-Dock Ice Damage

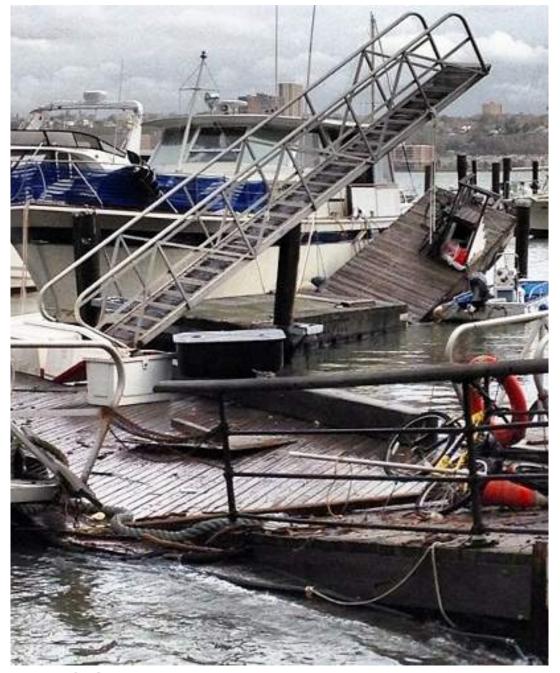




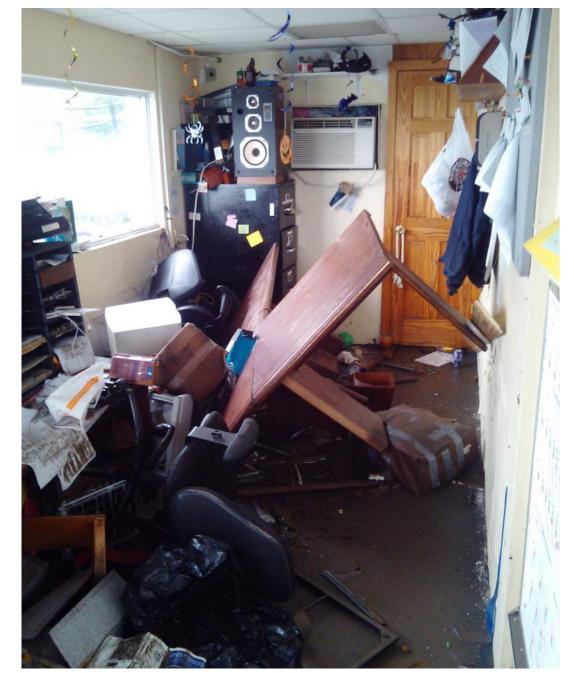








Dock & Gangway Damage



Dockhouse Office After Flood







Stakeholder Outreach

- 79th Street Boat Basin Boaters
- Riverside Park Conservancy
- Community Board 7
- Public Design Commission
- Borough President Mark Levine
- Council Member Gale Brewer
- Assembly Member Linda Rosenthal
- State Senator Holyman-Sigal
- NYPD 20th Precinct
- NYPD Harbor Patrol
- FDNY Marine Unit
- U.S. Coast Guard Waterways Management
- NY / NJ Harbor Operations Committee
- SHPO



Visioning Session with 79th Street Boat Basin Boaters 10/24/19

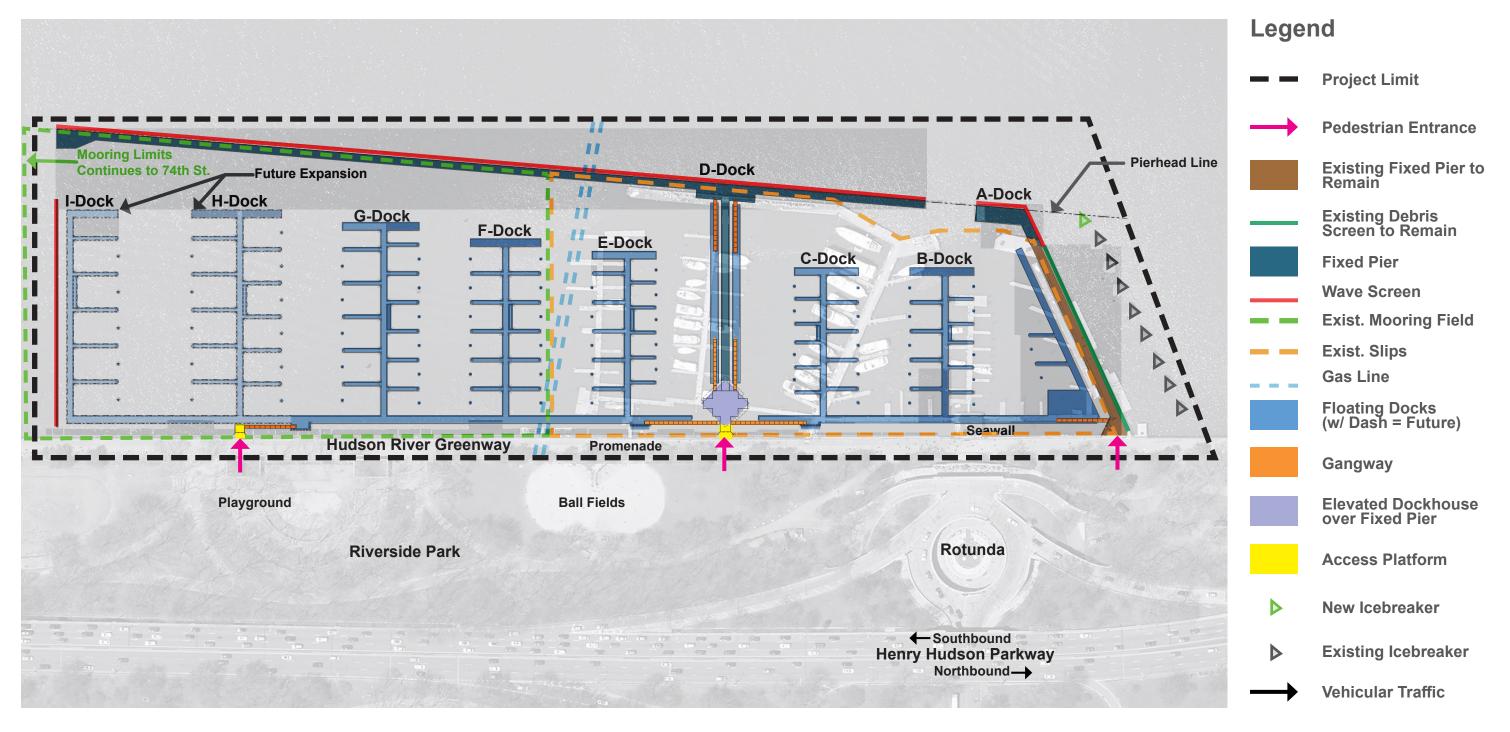
Dedicated Email: boatbasin@parks.nyc.gov









