



# PUBLIC NOTICE

US Army Corps  
of Engineers  
New York District  
Jacob K. Javits Federal Building  
New York, N.Y. 10278-0090  
ATTN: Regulatory Branch

In replying refer to:  
Public Notice Number: **NAN-2022-00423-EMI**  
Issue Date: **October 26, 2022**  
Expiration Date: **November 25, 2022**

To Whom It May Concern:

The New York District, Corps of Engineers has received an application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344).

APPLICANT: New York City Department of Parks and Recreation  
117-02 Roosevelt Avenue  
Flushing, New York 11368

ACTIVITY: Lower Manhattan Coastal Resiliency - Battery Wharf Replacement

WATERWAY: Hudson River / Upper New York Bay

LOCATION: The Battery, Borough of Manhattan, New York County, City of New York, New York

A detailed description and plans of the applicant's activity are enclosed to assist in your review.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

ALL COMMENTS REGARDING THE PERMIT APPLICATION MUST BE PREPARED IN WRITING

**CENAN-OP-RE**  
**PUBLIC NOTICE NO. NAN-2022-00423-EMI**

AND EMAILED TO REACH THIS OFFICE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

Comments submitted in response to this notice will be fully considered during the public interest review for this permit application. Comments provided will become part of the public record for this permit application. All written comments, including contact information, will be made a part of the administrative record, available to the public under the Freedom of Information Act. The Administrative Record, or portions thereof, may also be posted on a Corps of Engineers internet web site. Due to resource limitations, this office will normally not acknowledge the receipt of comments or respond to individual letters of comment.

Any person may request, in writing, before this public notice expires, that a public hearing be held to collect information necessary to consider this application. Requests for public hearings shall state, with particularity, the reasons why a public hearing should be held. It should be noted that information submitted by email is considered just as carefully in the permit decision process and bears the same weight as that furnished at a public hearing.

Our preliminary determination is that the activity for which authorization is sought herein is not likely to affect any Federally endangered or threatened species or their critical habitat. However, pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the District Engineer is consulting with the appropriate Federal agency to determine the presence of and potential impacts to listed species in the project area or their critical habitat.

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act (Public Law 104-267), requires all Federal agencies to consult with the National Oceanic and Atmospheric Administration Fisheries Service (NOAA/FS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). The proposed work, fully described in the attached work description, could cause the disruption of habitat for various lifestages of some EFH-designated species as a result of a temporary increase in turbidity during construction. However, the New York District has made the preliminary determination that the site-specific adverse effects are not likely to be substantial because it is expected that fish populations would avoid the small area of disturbance. Further consultation with NOAA/FS regarding EFH impacts and conservation recommendations is being conducted and will be concluded prior to the final decision.

Based upon a review of the latest published version of the National Register of Historic Places and the New York State Cultural Resources Information System (CRIS) Mapper, there are multiple sites known sites, including Castle Clinton and City Pier A, that are listed as eligible for, or included in, the Register within the permit area. New York District has made the preliminary determination that the proposed activities would have no adverse effect on these resources. Presently unknown archeological, scientific, prehistorical, or historical data may be lost by work accomplished under the required permit.

Reviews of activities pursuant to Section 404 of the Clean Water Act will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 (b) of the Clean Water Act and the applicant will obtain a water quality certificate or waiver from the appropriate state agency in accordance with Section 401 of the Clean Water Act prior to a permit decision.

Pursuant to Section 307 (c) of the Coastal Zone Management Act of 1972 as amended [16 U.S.C. 1456 (c)], for activities under consideration that are located within the coastal zone of a state which

**CENAN-OP-RE**  
**PUBLIC NOTICE NO. NAN-2022-00423-EMI**

has a federally approved coastal zone management program, the applicant has certified in the permit application that the activity complies with, and will be conducted in a manner that is consistent with, the approved state coastal zone management program. By this public notice, we are requesting the state's concurrence with, objection to, or waiver of the applicant's certification. No permit decision will be made until one of these actions occur. For activities within the coastal zone of New York State, the applicant's certification and accompanying information is available from the Consistency Coordinator, New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, Coastal Zone Management Program, One Commerce Plaza, 99 Washington Avenue, Albany, New York 12231, Telephone (518) 474-6000. Comments regarding the applicant's certification, and copies of any letters to this office commenting upon this proposal, should be so addressed.

In addition to any required water quality certificate and coastal zone management program concurrence, the applicant has obtained or requested the following governmental authorization for the activity under consideration:

- New York State Department of Environmental Conservation

It is requested that you communicate the foregoing information concerning the activity to any persons known by you to be interested and who did not receive a copy of this notice. Please send all comments and questions concerning this application to [Christopher.W.Minck@usace.army.mil](mailto:Christopher.W.Minck@usace.army.mil).

In order for us to better serve you, please complete our Customer Service Survey located at <http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx>.

For more information on New York District Corps of Engineers programs, visit our website at <http://www.nan.usace.army.mil>.

**FOR AND IN BEHALF OF**

Stephan A. Ryba  
Chief, Regulatory Branch

Enclosures

## **WORK DESCRIPTION**

The permit applicant, New York City Department of Parks and Recreation, has requested Department of the Army (DA) authorization to replace the Battery Wharf in the Hudson River and New York Harbor at The Battery, Borough of Manhattan, New York County, City of New York, New York.

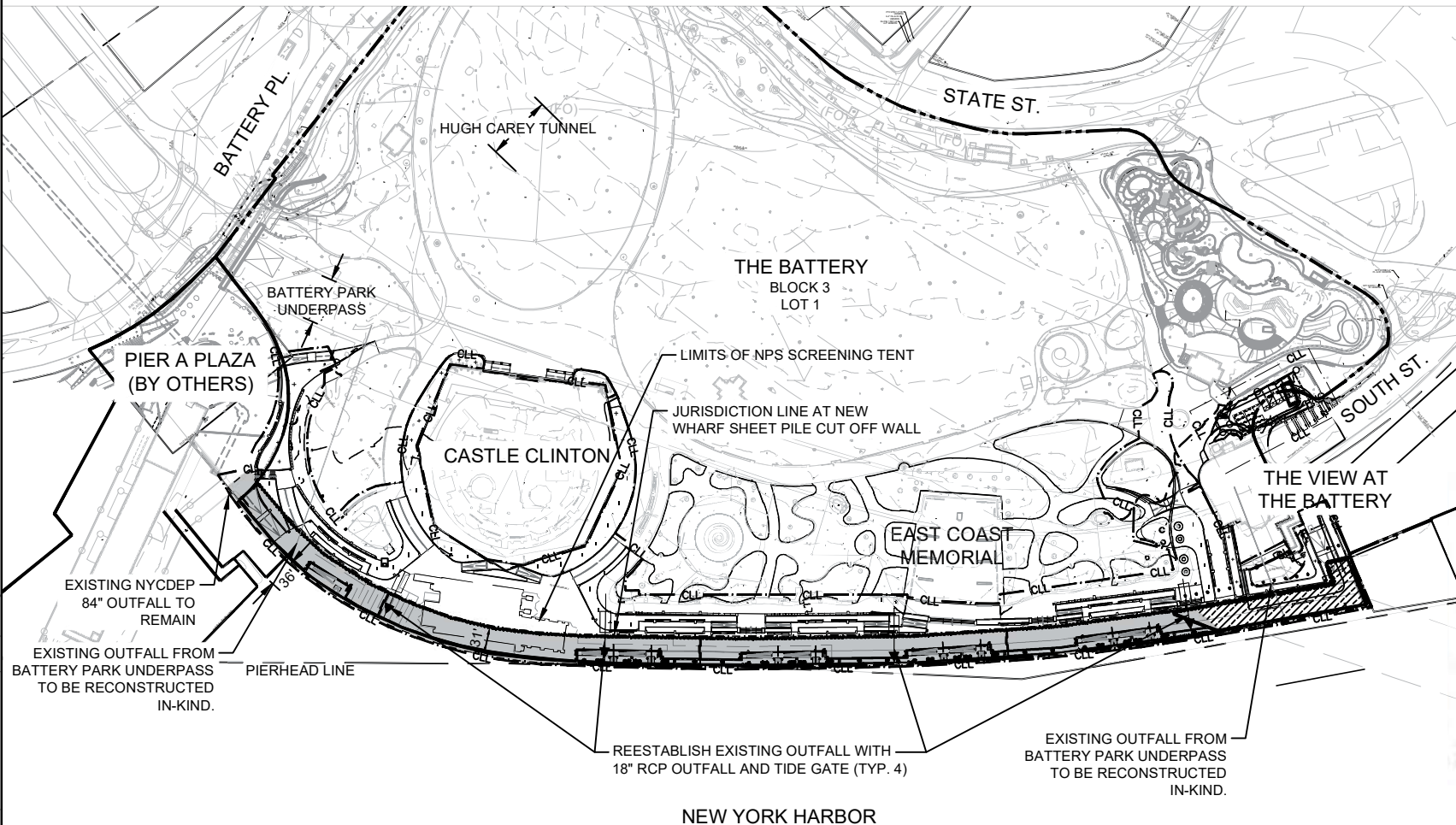
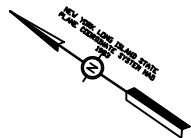
The proposed work would involve the following:

Removal of the existing approximately 36,850 square foot overwater Battery Wharf structures including six existing berths along the face of the wharf. The existing approximately two hundred and forty-four (244) timber piles will be extracted or cut at the mudline. The new approximately 46,085 square foot wharf will be reconstructed within the same general footprint as previously existing but at an elevation of 11.0 feet NAVD88, approximately five feet higher than existing. The new wharf structure will be constructed atop approximately two hundred and twenty-six (226) 24-inch diameter square concrete piles. Along the eastern end of the wharf that is located above the H.L. Carey Tunnel, approximately eighteen (18) 24-inch diameter caissons filled with concrete and six (6) 30-inch diameter caissons filled with concrete will be installed to support the wharf structure. The new wharf will incorporate five (5) berths, four (4) of which will incorporate two (2) slips, each, for a total of nine slips with associated timber fendering systems. Approximately two hundred and forty (240) timber fender piles will be installed. Fender piles will be installed in five-pile clusters along the wharf fascia.

Four existing stormwater outfalls will be replaced and increased to 18-inches in diameter and will have a higher invert elevation and tide gate. Two additional stormwater outfalls will be replaced in-place.

The applicant has stated that they have avoided, minimized, and mitigated for potential impacts proposed, to the maximum extent practicable by replacing the wharf within the same footprint and not extending the proposed wharf further seaward than existing. The increase in size of the wharf is a result of expansion upland. Additionally, a soft start and a vibratory hammer will be used for pile installation, as practicable.

The proposed activities are part of the Lower Manhattan Coastal Resiliency (LMCR) strategy by the City of New York. The purpose for the project is to raise the elevation of the wharf to enhance the southern tip of Manhattan's resiliency against storm surge tidal flood risk and sea level rise.



NEW YORK HARBOR

## LEGEND:

PROJECT LIMIT LINE

PROPERTY LINE

JURISDICTION LINE

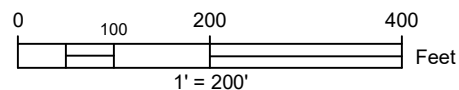
PILE SUPPORTED PLATFORM

BRIDGE STRUCTURE OVER HUGH L. CAREY TUNNEL

— CLL —

— — — — —

— · — · — · —



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**E/EDC** New York City  
Economic Development  
Corporation  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



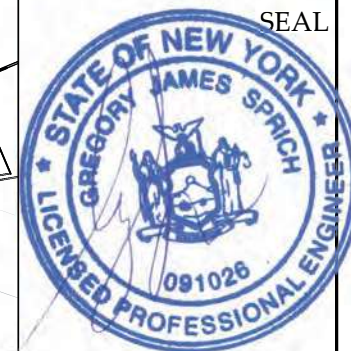
City of New York  
Parks & Recreation  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10018-2799  
www.stantec.com



REVISION: DATE: COMMENT:

DRAWING TITLE:

OVERALL SITE PLAN

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

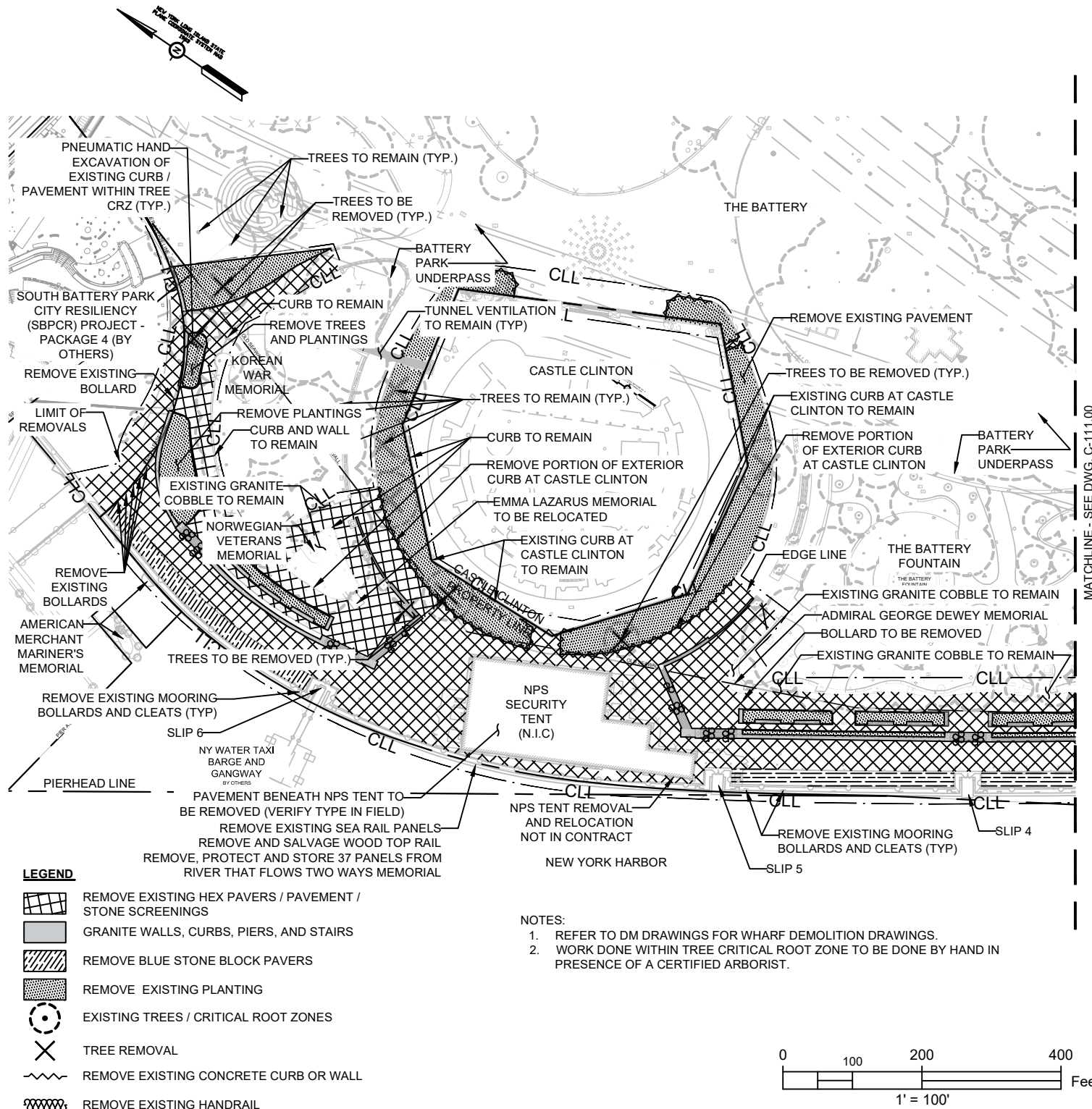
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

C-100.00

SHEET 1 OF 47



# LOWER MANHATTAN COASTAL RESILIENCY

## - BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com



REVISION: DATE: COMMENT:

DRAWING TITLE:

**REMOVALS PLAN - 01**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

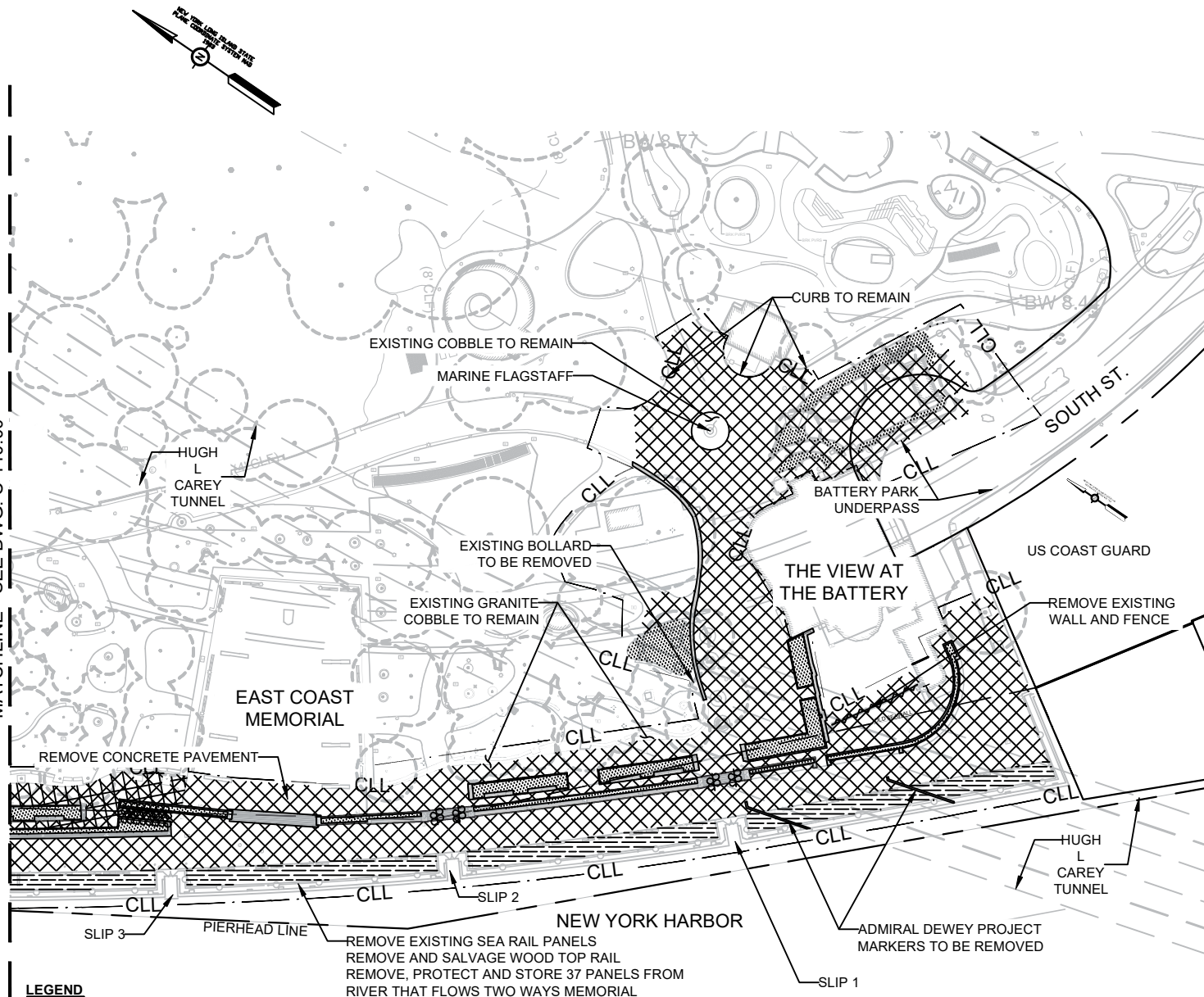
SHEET SIZE: 8.5" X 11"

DRAWING NO.

**C-110.00**

SHEET 11 OF 47

MATCHLINE - SEE DWG. C-110.00

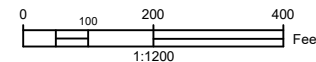


## LEGEND

- REMOVE EXISTING HEX PAVERS / PAVEMENT / STONE SCREENINGS
- GRANITE WALLS, CURBS, PIERS, AND STAIRS
- REMOVE BLUE STONE BLOCK PAVERS
- REMOVE EXISTING PLANTING
- EXISTING TREES / CRITICAL ROOT ZONES
- TREE REMOVAL
- REMOVE EXISTING CONCRETE CURB OR WALL
- REMOVE EXISTING HANDRAIL

## NOTES:

1. REFER TO DM DRAWINGS FOR WHARF DEMOLITION DRAWINGS.
2. WORK DONE WITHIN TREE CRITICAL ROOT ZONE TO BE DONE BY HAND IN PRESENCE OF A CERTIFIED ARBORIST.



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

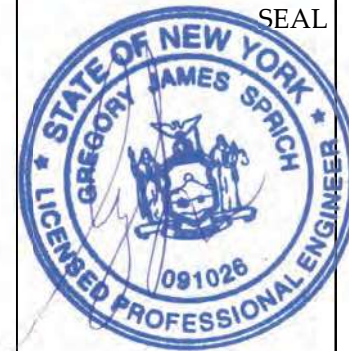
**E/EDC** New York City  
Economic Development  
Corporation  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

City of New York  
Parks & Recreation  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

Stantec  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com



REVISION: DATE: COMMENT:

DRAWING TITLE:

REMOVALS PLAN - 02

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7798

DATE: SEPTEMBER 16, 2022

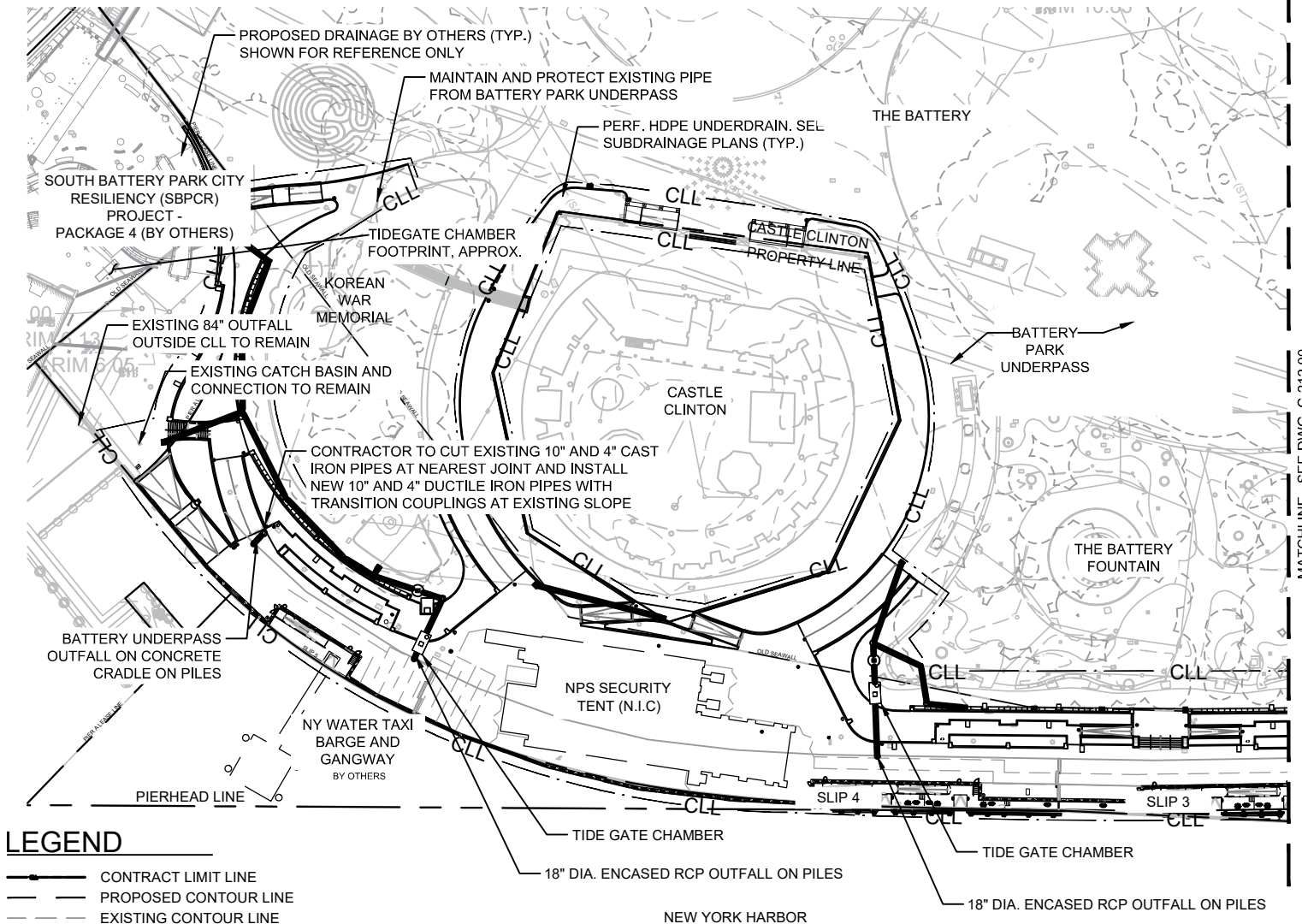
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

C-111.00

SHEET 3 OF 47



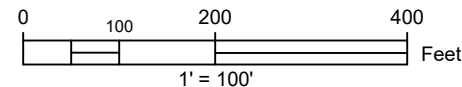
MATCHLINE - SEE DWG. C-212.00

## LEGEND

- CONTRACT LIMIT LINE
- PROPOSED CONTOUR LINE
- EXISTING CONTOUR LINE
- EXISTING STORM SEWER
- EXISTING CATCH BASIN
- EXISTING STORM MANHOLE
- PROPOSED STORM SEWER
- PROPOSED PERF. HDPE UNDERDRAIN
- PROPOSED NYCDPR C-1 CATCH BASIN WITH PARKS LEAF CATCH BASIN COVER
- PROPOSED NYCDPR C-1 CATCH BASIN WITH BEEHIVE GRATE
- PROPOSED NYCDPR C-2 CATCH BASIN WITH ADA CATCH BASIN COVER
- PROPOSED NYCDPR M-3 MANHOLE WITH LEAF MANHOLE COVER
- PROPOSED CLEANOUT
- PROPOSED HYDRODYNAMIC SEPARATOR
- PROPOSED TIDE GATE CHAMBER
- TREE CRITICAL ROOT ZONE

## NOTES:

1. EXISTING OUTFALLS MUST BE MAINTAINED AND OPERATIONAL UNTIL ADJACENT NEW OUTFALL IS CONSTRUCTED AND TIED INTO THE EXISTING SEWER SYSTEM.



