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-2024-00433-EMI**
Issue Date: February 5, 2025
Expiration Date: March 7, 2025

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: Battery Park City Authority
200 Liberty Street, 24th Floor
New York, New York 10281

ACTIVITY: Flood Barrier System for Coastal Resiliency

WATERWAY: Hudson River

LOCATION: Battery Park City, 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

AND EMAILED TO Christopher.W.Minck@usace.army.mil 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 can also be submitted through the USACE Regulatory Request System (RRS) at https://rrs.usace.army.mil/rrs/public-notices.

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, there are eighteen (18) architectural resources identified within a 400-foot radius of the proposed project, of which three (3) are located within the project area: the Shearwater, South Cove, and the Hudson River Bulkhead. USACE has made the determination that there would be no adverse effect to the historic resources within the permit area. The New York State Historic Preservation Office (NYSHPO) concurred with this determination on December 4, 2024.

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 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.

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.

R. Miranda Digitally signed by Rosita Miranda

FOR AND IN BEHALF OF
Stephan A. Ryba
Chief, Regulatory Branch

Enclosures

WORK DESCRIPTION

The permit applicant, Battery Park City Authority (BPCA) has requested Department of the Army (DA) authorization to construct a flood barrier system (FBS) along the Hudson River at Battery Park City (BPC) in the Borough of Manhattan, New York County, City of New York, New York. The proposed project is referred to as the North/West Battery Park City Resiliency (NWBPCR) Project.

The proposed project is divided into seven reaches each consisting of a different range of work. The FBS is comprised primarily of passive landside structures (e.g. above-grade concrete walls, below-grade concealed walls, etc.). Where physical constraints preclude landside implementation, in-water structures (e.g. seepage barriers, reconstructed platforms, bridging structures, etc.) are proposed.

The proposed work would involve the following:

Reach 1: State Route 9A Crossing/Tribeca – No USACE Regulated Work

Construction of an upland FBS "tie-back" near Greenwich Street and follows along North Moore Street, south on Route 9A before crossing north of Chambers Street for a total of approximately 1,700 linear feet. There is no in-water work associated with this reach of the project.

Reach 2: North Battery Park City Esplanade

Construction of an approximately 426-foot-long 36-inch diameter o-pile sheet-piling seepage barrier and placement of approximately 379 cubic yards of low permeability clean fill over approximately 0.07 acres (2,958 square feet).

Remove the existing approximately 43-foot-wide by 497-foot-long (approximately 20,267 square feet) overwater platform including the existing piles and replace with a new approximately 49-foot-wide by 562-foot-long (approximately 25,148 square feet) overwater platform supported by ninety-one (91) 36-inch diameter piles filled with approximately 229 cubic yards of concrete. The new platform will also include approximately 556 linear feet of seawall along the seaward side. The seawall will consist of eco-enhancement features. The new overwater platform will increase in size by approximately 0.11 acre (4,688 square feet).

Reach 3: Rockefeller Park – No USACE Regulated Work

Construction of an upland FBS along Rockefeller Park extending west and south along the Park and Connecting to Reach 4 at the South Meadow totaling 1,700 linear feet. There is no in-water work associated with this reach of the project.

Reach 4: Belvedere Plaza

Construction of an approximately 352-foot-long 36-inch diameter o-pile sheet-piling seepage barrier and placement of approximately 1,143 cubic yards of low permeability clean fill over approximately 0.12 acres (5,213 square feet).

Remove and replace an approximately 71-foot-wide by 342-foot-long (approximately 18,251 square feet) section of the existing overwater precast/prestressed deck to accommodate the installation of seventy-nine (79) 36-inch diameter piles filled with approximately 369 cubic yards of concrete used as deep foundation of the new FBS. Once drilled shafts and the footing of the

FBS are constructed, the deck will be reconstructed at the existing elevation with cast-in-place reinforced concrete slab and backfill to a proposed finished grade varying from approximately EL. 9.5' to EL. 12.0'. The new platform will also include approximately 229 linear feet of seawall along the seaward side. The seawall will consist of eco-enhancement features.

Within this reach, one (1) new 24-inch diameter outfall is proposed.

Reach 5: North Cove

Construction of an approximately 122-foot-long 42-inch diameter o-pile sheet piling seepage barrier and placement of approximately 80 cubic yards of low permeability clean fill over approximately 0.01 acres (226 square feet).

Construction of specialized bridging structures with butterfly valves and aerators that extend across the north and south PATH tunnels to control storm surge during storm events and maintain tidal flow during non-storm events. The south bridging structure will be approximately 58-foot-wide by 65.5-foot-long (approximately 3,746 square feet) and the north bridging structure will be 58-foot-wide by 62.5-foot-long (approximately 3,630 square feet). To install the bridging structures, approximately 3,681 cubic yards of material will be dredged from an approximately 26,707 square foot area to a depth of approximately -15 feet NAVD88 for the North PATH tunnel and -17.5 feet NAVD88 for the South PATH Tunnel The existing approximately 74.5-foot-wide by 130-foot-long (approximately 6,566 square feet) platform above the PATH tunnels will be removed and replaced in-place after installation of north and south bridging structures. To accommodate the installation of FBS wall, eight (8) 13.375-inch micropiles filled with approximately 12 cubic yards of concrete are to be installed. These micropiles are used as a deep foundation for the proposed FBS.

Within this reach, two (2) 18-inch diameter outfalls are proposed to be replaced with four (4) new outfalls including three (3) 12-inch diameter outfalls and one (1) 15-inch diameter outfall.

Reach 6: South Esplanade

Construction of an approximately 154-foot-long 36-inch diameter o-pile sheet piling seepage barrier and placement of approximately 1,504 cubic yards of low permeability clean fill over approximately 0.08 acres (3,578 square feet).

Remove and replace an approximately 67-foot-wide by 137-foot-long (approximately 7,159 square feet) section of the overwater precast/prestressed deck to accommodate the installation of thirty-six (36) 36-inch diameter piles filled with approximately 269 cubic yards of concrete used as deep foundation of the new FBS. Once drilled shafts and the footing of the FBS are constructed, the deck will be reconstructed at the existing elevation with cast-in-place reinforced concrete slab, and backfill to a proposed finished grade varying from approximately EL. 9.5' to EL. 12.0'. The new platform will also include approximately 138 linear feet of seawall along the seaward side. The seawall will consist of eco-enhancement features. Select existing piles will have precast eco-enhancement panels or casings installed onto them.

Reach 7: South Cove

Remove an approximately 14-foot-wide by 20-foot-long (approximately 277.5 square feet, 0.006 acre) section of the existing overwater precast/prestressed deck to accommodate the installation of four (4) of 13.375-inch diameter micropiles used as deep foundation of the new FBS. Once

micropiles and the footing of the FBS are constructed, the deck will be reconstructed at the existing elevation with cast-in-place reinforced concrete slab and backfill to a proposed finished grade at approximately EL. 13.5'.

Select existing piles will have precast eco-enhancement panels or casings installed onto them.

In total, the project will result in the discharge of approximately 8,914.40 cubic yards of fill material over approximately 25,475.8 square feet. Additional overwater coverage as a result of platform reconstruction would be approximately 4,688 square feet.