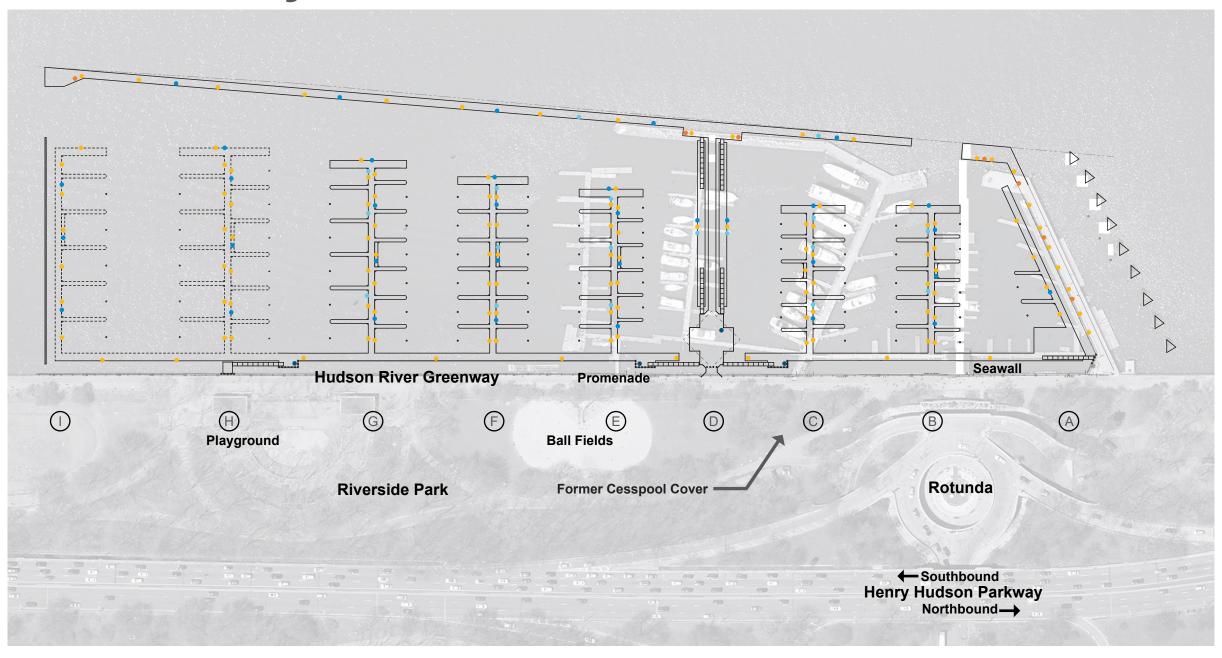






PDC Preliminary Design Review
79th Street Boat Basin | Project Overview

Marina Utility Plan















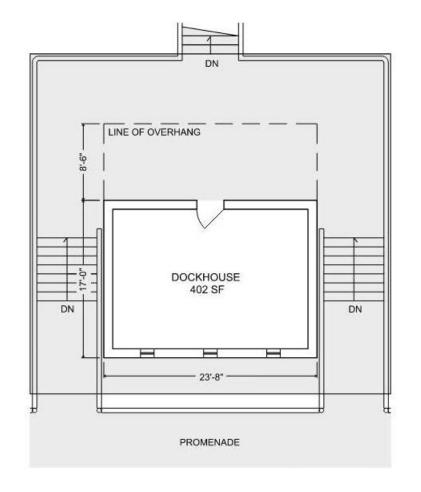




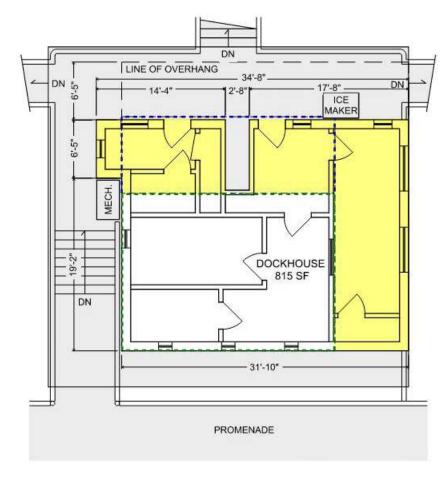


PDC Preliminary Design Review 79th Street Boat Basin | Marina Utility Plan





Original 1937



Existing Layout

Legend



2003 Additions - 413 SF

Outline of Original Overhang

Outline of Original Dockhouse



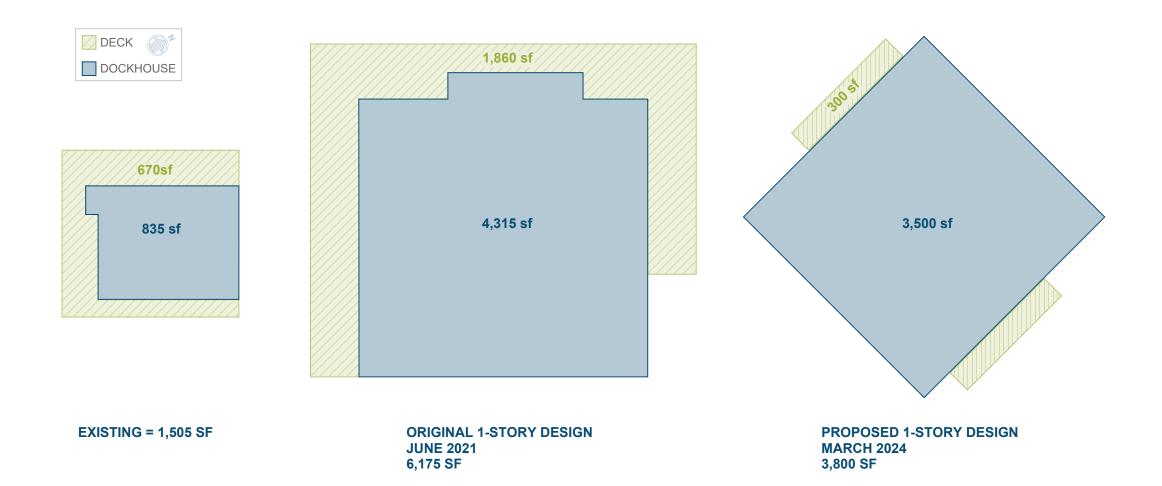








Dockhouse Size















Dockhouse Design Progression

02/09/2022

DEC requests Dockhouse Alternatives Analysis

04/28/2022

Submitted Dockhouse Alternatives Analysis

01/13/2023

Receive FEMA letter determining 2-story required Section 106 Design Review for view mitigation

09/15/2021

PDC Approved Conceptual Design: Approved by SHPO, LPC, did not require Section 106 review



4.314 SF 1st Floor 1,862 SF Deck **Total** 6.176 SF

09/14/2022 09/2022

DEC directs team Onboarding Design Architect: to 2-story Design Architecture Research Office