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:



**New York City  
Economic Development  
Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



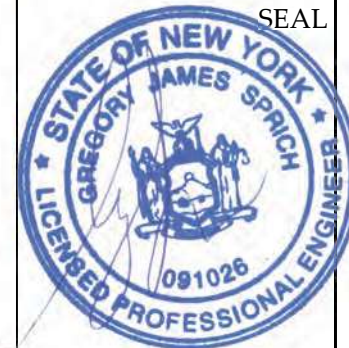
**City of New York  
Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com



REVISION:      DATE:      COMMENT:

DRAWING TITLE:

**DRAINAGE PLAN - 01**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

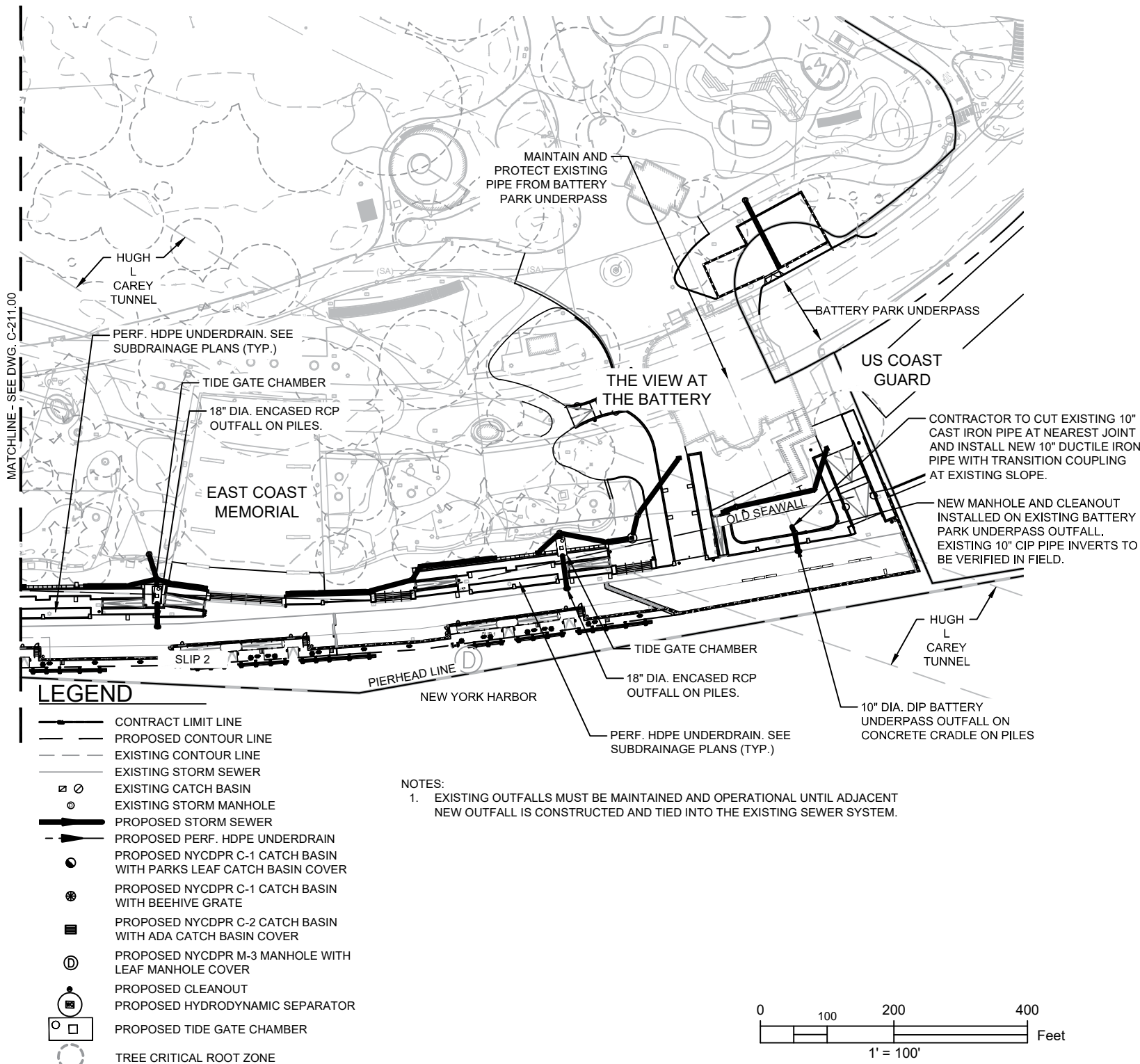
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**C-211.00**

SHEET 23 OF 47



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

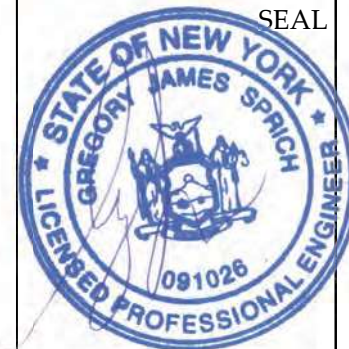
**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com



REVISION: DATE: COMMENT:

DRAWING TITLE:

**DRAINAGE PLAN - 02**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

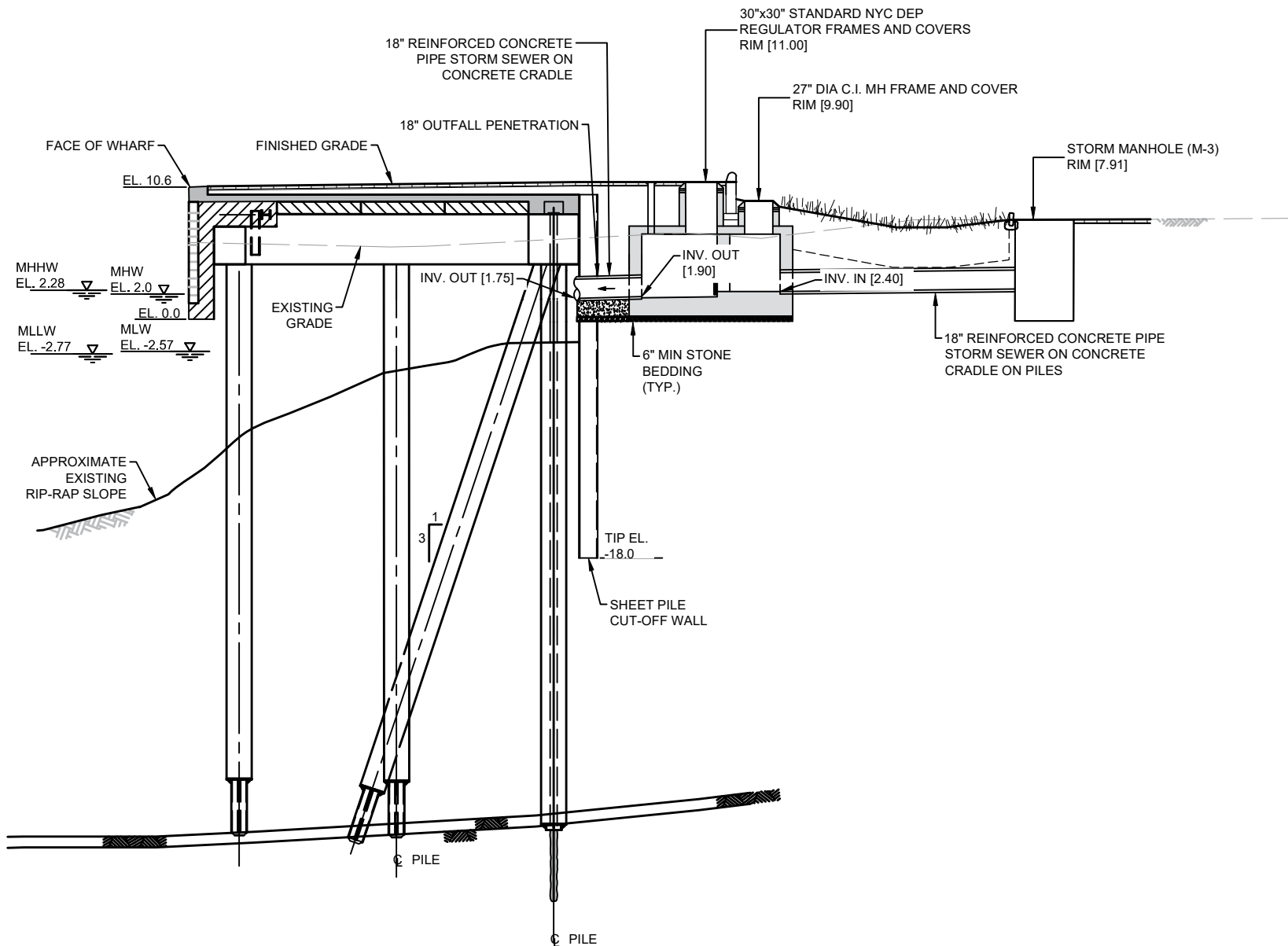
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**C-212.00**

SHEET 24 OF 47



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

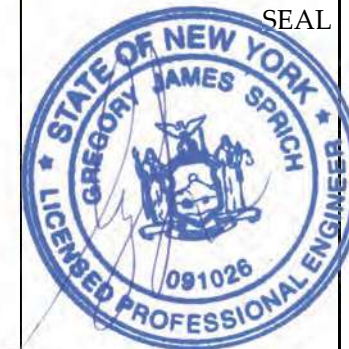
**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2297  
www.stantec.com



REVISION: DATE: COMMENT:

DRAWING TITLE:

**OUTFALL SECTIONS - 01**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

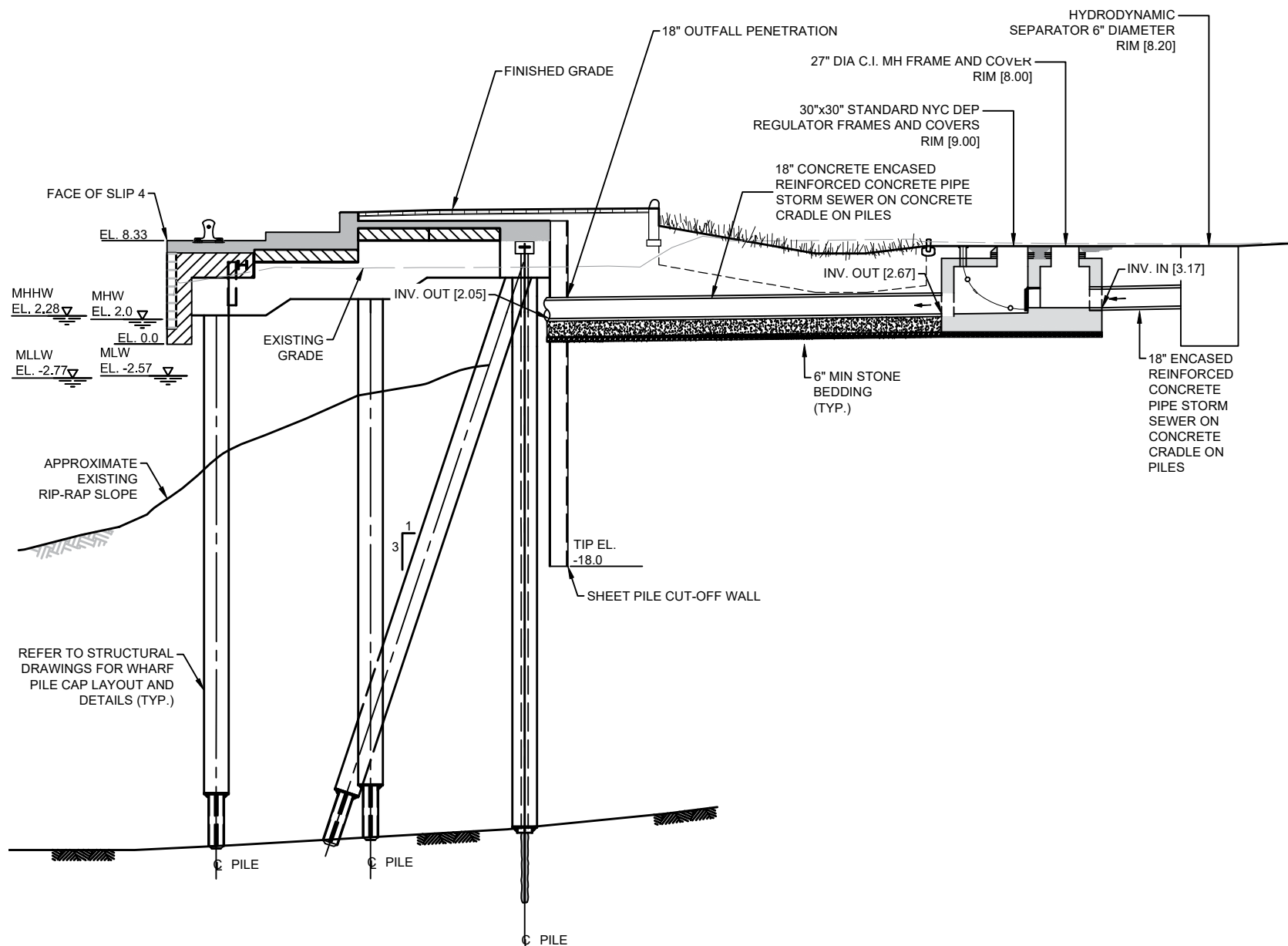
**C-301.00**

SHEET 27 OF 47

1 18" RCP OUTFALL ON PILES - 1  
SCALE: 1" = 1'

USER = V.A. DATE/TIME = Sep 08, 2022 -- 5:01pm

FILE NAME = C:\pw\_working\infra01\anmei\dms73260\C-603.00-609.00\_stn\_plt.dwg



1 18" RCP OUTFALL ON PILES - 2  
SCALE: 1" = 1'

LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:



**New York City  
Economic Development  
Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



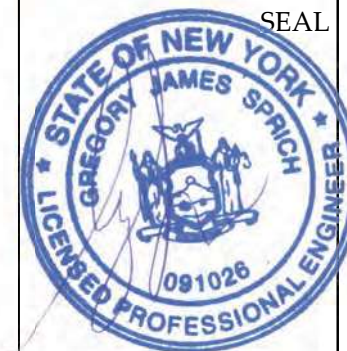
**City of New York  
Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10017-2298  
www.stantec.com



REVISION:      DATE:      COMMENT:

DRAWING TITLE:

**OUTFALL SECTIONS -  
02**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

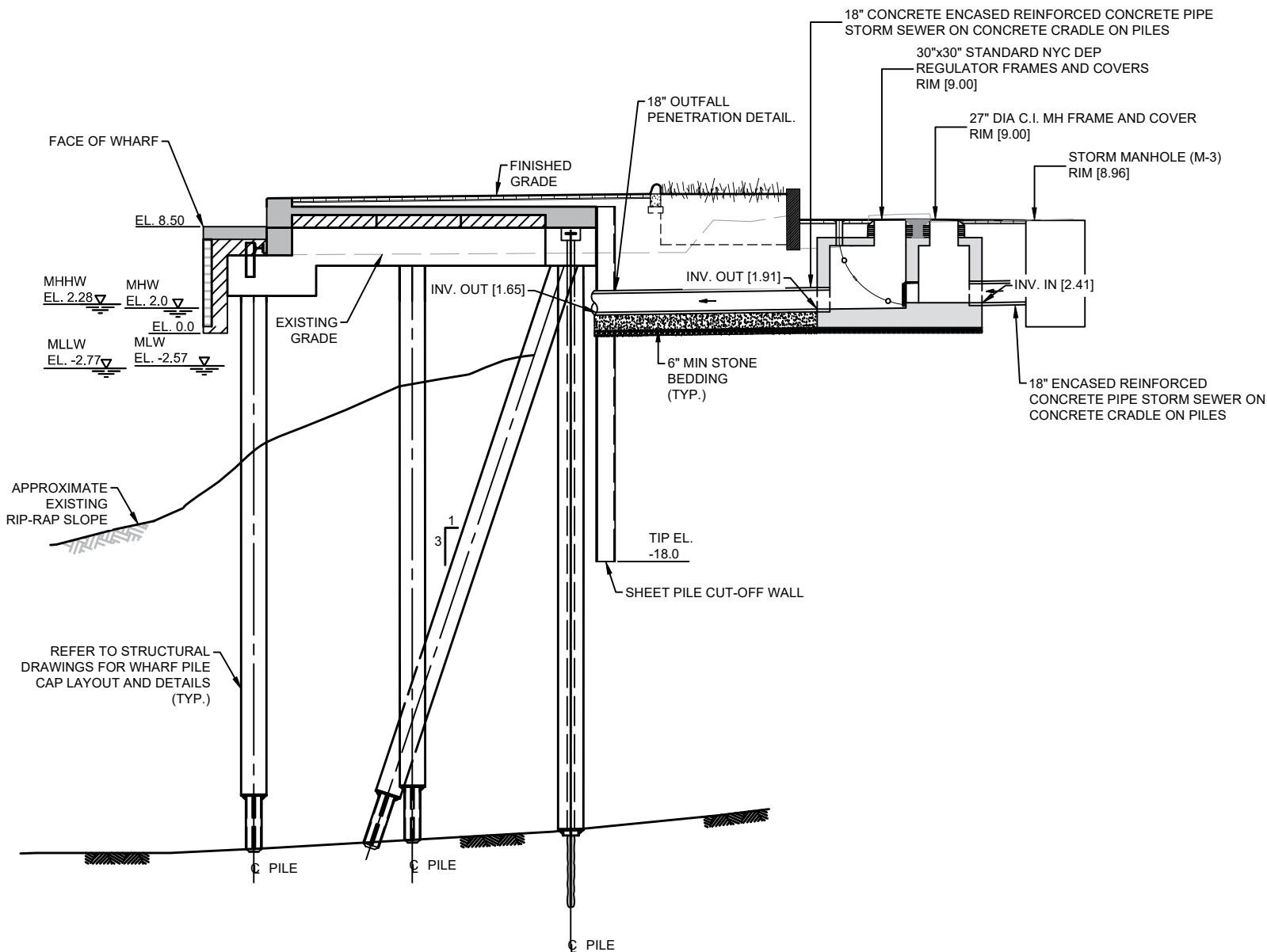
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**C-302.00**

SHEET **7** OF **47**



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

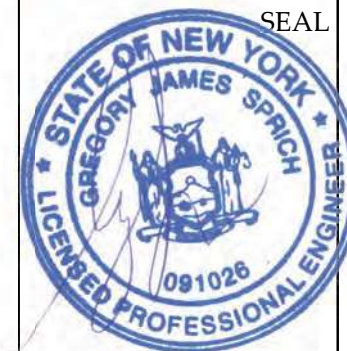
**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com



REVISION: DATE: COMMENT:

DRAWING TITLE:

**OUTFALL SECTIONS - 03**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

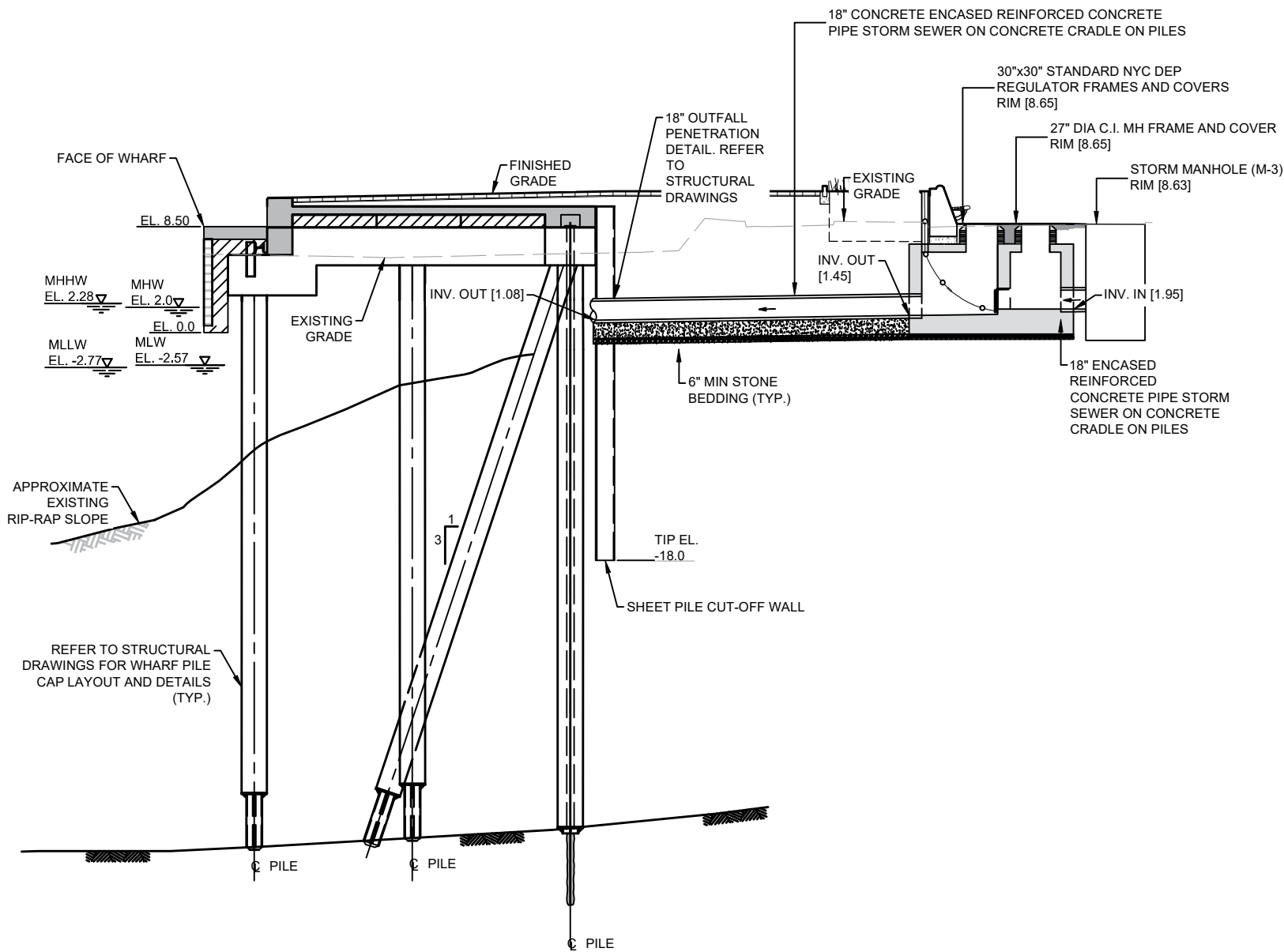
**C-303.00**

SHEET 29 OF 47

1

18" RCP OUTFALL ON PILES - 3

SCALE: 1" = 1'



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10017-2297  
www.stantec.com



REVISION: DATE: COMMENT:

DRAWING TITLE:

**OUTFALL SECTIONS - 04**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**C-304.00**

SHEET **9 OF 47**

1

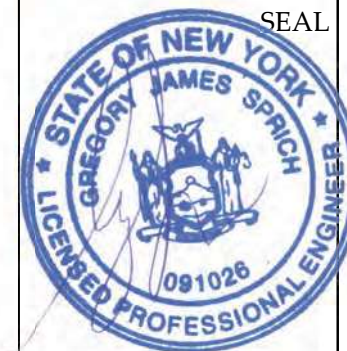
18" RCP OUTFALL ON PILES - 4

SCALE: 1" = 1'

FILE NAME = C:\pw\_working\infra01\anmei\dms73260\C-603.00-609.00-stn\_plt.dwg



475 Fifth Avenue, 12th Fl.  
New York, NY 10017-7239  
www.stanton.com



REVISION:	DATE:	COMMENT:
-----------	-------	----------

DRAWING TITLE:

OUTFALL SECTIONS -  
05

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

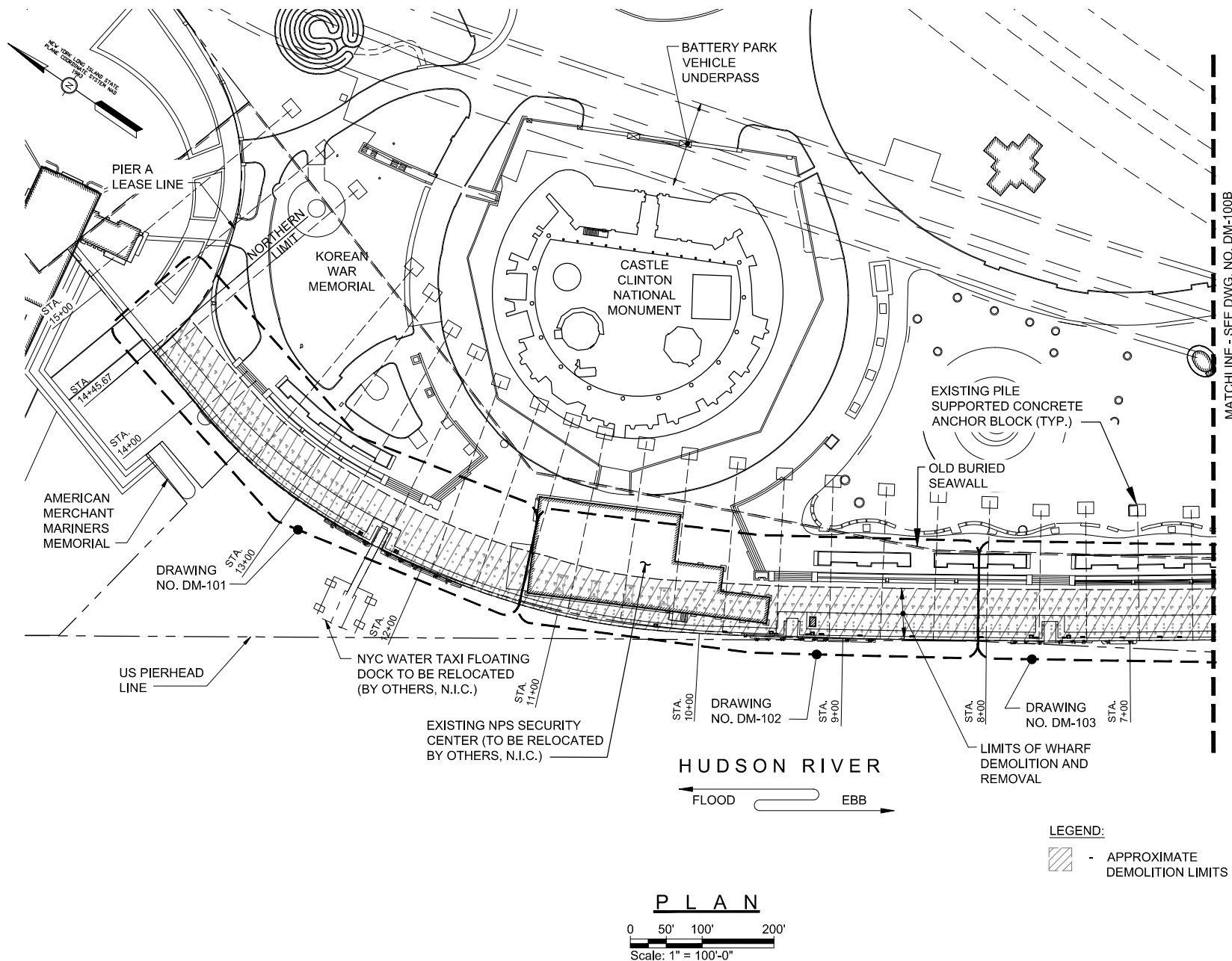
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