The applicant has stated that they have avoided, minimized, and mitigated for potential impacts proposed to the maximum extent practicable by minimizing in-water work as practicable given the number of constraints associated with the project location including limitations due to existing infrastructure, buildings, the PATH tunnels, and the existing ferry terminal. The applicant has proposed to utilize a turbidity curtain around construction areas, as practicable to minimize the spread of turbidity in the waterway. Additionally, Best Management Practices will be utilized to minimize impacts to the waterway. For the unavoidable impacts associated with the project, the applicant has proposed to purchase 0.5 mitigation bank credits from the Saw Mill Creek Mitigation Bank in Staten Island, New York.

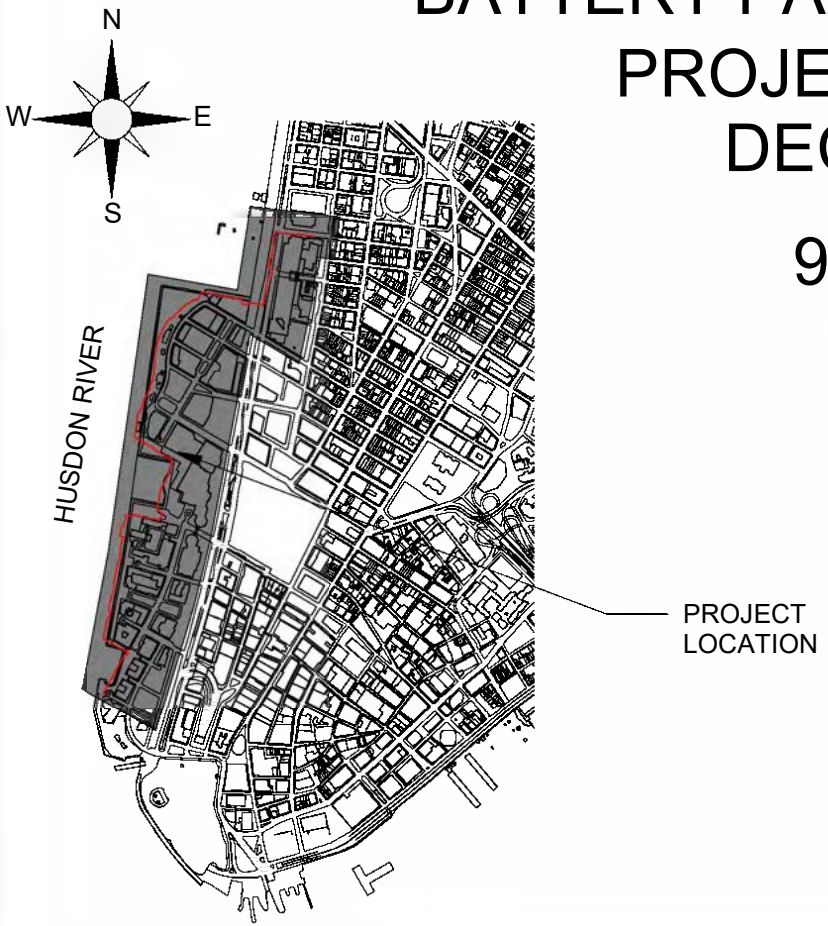
The stated purpose of this project is coastal storm flood risk reduction within and inland of BPC.

NORTH / WEST BATTERY PARK CITY RESILIENCY

BATTERY PARK CITY AUTHORITY
PROJECT NO. 30084181
DECEMBER 2024

90% DESIGN

NOT FOR CONSTRUCTION



Turner · ECRUZ ARCADIS

IN ASSOCIATION WITH:

BIG
BJARKE INGELS GROUP
45 MAIN ST #9,
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T: (347) 549-4141
big.dk

HE Hayduk Engineering, LLC
HAYDUK ENGINEERING
1010 ROUTE 112, SUITE 200
PORT JEFFERSON STATION, NY 11776
T: (631) 476-0600
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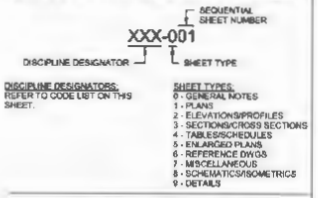
SCAPE
SCAPE LANDSCAPE ARCHITECTURE
277 BROADWAY NINTH FLOOR
NEW YORK, NY 10007
T: (212) 462-2628
www.scapestudio.com

wsp
WSP USA
ONE PENN PLAZA, 4TH FLOOR, 250 W 34TH STREET
NEW YORK, NY 10119
T: (212) 465-5000
www.wsp.com

DWG	TITLE
G (GENERAL)	
G-201	COVER SHEET
G-202	DRAWING INDEX
G-203	LEGENDS SYMBOLS AND ABBREVIATIONS
G-204	OVERALL KEY PLAN
G-205	GENERAL NOTES
G-206	GENERAL NOTES
G-207	GENERAL NOTES
G-208	FEMA FIRM MAP 2007
G-209	FEMA FIRM MAP 2007
G-210	FEMA FIRM MAP 2013
G-211	FEMA FIRM MAP 2013
G-212	NYC TAX MAP
G-213	NYC TAX MAP
VT (EXISTING SITE CONDITIONS - TOPO)	
VT-101	EXISTING SITE CONDITIONS (TOPO) AREA 1- REACH 7
VT-105	EXISTING SITE CONDITIONS (TOPO) AREA 5- REACH 6
VT-107	EXISTING SITE CONDITIONS- (TOPO) AREA 7- REACH 5
VT-108	EXISTING SITE CONDITIONS (TOPO) AREA 8- REACH 5
VT-110	EXISTING SITE CONDITIONS (TOPO) AREA 10- REACH 4
VT-115A	EXISTING SITE CONDITIONS (TOPO) AREA 15- REACH 2
VT-115B	EXISTING SITE CONDITIONS (TOPO) AREA 15- REACH 2
EC (EROSION AND SEDIMENT CONTROL)	
EC-001	EROSION AND SEDIMENT CONTROL NOTES
EC-101	EROSION AND SEDIMENT CONTROL PLAN AREA 1 - REACH 7
EC-105	EROSION AND SEDIMENT CONTROL PLAN AREA 5 - REACH 6
EC-107	EROSION AND SEDIMENT CONTROL PLAN AREA 7 - REACH 5
EC-108	EROSION AND SEDIMENT CONTROL PLAN AREA 9 - REACH 5
EC-110	EROSION AND SEDIMENT CONTROL PLAN AREA 10 - REACH 4
EC-115A	EROSION AND SEDIMENT CONTROL PLAN AREA 15 - REACH 2
EC-115B	EROSION AND SEDIMENT CONTROL PLAN AREA 15 - REACH 2
EC-901	EROSION AND SEDIMENT CONTROL DETAILS
EC-902	EROSION AND SEDIMENT CONTROL DETAILS
EC-903	EROSION AND SEDIMENT CONTROL DETAILS
EC-904	EROSION AND SEDIMENT CONTROL DETAILS
EC-905	EROSION AND SEDIMENT CONTROL DETAILS
CD (CIVIL DEMOLITION)	
CD-101	SITE DEMOLITION PLAN AREA 1- REACH 7
CD-105	SITE DEMOLITION PLAN AREA 5- REACH 6
CD-107	SITE DEMOLITION PLAN AREA 7- REACH 5
CD-108	SITE DEMOLITION PLAN AREA 8- REACH 5
CD-110	SITE DEMOLITION PLAN AREA 10- REACH 4
CD-115A	SITE DEMOLITION PLAN AREA 15- REACH 2