12/16/2024

1-Story Redesign



1st Floor 3.500 SF 300 SF Deck **Total** 3,800 SF







Dockhouse Design Material Progression



Original 1-Story Design June 2021 - September 2021 6,175 SF



Current 1-Story Design November 2024 3,800 SF Program

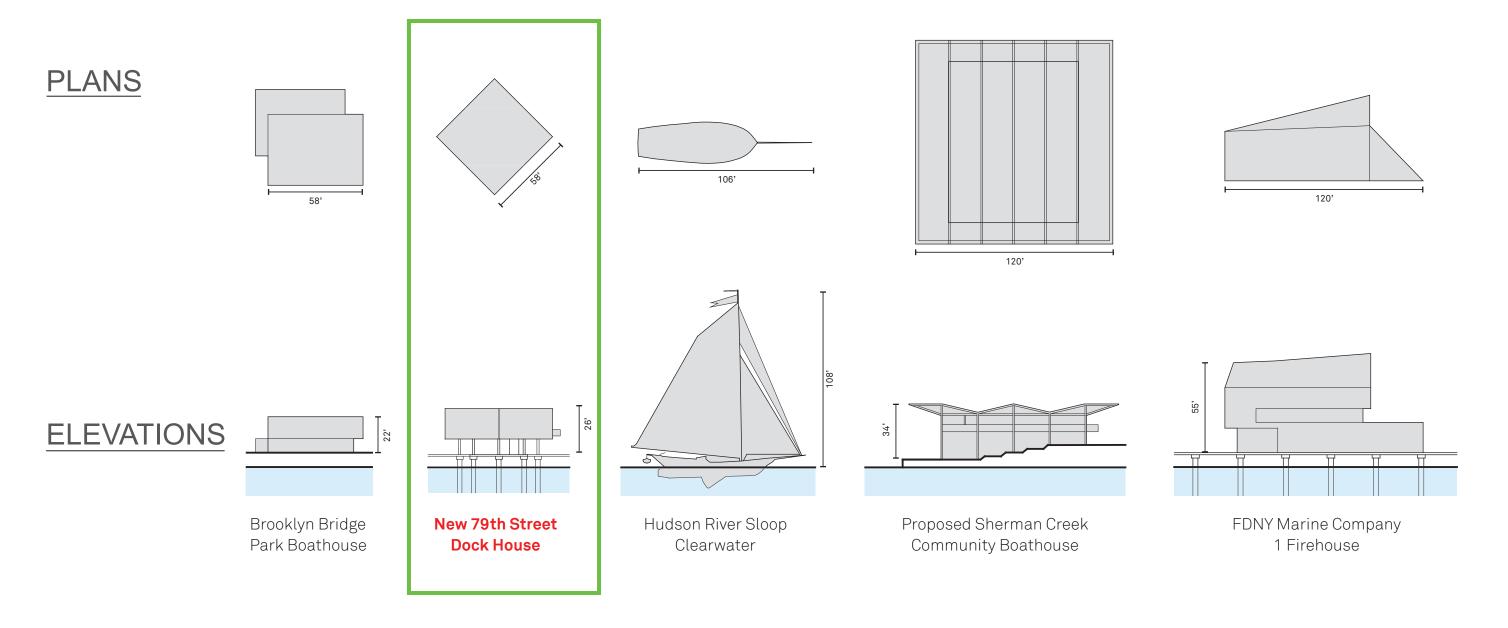








Size Comparison Reminder















Views and Access





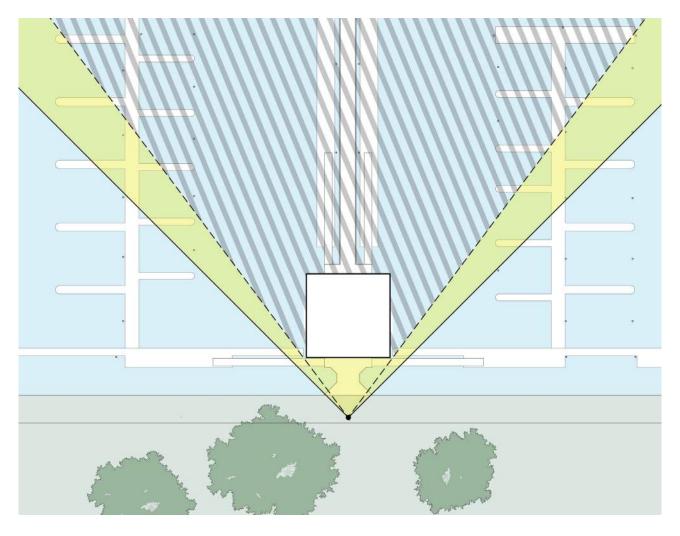




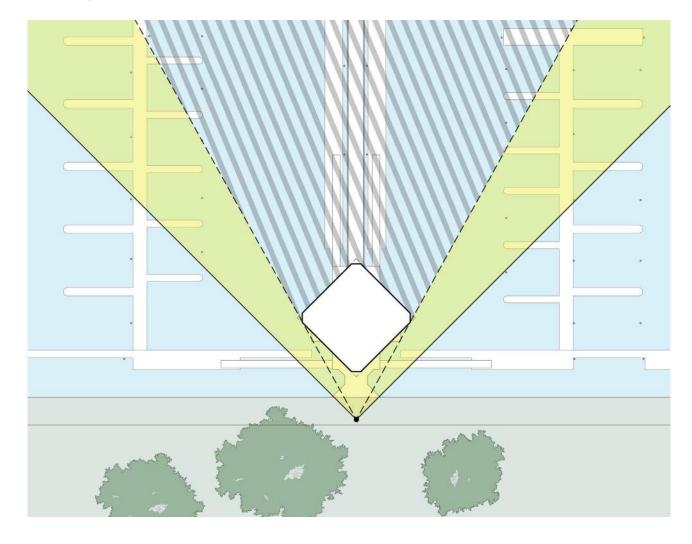


Promenade Viewshed Analysis: Building Rotation Reduces Visual Obstruction

Orthogonal Dockhouse Orientation



45 Degree Dockhouse Rotation









Site Section



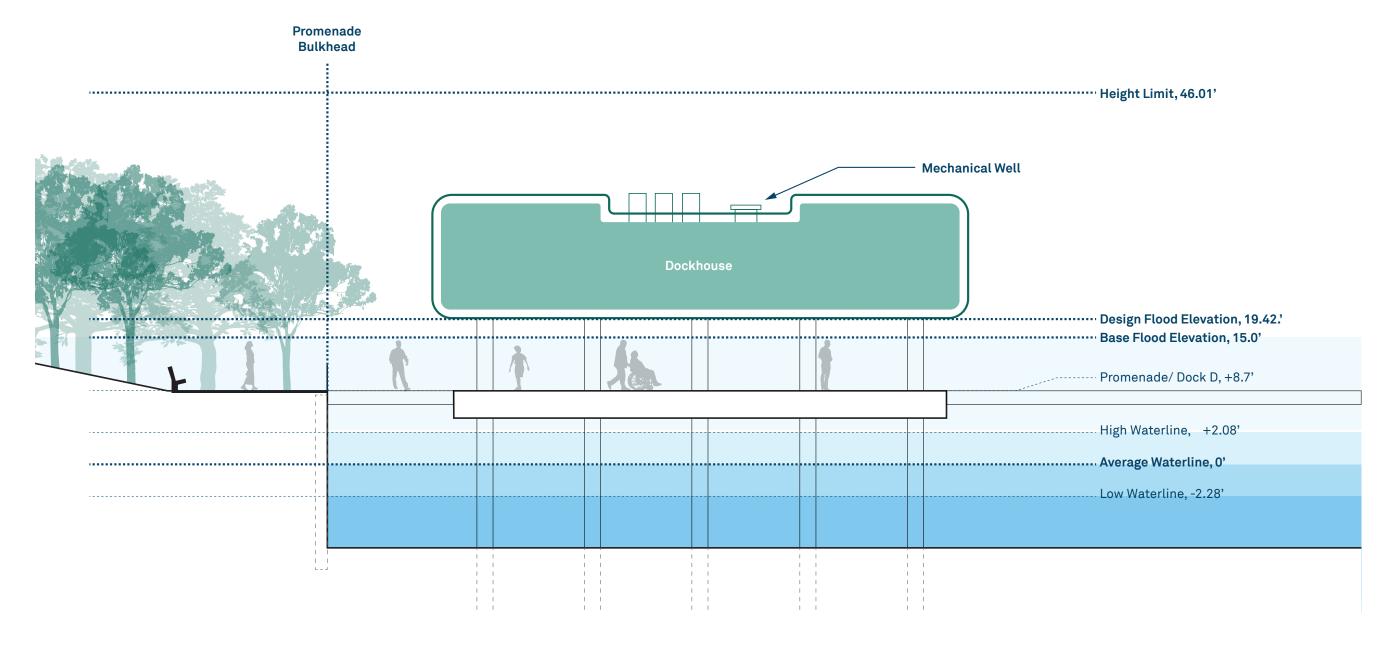






PDC Preliminary Design Review 79th Street Boat Basin | Site Section

Flood and Height Constraints

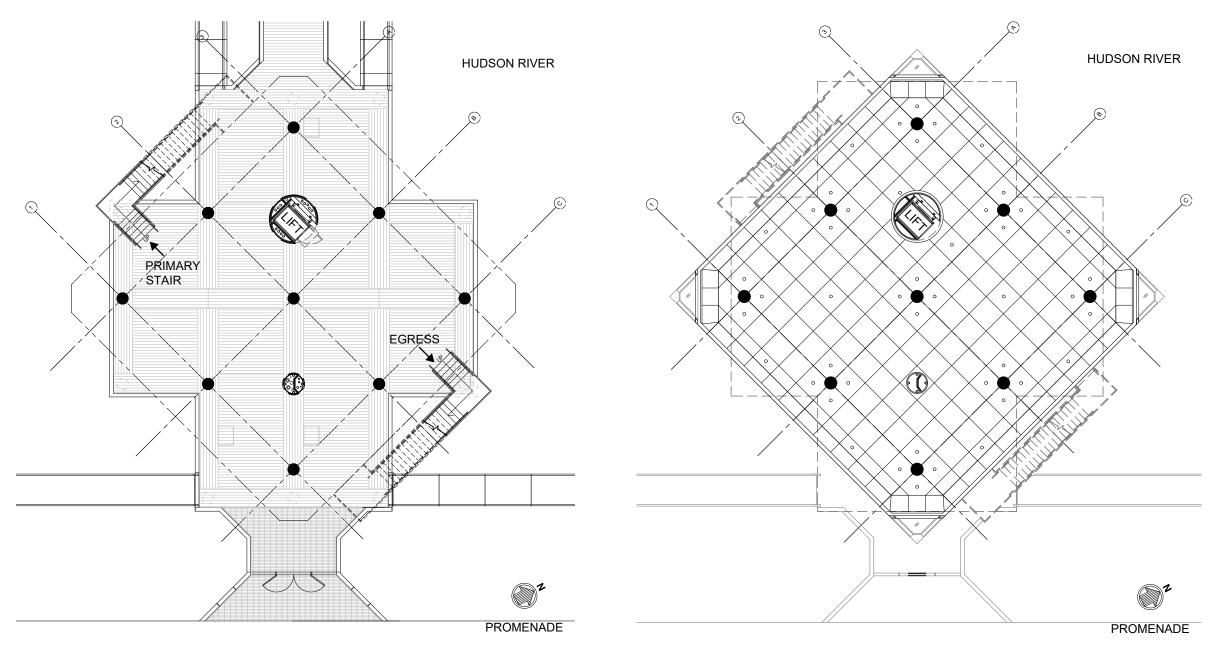








Pier Deck Level Plan and RCP





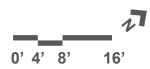




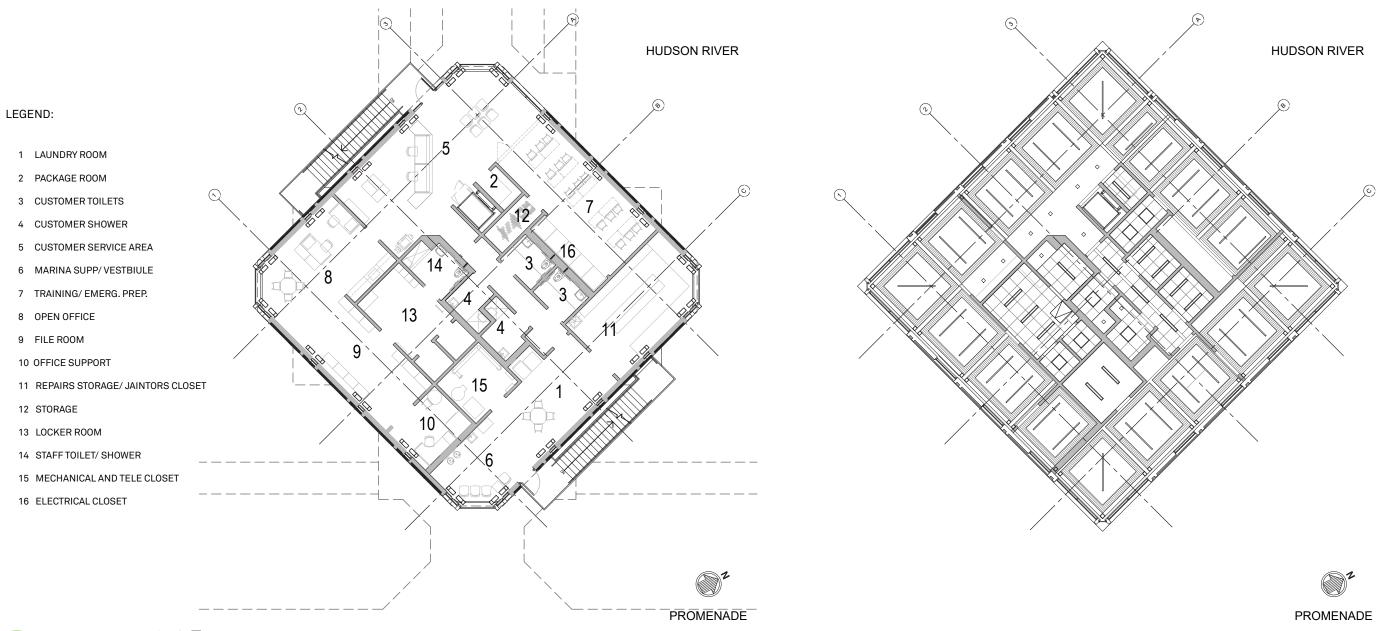




79th Street Boat Basin | Pier Deck Level Plan and RCP



Dockhouse Level Plan and RCP











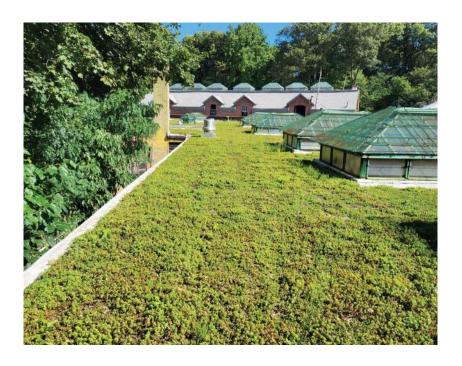
PDC Preliminary Design Review

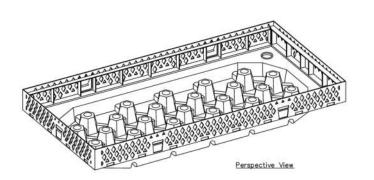
79th Street Boat Basin | Dockhouse Level Plan and RCP