C-305.00

**10 OF 47**



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

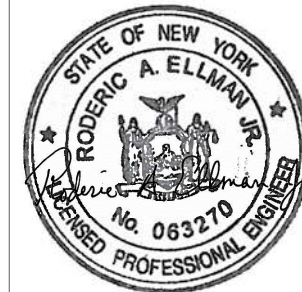
OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**EXISTING WHARF  
DEMOLITION AND REMOVALS  
KEY PLAN 1 OF 2**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

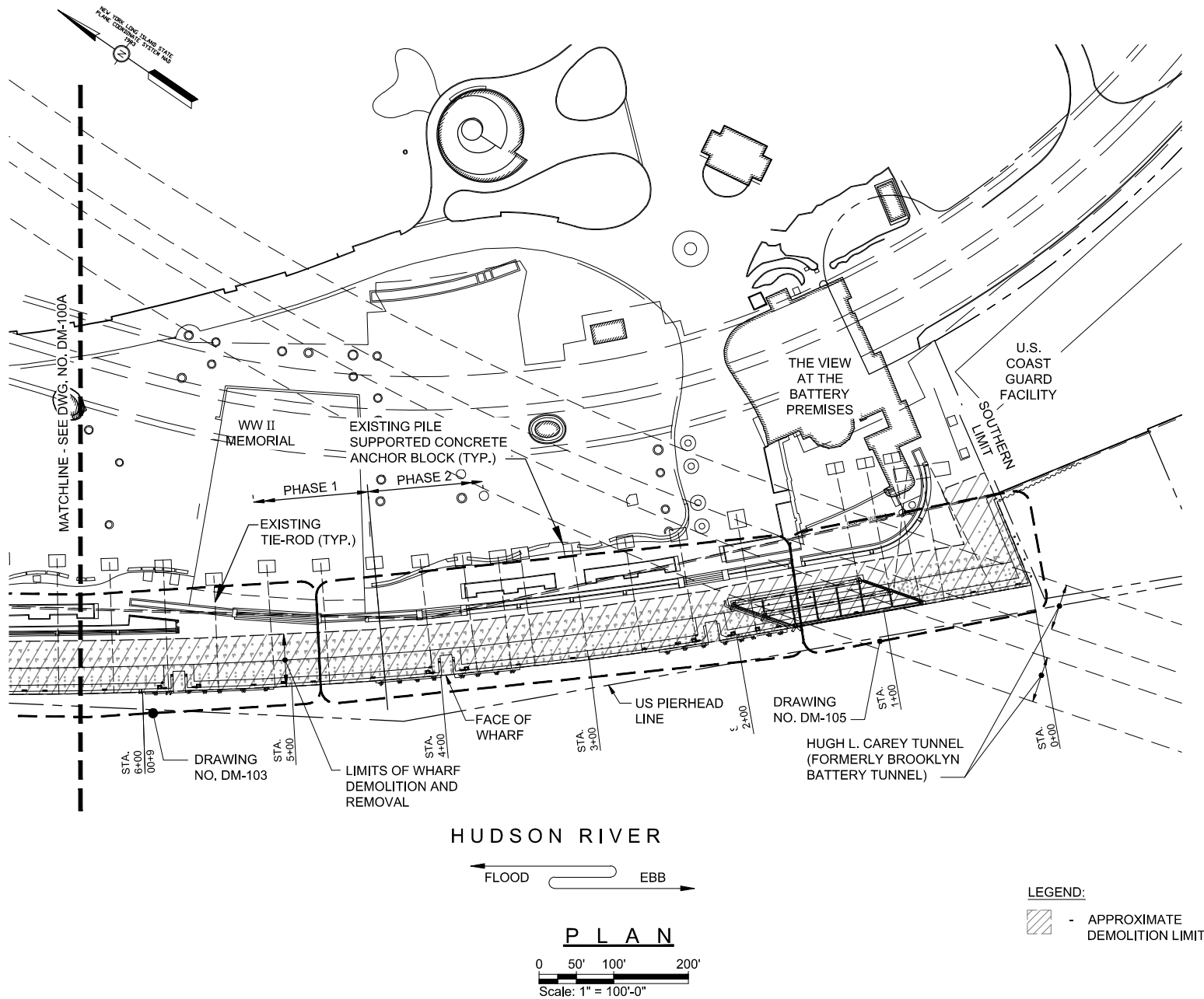
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**DM-100A**

**11 OF 47**



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City**  
**Economic Development Corporation**  
 One Liberty Plaza  
 New York, New York 10006  
 212 818 5000

OWNER:



**City of New York**  
**Parks & Recreation**  
 Olmsted Center  
 Flushing Meadows Corona Park  
 Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
 New York, NY 10017-2229  
 www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**EXISTING WHARF  
 DEMOLITION AND REMOVALS  
 KEY PLAN 2 OF 2**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**DM-100B**

**12 OF 47**



SEAL



REVISION:	DATE:	COMMENT:
-----------	-------	----------

DRAWING TITLE:

EXISTING WHARF  
DEMOLITION AND REMOVALS  
PLAN 1 OF 5

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

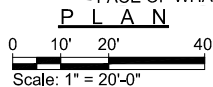
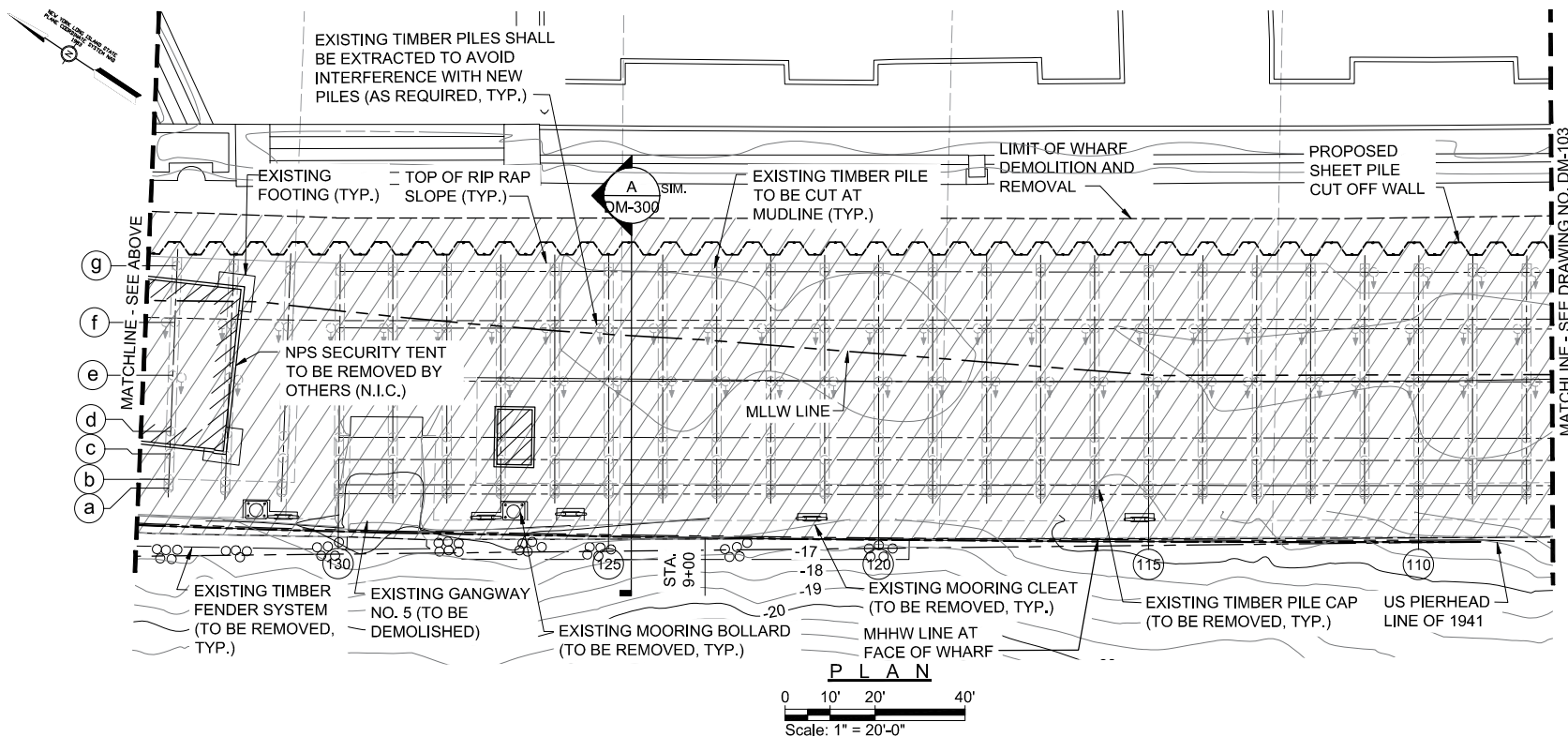
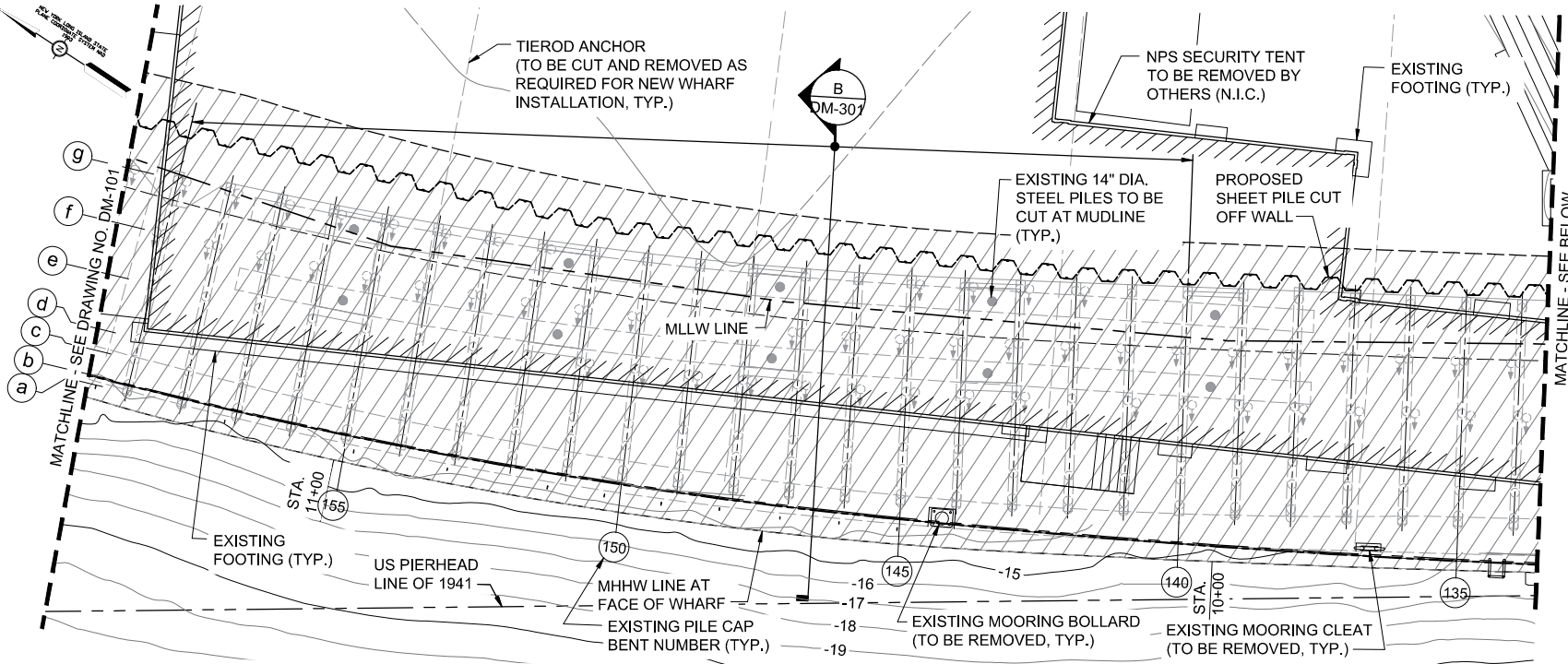
DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

DM-101



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10176-2229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**EXISTING WHARF DEMOLITION AND REMOVALS PLAN 2 OF 5**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

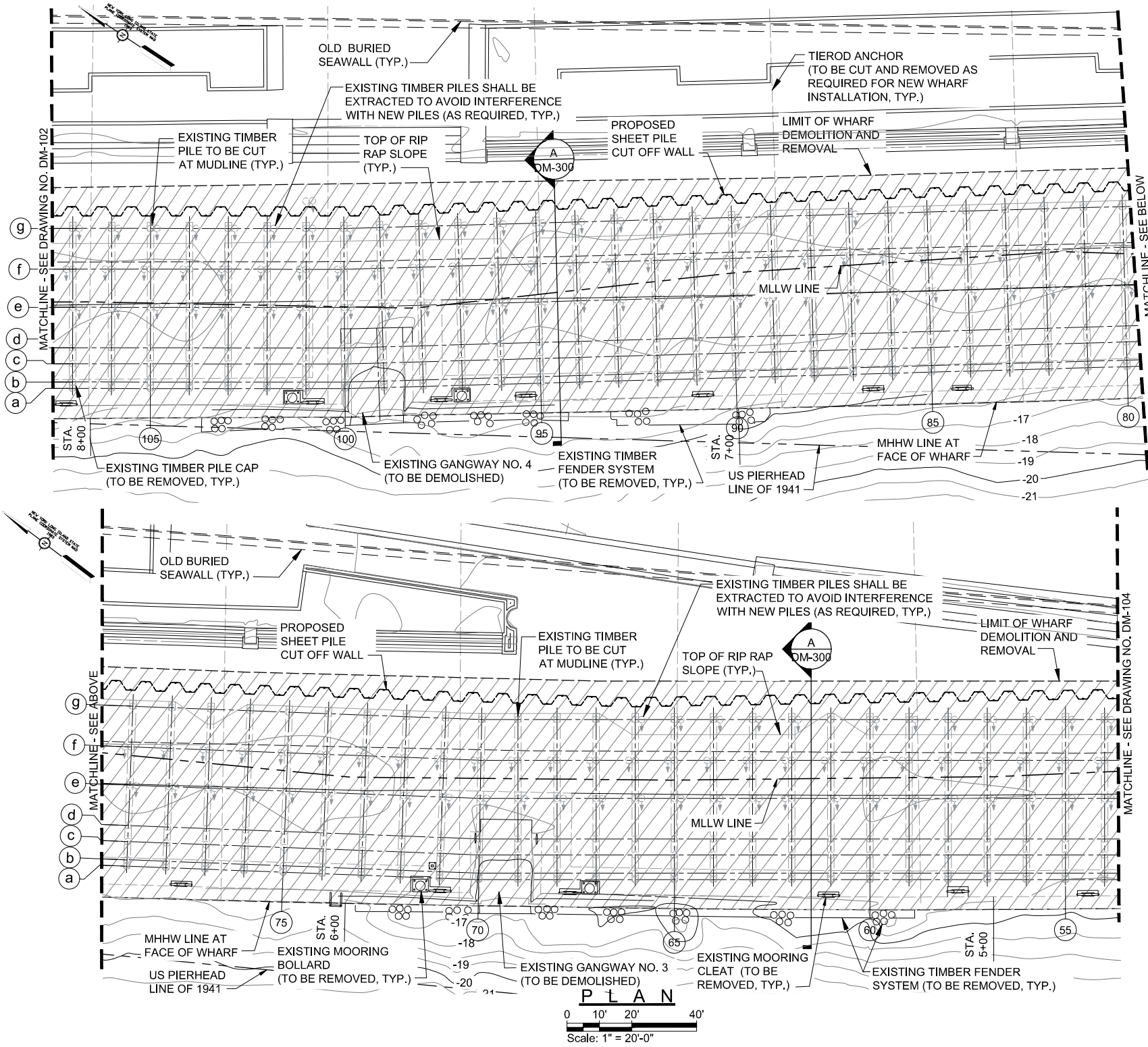
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**DM-102**

**14 OF 47**

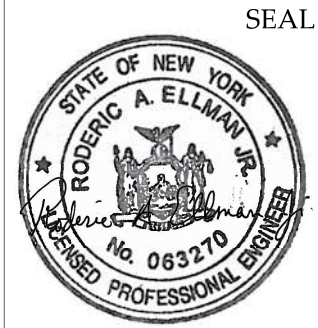


LOWER MANHATTAN COASTAL RESILIENCY  
- BATTERY

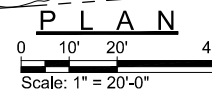
IMPLEMENTING AGENCY:  
**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:  
**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

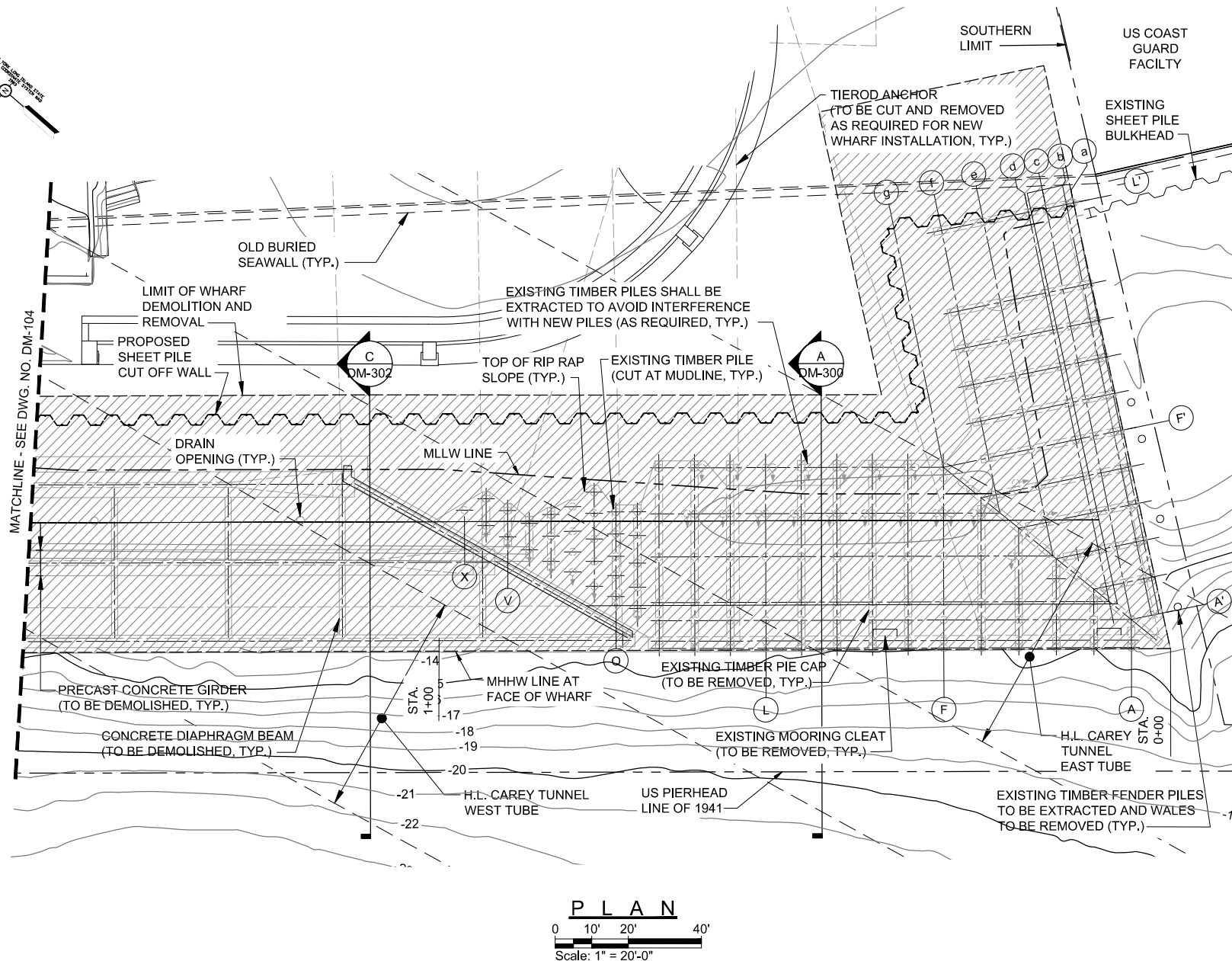
LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:  
**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com



REVISION:	DATE:	COMMENT:
DRAWING TITLE: <b>EXISTING WHARF DEMOLITION AND REMOVALS PLAN 3 OF 5</b>		
NYC EDC CONTRACT NO. 64350006		
DESIGN PROJECT NO. 7788		
DATE: SEPTEMBER 16, 2022		
SCALE: AS NOTED		
SHEET SIZE: 8.5" X 11"		
DRAWING NO. <b>DM-103</b>		
<b>15 OF 47</b>		



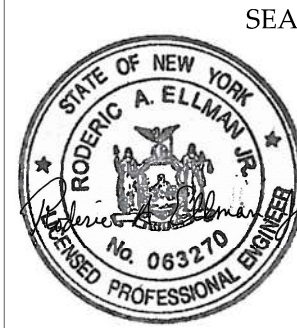
16 OF 47



LOWER MANHATTAN COASTAL RESILIENCY  
- BATTERY  
IMPLEMENTING AGENCY:  
**NY EDC** New York City Economic Development Corporation  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:  
**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:  
**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**EXISTING WHARF  
DEMOLITION AND REMOVALS  
PLAN 5 OF 5**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

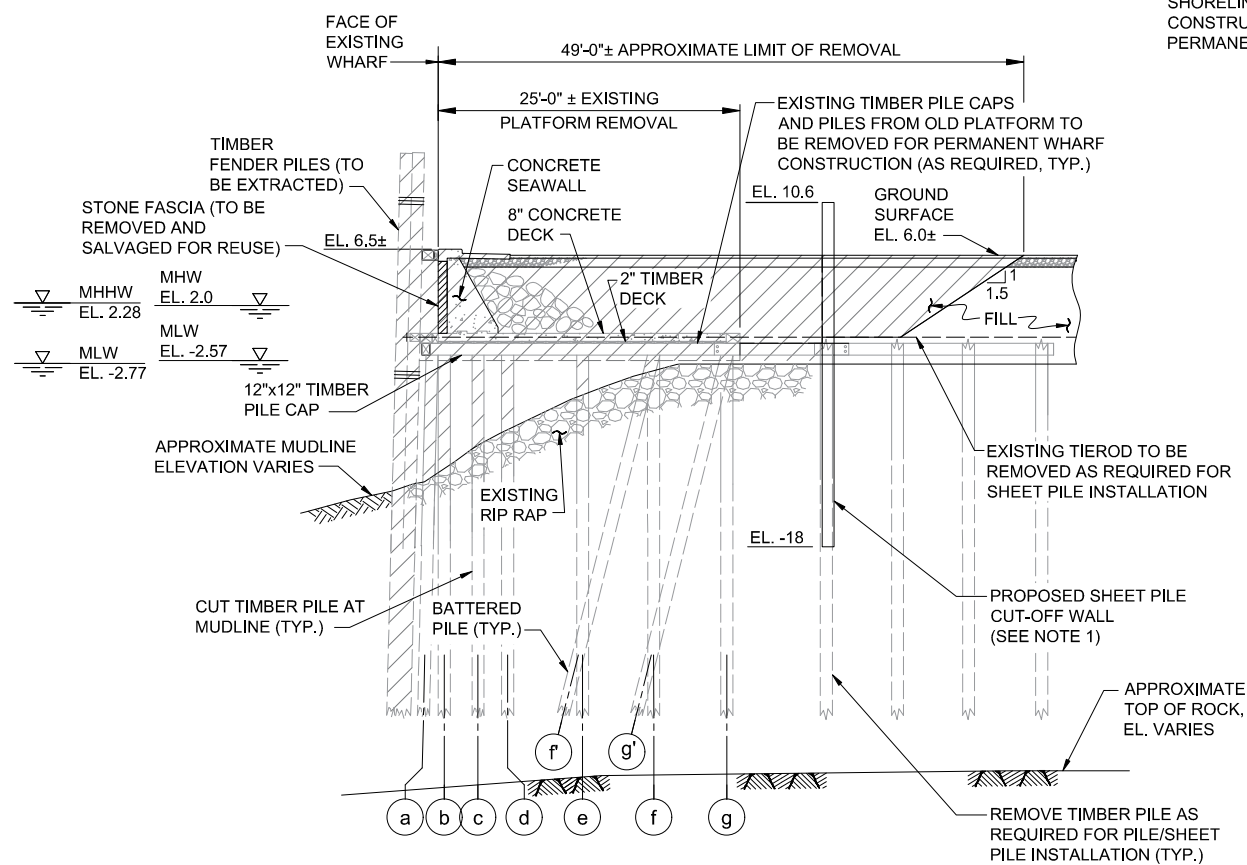
DRAWING NO.