DWG	TITLE
CD-115B	SITE DEMOLITION PLAN AREA 15- REACH 2
JA (JOINT APPLICATION)	
JA-101	PROPOSED PLAN AREA 1- REACH 7
JA-101A	PROPOSED ENLARGED PLAN AREA 1- REACH 7
JA-105	PROPOSED PLAN AREA 5- REACH 6
JA-107	PROPOSED PLAN AREA 7- REACH 5
JA-107B	PROPOSED DREDGING PLAN SOUTH BRIDGING STRUCTURE AREA 7 - REACH 5
JA-108	PROPOSED PLAN AREA 8- REACH 5
JA-108B	PROPOSED DREDGING PLAN NORTH BRIDGING STRUCTURE AREA 8 - REACH 5
JA-110	PROPOSED PLAN AREA 10- REACH 4
JA-115A	PROPOSED PLAN AREA 15- REACH 2
JA-115B	PROPOSED PLAN AREA 15- REACH 2
JA-303	PROPOSED LONGITUDINAL SECTION -NORTH BRIDGING STRUCTURE - REACH 5
JA-304	PROPOSED TRANSVERSAL SECTION - NORTH BRIDGING STRUCTURE - REACH 5
JA-305	PROPOSED FRONT ELEVATION - NORTH BRIDGING STRUCTURE - REACH 5
JA-306	PROPOSED SIDE ELEVATION - NORTH BRIDGING STRUCTURE - REACH 5
JA-307	PROPOSED LONGITUDINAL SECTION - SOUTH BRIDGING STRUCTURE - REACH 5
JA-308	PROPOSED TRANSVERSAL SECTION - SOUTH BRIDGING STRUCTURE- REACH 5
JA-309	PROPOSED FRONT ELEVATION - SOUTH BRIDGING STRUCTURE - REACH 5
JA-310	PROPOSED SIDE ELEVATION - SOUTH BRIDGING STRUCTURE- REACH 5
JA-311	TYPICAL IN-WATER PROPOSED PLATFORM SECTION REACH 2
JA-312	TYPICAL IN-WATER PROPOSED PLATFORM SECTION REACH 2
JA-313	TYPICAL IN-WATER PROPOSED PLATFORM SECTION REACH 2
JA-314	TYPICAL IN-WATER PROPOSED PLATFORM SECTION REACH 2
JA-315	TYPICAL IN-WATER PROPOSED PLATFORM SECTION REACH 4
JA-316	TYPICAL IN-WATER PLATFORM SECTION REACH 5
JA-317	TYPICAL IN-WATER PLATFORM SECTION REACH 5
JA-318	TYPICAL IN-WATER PROPOSED PLATFORM SECTION REACH 6
JA-319	TYPICAL IN-WATER PLATFORM SECTION REACH 7
JA-320	TYPICAL INWATER HABITAT DETAILS
JA-320A	TYPICAL IN-WATER HABITAT DETAILS
JA-321	PROFILE OF PROPOSED 12" STORM OUTFALL AREA 7 - REACH 5
JA-322	PROFILE OF PROPOSED 12" STORM OUTFALL AREA 8 - REACH 5
JA-323	PROFILE OF PROPOSED 24" STORM OUTFALL AREA 10 - REACH 4

SHEET NUMBER IDENTIFICATION



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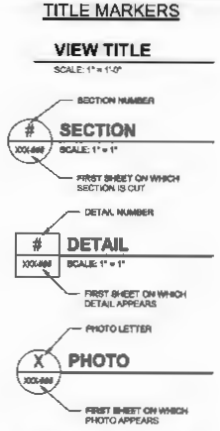

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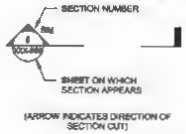

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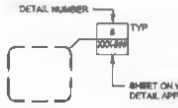
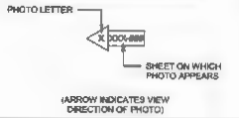
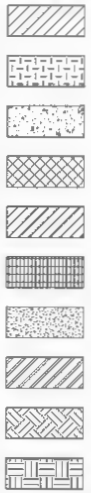


ELEVATION MARKERS

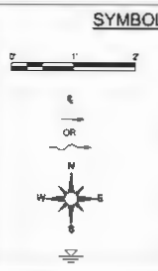
PHOTO MARKERS



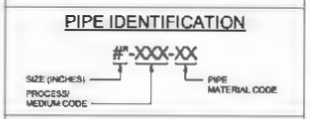
HATCH LEGEND



SYMBOLS



PIPE IDENTIFICATION



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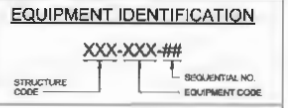
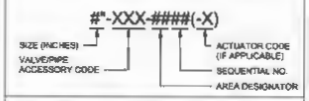


VALVE & PIPE ACCESSORY IDENTIFICATION



INSTRUMENT IDENTIFICATION

DISCIPLINE DESIGNATORS

G	GENERAL
VT	EXISTING SITE CONDITIONS - TOPO
VU	EXISTING SITE CONDITIONS - UTILITIES
PM	PARCEL COMPILATION
BI	GEOTECHNICAL INSTRUMENTATION
BP	GEOTECHNICAL MICRO PILES
BF	GEOTECHNICAL SEEPAGE BARRIER
EC	EROSION AND SEDIMENT CONTROL
CD	CIVIL DEMOLITION
MPT	MAINTENANCE AND PROTECTION OF TRAFFIC
SR	STREET AND ROAD REPOSITIONING
WM	WAYFINDING SIGNAGE AND PAVEMENT MARKINGS
CU	CIVIL UTILITIES
CS	CIVIL STORM
S	STRUCTURAL FLOOD BARRIER SYSTEM
SG	GATES
DPN	PATH TUNNEL SLUICE GATE NORTH - DEMOLITION
SPN	PATH TUNNEL SLUICE GATE NORTH - STRUCTURAL
MPN	PATH TUNNEL SLUICE GATE NORTH - MECHANICAL
EPN	PATH TUNNEL SLUICE GATE NORTH - ELECTRICAL
SMN	PATH TUNNEL SLUICE GATE NORTH - PLATFORM RECONSTRUCTION
DPS	PATH TUNNEL SLUICE GATE SOUTH - DEMOLITION
SPS	PATH TUNNEL SLUICE GATE SOUTH - STRUCTURAL
MPS	PATH TUNNEL SLUICE GATE SOUTH - MECHANICAL
EPS	PATH TUNNEL SLUICE GATE SOUTH - ELECTRICAL
SMS	PATH TUNNEL SLUICE GATE SOUTH - PLATFORM RECONSTRUCTION
SD	STRUCTURAL PLATFORM DEMOLITION
SP	STRUCTURAL PLATFROM RECONSTRUCTION
FT	FERRY TERMINAL RELOCATION
LG	GENERAL LANDSCAPE
LP	LANDSCAPE TREE PROTECTION PLANS
LM	LANDSCAPE SITE PLANS (LANDSCAPE MATERIALS PLANS PART 30%)
LV	LANDSCAPE PAVING PLANS
LL	LANDSCAPE LAYOUT PLANS
LE	LANDSCAPE GRADING PLANS
LS	LANDSCAPE SOILS PLANS
LT	LANDSCAPE TREE AND PLANTING PLANS
L	LANDSCAPE SECTIONS AND DETAILS