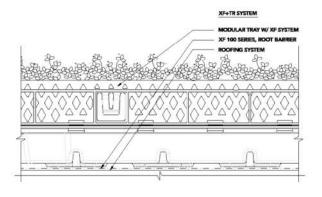


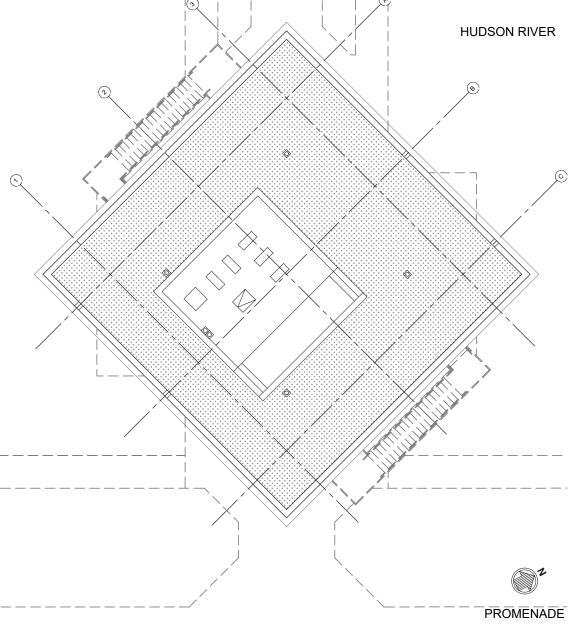
Roof Plan













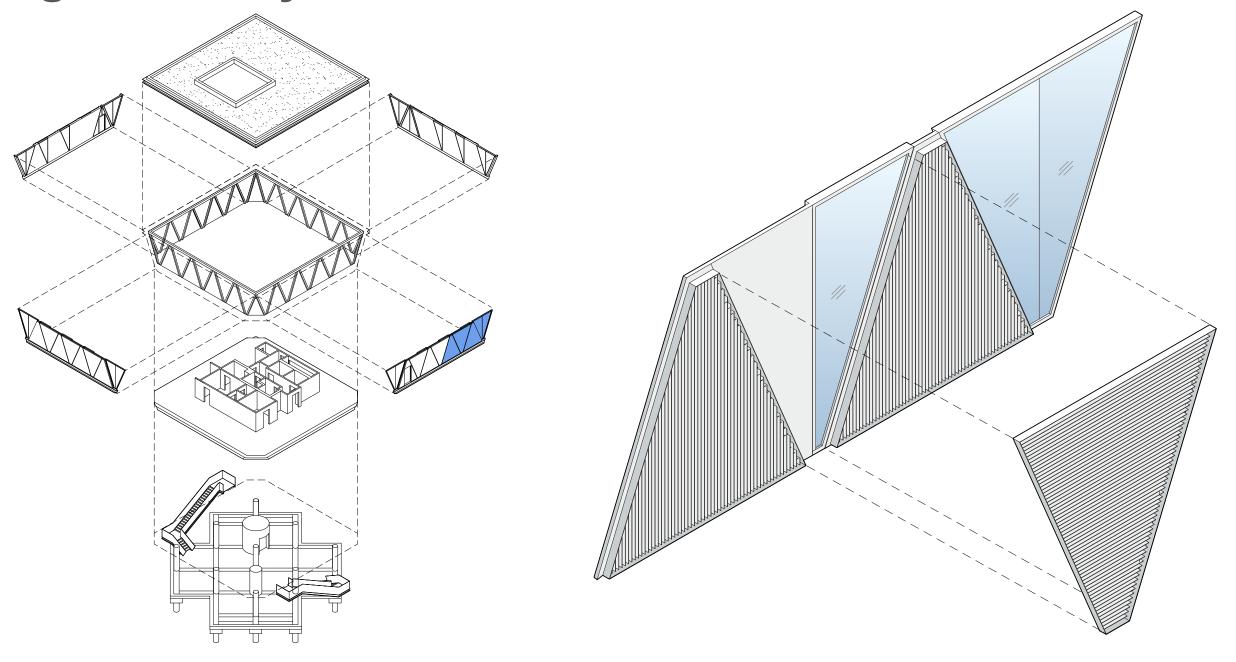






PDC Preliminary Design Review 79th Street Boat Basin | Roof Plan

Building Assembly

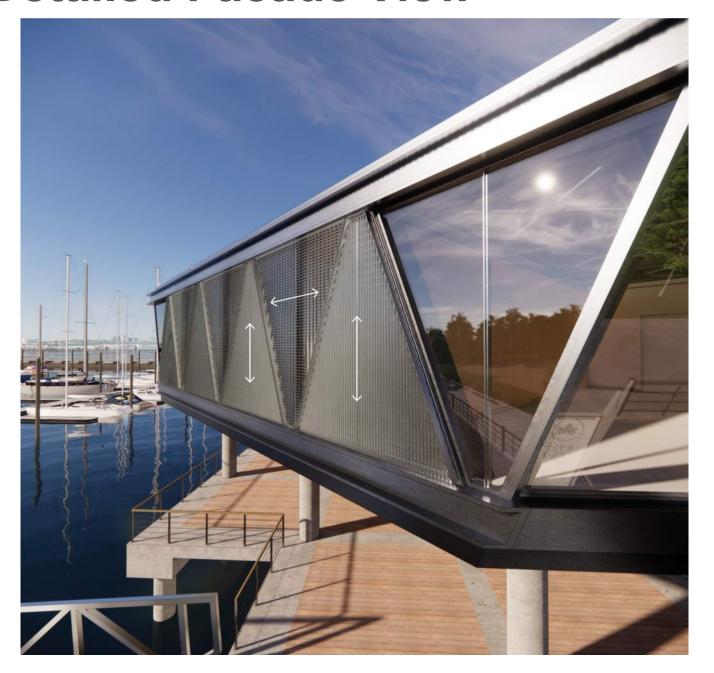


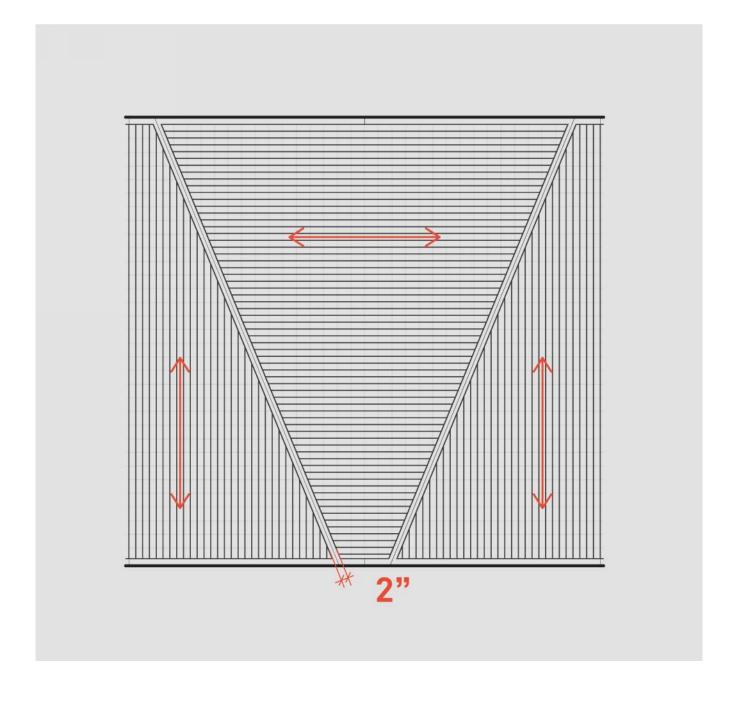






Detailed Facade View





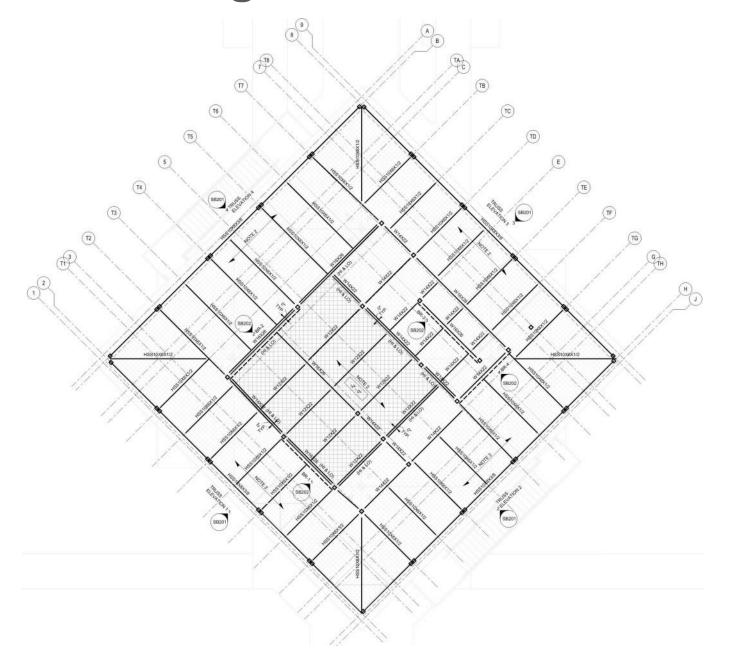


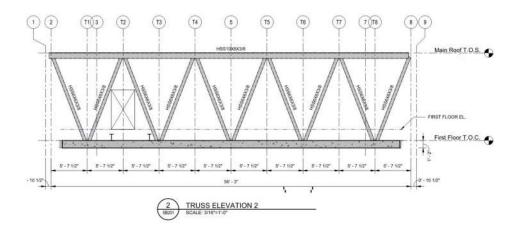


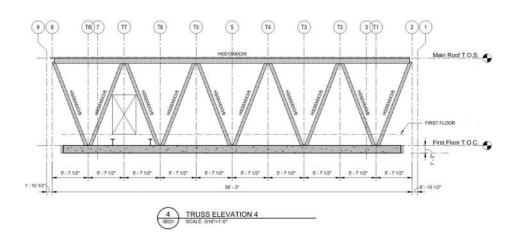




Structural Design









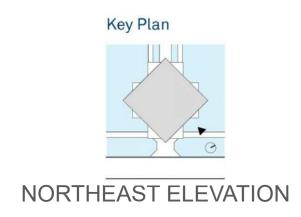


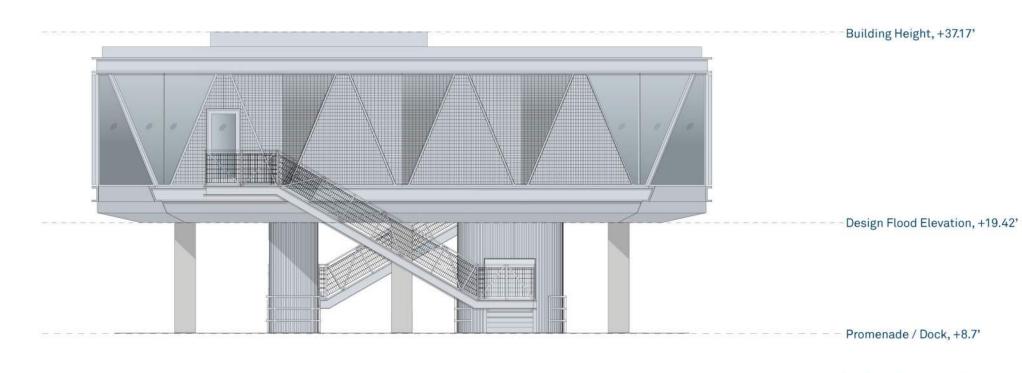


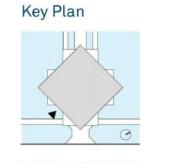


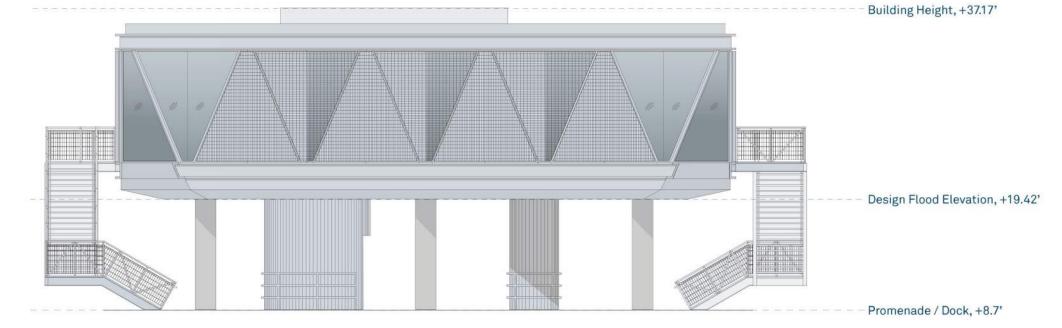
PDC Preliminary Design Review
79th Street Boat Basin | Structural Design