**DM-105**

**17 OF 47**

NOTES:

1. SHEET PILE WALL TO PROVIDE TEMPORARY SHORELINE EROSION PROTECTION DURING CONSTRUCTION AND TO BE INCORPORATED INTO PERMANENT WHARF CONSTRUCTION.



SECTION

DM-101, DM-102, DM-103, DM-104, DM-105

0 8' 16' 32'

Scale: 1/16" = 1'-0"

LEGEND:

- APPROXIMATE DEMOLITION LIMITS

LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10119-2229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**EXISTING WHARF DEMO AND REMOVALS SECTION A**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

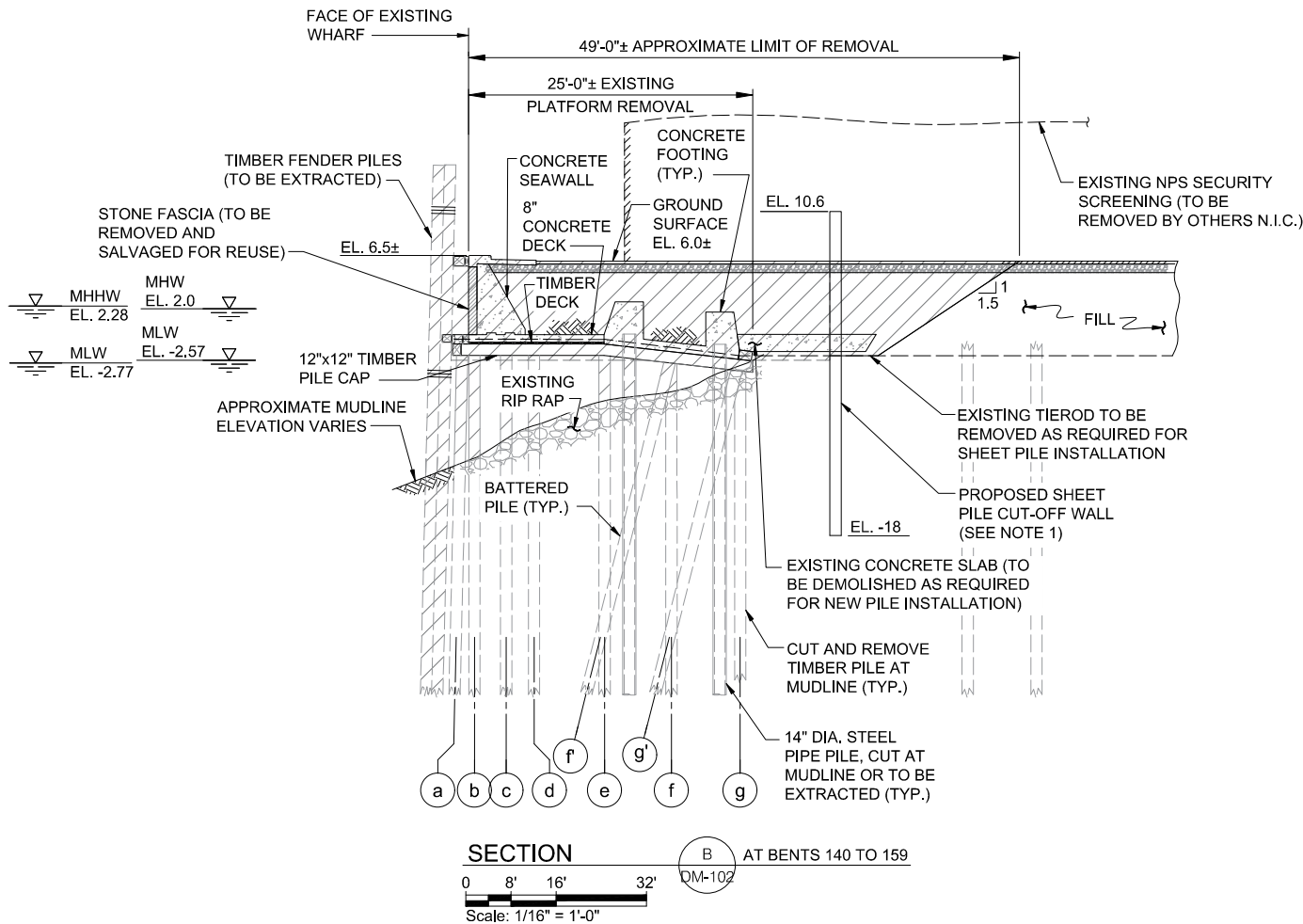
DRAWING NO.

**DM-300**

**18 OF 47**

**NOTES:**

1. SHEET PILE WALL TO PROVIDE TEMPORARY SHORELINE EROSION PROTECTION DURING CONSTRUCTION AND TO BE INCORPORATED INTO PERMANENT WHARF CONSTRUCTION.



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**NYC/EDC** New York City Economic Development Corporation  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**EXISTING WHARF  
DEMO AND REMOVALS  
SECTION B**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

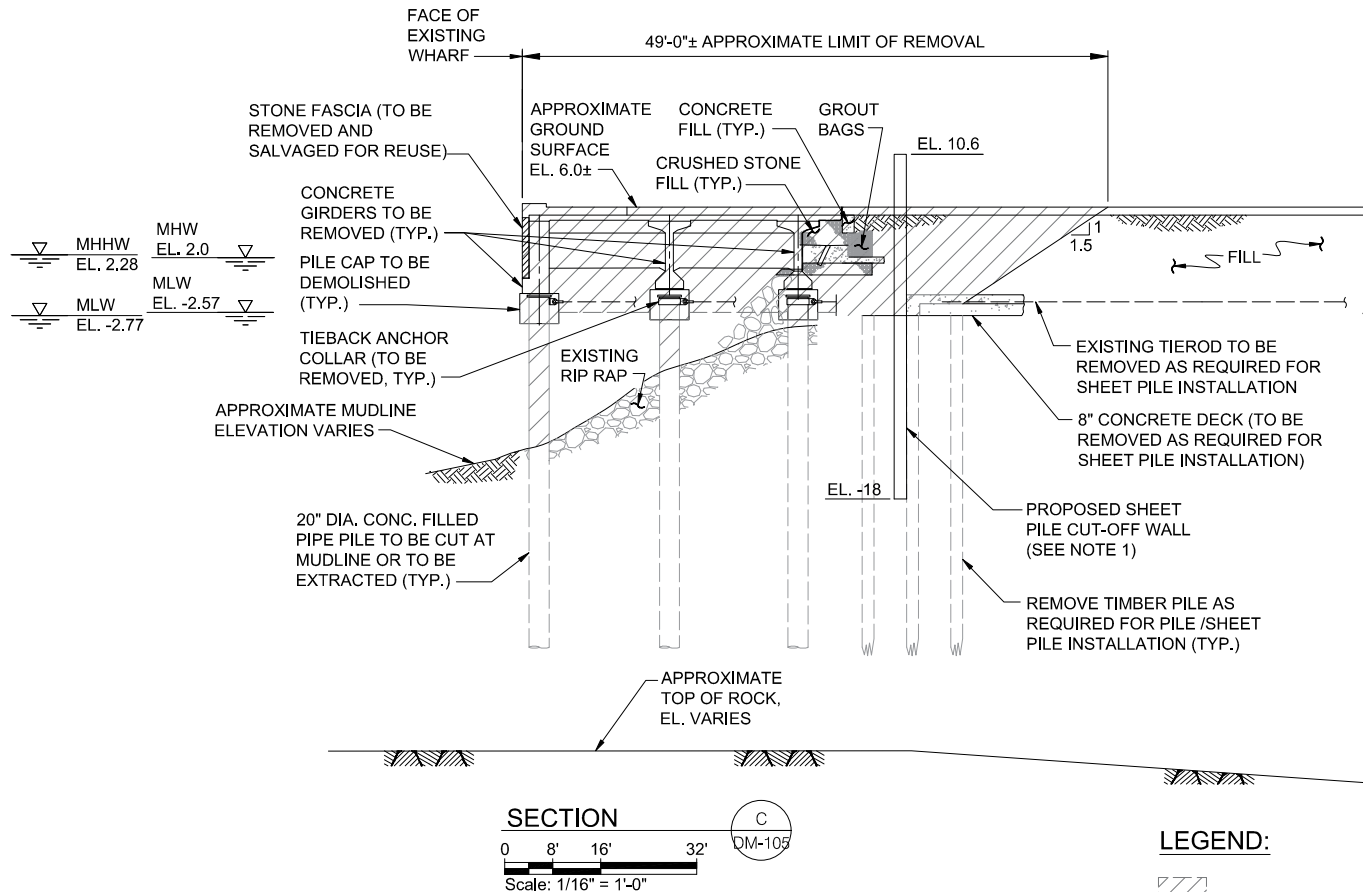
DRAWING NO.

**DM-301**

**19 OF 47**

## NOTES:

1. SHEET PILE WALL TO PROVIDE TEMPORARY SHORELINE EROSION PROTECTION DURING CONSTRUCTION AND TO BE INCORPORATED INTO PERMANENT WHARF CONSTRUCTION.



## LEGEND:

 - APPROXIMATE DEMOLITION LIMITS

LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**NY/EDC**

**New York City  
Economic Development  
Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



**City of New York  
Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10110-3229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**EXISTING WHARF  
DEMO AND REMOVALS  
SECTION C**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**DM-302**

**20 OF 47**

DATE/TIME = Sep 09, 2022 - 3:32pm

FILE NAME = G:\DWGS\137\13721\Temp\jem\2022-09-09 - ISSUED PERMIT DRAWINGS\SK-S-001-mrce\_plt.dwg

USACE FILE: NAN-2022-00423-EMI

NOTES:

A. GENERAL

1. LOCATION OF PROPERTY LINES, EXISTING BULKHEAD LINES, EXISTING SITE FEATURES, AND EXISTING GRADE CONTOURS SHOWN WERE OBTAINED FROM THE TOPOGRAPHIC SURVEY PREPARED BY MATRIX NEW WORLD ENGINEERING, DATED APRIL 7, 2021.

2. MUDLINE ELEVATIONS WERE OBTAINED FROM THE BATHYMETRIC SUIVREY PREPARED BY MATRIX NEW WORLD ENGINEERING, DATED APRIL 7, 2021.

3. ELEVATIONS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

4. EXISTING WHARF STRUCTURE SHOWN ON THE DRAWINGS WAS COMPILED FROM THE FOLLOWING:

a. AS-BUILT DRAWINGS FOR THE "RECONSTRUCTION OF THE SEAWALL AND PROMENADE IN BATTERY PARK, AT BATTERY PLACE AND STATE STREET", DESIGNED BY GOODKIND AND O'DEA INC., DATED DECEMBER 12, 1997.

b. NEW YORK CITY TUNNEL AUTHORITY, BROOKLYN BATTERY TUNNEL CONTRACT DOCUMENTS, DATED JULY 9, 1941.

c. MRCE REPORT "REVIEW OF SUBSURFACE INFORMATION BATTERY PARK REDEVELOPMENT", DATED DECEMBER 18, 1986.

d. DIVER INSPECTION OF EXISTING WHARF CONDITIONS PERFORMED BY OCEAN AND COASTAL CONSULTANTS ENGINEERING, P.C. (COWI), OBSERVED CONDITIONS DESCRIBED AND SHOWN IN COWI NOVEMBER 2015 REPORT "BATTERY PARK WATERFRONT STRUCTURES ROUTINE INSPECTION."

5. ALL WORK SHALL COMPLY WITH FEDERAL, STATE AND LOCAL LAWS AND STATUTES AND THE REQUIREMENTS AND CONDITIONS OF ALL REGULATORY PERMITS ISSUED FOR THE WORK.

6. THE CONTRACTOR SHALL NOT BLOCK OR INTERFERE WITH VESSEL TRAFFIC AT ANY TIME. CONTRACTOR MUST STAGE EQUIPMENT AND BARGES TO MINIMIZE INTERFERENCE WITH CURRENT FERRY SERVICES MOORING AT THE WHARF. BARGES SHALL BE POSITIONED TO MAINTAIN A MINIMUM OF 2.5 FT BETWEEN THE BOTTOM OF THE BARGE AND THE MUDLINE AT ALL TIMES.

7. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS, DIMENSIONS AND CLEARANCES PRIOR TO FABRICATION OF MATERIAL AND PRIOR TO START OF WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER FOR RESOLUTION.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING FROM DAMAGE ALL OUTFALL PIPES, DRAIN PIPES, UTILITIES, UTILITY STRUCTURES, ELECTRICAL LINES AND CONDUITS THAT ARE TO REMAIN PRIOR TO START OF WORK.

9. THE CONTRACTOR SHALL PREVENT DEBRIS FROM FALLING INTO THE WATERWAY DURING REMOVAL OF PROJECT ELEMENTS. CONTRACTOR SHALL REMOVE ANY FALLEN DEBRIS AT NO ADDITIONAL COST TO THE CITY.
- B. DESIGN CRITERIA AND LOADS
1. PROJECT DATUM: DESIGN SITE ELEVATIONS AND TOPOGRAPHIC ELEVATIONS ARE BASED ON NAVD 1988 (NORTH AMERICAN VERTICAL DATUM), THE TIDAL DATA AND RELATIONSHIP OF DATUM PLANES IS AS FOLLOWS:
- | TIDAL RELATIONSHIP                           | PROJECT DATUM ELEVATION         |
|--|---------------------------------|
| FLOOD ZONE: VE (COASTAL)                     | +17.0                           |
| HIGHEST OBSERVED WATER LEVEL (10/30/12)      | +11.27                          |
| MEAN HIGHER HIGH WATER (MHHW)                | +2.28 (MHHW = SPRING HIGH TIDE) |
| MEAN HIGH WATER (MHW)                        | +1.96                           |
| BPM (THE BOROUGH PRESIDENT OF MANHATTAN)     | +1.65                           |
| NGVD 1929 (NATIONAL GEODETIC VERTICAL DATUM) | -1.10                           |
| MEAN LOW WATER (MLW)                         | -2.57                           |
| MEAN LOWER LOW WATER (MLLW)                  | -2.77                           |
| LOWEST OBSERVED WATER LEVEL (2/2/76)         | -7.06                           |
| TBTA   | -298.45                         |
- THE TIDAL DATA IS AS PER NOAA (NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION) AVERAGES BASED ON THE 1983 - 2001 TIDAL EPOCH FOR STATION NO. 8518750, THE BATTERY AND IS NOT GUARANTEED TO REPRESENT CONDITIONS WHICH MAY OCCUR DURING CONSTRUCTION. ACTUAL TIDES WILL VARY FROM THE LEVELS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN ESTIMATIONS OF TIDES WHICH MAY OCCUR DURING CONSTRUCTION. VARIATION OF TIDAL LEVELS FROM THOSE INDICATED OR THE CONTRACTOR'S ESTIMATION OF TIDE LEVELS SHALL NOT BE CONSIDERED AS A CLAIM FOR ADDITIONAL COMPENSATION OR DELAY OF THE WORK.
2. WAVES: SIGNIFICANT WAVE HEIGHT Hs = 5.0 FEET; PERIOD T= 2 TO 4 SECONDS.

3. CURRENT: 2.0 KNOTS.

5. LIVE LOAD: 100 PSF (NOT CONCURRENT WITH VEHICLE LOADS).

7. VEHICLE LOADS: AASHTO H10 OR A TOTAL LOAD OF 20000 LBS.

8. ICE LOAD: 8 INCH THICK ICE WITH ICE STRENGTH OF 55 PSI.

9. WIND: BASIC WIND SPEED 110 MPH, EXPOSURE C. IMPORTANCE FACTOR 1.0.

10. TEMPERATURE AND SHRINKAGE AS PER AASHTO.

11. DESIGN MOORING LOAD: 33.5 TONS.

12. VESSEL BERTHING SPEED: 1 FT/SEC.
- C. MATERIALS
1. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS:

a. CAST-IN-PLACE CONCRETE:5000 PSI

b. PILE CAPS SUPPORTING CONCRETE GIRDERS:8000 PSI

c. PRECAST NON-PRESTRESSED CONCRETE DECK AND SLABS: 5000 PSI

d. PRECAST PRESTRESSED CONCRETE PLANKS:6000 PSI

e. PRECAST PRESTRESSED CONCRETE PILES:8000 PSI

f. PRECAST PRESTRESSED CONCRETE GIRDERS:8000 PSI

2. STEEL REINFORCING SHALL BE GALVANIZED NEW BILLET STEEL AND MEET THE REQUIREMENTS OF ASTM 615 GRADE 60 IN ACCORDANCE WITH ASTM A767.

3. STEEL REINFORCING BARS SHALL HAVE A MINIMUM CONCRETE COVER OF THREE INCHES, UNLESS OTHERWISE NOTED.

4. STEEL CASING FOR DRILLED CAISSONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A252, GR. 3 MODIFIED, 50 KSI MINIMUM AND SHALL BE EPOXY COATED TO MINIMUM EL. -25.

5. STEEL SHAPES, PLATES AND OTHER MISCELLANEOUS STEEL SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572 OR ASTM A992 WITH A MINIMUM YIELD STRENGTH OF 50 KSI.

6. CAISSONS SHALL BE CATHODICALLY PROTECTED WITH ZINC ANODES.

7. STEEL SHEET PILING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572 GRADE 60, SHEET PILING SHALL BE EPOXY COATED ON THE OUTSHORE FACE TO MINIMUM EL. -10.0.
- D. FLOOD CONSTRUCTION:
1. NEW YORK CITY FLOOD RESISTANT CONSTRUCTION:

a. THE PROPOSED WORK DOES NOT ENCROACH ON THE FLOODWAY, ALTER THE WATERCOURSE OR MODIFY A SAND DUNE IN A V-ZONE AND THEREFORE DOES NOT REQUIRE TECHNICAL CERTIFICATION ACCORDING TO SECTION G103 OF THE CODE.

b. THE PROPOSED WORK IS NOT LOCATED IN A REGULATORY FLOODWAY.

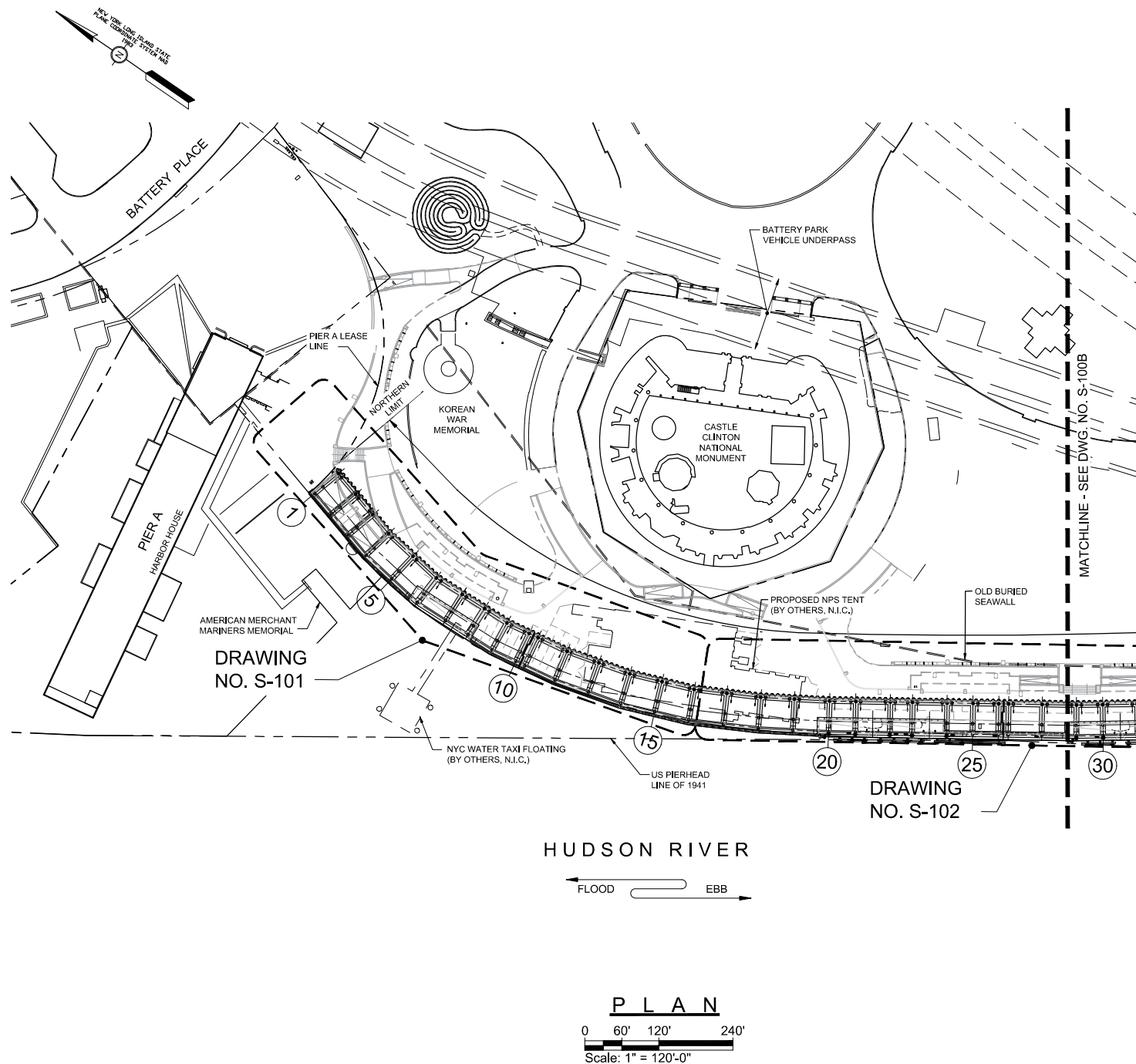
c. THE PROPOSED WORK DOES NOT INCLUDE ANY ENCLOSED STRUCTURES AND IS NOT SUBJECT TO THE CERTIFICATION REQUIREMENTS OF CODE SECTIONS G104.5.

d. FLOOD ZONE COMPLIANCE INSPECTION REQUIREMENT IS INDICATED UNDER THE SPECIAL INSPECTIONS NOTES ON THIS DRAWING. ELEVATION AND FLOOD SHIELD INSPECTIONS ARE NOT APPLICABLE.

e. RIP RAP SHORELINE HAS BEEN DESIGNED AND SPECIFIED IN ACCORDANCE WITH SECTION G303.7 AND DOES NOT DIRECT WATER OR WAVES TOWARD ANY BUILDING.

f. THE PROPOSED WORK IS AN UNOCCUPIED ACCESSORY STRUCTURE, IS NOT REQUIRED FOR ANY BUILDING EGRESS AND IS NOT REQUIRED FOR SUPPORT OR FLOOD PROTECTION OF ANY BUILDING. THE REQUIREMENTS OF CODE SECTION G304 ARE NOT APPLICABLE. THE STRUCTURE HAS BEEN DESIGNED TO PREVENT FLOTATION, COLLAPSE AND LATERAL MOVEMENT RESULTING FROM HYDROSTATIC LOADS, INCLUDING THE EFFECTS OF BUOYANCY, DURING CONDITIONS OF FLOODING TO THE DESIGN FLOOD ELEVATION.
- | MUDLINE DISPLACEMENT (AREA)           |                |               |
|---------------------------------------|----------------|---------------|
| ELEMENT                               | AREA (SQ. FT ) | AREA (SQ. YD) |
| PROPOSED 24" DRILLED CAISSONS (18)    | 56             | 6.2           |
| PROPOSED 30" DRILLED CAISSONS (6)     | 29             | 3.3           |
| PROPOSED 24" SQ. CONCRETE PILES (226) | 904            | 100           |
| PROPOSED TIMBER FENDER PILES (240)    | 188            | 21            |
| REMOVAL EXISTING FENDER PILES (244)   | 192            | 21            |
| NET ADDITION OF AREA AT MUDLINE       | 986            | 110           |
- | STRUCTURE FOOTPRINT OF EXISTING vs PROPOSED WHARF (AREA) |                |               |
|--|----------------|---------------|
| STRUCTURE  | AREA (SQ. FT ) | AREA (SQ. YD) |
| EXISTING WHARF   | 36,850         | 4,094         |
| PROPOSED WHARF   | 46,085         | 5,121         |
| NET ADDITION OF WHARF FOOTPRINT 1                        | 9,235          | 1,026         |
- NOTE:

1. THE INCREASE IN WHARF FOOTPRINT IS DUE TO THE INCREASED WIDTH OF PROPOSED WHARF INLAND. THE OUTSHORE LIMIT OF THE EXISTING WHARF IS BEING MAINTAINED.
- LOWER MANHATTAN COASTAL RESILIENCY
- BATTERY
- IMPLEMENTING AGENCY:
- 
- New York City  
Economic Development  
Corporation  
One Liberty Plaza  
New York, New York 10006  
212 818 5000
- OWNER:
- 
- City of New York  
Parks & Recreation  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368
- LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:
- 
- Stantec
- 475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com
- SEAL
- 
- REVISION:      DATE:      COMMENT:
- DRAWING TITLE:
- GENERAL WHARF  
CONSTRUCTION NOTES
- NYC EDC CONTRACT NO. 64350006
- DESIGN PROJECT NO. 7788
- DATE: SEPTEMBER 16, 2022
- SCALE: AS NOTED
- SHEET SIZE: 8.5" X 11"
- DRAWING NO.
- S-001
- 21 OF 47



## LOWER MANHATTAN COASTAL RESILIENCY

## - BATTERY

IMPLEMENTING AGENCY:

**New York City**  
**Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



**City of New York**  
**Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

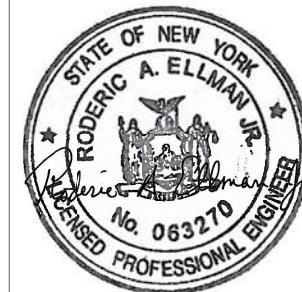
LANDSCAPE ARCHITECT, ARCHITECT &amp; ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**PILE AND PILE CAP KEY**  
**PLAN 1 OF 2**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