PROCESS/MEDIUM CODES

AIR	AIR HIGH PRESSURE
ALP	AIR LOW PRESSURE PROCESS
AS	AIR SCOUR
BW	BACKWASH
CAP	COAGULANT AID POLYMER
CLG	CHLORINE GAS
CLS	CHLORINE SOLUTION
COND	CONDENSATE
CONDR	CONDENSATE RETURN
CW	COLD WATER
DEC	DECANT WATER
DR	DRAIN
EFF	EFFLUENT
FTW	FILTER TO WASTE
INF	INFLUENT
NG	NATURAL GAS
NPW	NON-POTABLE WATER
OF	OVERFLOW
PA	PLANT AIR
POL	POLYMER
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RAW	RAW WATER
REC	RECYCLED WATER
RES	RESIDUALS
SA	SAMPLE LINE
SAN	SANITARY
SFBW	SPENT FILTER BACKWASH
SLG	SLUDGE
SLW	SEAL WATER
SPD	SUMP PUMP DISCHARGE
STM	STORM SEWER
SW	SETTLED WATER
TW	TEPID WATER
VT	VENT
WAS	WASTE ACTIVATED SLUDGE
WW	WASHWATER

GENERAL ABBREVIATIONS

AB	ANCHOR BOLT
ABAN.	ABANDONED
ACM	ASBESTOS CONTAINING MATERIAL
ADDTL	ADDITIONAL
ADJ	ADJUSTABLE
AH	ACCESS HATCH
ALT.	ALTERNATE
ALUM.	ALUMINUM
B/ OR BOT	BOTTOM
BF	BLIND FLANGE
BITUM	BITUMINOUS
BL	BASELINE
BLDG	BUILDING
BLDRS	BOULDERS
BM	BEAM
BMK	BENCH MARK
BOP	BOTTOM OF PIPE
BRG	BEARING
BRP	BUILDING REFERENCE POINT
C/C	CENTER TO CENTER
CMH	COMMUNICATION HANDHOLE
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
CLR	CLEAR
CMH	COMMUNICATION MANHOLE
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUED OR CONTINUOUS
CPLG	COUPLING
CY	CUBIC YARDS
DET	DETAIL
DIA OR Ø	DIAMETER
DISCH	DISCHARGE
DMH	DROP MANHOLE
DN	DOWN
DWL	DOWELS
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
EMH	ELECTRICAL MANHOLE
EQ	EQUAL
ESE	EMERGENCY SHOWER/EYEWASH
EW	EACH WAY
EX OR EXIST.	EXISTING
FD	FLOOR DRAIN
FDN	FOUNDATION
FDND	FOUNDATION DRAIN
FF	FAIR FACE
FIN	FINISHED
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOOR
FT OR '	FOOT OR FEET
FTG	FOOTING
GA	GAGE OR GAUGE
GALV	GALVANIZED
GE	GROOVED END JOINT
GRAT	GRATING
GRD	GROUND
HB	HOSE BIBB
HORIZ	HORIZONTAL
HP	HIGH POINT
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN OR "	INCH OR INCHES
INV	INVERT
JST	JOIST
JT	JOINT
K	KIP (1,000 POUNDS)
KSF	KIPS PER SQUARE FOOT
LG	LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LR	LONG RADIUS
LSH	LEVEL SWITCH HIGH
LSLL	LEVEL SWITCH LOW LOW
MAS	MASONRY
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MO	MASONRY OPENING
NC	NORMALLY CLOSED
NF	NEAR FACE
NO	NORMALLY OPEN
NO. OR #	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
R	RISER
RED	REDUCER
REINF	REINFORCED OR REINFORCEMENT
REQ'D	REQUIRED
RJ	RESTRAINED JOINT
RM	ROOM
SHT	SHEET
SPA	SPACING
SR	SHORT RADIUS
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STP	STEP
STRUC	STRUCTURAL
T	TREAD
TAB	TOP AND BOTTOM
TJ	TOP OF
THK	THICK
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
USG	UNITED STATES STANDARD GAGE
VERT	VERTICAL
W/	WITH
WP	WORK POINT
WS	WATERSTOP

EQUIPMENT CODES

AC	AIR COMPRESSOR
AE	ANALYZING ELEMENT
AHU	AIR HANDLING UNIT
AIT	ANALYZING TRANSMITTER
AM	AMMONIATOR
AR	AIR RECEIVER
BC	BRIDGE CRANE
BL	BLOWER
ESE	EMERGENCY SHOWER/EYEWASH
FE	FLOW ELEMENT
FI	FLOW INSTRUMENT
FIC	FLOW INDICATING CONTROLLER
FIT	FLOW INDICATING TRANSMITTER
FN	FAN
H	HOIST
LI	LEVEL INSTRUMENT
LS	LEVEL SWITCH
M	MOTOR
MX	MIXER
PAU	POLYMER ACTIVATION UNIT
PE	PRESSURE ELEMENT
PI	PRESSURE INDICATOR
PIS	PRESSURE INDICATING SWITCH
PMP	PUMP
PNL	PANEL
PS	PRESSURE SWITCH
PSH	PRESSURE SWITCH HIGH
SCN	SCREEN
SL	SLUICE GATE
TC	TEMPERATURE CONTROLLER
TI	TEMPERATURE INDICATOR
TNK	TANK
TS	TEMPERATURE SWITCH
VI	VACUUM INDICATOR
WE	WEIGH ELEMENT
WG	WEIR GATE
WI	WEIGHT INDICATOR
WIT	WEIGHT INDICATOR TRANSMITTER

VALVE & PIPE ACCESSORY CODES

3W	THREE WAY VALVE
4W	FOUR WAY VALVE
AR	AIR RELEASE VALVE
BA	BALL VALVE
BFP	BACKFLOW PREVENTER
BU	BUTTERFLY VALVE
CAV	COMBINATION AIR VALVE
CH	CHECK VALVE
CN	CONE VALVE
DV	DIAPHRAGM VALVE
FC	FLOW CONTROL VALVE
GA	GATE VALVE
GL	GLOBE VALVE
KG	KNIFE GATE VALVE
NE	NEEDLE VALVE
PC	PRESSURE CONTROL VALVE
PI	PINCH VALVE
PL	PLUG VALVE
PRG	PRESSURE REGULATING VALVE
PRV	PRESSURE REDUCING VALVE
RV	RELIEF VALVE
SOL	SOLENOID VALVE
TE	TELESCOPING VALVE