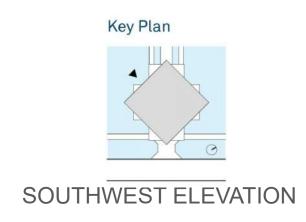


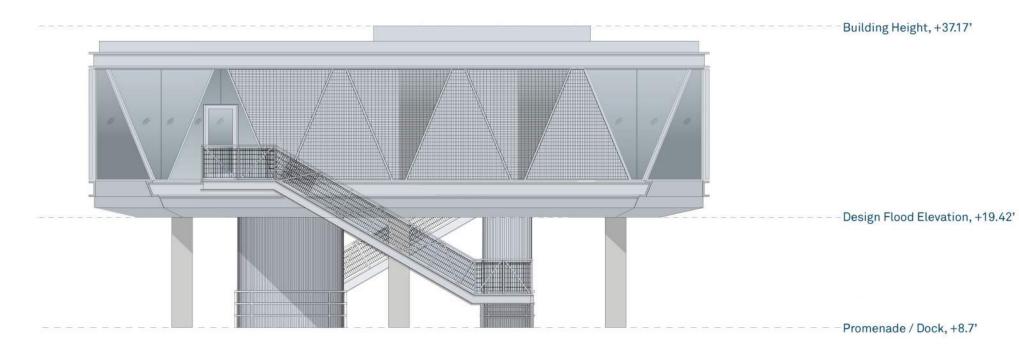
SOUTHEAST ELEVATION

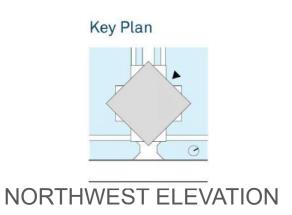


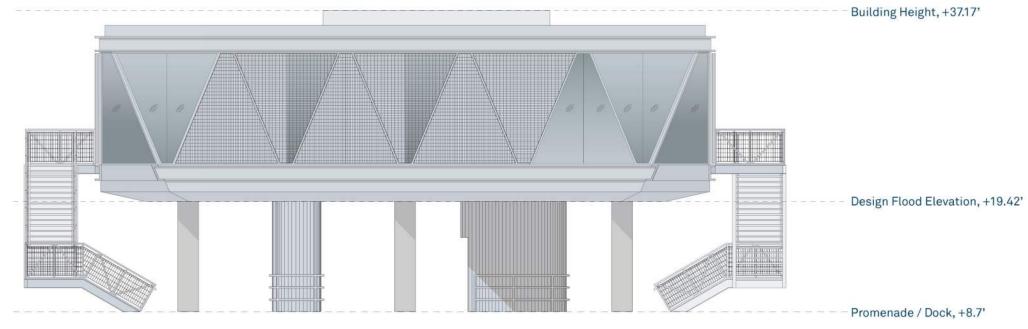
79th Street Boat Basin | Elevations - Northeast and Southeast











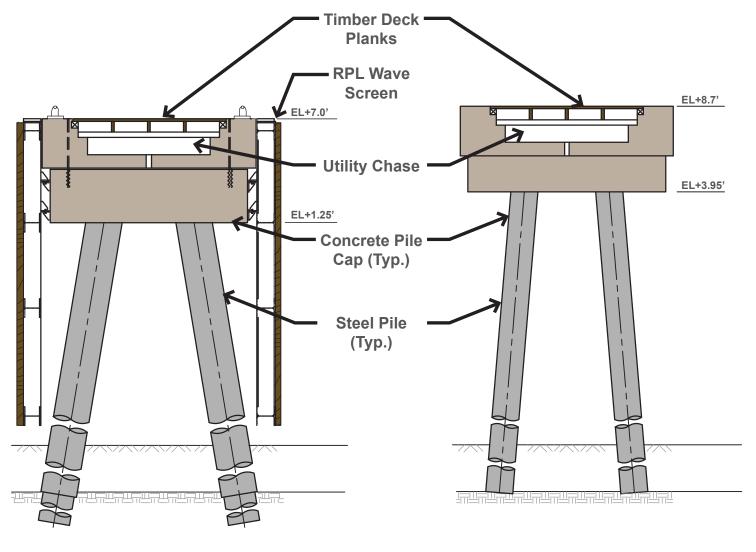


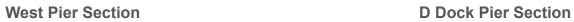


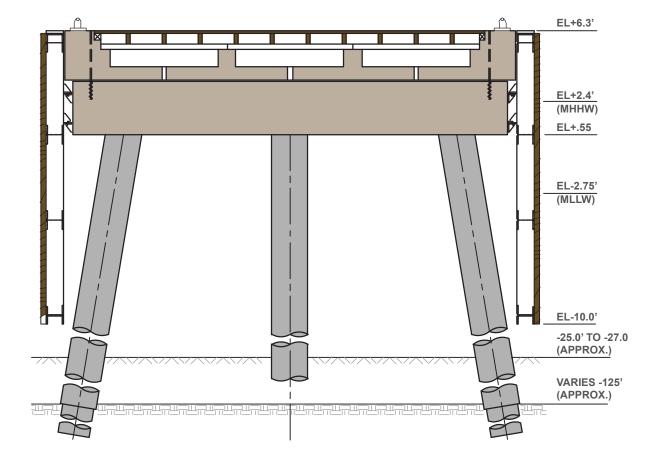


PDC Preliminary Design Review

79th Street Boat Basin | Elevations - Southwest and Northwest







A Dock Pier Extension Section









PDC Preliminary Design Review
79th Street Boat Basin | Fixed Pier Sections

Design Principles

- Design for Resiliency
- Elevate building above flood level per code requirements
- Unenclosed lower level per code requirements
- Vertical lift with mechanical located above floor level
- Reduce Ecological Impact
- Area of building over water is minimized
- Building contains only water-dependent uses
- LEED Silver
- Bird-friendly glazing
- Support Operational Requirements
- Purposeful, efficient program and planning
- Appropriate marina security and access
- Low maintenance, durable materials

- Context-Sensitive Design
- Building site is located away from rotunda
- No program in Riverside Park
- Smallest footprint to meet program requirements
- Minimize plenum space to reduce building height
- Visually screened exterior mechanical area
- Green roof
- Design Excellence
- Distinctive and memorable design
- Integrity of building form, structure and materials
- Respond to sight lines from land to water
- Large areas of windows facing land for transparency