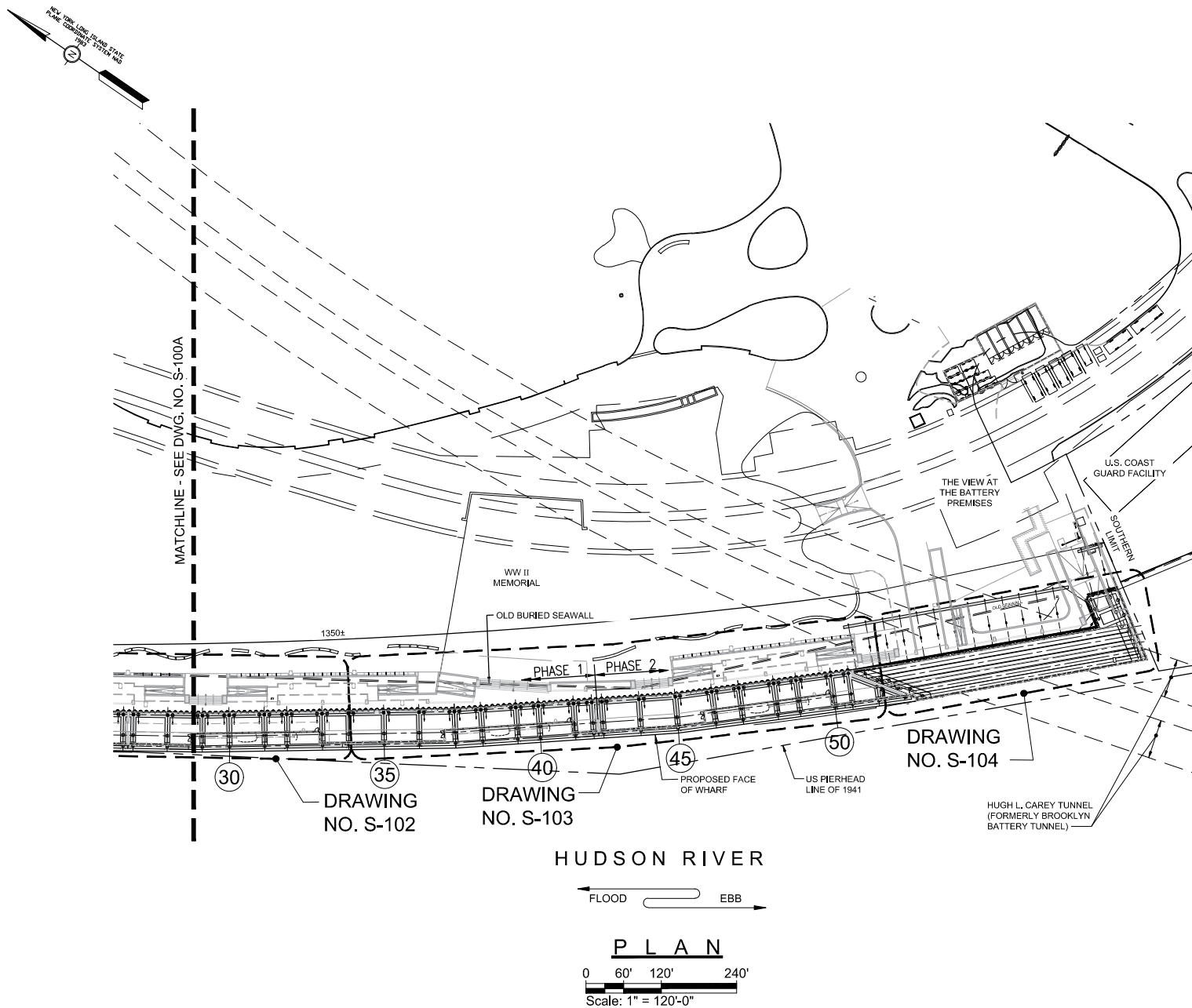
DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-100A****22 OF 47**



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
 One Liberty Plaza  
 New York, New York 10006  
 212 818 5000

OWNER:

**City of New York Parks & Recreation**  
 Olmsted Center  
 Flushing Meadows Corona Park  
 Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
 475 Fifth Avenue, 12th Floor  
 New York, NY 10017-2229  
 www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**PILE AND PILE CAP KEY PLAN - SHEET 2 OF 2**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

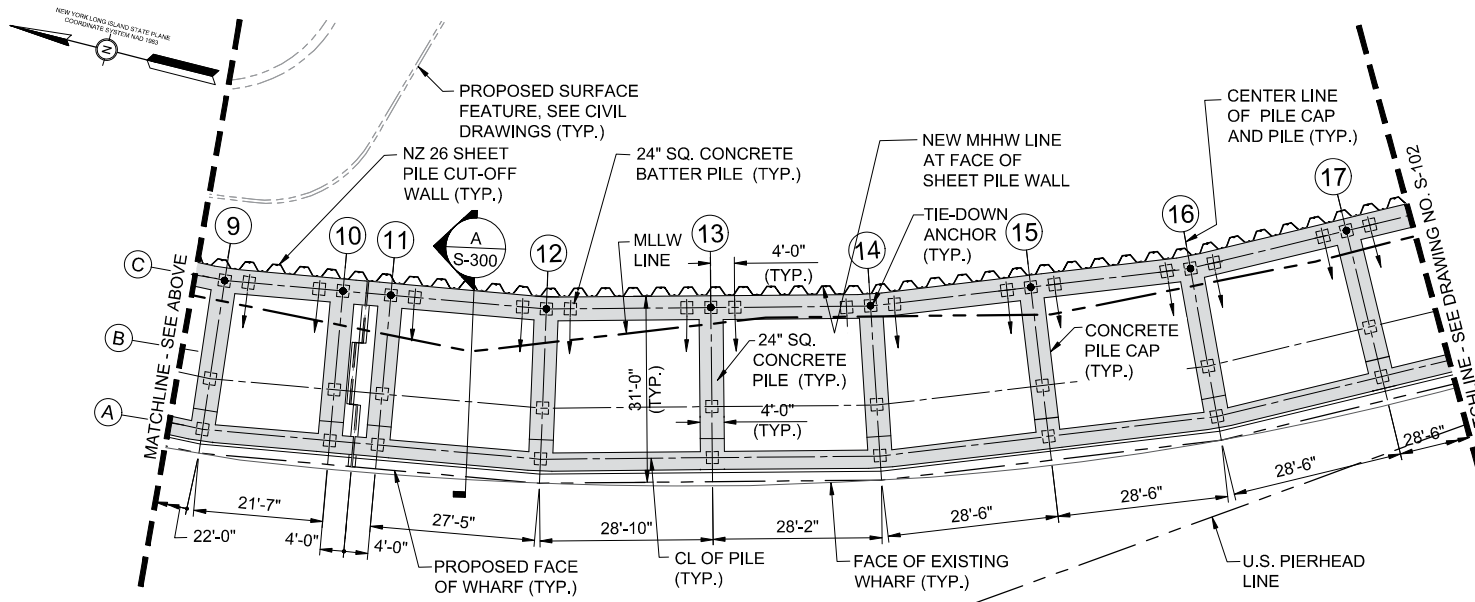
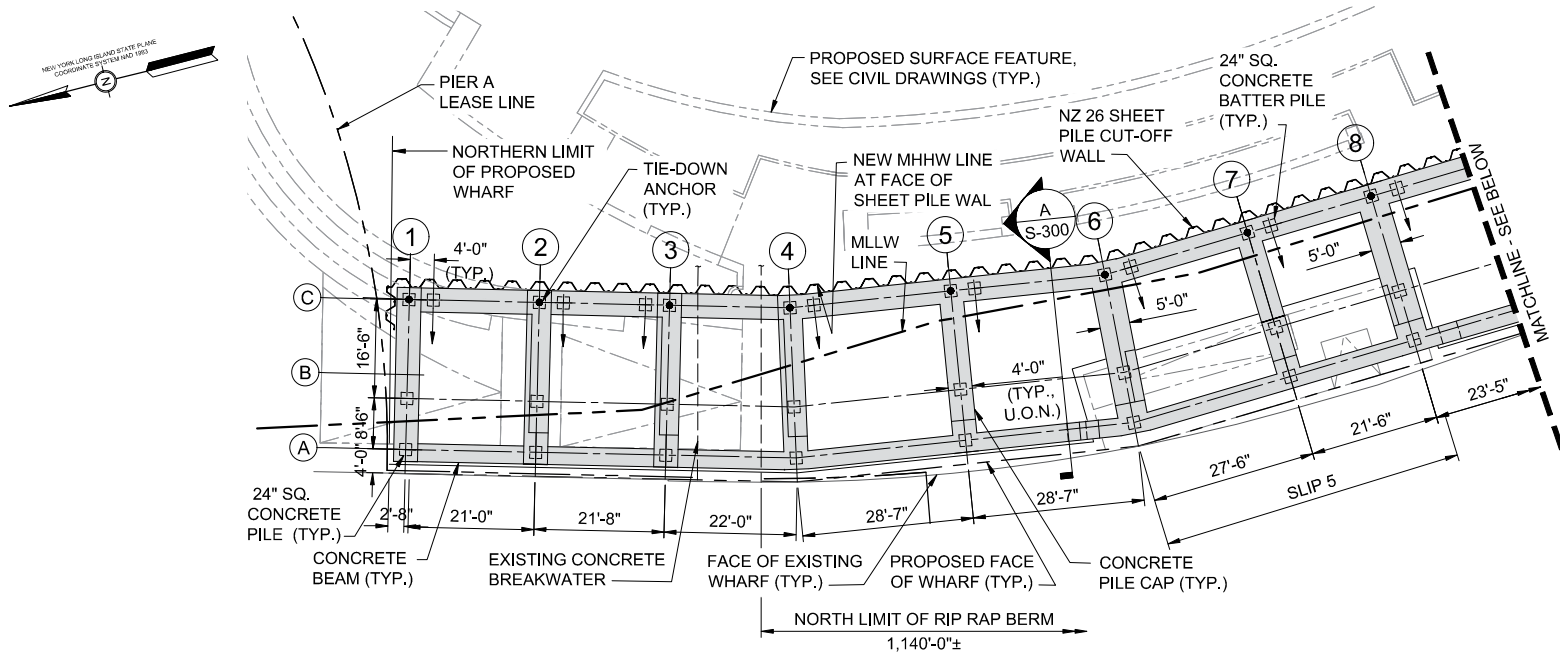
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

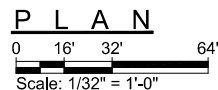
**S-100B**

**23 OF 47**



NOTE:

1. SEE DRAWING NO. S-001 FOR GENERAL NOTES.



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**NY/EDC** New York City  
Economic Development  
Corporation  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

City of New York  
Parks & Recreation  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**PILE AND  
PILE CAP PLAN  
SHEET 1 OF 4**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

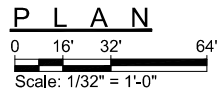
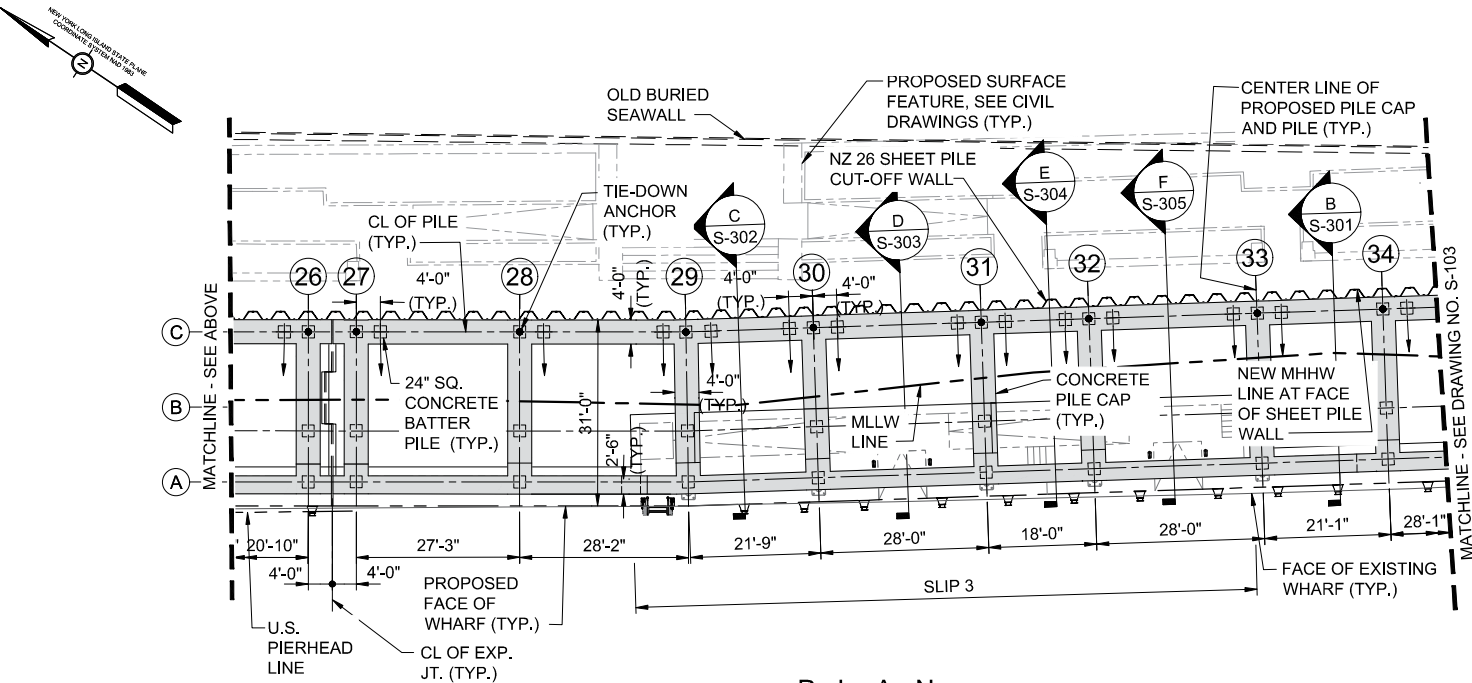
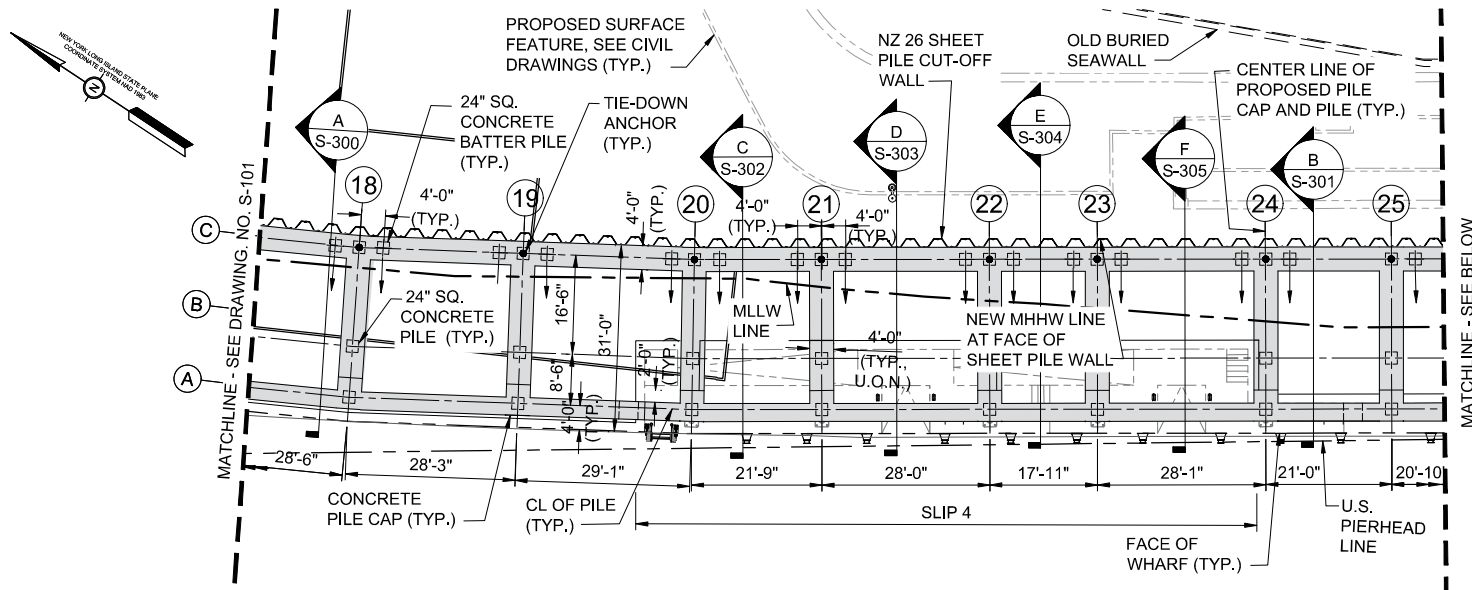
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-101**

**24 OF 47**



**NOTE:**

- SEE DRAWING NO. S-001 FOR GENERAL NOTES.

## LOWER MANHATTAN COASTAL RESILIENCY

### - BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**PILE AND PILE CAP PLAN  
SHEET 2 OF 4**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

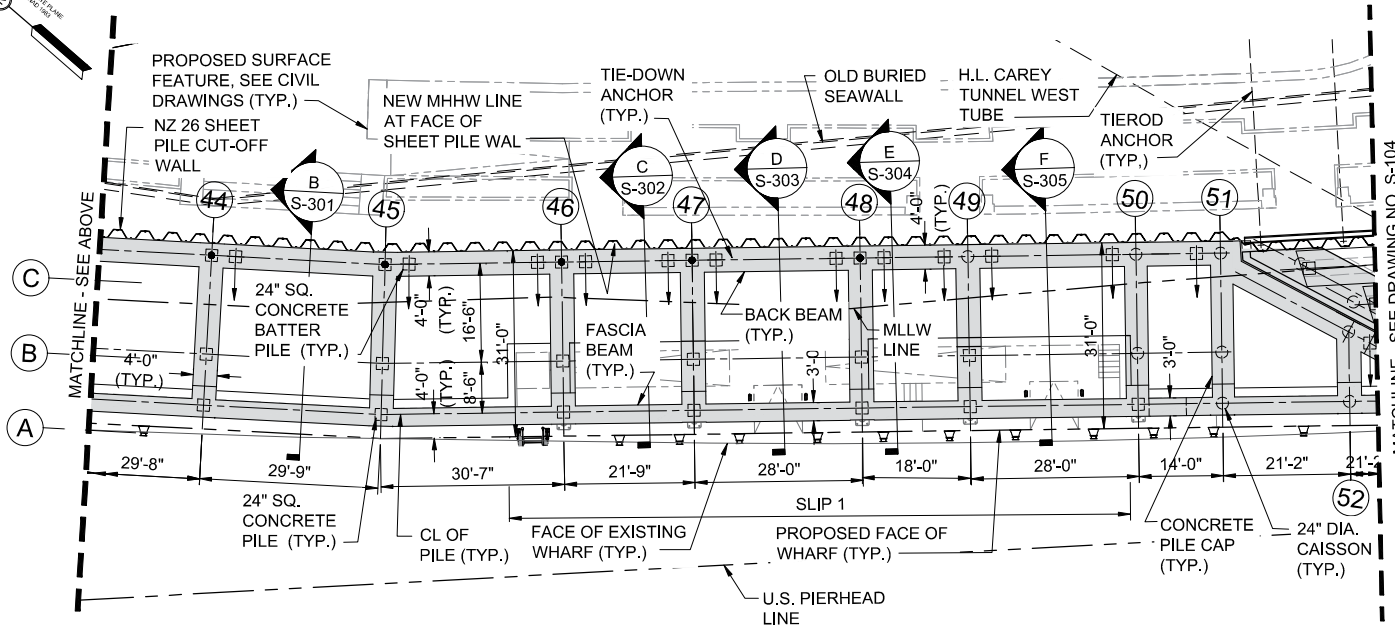
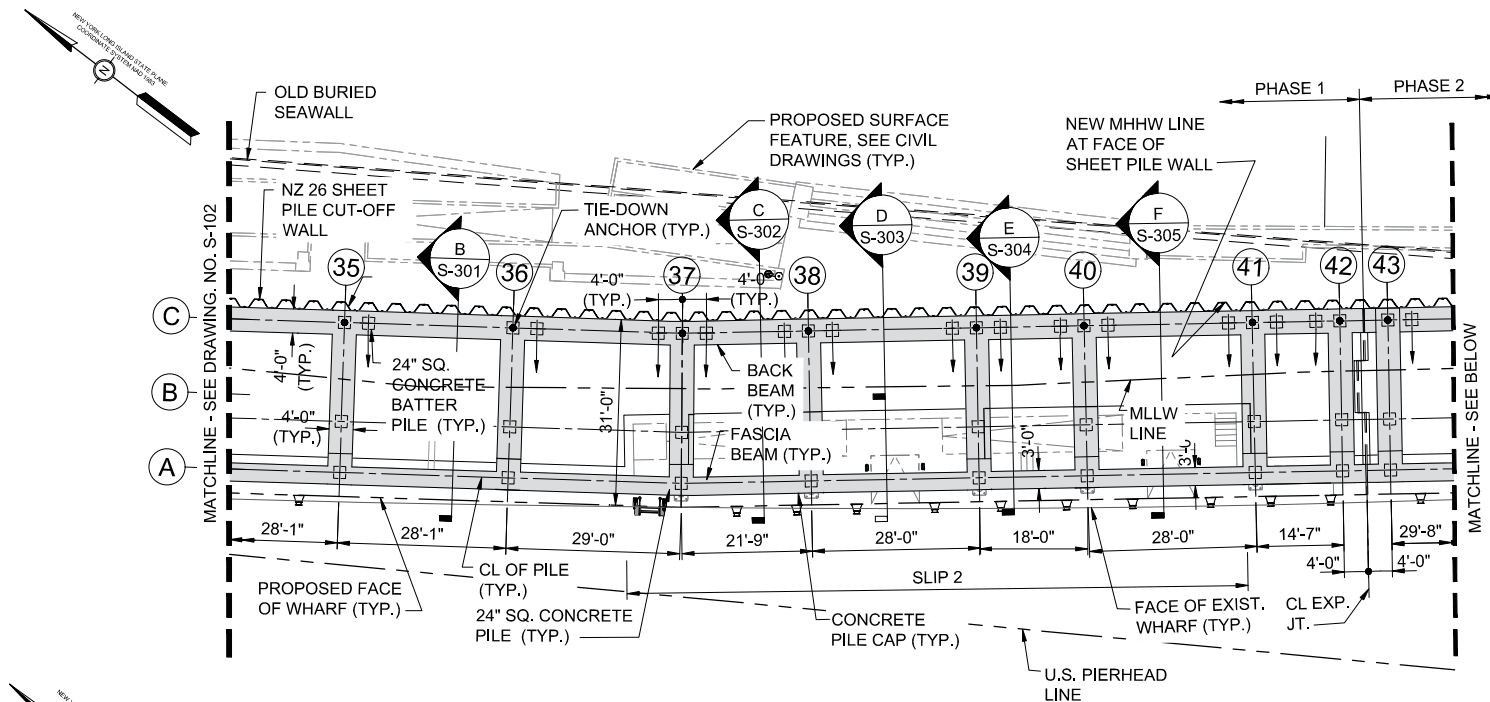
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

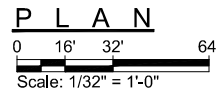
**S-102**

**25 OF 47**



NOTE:

- SEE DRAWING NO. S-001 FOR GENERAL NOTES.