ACTUATOR CODES

E	ELECTRIC
H	HYDRAULIC
PN	PNEUMATIC
S	SOLENOID

PIPE MATERIAL CODES

BR	BRASS
CI	CAST IRON
CPP	CORRUGATED PLASTIC PIPE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CARBON STEEL
CU	COPPER
DCCPVC	DOUBLE CONTAINED CPVC
DCPVC	DOUBLE CONTAINED PVC
DIP	DUCTILE IRON PIPE
ESVP	EXTRA STRENGTH VITRIFIED PIPE
FRP	FIBER REINFORCED PLASTIC
HDPE	HIGH DENSITY POLYETHYLENE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PVC	POLYVINYL CHLORIDE
RCCP	REINFORCED CONCRETE CYLINDER PIPE
RCP	REINFORCED CONCRETE PIPE
SS	STAINLESS STEEL
UNK	UNKNOWN
VC	VITRIFIED CLAY

Turner ECRUZ

ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

GENERAL
LEGENDS, SYMBOLS AND ABBREVIATIONS

DECEMBER 2024

DWG: G-203

USACE FILE: NAN-2024-00433-EMI

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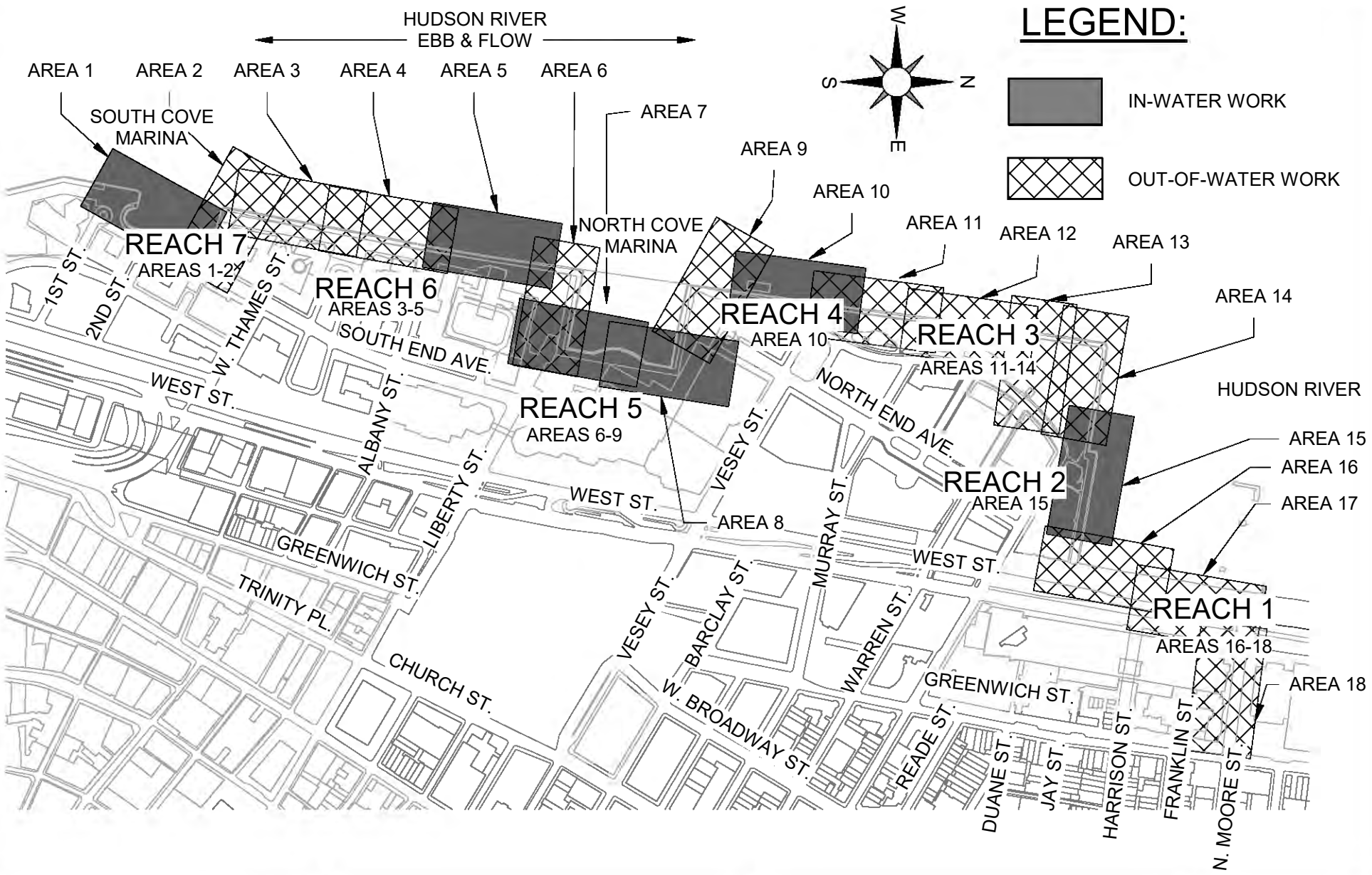

Turner ECRUZ

ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

GENERAL
OVERALL KEY PLAN

SCALE : NOT TO SCALE

DECEMBER 2024

DWG: G-204

GENERAL NOTES:

1. ELEVATIONS SHOWN ON CONTRACT DRAWINGS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). UNITS ARE IN FEET.

2. NORTH ARROWS AND HORIZONTAL COORDINATES SHOWN ON CONTRACT DRAWINGS ARE REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM (NORTH AMERICAN DATUM OF 1983 (NAD83, ZONE LONG ISLAND 3104)). UNITS ARE IN U.S. SURVEY FEET.

3. EXISTING UTILITIES SHOWN ON CONTRACT DRAWINGS MAY NOT INCLUDE ALL THE UTILITIES, EITHER OPERATIONAL OR ABANDONED, AND THEY MAY NOT EXIST IN THE EXACT LOCATIONS INDICATED.

4. COMPLY WITH THE PROVISIONS OF 16 NYCRR PART 753 (CODE RULE 53), INCLUDING, BUT NOT LIMITED TO, THE PROVISIONS OF SUBPARTS 753-3.1(A) AND (B), WHICH STATES THAT EXCAVATORS SHALL NOTIFY THE NEW YORK CITY ONE CALL CENTER AT 1-800-272-4480 AT LEAST TWO BUT NOT MORE THAN TEN WORKING DAYS, NOT INCLUDING THE DATE OF THE CALL, BEFORE THE COMMENCEMENT OF EXCAVATION. DESIGN-BUILDER IS ADVISED THAT THE PROVISIONS OF 16 NYCRR PART 753 DO NOT APPLY TO CITY-OWNED UTILITIES, WHICH SHALL BE LOCATED BY DESIGN-BUILDER.

5. ALL HYDRANTS, LIGHT POLES, TREES, OR OTHER FIXED OBJECTS THAT ARE TO BE CONSTRUCTED, PLANTED, RESET, OR RELOCATED WITHIN THE CITY RIGHT-OF-WAY AS A RESULT OF THE PROJECT SHALL BE CONSTRUCTED OR PLANTED SO AS TO PROVIDE AT LEAST ONE AND ONE HALF (1 1/2) FOOT CLEAR DISTANCE FROM THE FACE OF THE CURB TO THE FACE OF THE OBJECT.