Hudson Waterfront Precedents





GW Bridge from top level looking down



















Abandoned 69th Street Transfer Bridge







View Looking South Along Promenade









79th Street Boat Basin | View Looking South Along Promenade

View Looking West



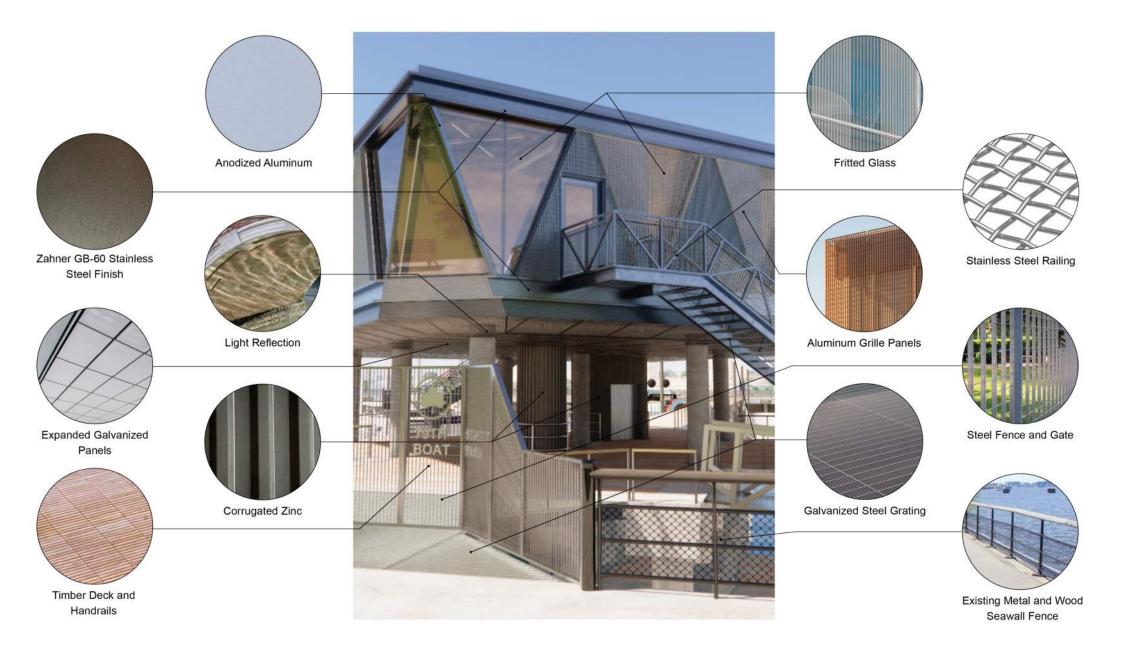








Building Materials











Various Lighting Conditions













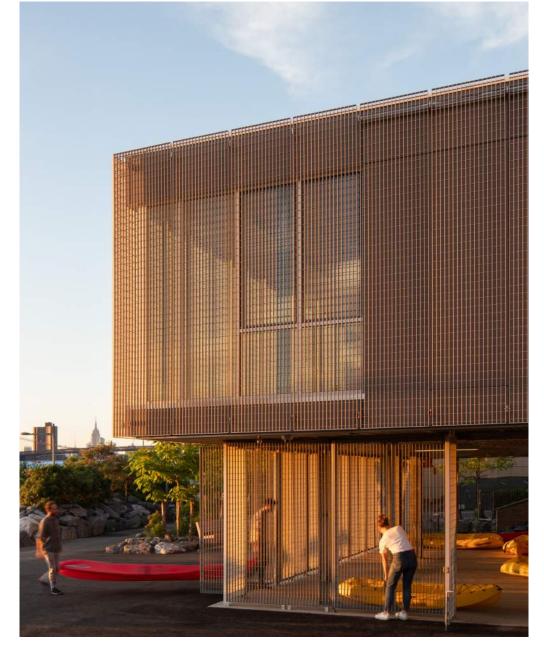




Brooklyn Bridge Park Boat House Facade Precedent







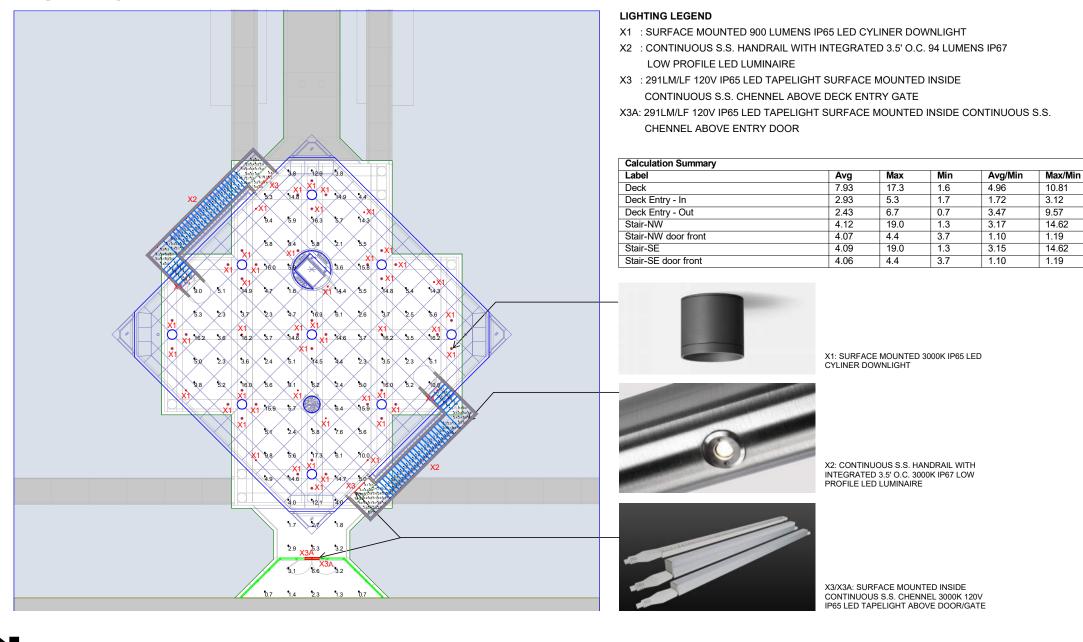






Lighting Design Strategies

Exterior / Site Lighting Study



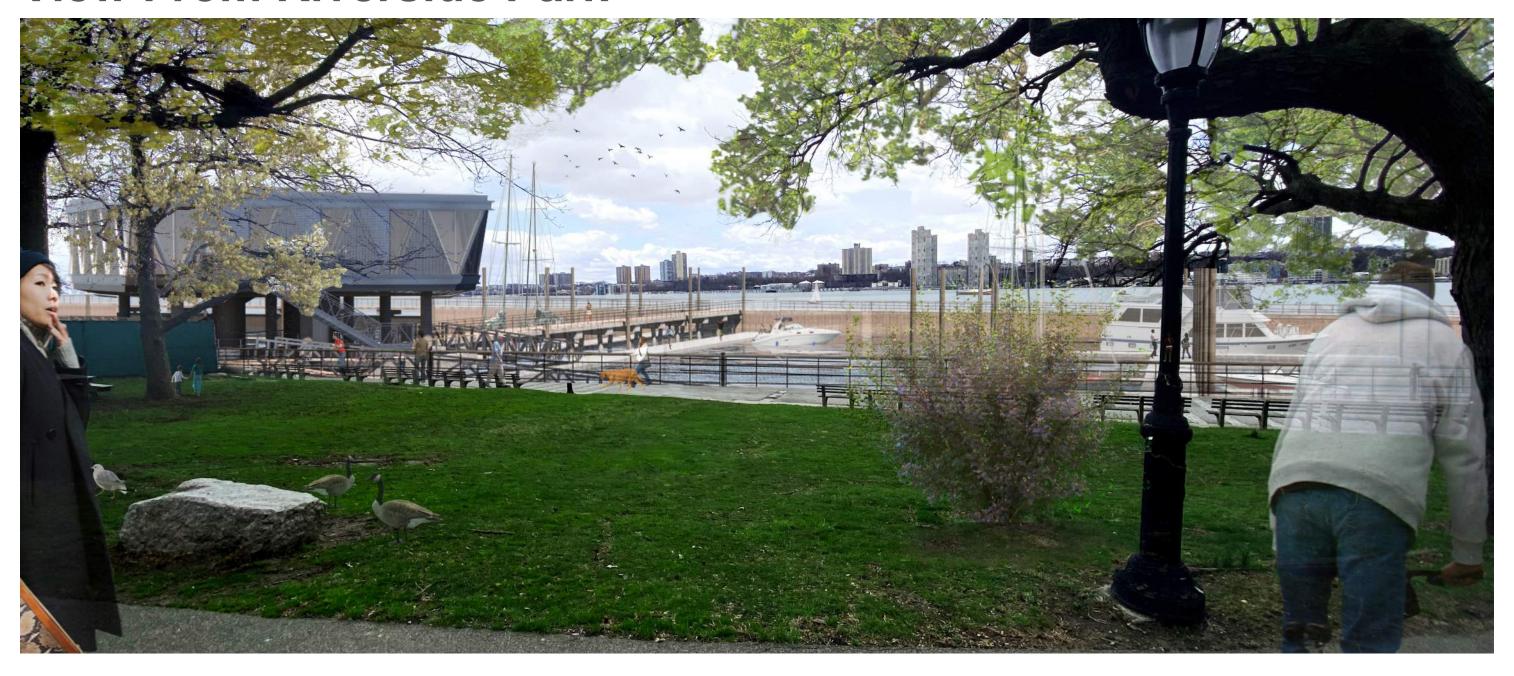








View From Riverside Park











79th Street Boat Basin | View From Riverside Park









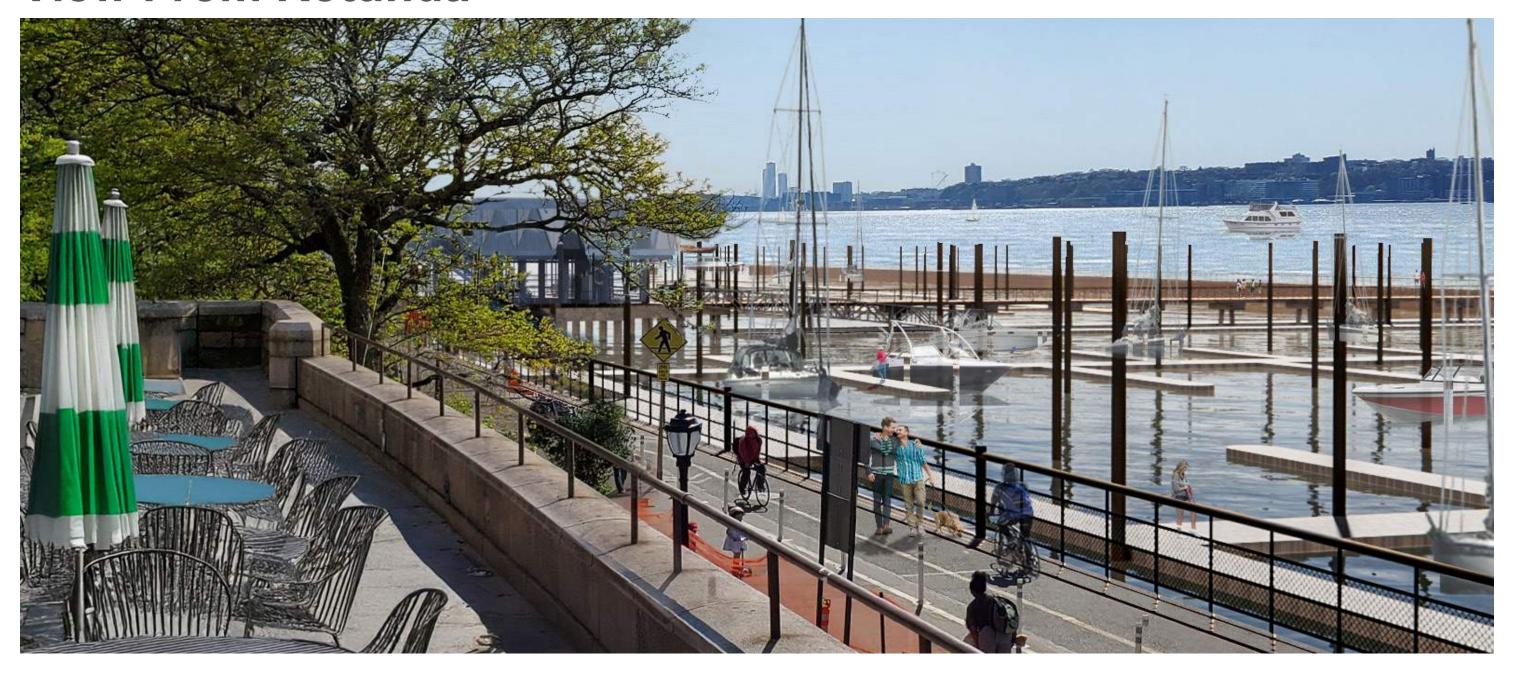








View From Rotunda

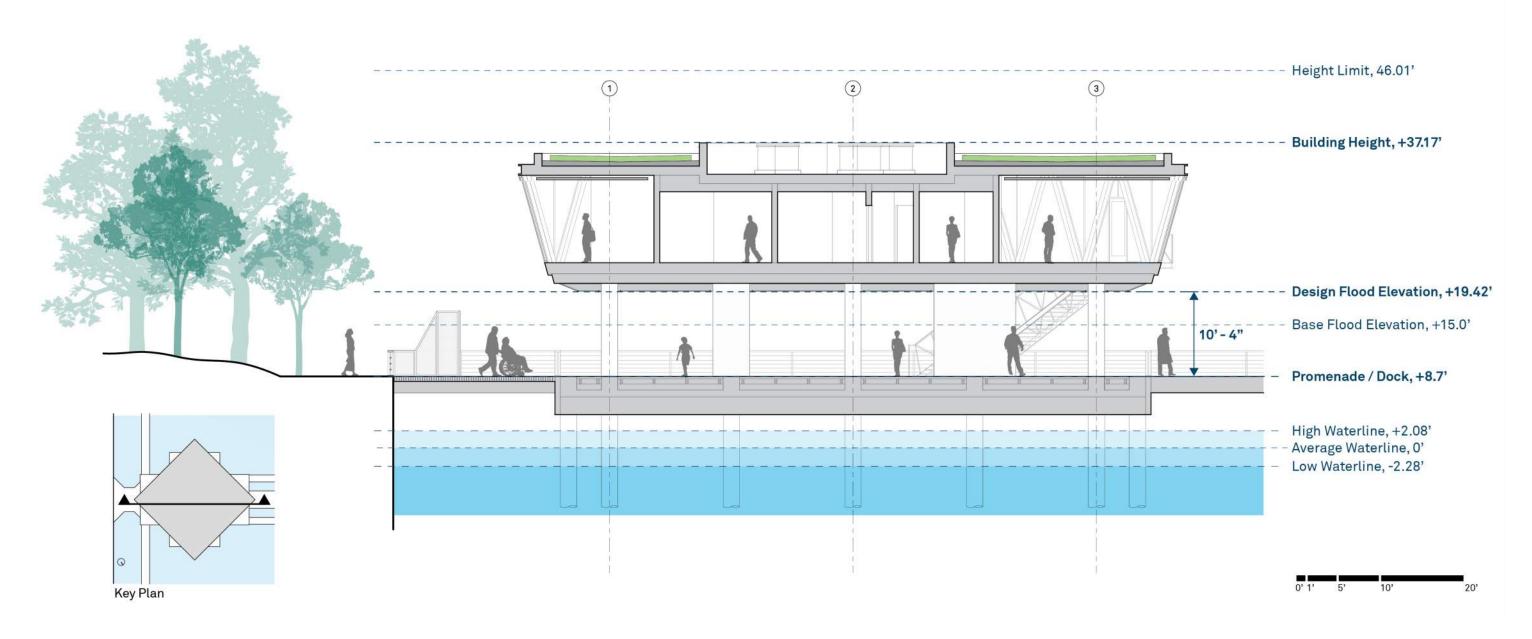








Building Section

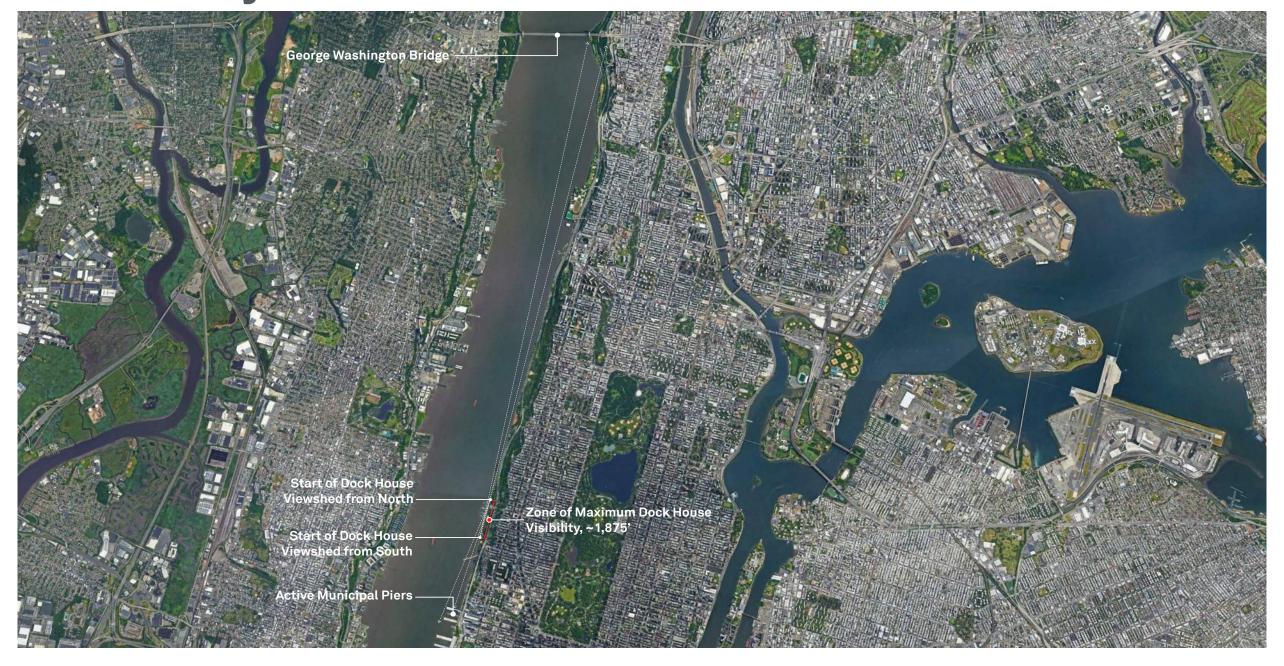








Viewshed Analysis











Viewshed Analysis











View From Afar Looking North













View From Afar Looking South











79th Street Boat Basin | View From Afar Looking South

Dockhouse Design Evolution

1. Dock House Location

- Fulfills operational requirements
- No program in Riverside Park
- Active section of Riverside Park

2. Dock House Visibility

- Not in viewshed of Rotunda
- Screened by existing trees
- Green roof

3. Hudson River View from Riverside Park

- Orientation of building
- Chamfered corners
- Fewer columns

4. Dock House Size

- Smaller floor area
- Minimum program required
- Minimum building height

5. Dock House Appearance

- Wholistic redesign
- 360 degree design strategy
- Design and materials connect to context

6. Dock House Transparency

- Active spaces on exterior
- Large corner windows
- Facade depth and shadow







Dock House Design Mitigation Measures

Screening

- Existing trees and topography block view of building
- Green roof blends building with vegetation

Relocation

- Site located away from Rotunda
- Building outside of 79th Street viewshed

Camouflage / Disguise

- Form and massing reduce apparent size
- 45 degree rotation reduces visibility from Park
- Faceted cladding creates changing shadows
- Low-luster cladding blends with water and sky

Low Profile

- Minimum floor elevation per FEMA flood requirement
- Plenum space minimized to reduce building height
- Visually screened exterior mechanical area
- No rooftop mechanical equipment

Downsizing

- Smallest floor area for program and code compliance
- Over-water footprint minimized per NYS DEC

Maintenance, Materials, Lighting

- Low maintenance, durable exterior materials
- Low-luster stainless steel cladding
- Lighting design will minimize glare and sky glow