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City**  
**Economic Development Corporation**  
 One Liberty Plaza  
 New York, New York 10006  
 212 818 5000

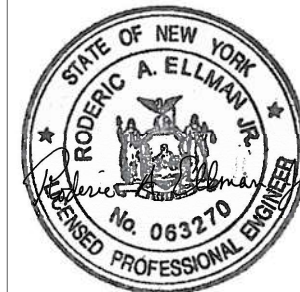
OWNER:

**City of New York**  
**Parks & Recreation**  
 Olmsted Center  
 Flushing Meadows Corona Park  
 Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
 475 Fifth Avenue, 12th Floor  
 New York, NY 10017-2229  
 www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**PILE AND PILE CAP PLAN**  
**SHEET 3 OF 4**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

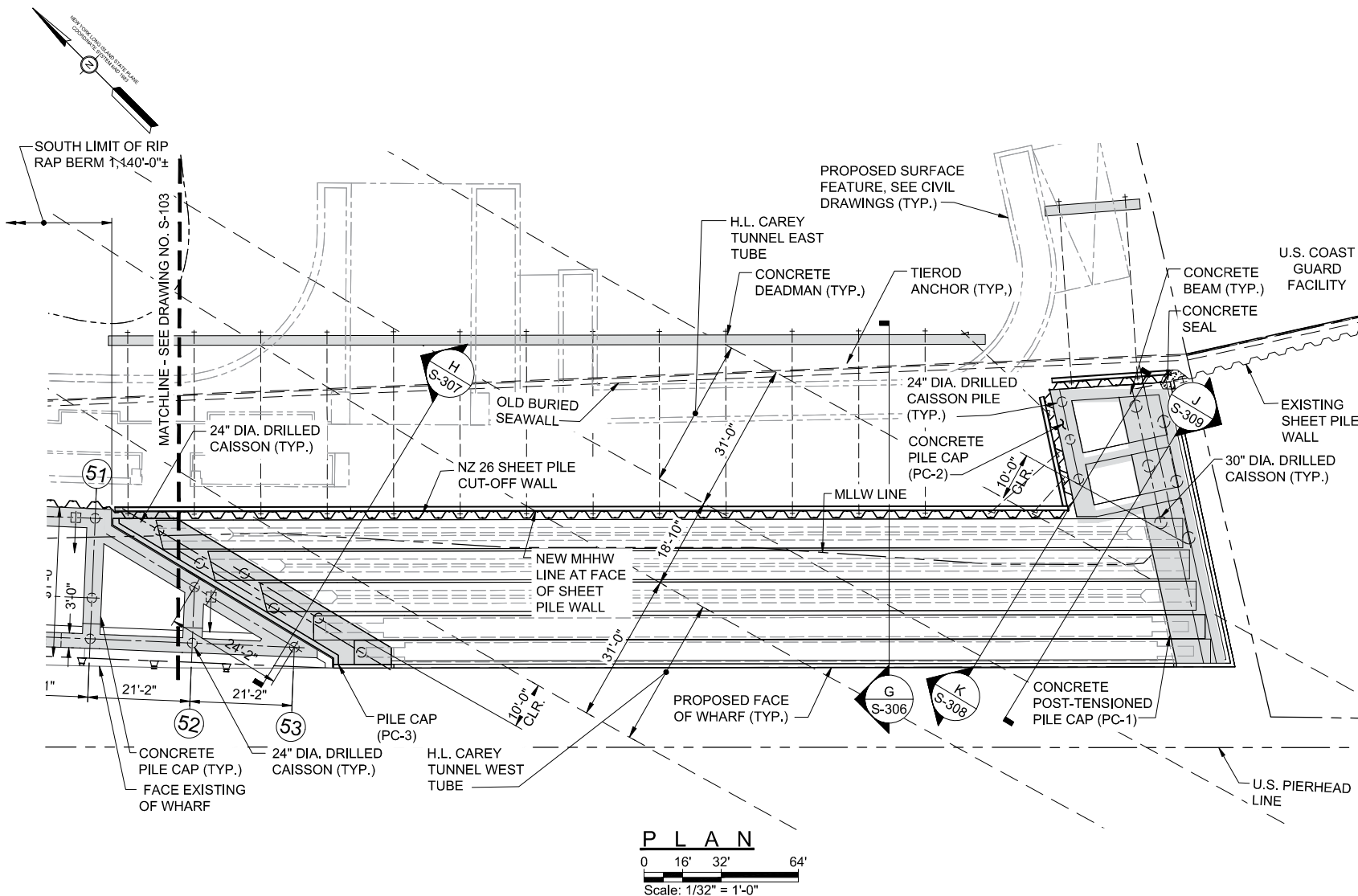
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-103**

**26 OF 47**



## NOTE:

1. SEE DRAWING NO. S-001 FOR GENERAL NOTES.

## LOWER MANHATTAN COASTAL RESILIENCY

## - BATTERY

IMPLEMENTING AGENCY:

**New York City**  
**Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



**City of New York**  
**Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

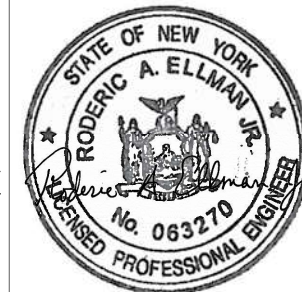
LANDSCAPE ARCHITECT, ARCHITECT &amp; ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10017-2299  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**PILE AND**  
**PILE CAP PLAN**  
**SHEET 4 OF 4**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

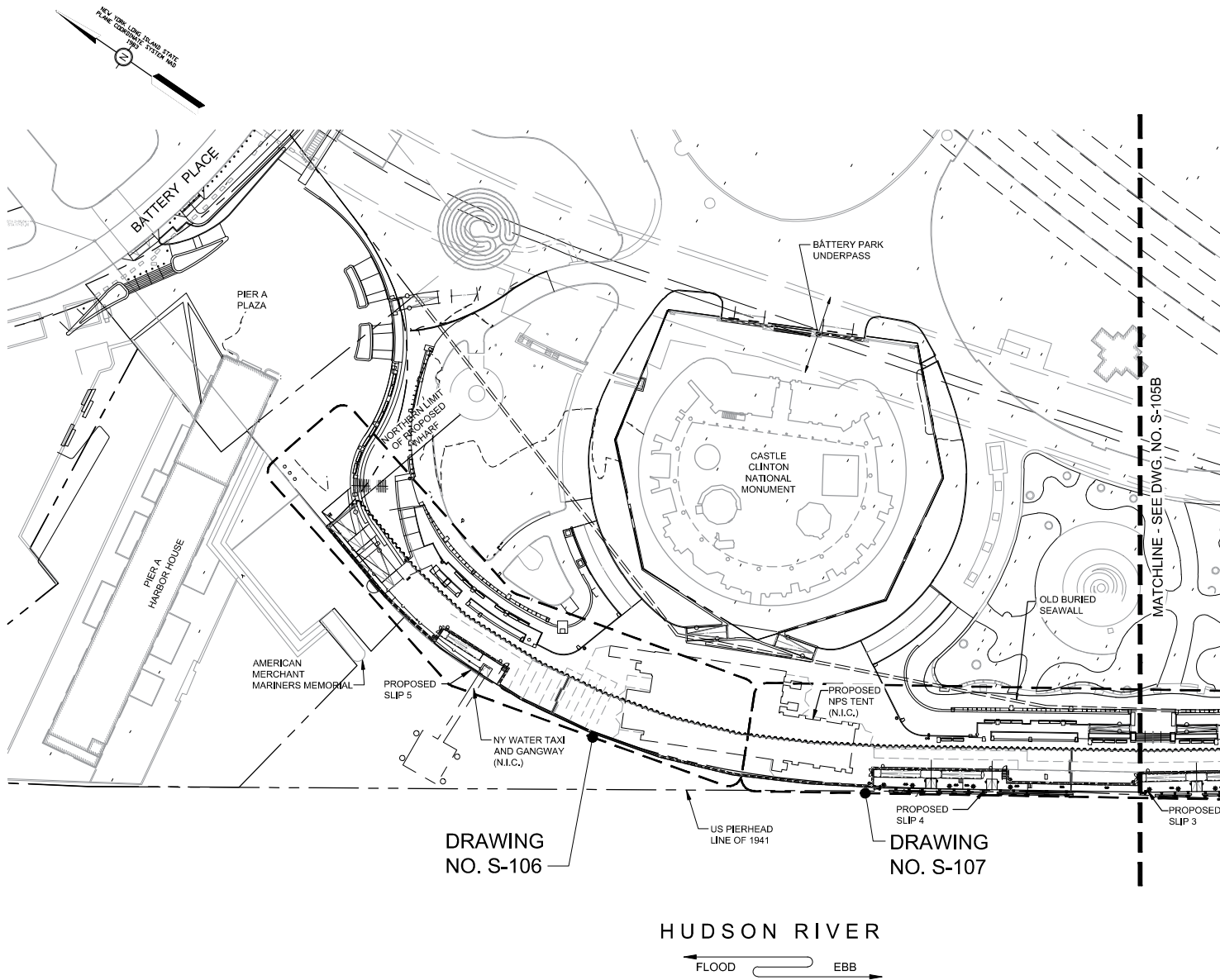
DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-104****27 OF 47**



DRAWING  
NO. S-106

DRAWING  
NO. S-107

HUDSON RIVER

FLOOD EBB

P L A N

0 60' 120' 240'  
Scale: 1" = 120'-0"

**NOTE:**

1. SEE DRAWING NO. S-001 FOR GENERAL NOTES.

LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City  
Economic Development  
Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



**City of New York  
Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10017-2299  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**TOPSIDE KEY PLAN  
SHEET 1 OF 2**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

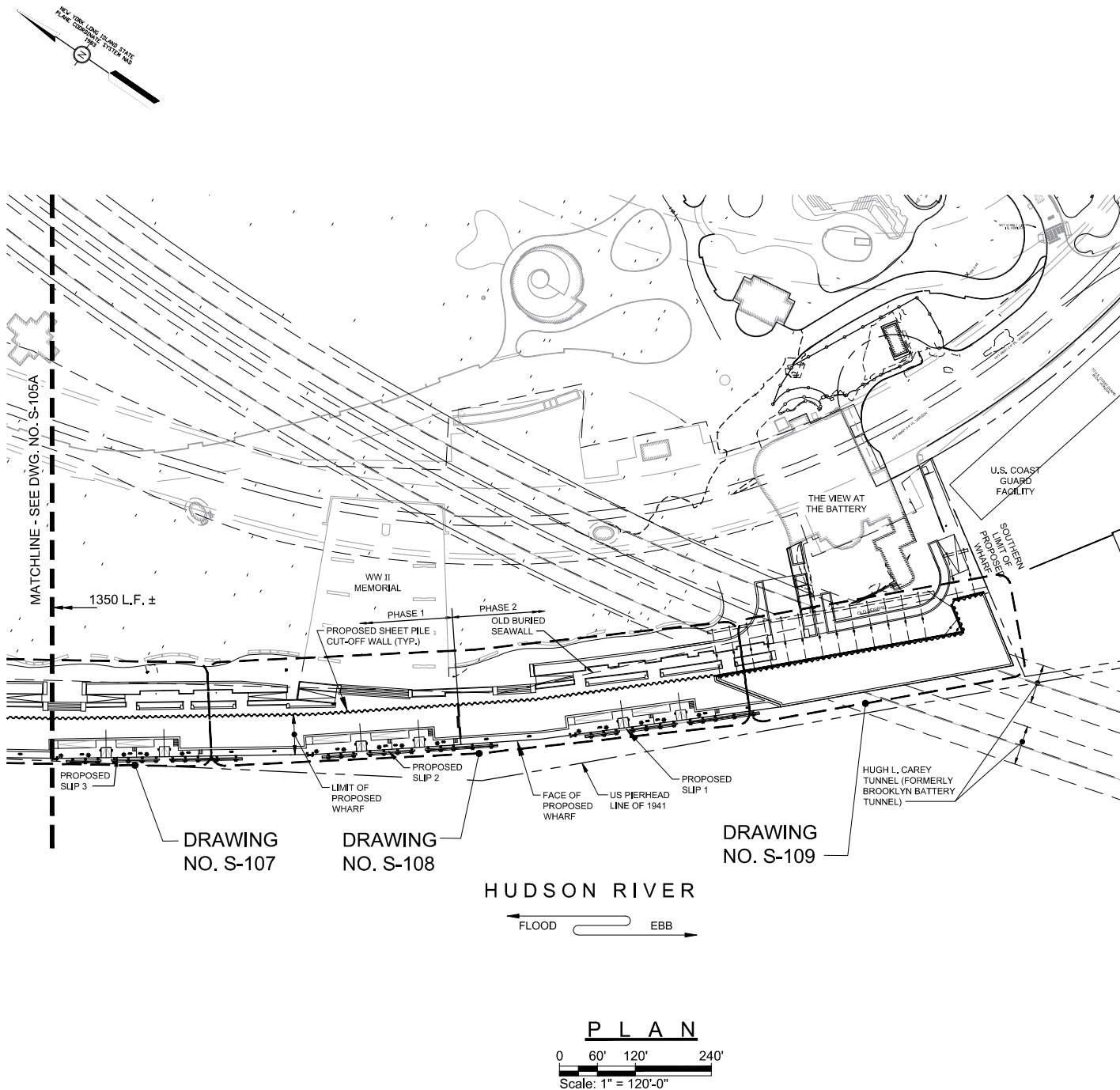
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-105A**

**28 OF 47**



## NOTE:

- SEE DRAWING NO. S-001 FOR GENERAL NOTES.

## LOWER MANHATTAN COASTAL RESILIENCY

### - BATTERY

IMPLEMENTING AGENCY:

**New York City**  
**Economic Development Corporation**  
 One Liberty Plaza  
 New York, New York 10006  
 212 818 5000

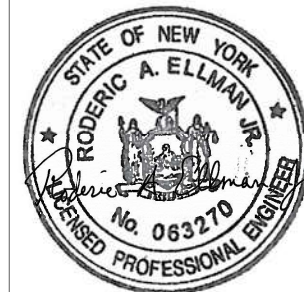
OWNER:

**City of New York**  
**Parks & Recreation**  
 Olmsted Center  
 Flushing Meadows Corona Park  
 Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
 475 Fifth Avenue, 12th Floor  
 New York, NY 10119-2229  
 www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**TOPSIDE KEY PLAN**  
**SHEET 2 OF 2**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

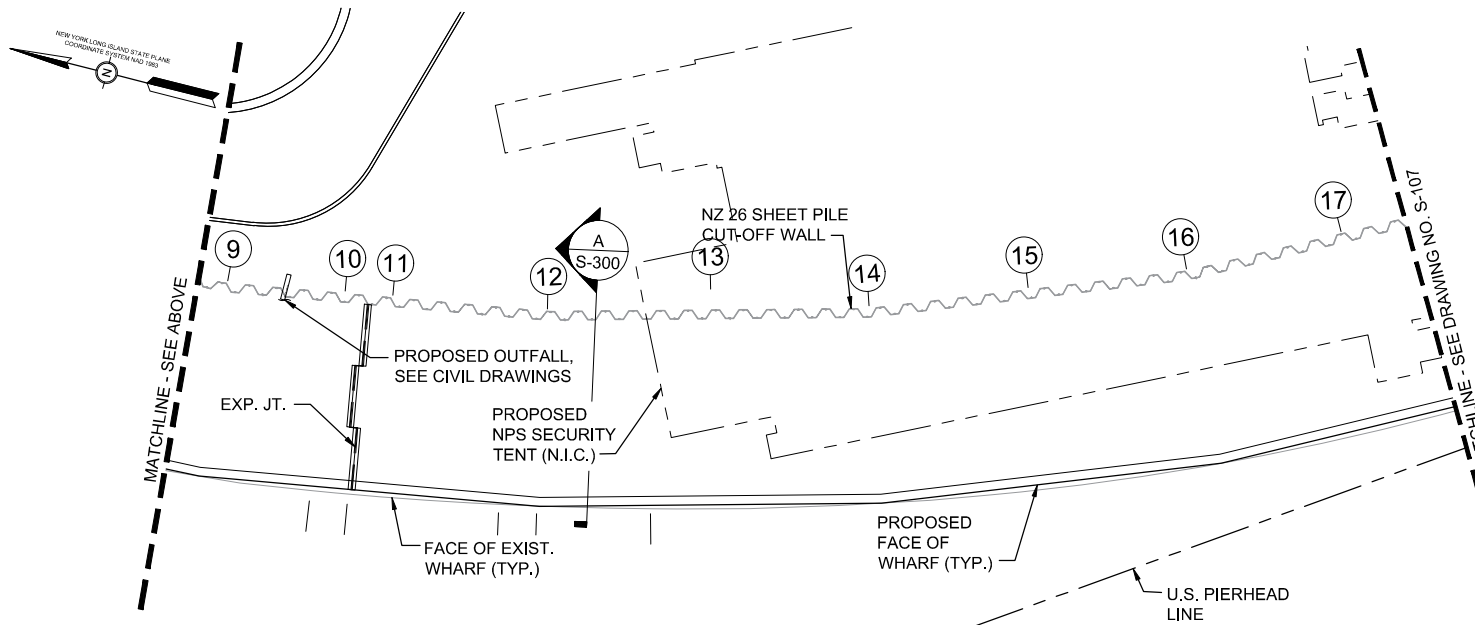
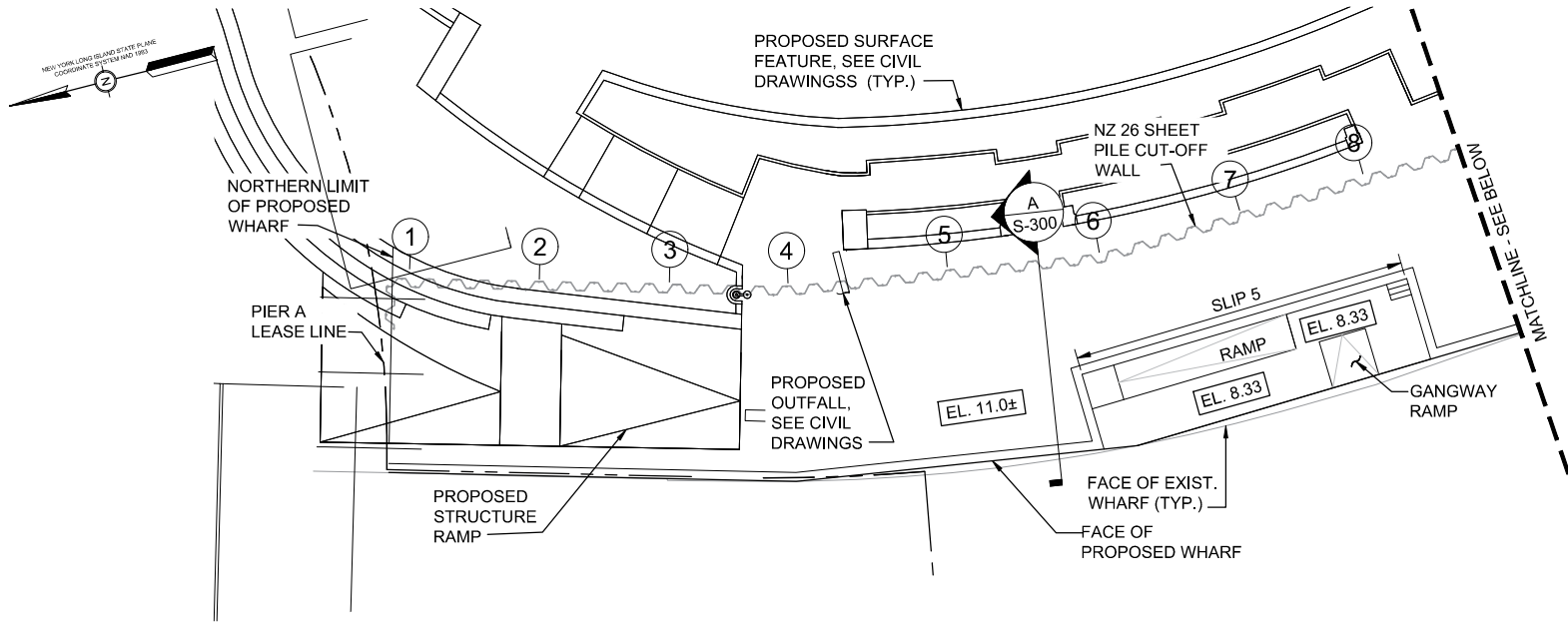
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

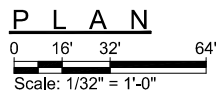
**S-105B**

**29 OF 47**



## NOTE:

1. SEE DRAWING NO. S-001 FOR GENERAL NOTES.



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**NY/EDC** New York City  
Economic Development  
Corporation  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

 City of New York  
Parks & Recreation  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

 **Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2297  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**TOPSIDE PLAN  
SHEET 1 OF 4**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

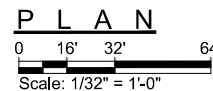
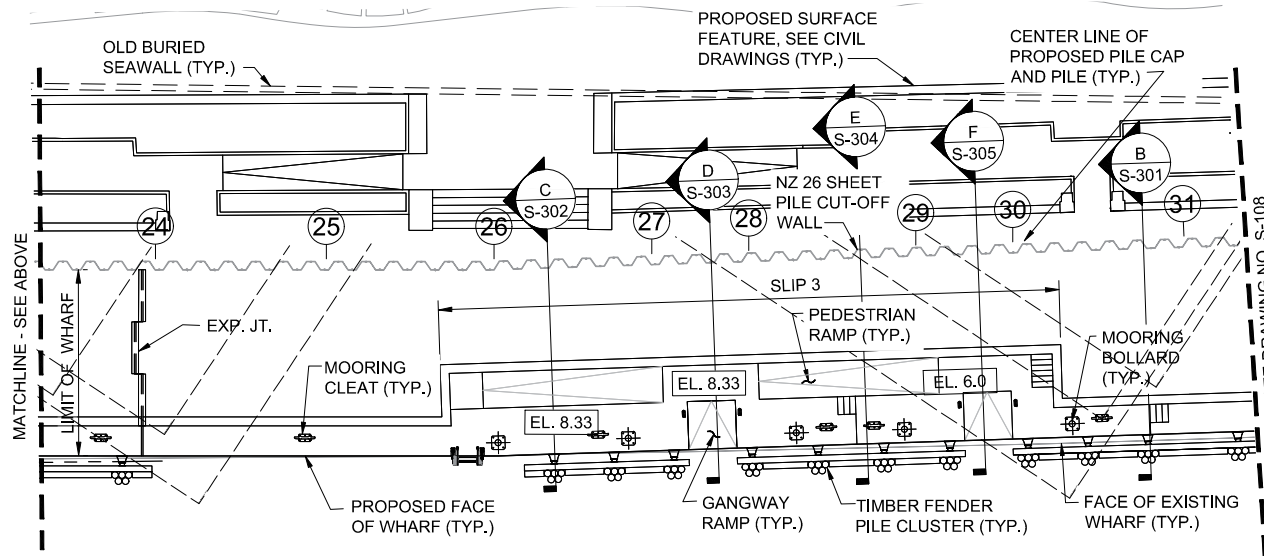
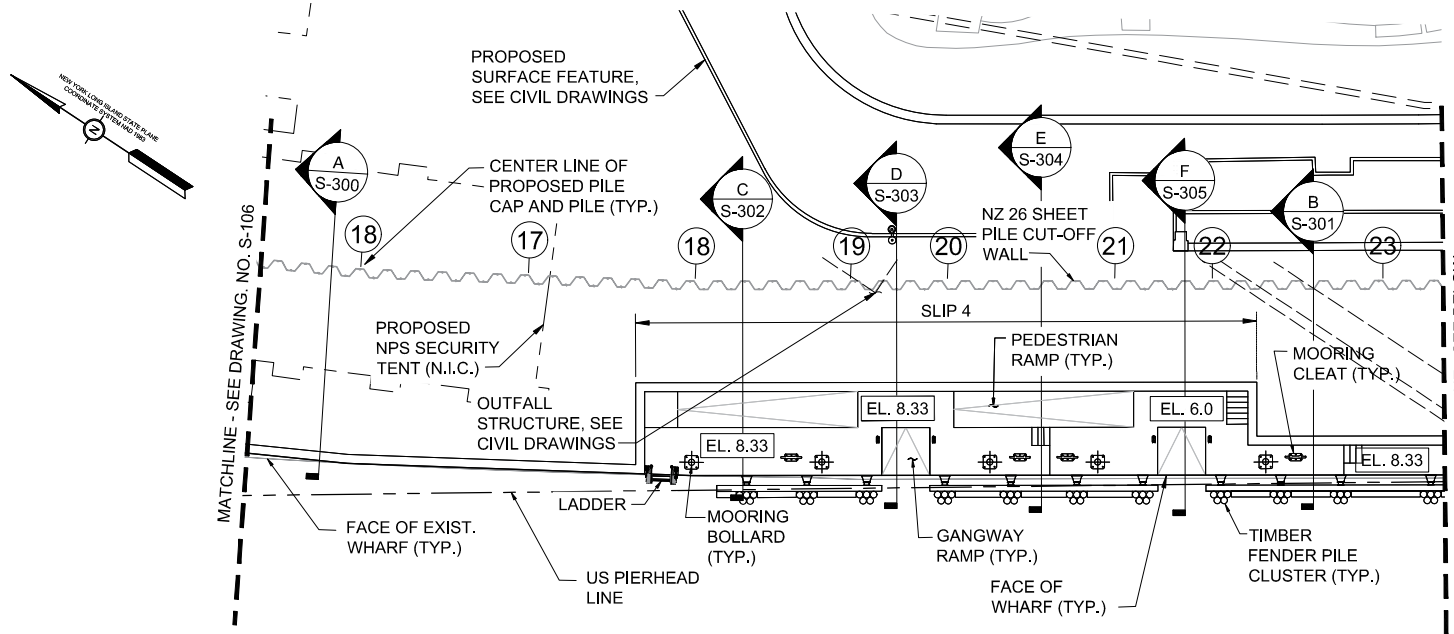
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-106**

**30 OF 47**



**NOTE:**

- SEE DRAWING NO. S-001 FOR GENERAL NOTES.