6. AS A RESULT OF CURB RELOCATION AND/OR REPLACEMENT WITHIN THE CONTRACT LIMITS, EXISTING STREET APPURTENANCES PROJECTING ABOVE PAVED SURFACES, SUCH AS HYDRANTS, LAMPPOSTS AND TRAFFIC SIGNAL POLES, AND BUS SHELTERS, WILL HAVE TO BE RELOCATED. NOT WITHSTANDING ANY CONSTRUCTION SEQUENCE AS DEFINED BY THE CONTRACT DOCUMENTS, THE DESIGN-BUILDER SHALL PLAN CONSTRUCTION OPERATIONS TO ENSURE THAT THESE APPURTENANCES ARE CONSTRUCTED OR RELOCATED IN CONJUNCTION WITH THE INSTALLATION OF THE NEW CURB.

   A. IN THE EVENT THE SIDEWALK IS WIDENED, THE STREET APPURTENANCES SHALL BE MAINTAINED AT THEIR EXISTING LOCATION BEHIND THE EXISTING CURB UNTIL THE NEW SIDEWALK IS CONSTRUCTED.

   B. IF THE SIDEWALK IS NARROWED, THE STREET APPURTENANCES MUST BE MOVED TO THEIR NEW LOCATIONS BEHIND THE PROPOSED NEW CURB PRIOR TO REMOVAL OF THE EXISTING CURB.

   C. SERVICES MUST BE MAINTAINED BY INSTALLING AND ENERGIZING NEW APPURTENANCES OR BY USING TEMPORARY APPURTENANCES, AS DIRECTED BY THE CONSTRUCTION MANAGER AT NO ADDITIONAL COST TO BPCA.

7. ALL EXISTING SEWER HOUSE CONNECTIONS SHALL BE CONTINUOUSLY MAINTAINED DURING ALL STAGES OF CONSTRUCTION. IF ANY HOUSE CONNECTION MUST BE DISCONNECTED FOR CONSTRUCTION PURPOSES, FLOW MUST BE MAINTAINED BY FLUMING OR OTHER SUITABLE MEANS AS DIRECTED BY THE CONSTRUCTION MANAGER AND IN SUCH A MANNER THAT NO BACK-UPS OCCUR. ANY AND ALL EXISTING SEWERS, HOUSE CONNECTIONS OR OTHERS SEWER APPURTENANCES WHICH ARE TO REMAIN, AND WHICH MUST BE DISTURBED FOR CONSTRUCTION PURPOSES, SHALL BE RESTORED TO THEIR PRESENT CONDITION AFTER COMPLETION OF THE WORK.

8. THE DESIGN-BUILDER SHALL COORDINATE WITH ALL OTHER PROJECTS WITHIN THE VICINITY OF THE PROJECT AREA OR NEARBY. PROJECTS WITHIN THE VICINITY OF THE PROJECT AREA INCLUDE BUT ARE NOT LIMITED TO:

   A. NYC EDC / NYC DPR - BATTERY WHARF PROJECT

   B. NYC DDC - HWPR16M INSTALLATION OF PEDESTRIAN RAMPS AT DESIGNATED LOCATIONS MARINE BASED OPERATIONS

   C. NYCDOT - BATTERY PARK UNDERPASS PROJECT

   D. NYCDOT - FLOOD PROTECTION OF BATTERY PARK AND WEST STREET TUNNELS

9. FLOATING PLANT

   A. NOTIFICATION OF THE COAST GUARD: PRIOR TO COMMENCEMENT OF WORK ON THIS CONTRACT, NOTIFY US COAST GUARD OF INTENDED MARINE BASED OPERATIONS AND REQUEST POSTING OF A NOTICE IN LOCAL NOTICE TO MARINERS. ALLOW SUFFICIENT TIME FOR PUBLICATION IN THE NOTICE TO MARINERS AT LEAST ONE WEEK PRIOR TO MOBILIZING MARINE BASED EQUIPMENT ON SITE.

   B. NO UNREASONABLE OR UNNECESSARY INTERFERENCE TO MARINE NAVIGATION SHALL BE PERMITTED. PRIOR TO MOBILIZING EQUIPMENT FOR ACTIVITIES POTENTIALLY AFFECTING MARINE NAVIGATION, PERFORM ALL NECESSARY COORDINATION AND OBTAIN ANY NECESSARY APPROVALS FROM THE US COAST GUARD AND OTHER AUTHORITIES HAVING JURISDICTION.

   C. MARINE VESSELS SHALL NOT BE SECURED TO EXISTING RELIEVING PLATFORMS OR OTHER EXISTING STRUCTURES AT ANY TIME.

10. PARKING METERS AND MUNI-METERS

   A. NOTIFY NYCDOT 48 HOURS PRIOR TO THE START OF WORK TO HAVE PARKING METERS AND/OR MUNI-METERS REMOVED. CONTACT MR. JOHN PREMUS, ADMINISTRATIVE TRANSPORTATION COORDINATOR, NYCDOT, DIVISION OF TRAFFIC OPERATIONS, 58-50 57TH ROAD, 2ND FLOOR, MASPETH, NY 11378, PHONE NUMBER (718) 894-1835, FAX NUMBER (718) 894-8397, E-MAIL JPREMUS@DOT.NYC.GOV. PROVIDE THE FOLLOWING INFORMATION TO NYCDOT: (1) PARKING/MUNI METER NUMBERS, (2) LOCATION OF METERS, AND (3) DATE WHEN METERS CAN BE REINSTALLED.

   B. MUNI METERS SHALL NOT BE REMOVED OR RELOCATED BY THE DESIGN-BUILDER. ANY WORK RELATED TO MUNI METERS MUST BE PERFORMED BY THE NYCDOT, BUREAU OF PARKING. INFORM NYCDOT VIA PHONE AT (718) 894-8327 OR (718) 894-1835 AND SUBMIT VIA E-MAIL ALL PERTINENT DRAWINGS, AND PROPOSALS THAT REQUIRE THE REMOVAL/RELOCATION OR REINSTALLATION OF MUNI METERS IN THE PROJECT AREA AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT DATE. IN ADDITION, UPON COMPLETION OF THE CONTRACTED WORK, SUBMIT A REQUEST FOR REINSTALLATION OF THE MUNI METERS TO NYCDOT AT THE NUMBER PROVIDED AT LEAST A WEEK PRIOR TO THE END OF CONSTRUCTION.