Pier, Dock and Gangway Precedents



Timber Deck



Concrete Floating Docks



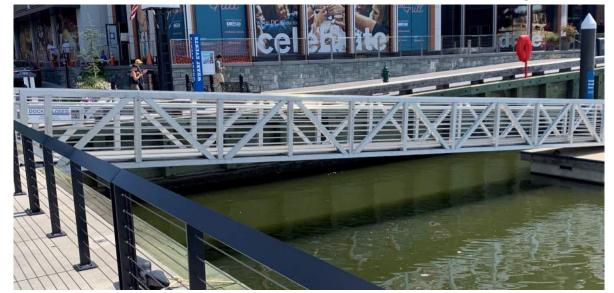
Vertical Plank Wave Screen



Floating Dock Pile Guides



Steel Piles & Concrete Pile Caps



Aluminum Gangway

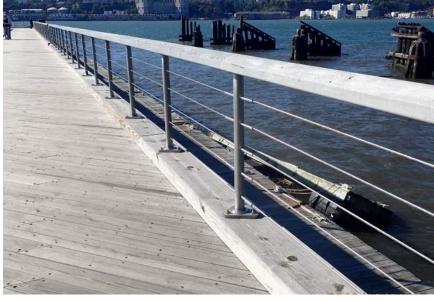






Searail/ Gates & Site Amenities Precedents







Promenade Searail

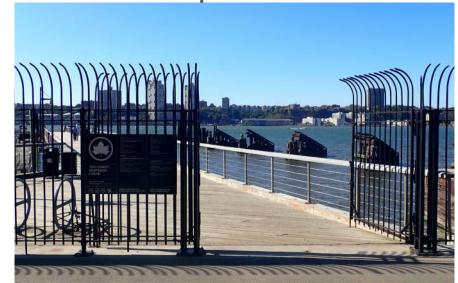
A-Dock Pipe/ Cable Searail

A-Dock Pipe/ Chain Searail









Utility/Power Pedestals

Dock Boxes

Pier Lighting

Existing A-Dock Steel Picket Gate



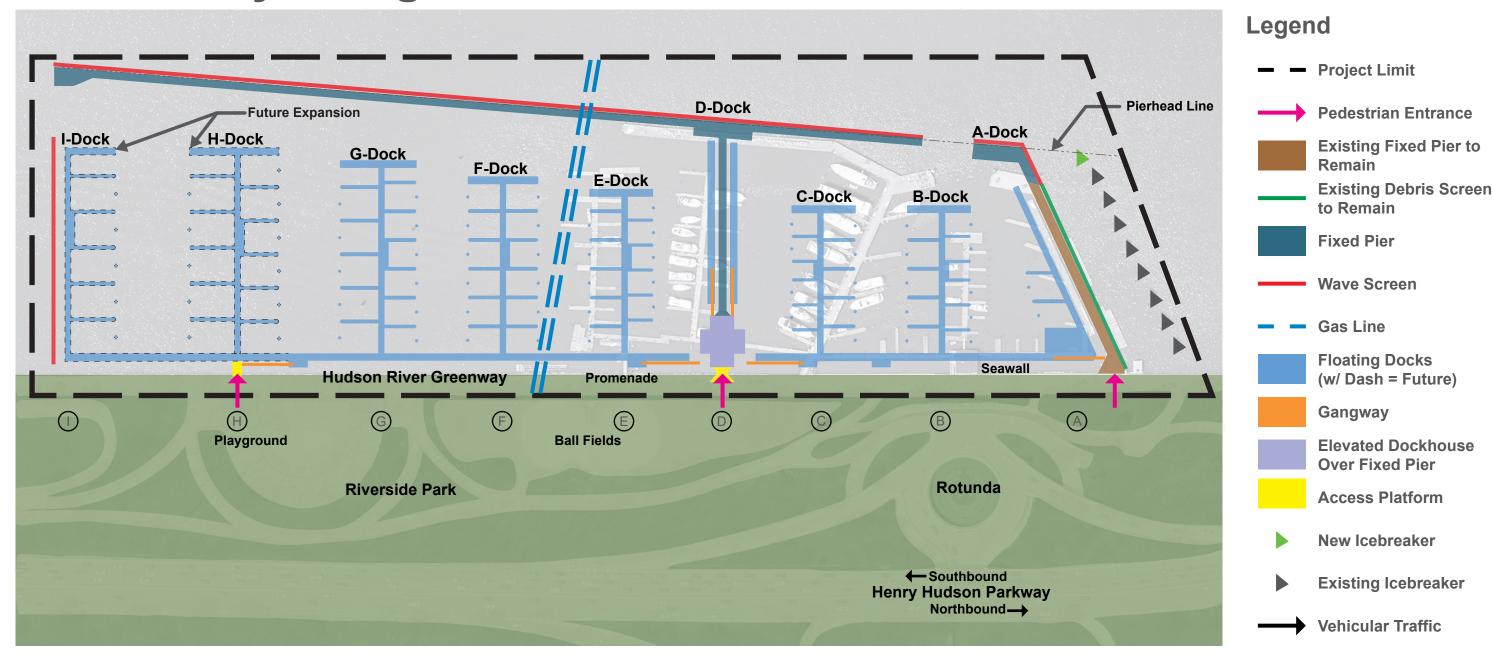






79th Street Boat Basin | Searail/ Gates & Site Amenities Precedents

Preliminary Design Plan



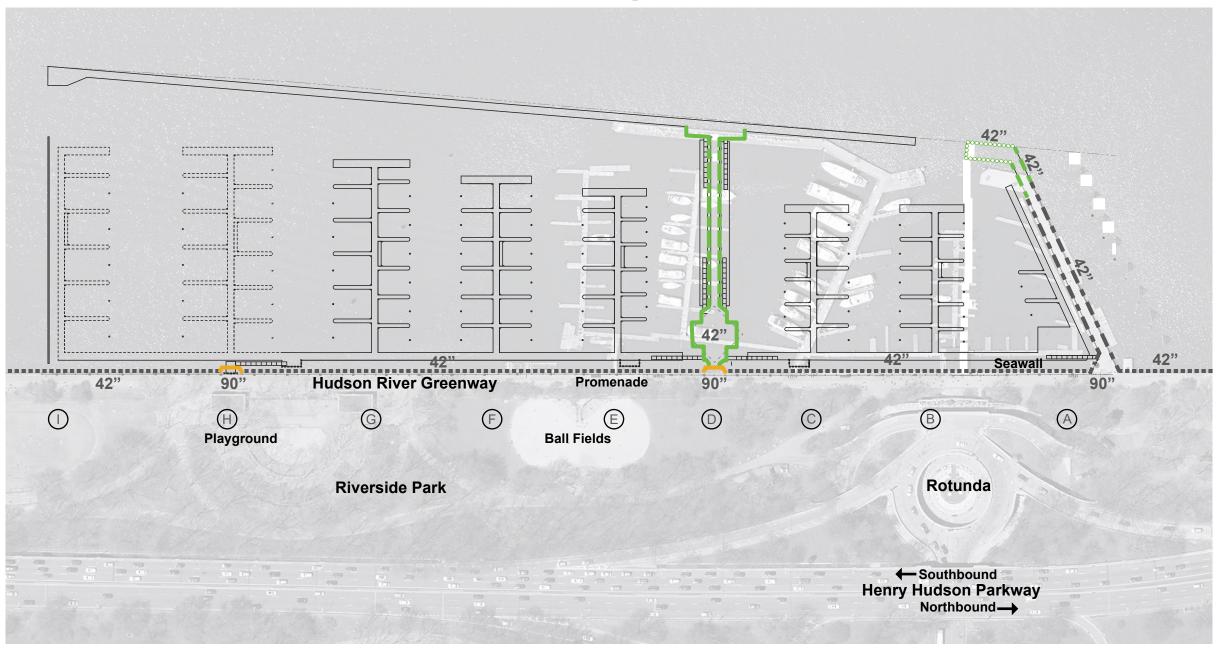




PDC Preliminary Design Review
79th Street Boat Basin | Preliminary Design Plan

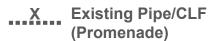


Proposed Searail/ Gate Diagram





(X = Height)





Existing Gate (A-Dock)

Proposed Pipe/Cable (A-Dock & Dockhouse)

Proposed Pipe/Chain (A-Dock)

Marina Entrance











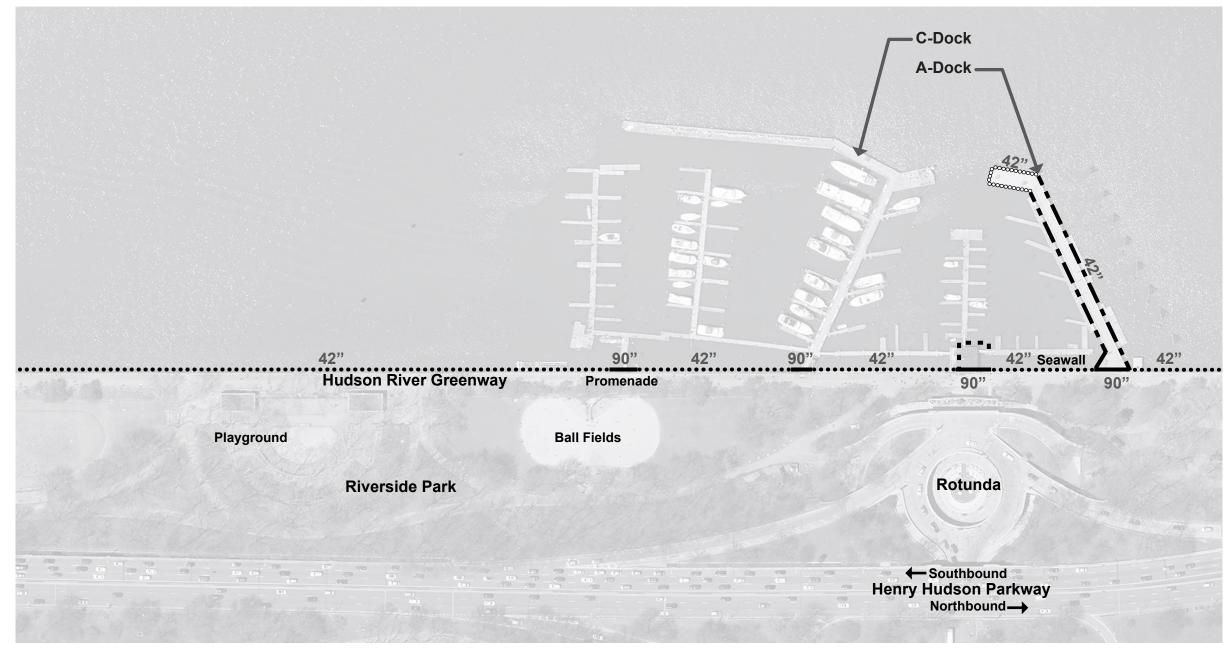




79th Street Boat Basin | Proposed Searail/ Gate Diagram



Existing Searail/ Gate Diagram





(X = Height)

X Pipe/CLF (Promenade)

X Pipe (Dockhouse Deck)

X Pipe/Cable (A-Dock)

Pipe/Chain (A-Dock)

X Steel Picket Gate

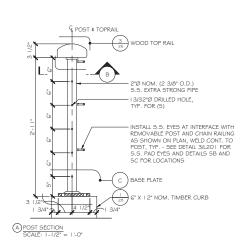


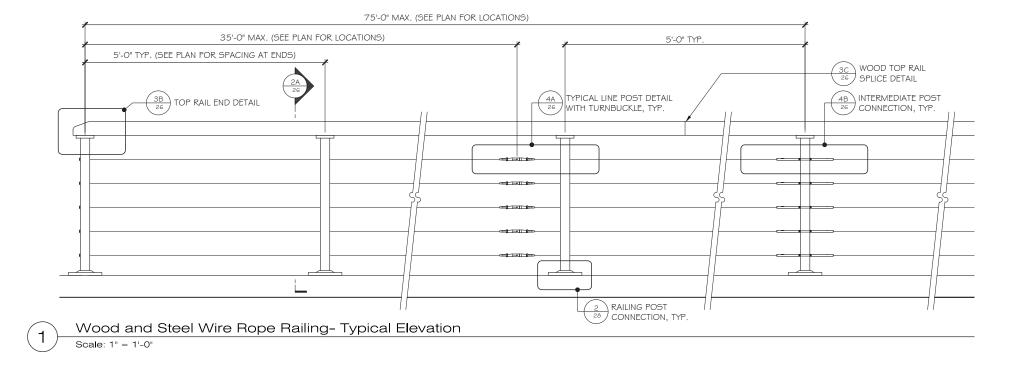




PDC Preliminary Design Review 79th Street Boat Basin | Existing Searail/ Gate Diagram



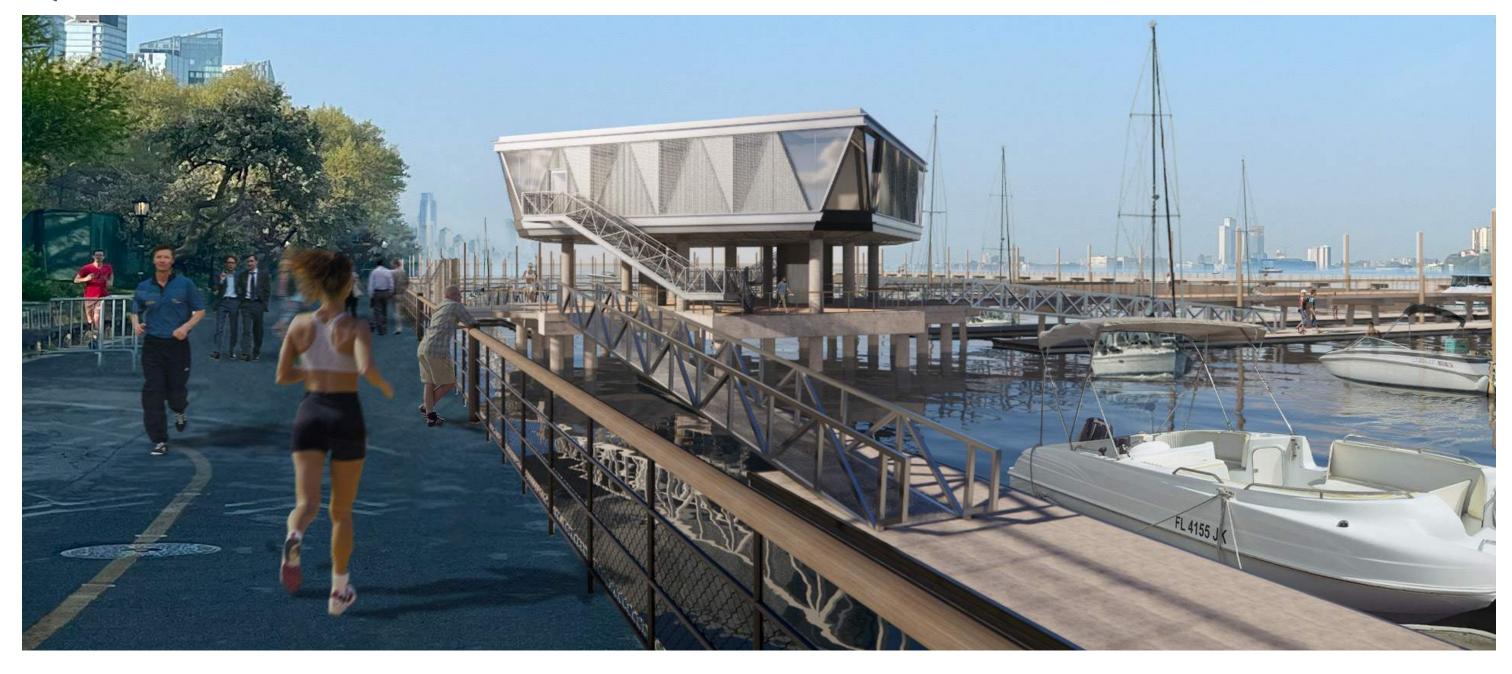








Q&A











PDC Preliminary Design Review 79th Street Boat Basin | Q&A