## LOWER MANHATTAN COASTAL RESILIENCY

### - BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**TOPSIDE PLAN  
SHEET 2 OF 4**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

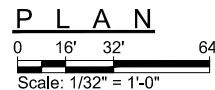
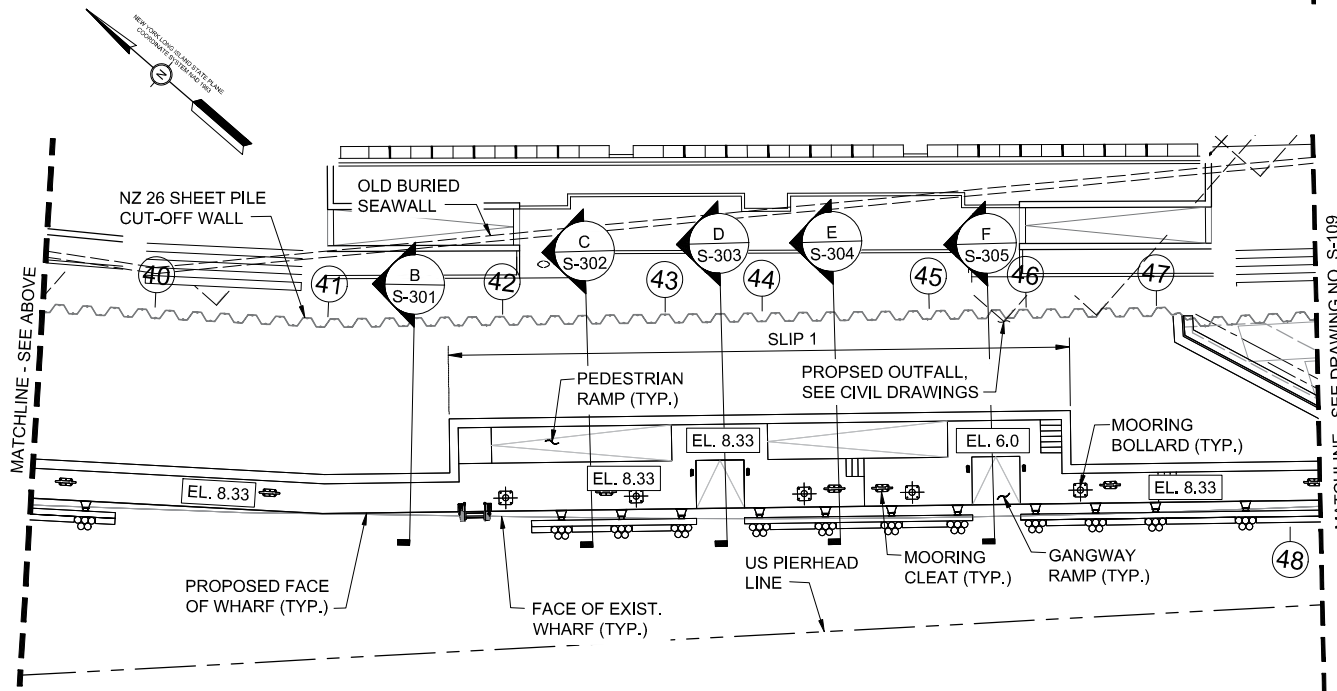
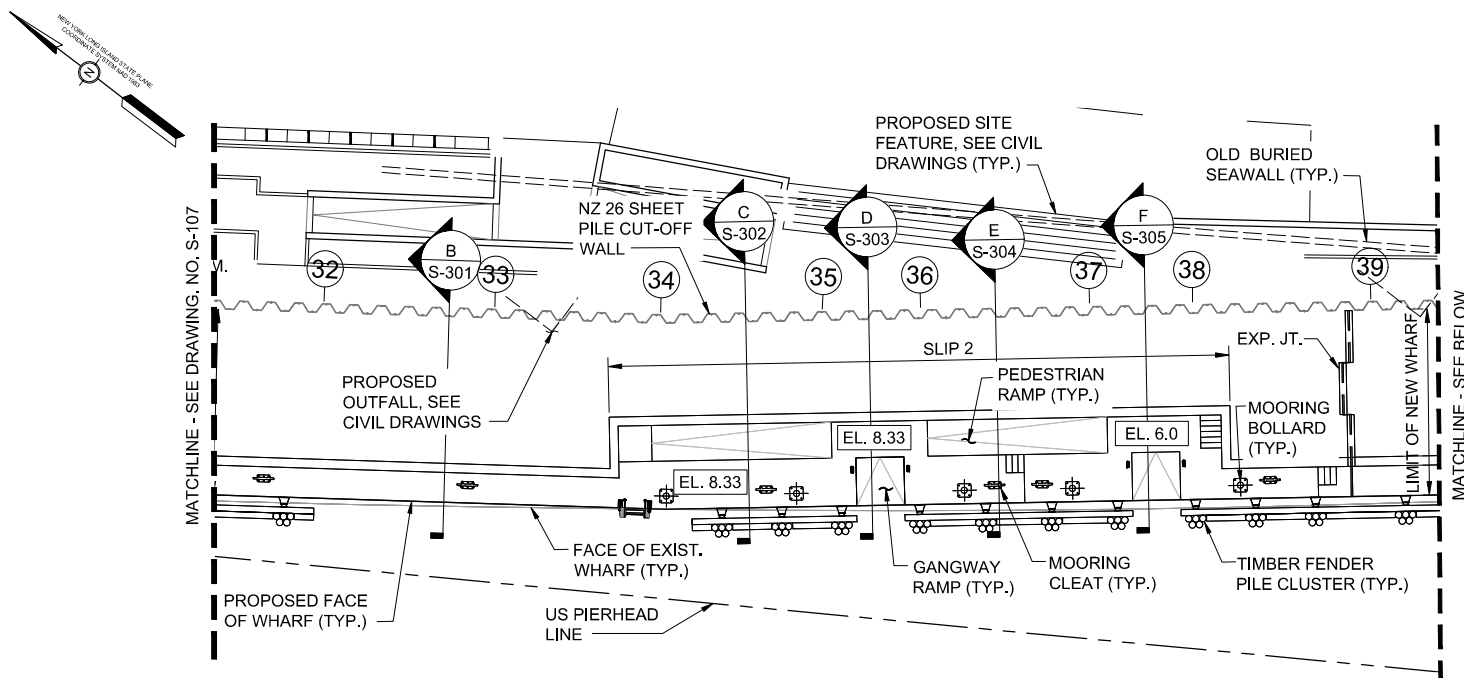
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-107**

**31 OF 47**



**NOTE:**

- SEE DRAWING NO. S-001 FOR GENERAL NOTES.

## LOWER MANHATTAN COASTAL RESILIENCY

### - BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2229  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**TOPSIDE PLAN  
SHEET 3 OF 4**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

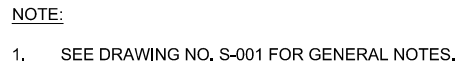
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

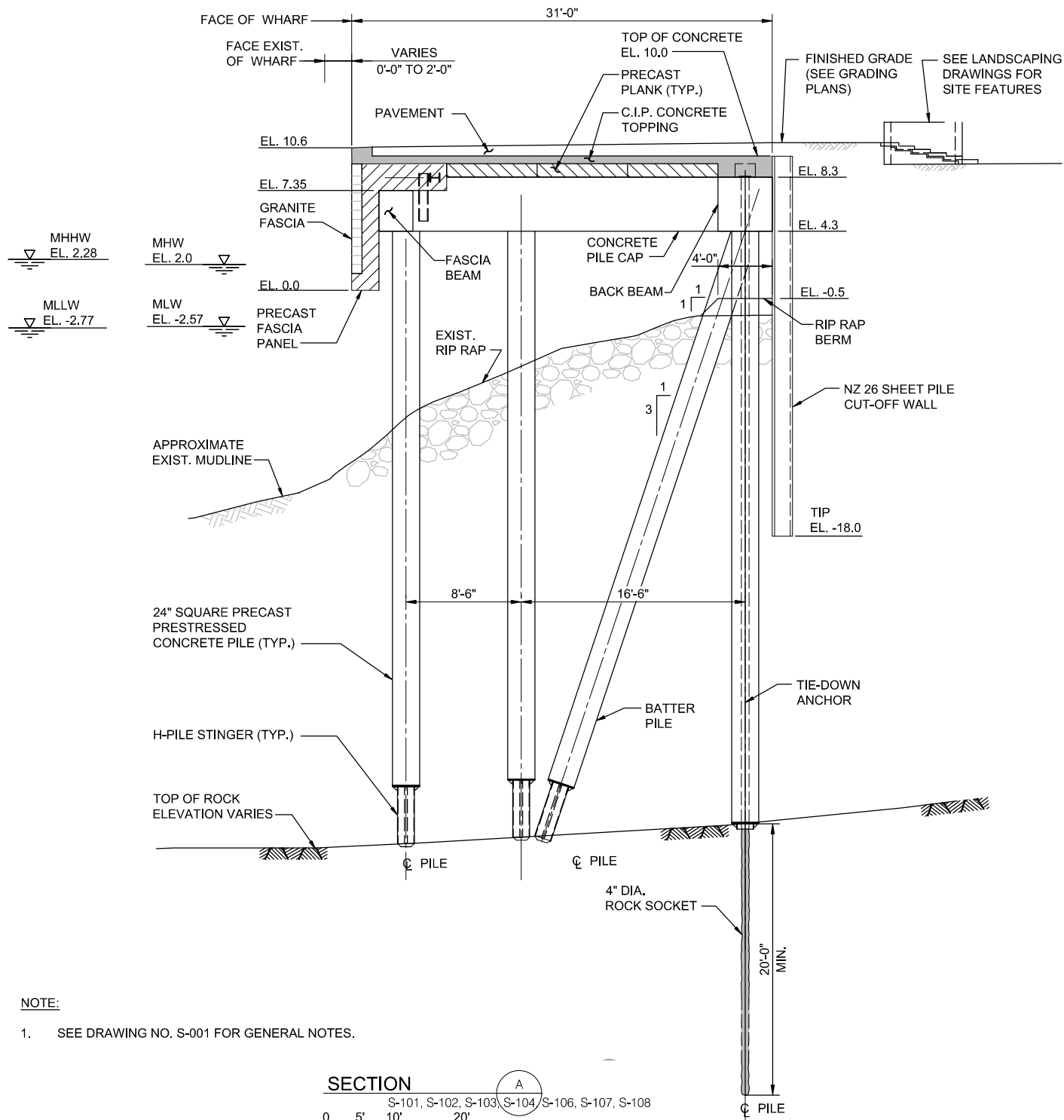
DRAWING NO.

**S-108**

**32 OF 47**



33 OF 47



## NOTE:

- SEE DRAWING NO. S-001 FOR GENERAL NOTES.

## SECTION

S-101, S-102, S-103, S-104, S-106, S-107, S-108

0 5' 10' 20'

Scale: 3/32" = 1'-0"

LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2299  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**GENERAL SECTION  
TYPICAL WHARF**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

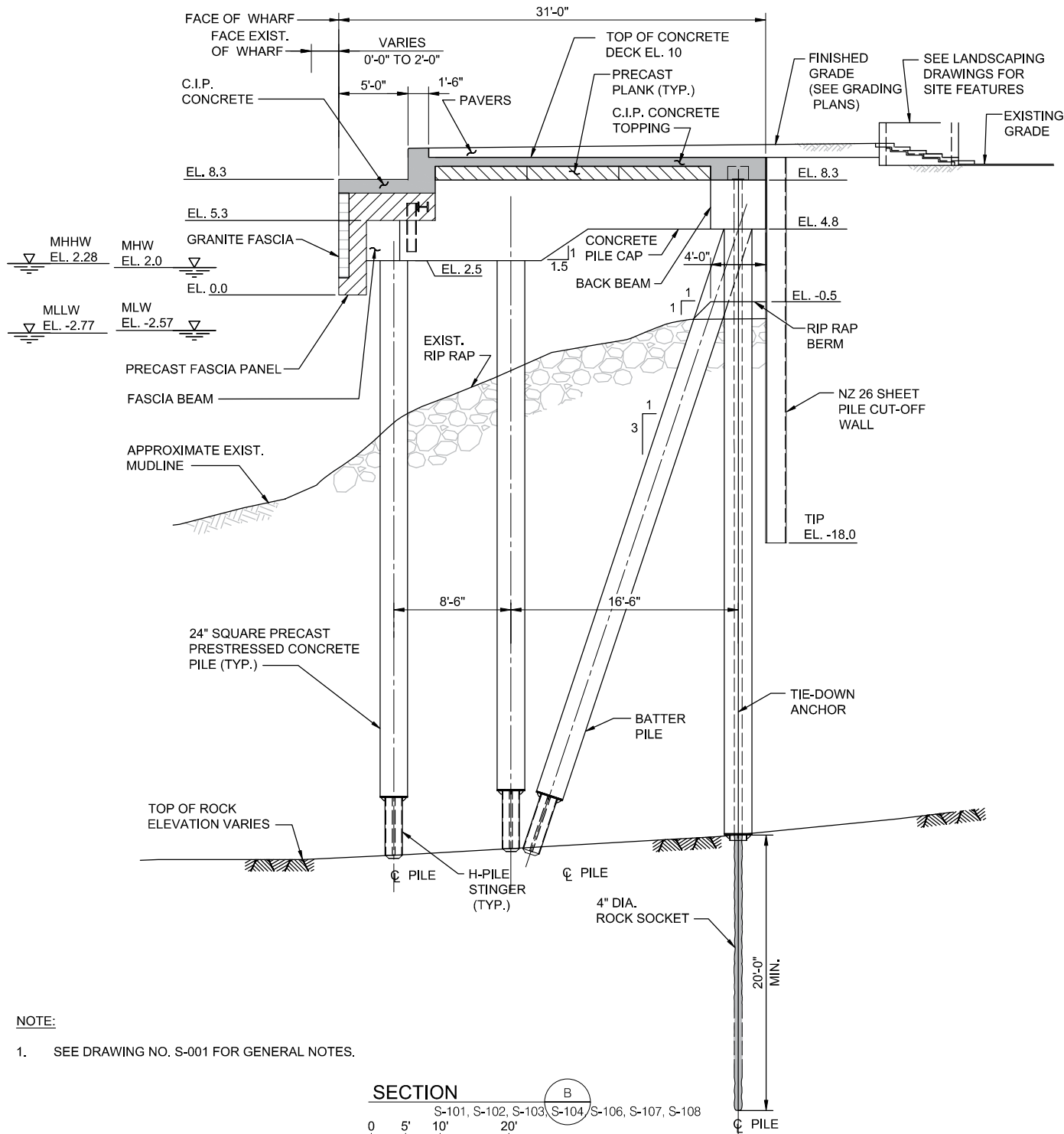
DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

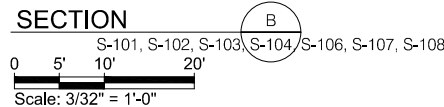
SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-300**  
**34 OF 47**



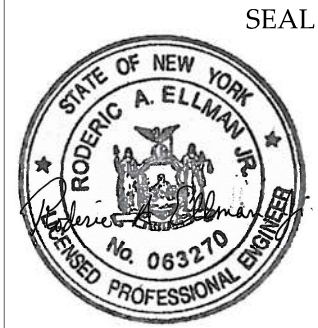
**NOTE:**  
1. SEE DRAWING NO. S-001 FOR GENERAL NOTES.



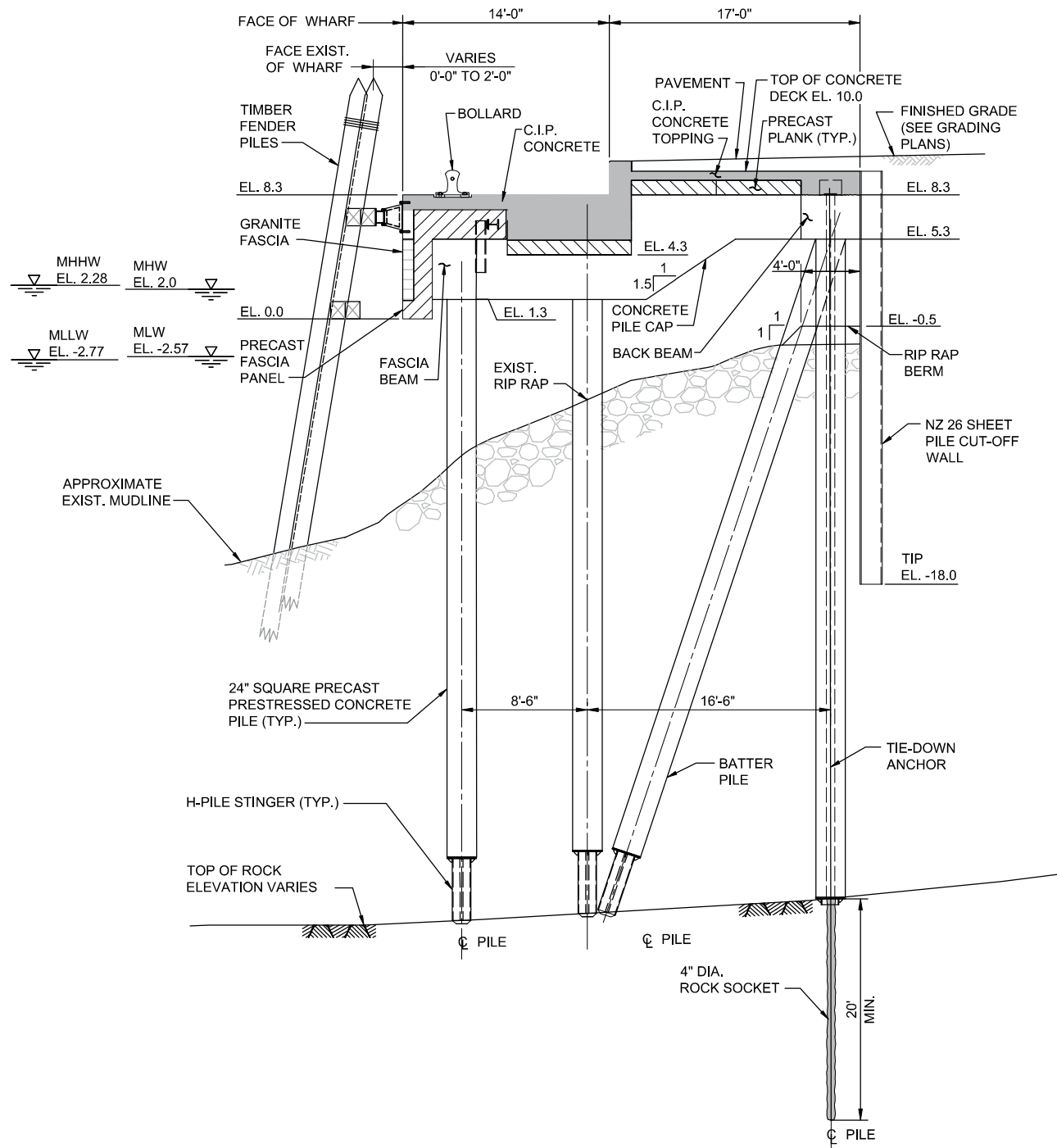
LOWER MANHATTAN COASTAL RESILIENCY  
- BATTERY  
IMPLEMENTING AGENCY:  
**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:  
**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

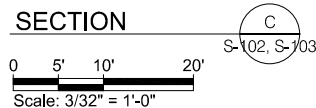
LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:  
**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2299  
www.stantec.com



REVISION:	DATE:	COMMENT:
DRAWING TITLE: <b>GENERAL SECTION TYPICAL WHARF</b>		
NYC EDC CONTRACT NO. 64350006		
DESIGN PROJECT NO. 7788		
DATE: SEPTEMBER 16, 2022		
SCALE: AS NOTED		
SHEET SIZE: 8.5" X 11"		
DRAWING NO. <b>S-301</b>		
<b>35 OF 47</b>		



- NOTE:**
- SEE DRAWING NO. S-001 FOR GENERAL NOTES.



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City**  
**Economic Development Corporation**  
 One Liberty Plaza  
 New York, New York 10006  
 212 818 5000

OWNER:

**City of New York**  
**Parks & Recreation**  
 Olmsted Center  
 Flushing Meadows Corona Park  
 Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
 475 Fifth Avenue, 12th Floor  
 New York, NY 10119-2229  
 www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**GENERAL SECTION**  
**SLIPS 1 THRU 4**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

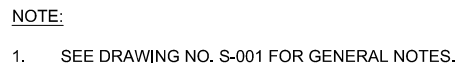
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

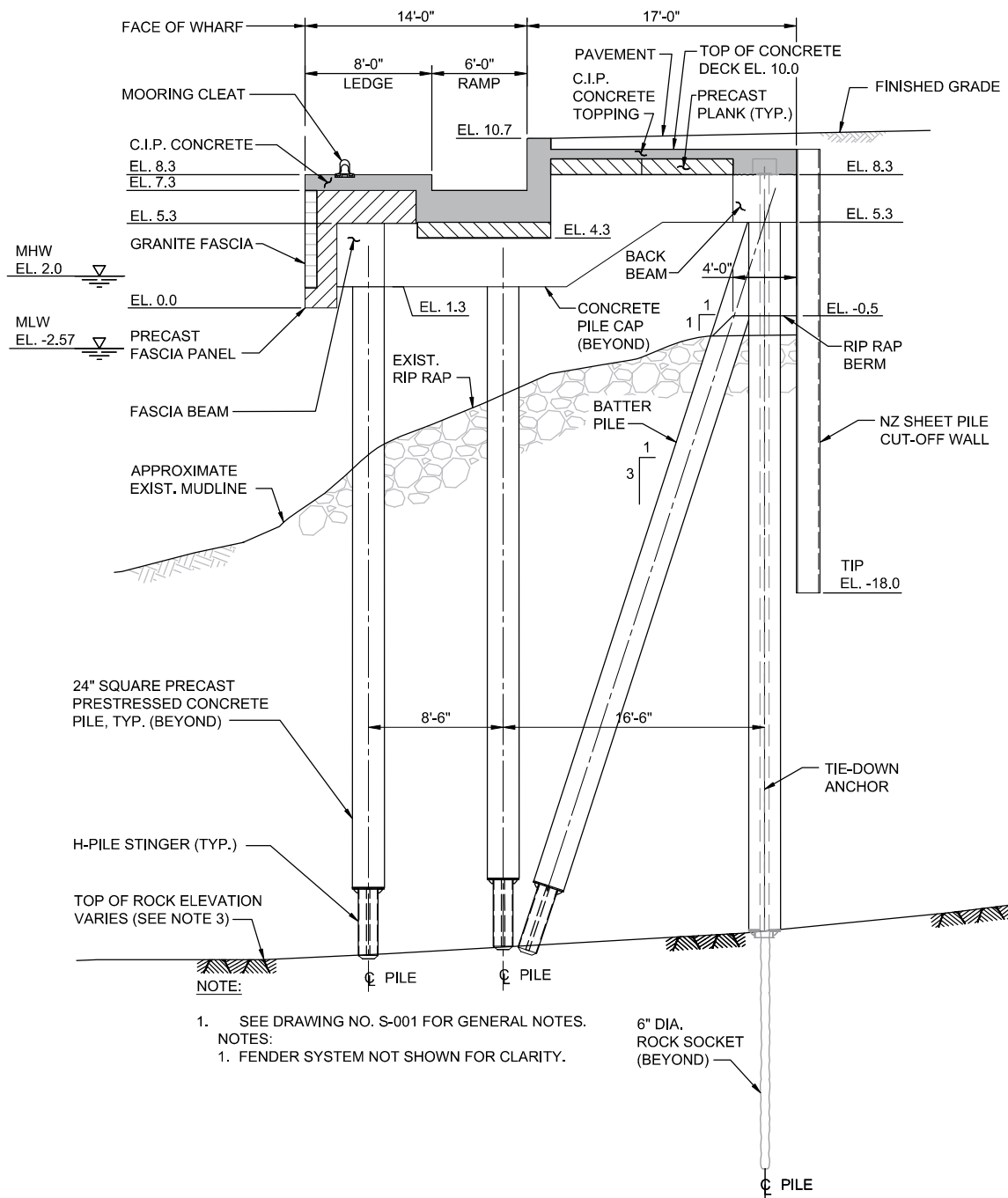
**S-302**

**36 OF 47**



A circle with a horizontal line passing through its center. The line is labeled "S-102, S-103" on the left and "D" on the right.

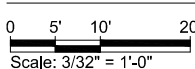
**37 OF 47**



NOTE:

- SEE DRAWING NO. S-001 FOR GENERAL NOTES.

SECTION

E  
S-102, S-703

LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**NY/EDC** New York City  
Economic Development  
Corporation  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

 City of New York  
Parks & Recreation  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT &amp; ENGINEER:

 **Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2299  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**PROPOSED WHARF  
SECTION E**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

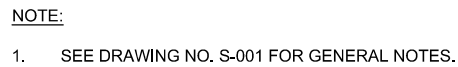
DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

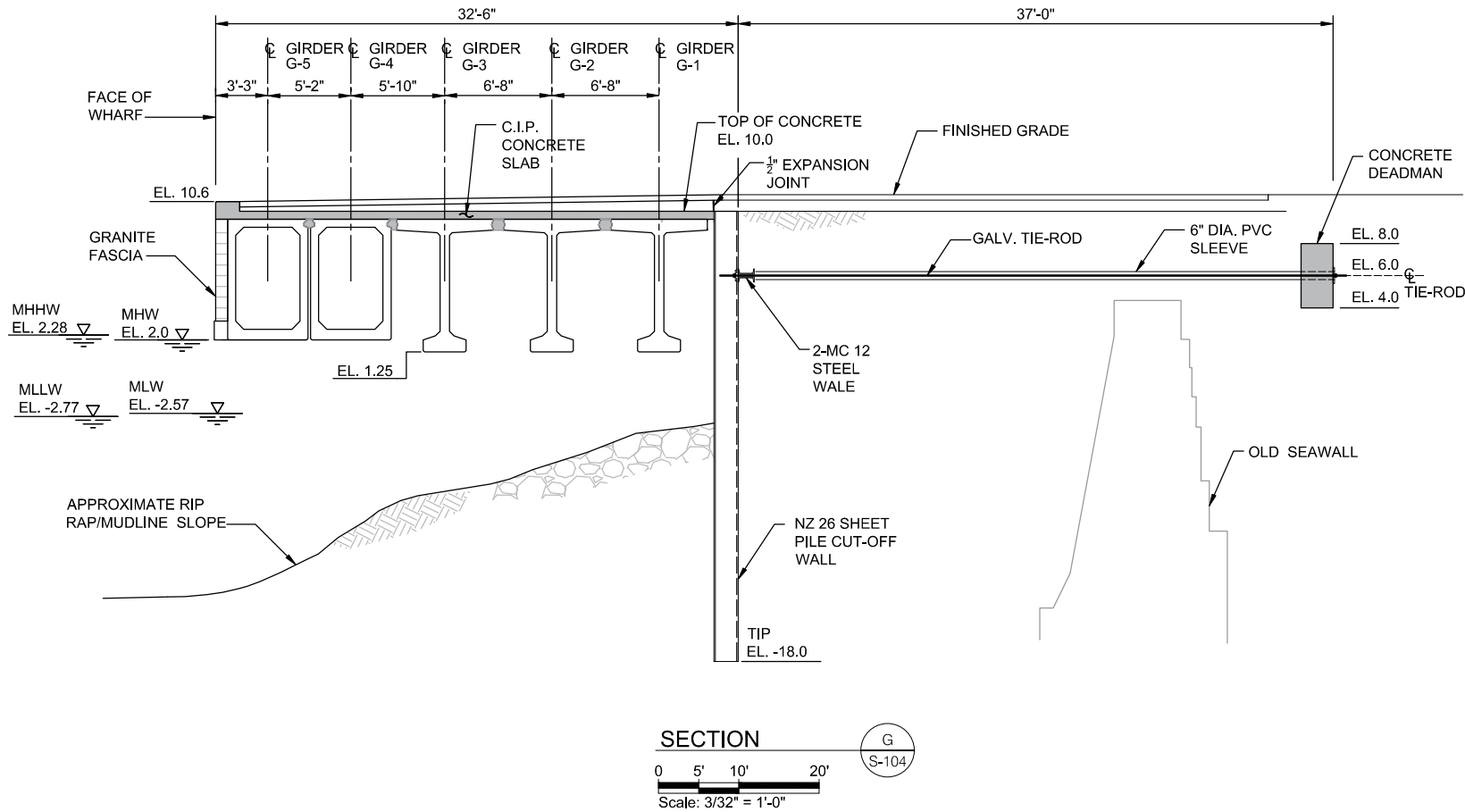
SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-304****38 OF 47**



S-305  
39 OF 47



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2297  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**GENERAL SECTION  
PREST GIRDERS**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

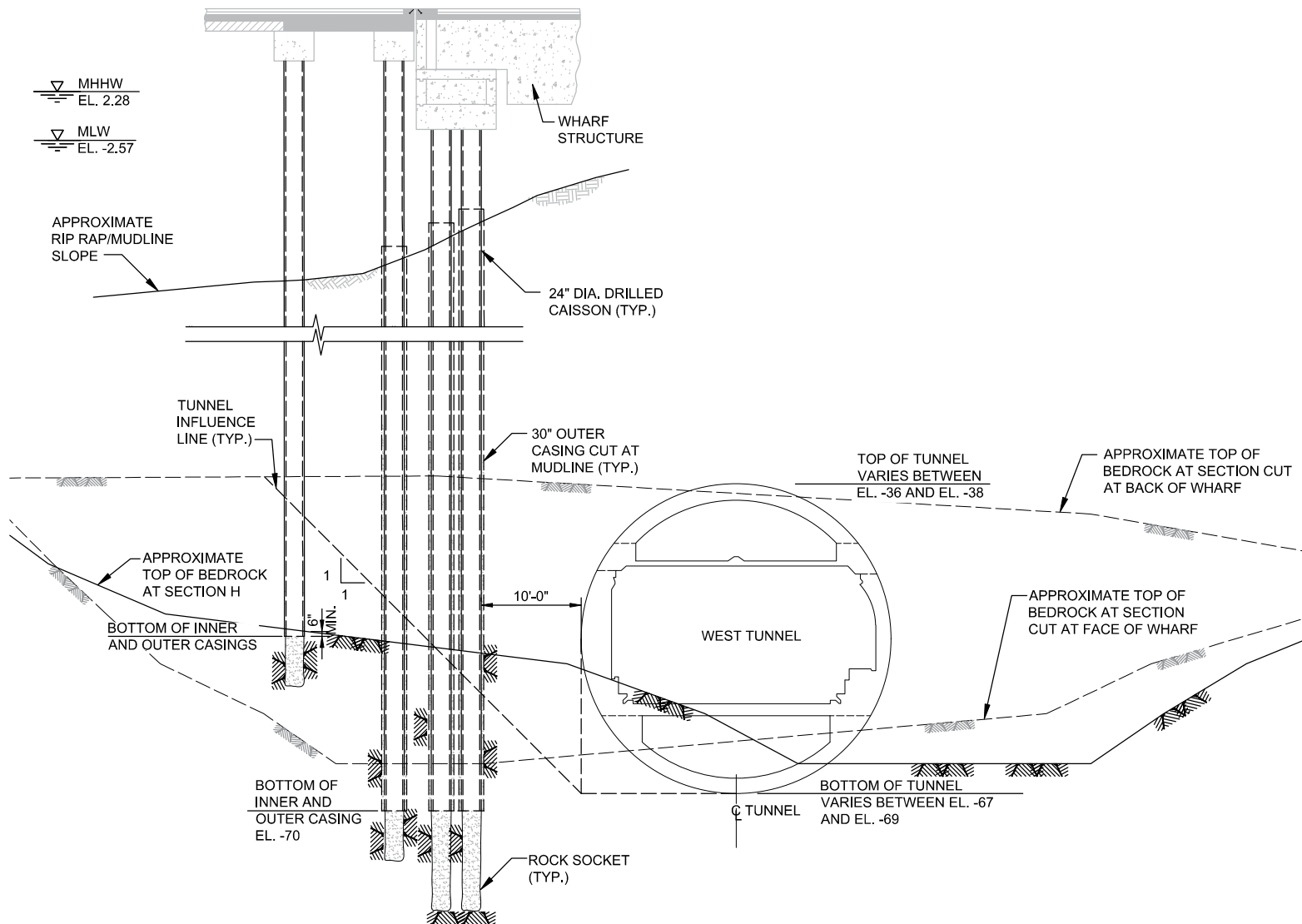
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

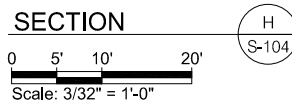
DRAWING NO.