PROJECT TIDAL DATUMS
(BASED ON NOAA STATION 8518750, THE BATTERY, NY, 1983-2001 TIDAL EPOCH)

DATUM	**EL. NAVD88, FT**
HIGHEST ASTRONOMICAL TIDE (HAT)	+3.65
MEAN HIGHER HIGH WATER (MHHW)	+2.28
MEAN HIGH WATER (MHW)	+1.96
NAVD88	0
MEAN LOW WATER (MLW)	-2.57
MEAN LOWER LOW WATER (MLLW)	-2.77
LOWEST ASTRONOMICAL TIDE (LAT)	-4.16
TIDAL WETLANDS	-6.00

11. BIKE RACKS/ BIKE CORRALS / CITI BIKE STATIONS / CITYBENCH

    A. BIKE RACKS SHALL NOT BE REMOVED OR RELOCATED BY THE DESIGN-BUILDER UNLESS APPROVAL HAS BEEN RECEIVED IN ACCORDANCE WITH THE INSTRUCTIONS SET FORTH HEREIN. ANY WORK RELATED TO BIKE RACKS MUST BE PERFORMED BY NYCDOT, BICYCLE PROGRAM. DESIGN-BUILDER SHALL INFORM NYCDOT VIA PHONE AT (212) 839-7205 OR (212) 839-7240 AND BY E-MAIL AT CITYRACKS@DOT.NYC.GOV. DESIGN-BUILDER SHALL SUBMIT BY E-MAIL ALL PERTINENT DRAWINGS AND PROPOSALS THAT REQUIRE THE REMOVAL/RELOCATION OR RE-INSTALLATION OF BIKE RACKS IN THE PROJECT AREA AT LEAST THREE WEEKS PRIOR TO THE COMMENCEMENT DATE. IN ADDITION, UPON COMPLETION OF THE CONTRACTED WORK, A REQUEST FOR RE-INSTALLATION OF THE BIKE RACKS MUST ALSO BE MADE TO NYCDOT AT THE NUMBER PROVIDED, AT LEAST TWO WEEKS PRIOR TO THE END OF CONSTRUCTION.

    B. BIKE CORRALS SHALL NOT BE REMOVED OR RELOCATED BY THE DESIGN-BUILDER UNLESS APPROVAL HAS BEEN RECEIVED IN ACCORDANCE WITH THE INSTRUCTIONS SET FORTH HEREIN. ANY WORK RELATED TO BIKE CORRALS MUST BE PERFORMED BY NYCDOT, BICYCLE PROGRAM. DESIGN BUILDER SHALL INFORM NYCDOT VIA PHONE AT (212) 839-7205 OR (212) 839-7211 AND BY E-MAIL AT BIKECORRALS@DOT.NYC.GOV. DESIGN-BUILDER WILL SUBMIT VIA E-MAIL ALL PERTINENT DRAWINGS AND PROPOSALS THAT REQUIRE THE REMOVAL/RELOCATION OR RE-INSTALLATION OF BIKE CORRALS IN THE PROJECT AREA, AT LEAST THREE WEEKS PRIOR TO THE COMMENCEMENT. IN ADDITION, UPON COMPLETION OF THE CONTRACTED WORK, A REQUEST FOR RE-INSTALLATION OF THE BIKE CORRALS MUST ALSO BE MADE TO NYCDOT AT THE NUMBER PROVIDED, AT LEAST TWO WEEKS PRIOR TO THE END OF CONSTRUCTION.

    C. CITI BIKE STATIONS SHALL NOT BE REMOVED OR RELOCATED BY THE DESIGN-BUILDER UNLESS APPROVAL HAS BEEN RECEIVED IN ACCORDANCE WITH THE INSTRUCTIONS SET FORTH HEREIN. ANY WORK RELATED TO CITI BIKE STATIONS MUST BE PERFORMED BY CITI BIKE/NYC BICYCLE SHARE. DESIGN-BUILDER SHALL INFORM CITI BIKE VIA PHONE AT (855) 245-3311 AND SIMULTANEOUSLY CALL NYCDOT, BIKE SHARE UNIT AT (212) 839-7235. FOR BOTH, DESIGN-BUILDER MUST SUBMIT VIA E-MAIL ALL PERTINENT DRAWINGS, AND PROPOSALS THAT REQUIRE THE REMOVAL/RELOCATION OR RE-INSTALLATION OF A CITI BIKE STATION IN THE PROJECT AREA, AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT DATE. IN ADDITION, UPON COMPLETION OF THE CONTRACTED WORK, A REQUEST FOR RE-INSTALLATION OF THE CITI BIKE STATION MUST ALSO BE MADE TO CITI BIKE AND NYCDOT AT THE NUMBERS PROVIDED, AT LEAST A WEEK PRIOR TO THE END OF CONSTRUCTION.

    D. CITY BENCHES SHALL NOT BE REMOVED OR RELOCATED BY THE DESIGN-BUILDER UNLESS APPROVAL HAS BEEN RECEIVED IN ACCORDANCE WITH THE INSTRUCTIONS SET FORTH HEREIN. ANY WORK RELATED TO CITY BENCHES MUST BE PERFORMED BY NYCDOT, CITY BENCH PROGRAM DESIGN-BUILDER SHALL INFORM NYCDOT VIA PHONE AT (212) 839-6569 OR (212) 839-6692 AND BY EMAIL AT CITYBENCH@DOT.NYC.GOV. DESIGN-BUILDER SHALL SUBMIT BY EMAIL ALL PERTINENT DRAWINGS AND PROPOSALS THAT REQUIRE THE REMOVAL, RELOCATION OR RE-INSTALLATIONOF CITY BENCHES IN THE PROJECT AREA, AT LEAST THREE WEEKS PRIOR TO THE COMMENCEMENT DATE. IN ADDITION, UPON COMPLETION OF THE CONSTRUCTED WORK, A REQUEST FOR RE-INSTALLATION OF THE CITY BENCHES MUST ALSO BE MADE TO NYCDOT AT THE NUMBER AND EMAIL PROVIDED, AT LEAST TWO WEEKS PRIOR TO THE END OF CONSTRUCTION.

12. FIRE DEPARTMENT COORDINATION

    A. NOTIFY THE FIRE DEPARTMENT'S BUREAU OF FACILITIES MANAGEMENT, PLANT OPERATIONS ENGINEERING UNIT, TELEPHONE (718) 281-3846 OR 281-3933, AT LEAST ONE (1) MONTH IN ADVANCE OF STARTING CONSTRUCTION AND TO MAKE AN APPOINTMENT TO PICK UP FDNY BASE MAPS AT 316 SGT. BEERS AVENUE, FORT TOTTEN, BAYSIDE, QUEENS 11359.

    B. ALL EXISTING FIRE DEPARTMENT COMMUNICATION FACILITIES SHALL BE PROTECTED AND PROVISIONS MADE FOR THEIR CONTINUOUS OPERATION DURING CONSTRUCTION. ALL ALARM BOXES AND POSTS MUST REMAIN ACCESSIBLE. IF, DUE TO THE DESIGN-BUILDER'S OPERATION, FIRE ALARM SERVICE IS INADVERTENTLY INTERRUPTED OR FIRE COMMUNICATION SYSTEM EQUIPMENT OR FACILITIES ARE DAMAGED, THE DESIGN-BUILDER SHALL BE HELD RESPONSIBLE AND SHALL REPLACE THEM AT HIS/HER OWN EXPENSE AND IN ACCORDANCE WITH FIRE DEPARTMENT REQUIREMENTS. TO REQUEST STREET MARKOUTS OF FIRE COMMUNICATIONS UNDERGROUND FACILITIES, THE DESIGN-BUILDER MUST CONTACT PLANT OPERATIONSENGINEERING AT (718) 281-3846 OR (718) 281-3933 AT LEAST ONE (1) MONTH PRIOR TO COMMENCEMENT OF WORK.

13. UTILITY COORDINATION

    A. CON EDISON, CABLEVISION, TIME WARNER, AT&T, RCN, EMPIRE CITY SUBWAY, AND VERIZON FACILITIES ARE LOCATED WITHIN THE PROJECT. AS A RESULT OF THIS PROJECT, THE DESIGN BUILDER WILL BE REQUIRED TO PROTECT, REMOVE, REPLACE OR RELOCATE SOME OR ALL OF THEIR FACILITIES.