**S-306**

**40 OF 47**



- NOTE:**
- SEE DRAWING NO. S-001 FOR GENERAL NOTES.



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2299  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**GENERAL SECTION  
H.L. CAREY TUNNELS**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

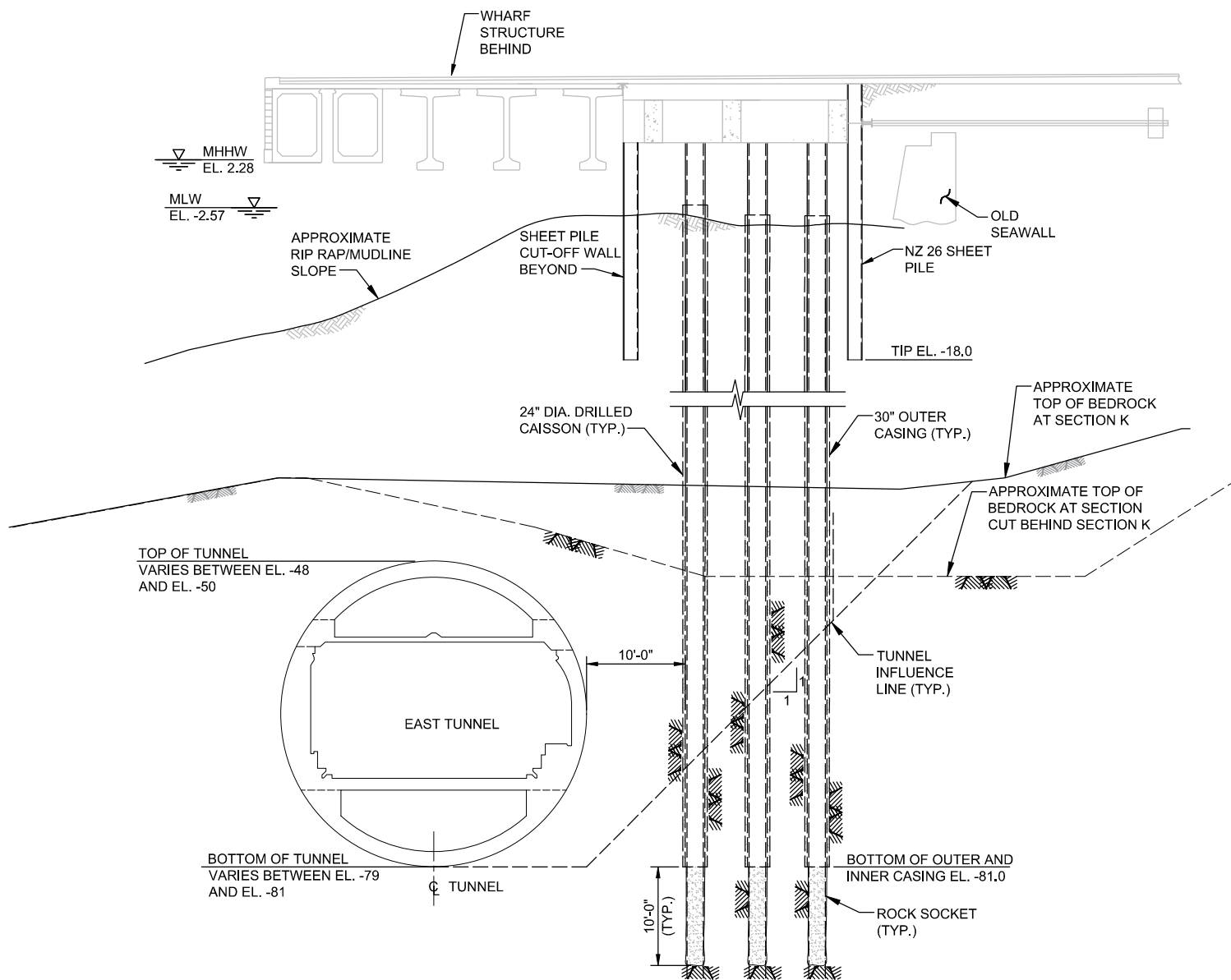
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-307**

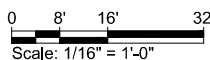
**41 OF 47**



**NOTE:**

1. SEE DRAWING NO. S-001 FOR GENERAL NOTES.

**SECTION**



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



**City of New York Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:



**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10017-2299  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**GENERAL SECTION  
H.L. CAREY TUNNELS**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

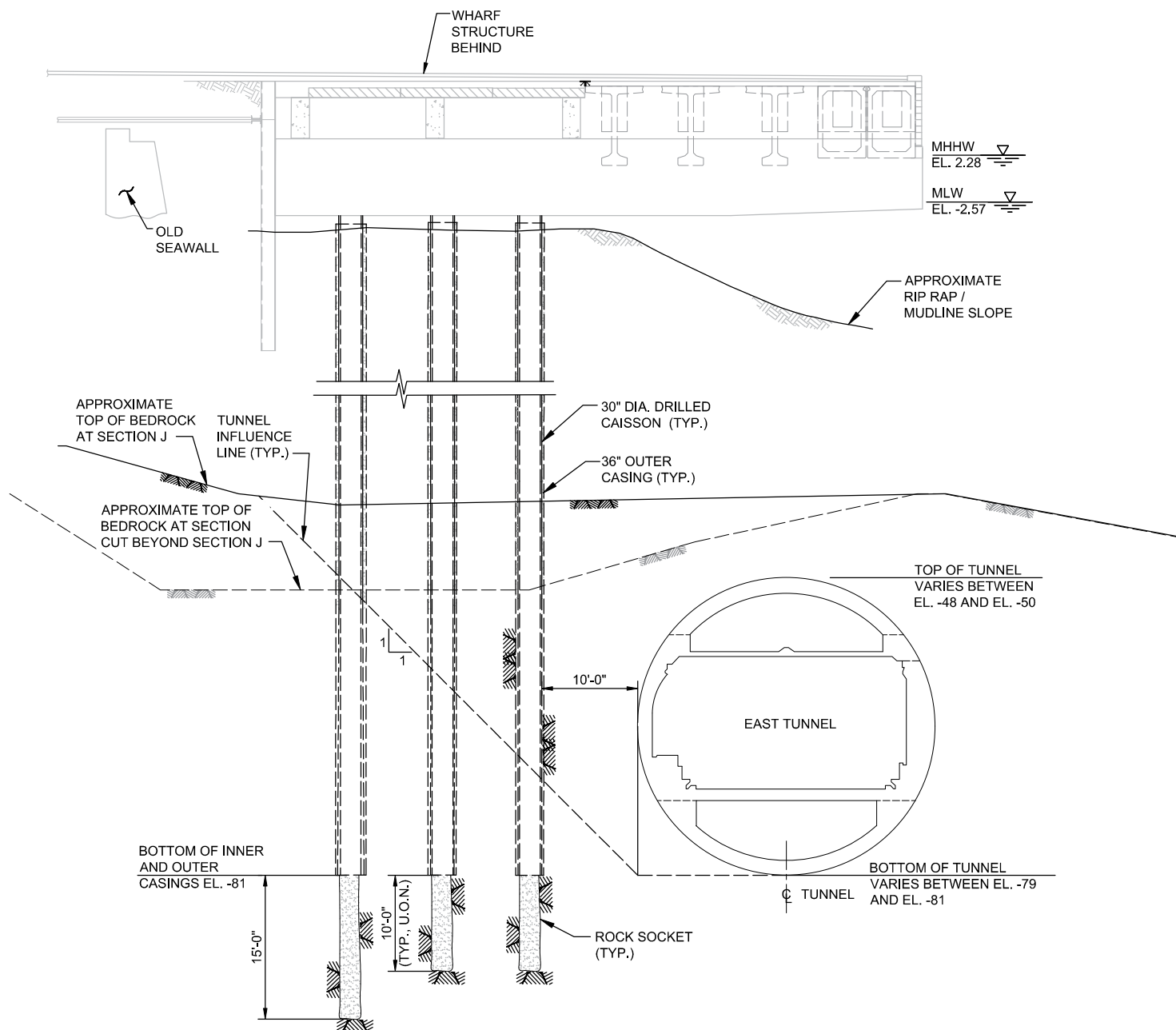
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

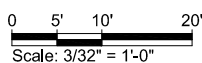
DRAWING NO.

**S-308**

**42 OF 47**

**NOTE:**

1. SEE DRAWING NO. S-001 FOR GENERAL NOTES.

**SECTION**

LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City**  
**Economic Development Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:



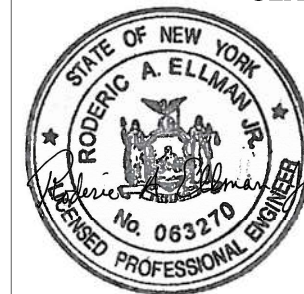
**City of New York**  
**Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT &amp; ENGINEER:

**Stantec**

475 Fifth Avenue, 12th Floor  
New York, NY 10017-2299  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:

**GENERAL SECTION**  
**H.L. CAREY TUNNELS**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

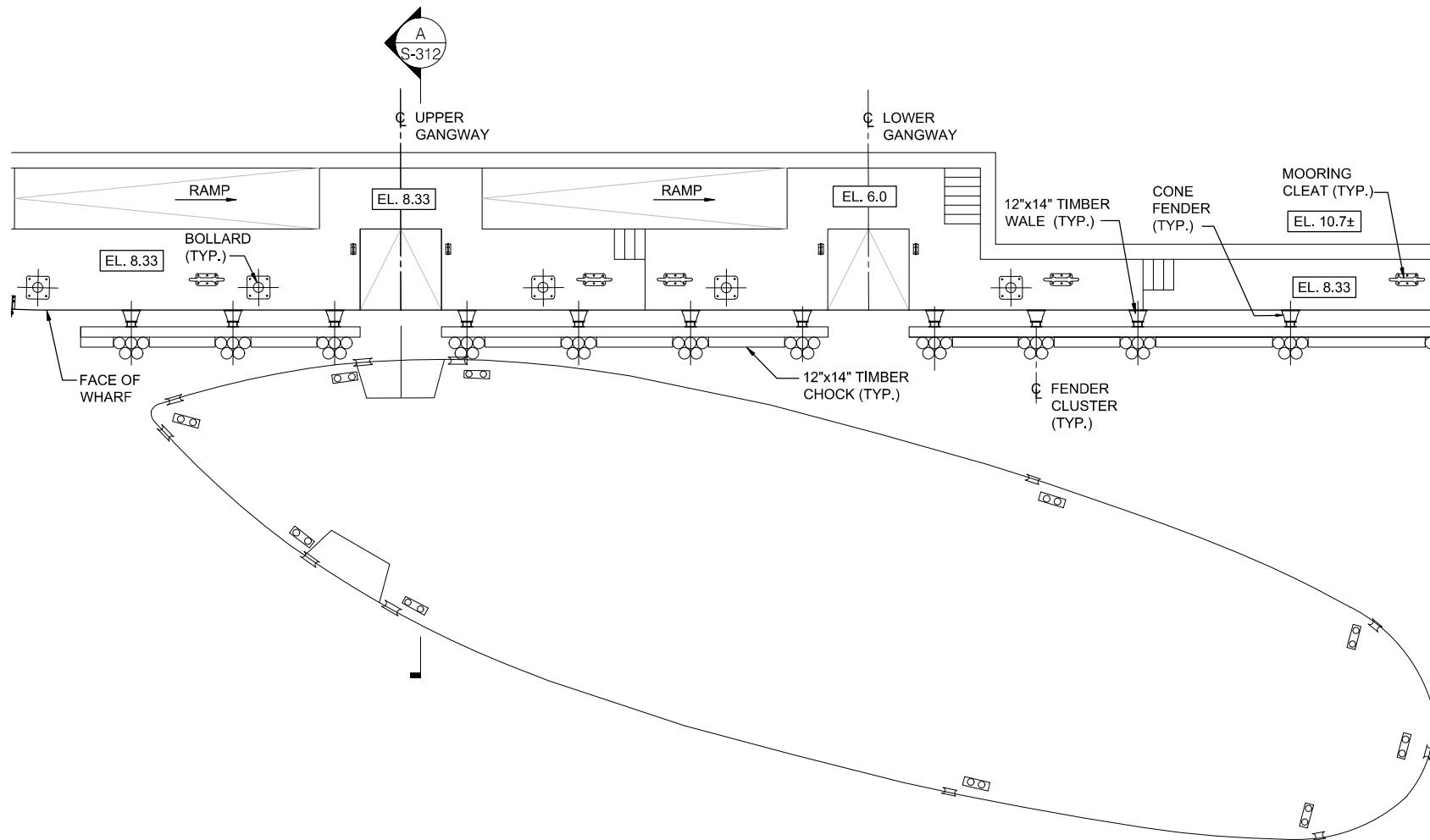
DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-309****43 OF 47**



**MOORING ARRANGEMENT AT UPPER GANGWAY**

0 8' 16' 32'  
Scale: 1/16" = 1'-0"

**NOTE:**

- SEE DRAWING NO. S-001 FOR GENERAL NOTES.

LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City  
Economic Development  
Corporation**  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

**City of New York  
Parks & Recreation**  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2297  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**TYPICAL FENDER AND  
MOORING ARRANGEMENT  
PLAN - SHEET 1 OF 2**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

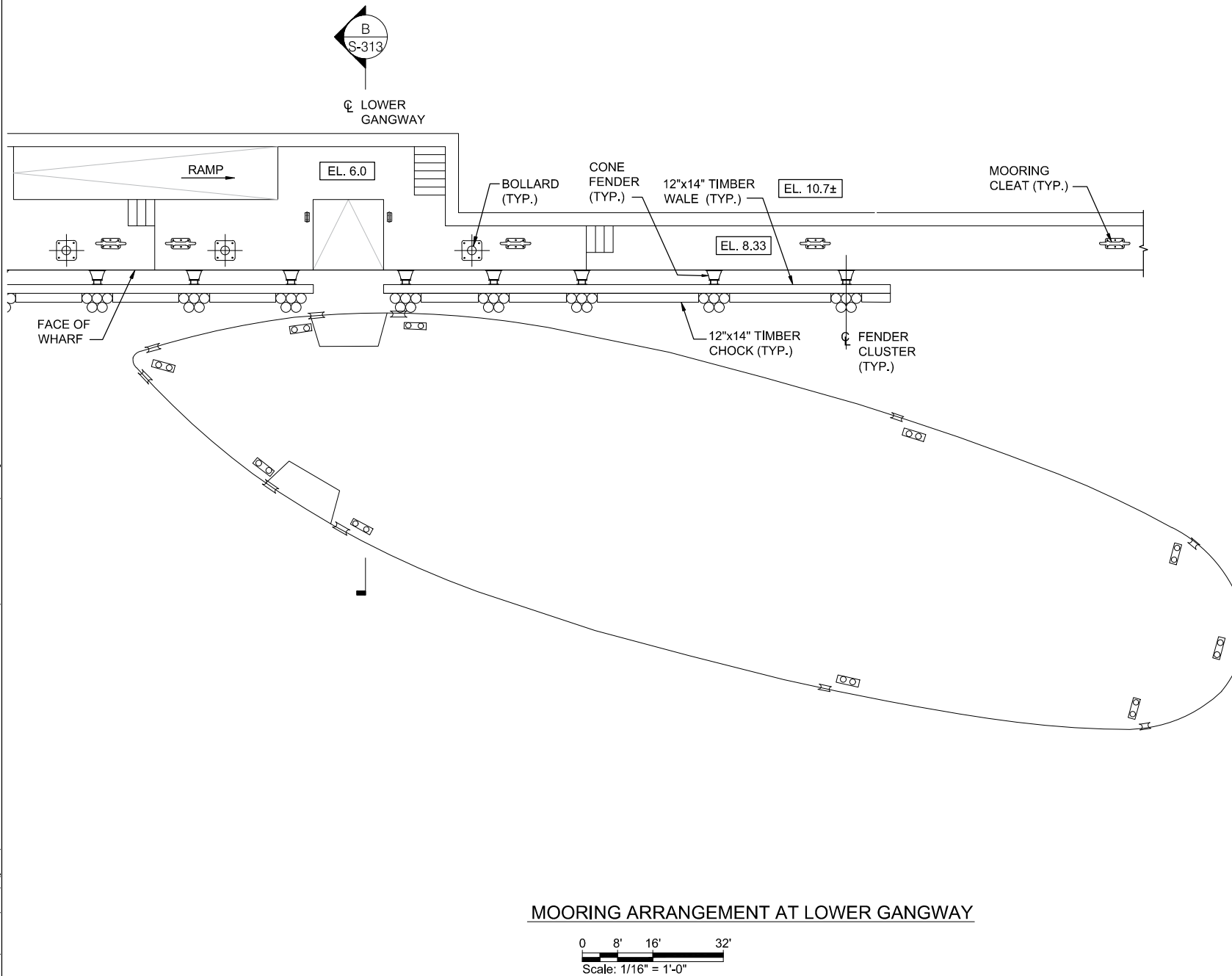
SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-310**

**44 OF 47**



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**New York City**  
**Economic Development**  
**Corporation**  
 One Liberty Plaza  
 New York, New York 10006  
 212 818 5000

OWNER:

**City of New York**  
**Parks & Recreation**  
 Olmsted Center  
 Flushing Meadows Corona Park  
 Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

**Stantec**  
 475 Fifth Avenue, 12th Floor  
 New York, NY 10017-2298  
 www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**TYPICAL FENDER AND**  
**MOORING ARRANGEMENT**  
**PLAN - SHEET 2 OF 2**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

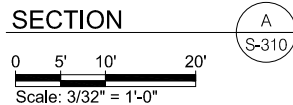
DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

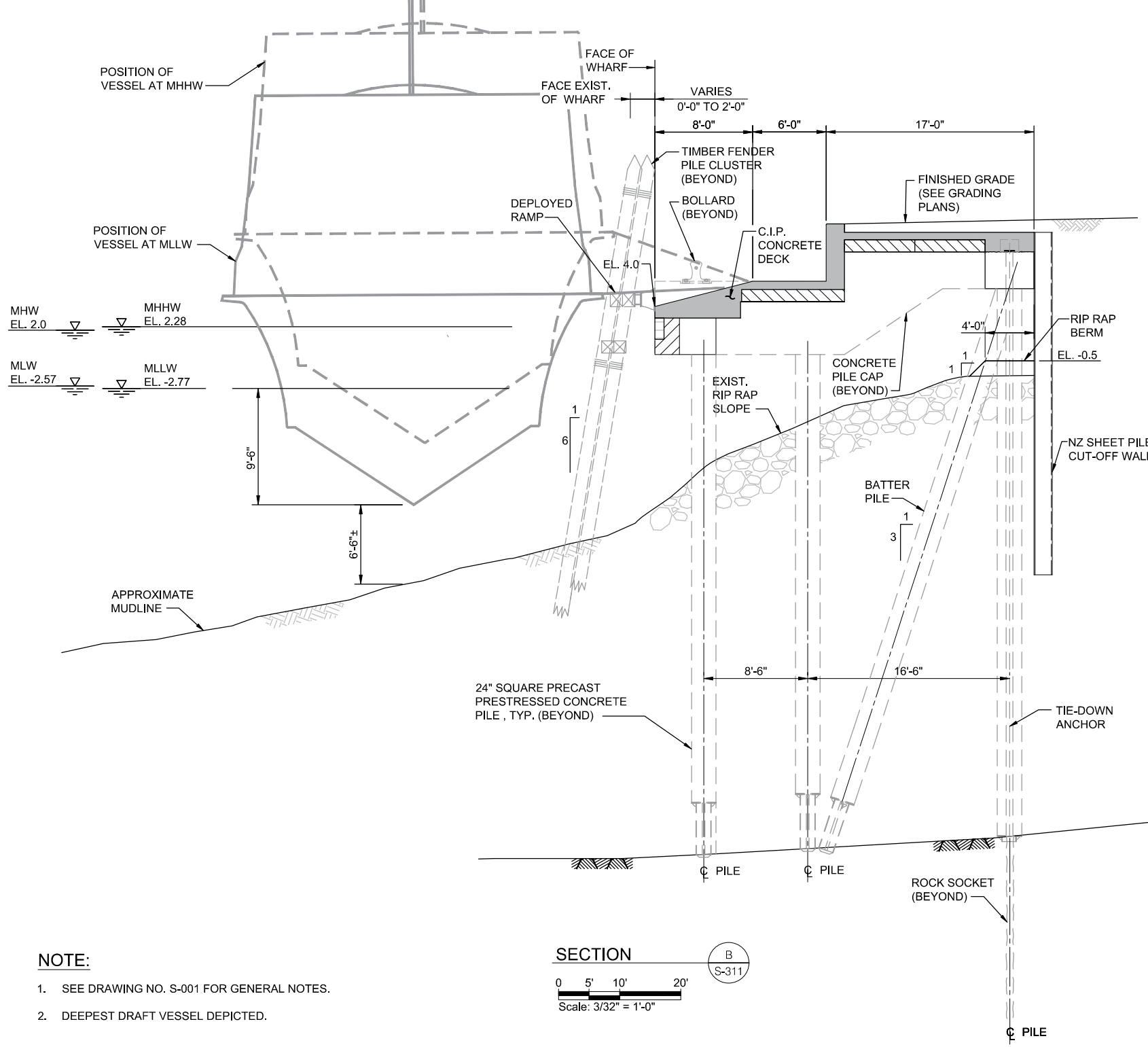
SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-311**  
**45 OF 47**



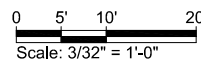
S-312  
46 OF 47



## NOTE:

1. SEE DRAWING NO. S-001 FOR GENERAL NOTES.
2. DEEPEST DRAFT VESSEL DEPICTED.

## SECTION



LOWER MANHATTAN COASTAL RESILIENCY

- BATTERY

IMPLEMENTING AGENCY:

**E/EDC** New York City  
Economic Development  
Corporation  
One Liberty Plaza  
New York, New York 10006  
212 818 5000

OWNER:

 City of New York  
Parks & Recreation  
Olmsted Center  
Flushing Meadows Corona Park  
Flushing, New York 11368

LANDSCAPE ARCHITECT, ARCHITECT & ENGINEER:

 **Stantec**  
475 Fifth Avenue, 12th Floor  
New York, NY 10017-2297  
www.stantec.com

SEAL



REVISION: DATE: COMMENT:

DRAWING TITLE:  
**TYPICAL FENDER AND  
MOORING ARRANGEMENT  
SECTION**

NYC EDC CONTRACT NO. 64350006

DESIGN PROJECT NO. 7788

DATE: SEPTEMBER 16, 2022

SCALE: AS NOTED

SHEET SIZE: 8.5" X 11"

DRAWING NO.

**S-313**  
**47 OF 47**