    B. IF ANY RELOCATION OR DISCONNECTION OF POLICE DEPARTMENT FACILITIES IS REQUIRED, INFORM THE CONSTRUCTION MANAGER WHO WILL CONTACT THE SPECIAL PROJECT UNIT COMMUNICATIONS DIVISION OF THE POLICE DEPARTMENT (212-374-5900).

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE DESIGN-BUILDER SHALL INSTALL TEMPORARY SEDIMENT CONTROL DEVICES AS REQUIRED TO IN ACCORDANCE WITH THE APPROVED FEDERAL, STATE, AND LOCAL PERMITS AND APPLICABLE EROSION AND SEDIMENT CONTROL PLAN, INCLUDING BUT NOT LIMITED TO SILT FENCE, AND HAY OR STRAW BALES. THESE MEASURES WILL BE INSTALLED PRIOR TO A MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

SEWER WORK NOTES

1. ABANDONED DRAINAGE STRUCTURES AS SHOWN ON THE CONTRACT DRAWINGS ARE TO BE CUT DOWN TWO (2) FEET BELOW SUBGRADE AND FILLED WITH COMPACTED CLEAN SAND. BASIN CONNECTIONS NOT REQUIRED SHALL BE BULK HEADED AT BOTH ENDS.

2. WHERE THE HEIGHT OF AN EXISTING MANHOLE PERMITS MORE THAN ONE (1) BASIN CONNECTION TO BE MADE ON THE SAME WALL, SPECIAL PRECAUTION SHALL BE TAKEN TO PROTECT THE STRUCTURAL INTEGRITY OF THE MANHOLE. THE MINIMUM CLEARANCE WITH THE OUTSIDE WALLS OF ANY TWO BASIN CONNECTIONS OR BETWEEN A BASIN CONNECTION AND A SEWER, VERTICALLY OR HORIZONTALLY SHALL BE 12 INCHES.

3. FOR SEWER REPLACEMENTS WHERE EXISTING LINES ARE TO BE REPLACED WITH NEW LINES OF THE SAME SIZE AND DIMENSIONS, EXISTING FOUNDATIONS, PILES, CRADLES, PILE CAPS AND OTHER FOUNDATION FEATURES SHALL BE RE-USED UNLESS OTHERWISE SPECIFIED ON THE CONTRACT DRAWINGS.

4. FOR TIDE-GATE REPLACEMENTS CALLED OUT ON THE CONTRACT DRAWINGS AS "TO BE REMOVED AND REPLACED", ONLY THE TIDE GATE ITSELF SHALL BE REPLACED WITH A NEW TIDE GATE CONFORMING TO THE LATEST DEP SPECIFICATIONS REGARDINGMATERIALS AND MANUFACTURER INFORMATION. EXISTING TIDE-GATE CONFIGURATIONS SHOULD BE REVIEWED WITH THE ENGINEER TO ENSURE THAT FULL CLOSURE IS PRESENT, WHICH WILL PREVENT WATER LEVELS HIGHER THAN THE TIDE GATE FROM FLOWING OVER THE TOP OF THE TIDE GATE IN A WEIR OR OVERFLOW CONDITION. REMOVAL AND REPLACEMENT, INCLUDING ATTACHMENT OF HINGES AND OTHER FITTINGS SHALL BE COORDINATED WITH THE TIDE GATE MANUFACTURER AND AN INSTALLATION PLAN LISTING ALL MATERIALS, BONDING AGENTS, ANCHOR SYSTEMS AND OTHER APPURTENANCES SENT TO THE ENGINEER FOR APPROVAL.

5. DESIGN-BUILDER TO NOTIFY NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTEWATER TREATMENT (BWT) OPERATIONS PRIOR TO STARTING WORK ON THE REGULATORS OUTFALLS.

WATER MAIN WORK NOTES

1. WATER MAINS LAID WITHIN THE INFLUENCE LINE OF SEWER TRENCHES SHALL HAVE RESTRAINED JOINTS.

2. WITHIN ONE (1) FOOT OF EXISTING SEWERS, CONNECTIONS, DRAINS AND OTHER UTILITIES, ALL EXCAVATION SHALL BE DONE BY HAND.

3. SEWER ELEVATIONS AT WATER MAIN CROSSINGS SHALL BE VERIFIED IN THE FIELD BY THE DESIGN BUILDER PRIOR TO COMMENCEMENT OF THE WORK.

4. FOR WATER MAINS CROSSING EXISTING SEWERS, THE MINIMUM CLEARANCE BETWEEN THE TOP OF AN EXISTING SEWER TO THE OUTSIDE BOTTOM OF THE TRUNK MAIN (PIPE WALL THICKNESS TO BE TAKEN INTO CONSIDERATION) SHALL BE 12 INCHES IN ORDER TO MAINTAIN THE PROPER CLEARANCE. THE FOLLOWING ALTERNATIVES SHALL BE CONSIDERED AND APPLIED, AS DIRECTED, BY THE ENGINEER.

    A. THE USE OF BEVELED CONNECTION IN LIEU OF BENDS SHALL BE INVESTIGATED IF THE DEGREE OF INTERFERENCE IS OF A MINOR NATURE. OTHERWISE, BENDS AND/OR REDUCERS SHALL BE USED.

    B. THE COVER ON THE PIPE MAY BE REDUCED TO TWO AND ONE HALF (2.5) FEET.

        1. IF A 12-INCH MINIMUM CLEARANCE CANNOT BE MAINTAINED, THE WATER MAIN SHALL BE SUPPORTED BY A PIER OF APPROVED DESIGN ON EACH SIDE OF THE SEWER. THE PIPE SHALL THEN BE DESIGNED TO ACT AS A BEAM BETWEEN THESE SUPPORTS. THE CLEARANCE SPACE IS TO BE FILLED WITH LAYERS OF APPROVED MATERIAL TO AVOID EXCESSIVE BEARING PRESSURE ON THE PIPE. IN NO CASE, HOWEVER, SHALL THIS CLEARANCE BE LESS THAN 6 INCHES.

C. IF BROKEN STONE BEDDING IS USED FOR WATER MAIN, SAID BEDDING SHALL BE DISCONTINUOUS, IF REQUIRED, OVER THE SEWER WITHIN A DISTANCE OF 12' AWAY EACH SIDE OF THE CROSSING SEWER.

5. FOR WATER MAINS INSTALLED PARALLEL TO EXISTING SEWERS, ALL HORIZONTAL CLEARANCE BETWEEN NEW WATER MAIN INSTALLED PARALLEL TO EXISTING SEWER SHALL NOT BE LESS THAN 6 FEET PLUS ONE-HALF SEWER DIAMETER WHERE DEPTH TO BOTTOM OF SEWER CRADLE IS LESS THAN 10 FEET.

   A. HORIZONTAL CLEARANCE BETWEEN OUTSIDE OF NEW WATER MAINS AND CENTERLINE OF SEWER SHALL NOT BE LESS THAN 6 FEET PLUS ONE-HALF SEWER DIAMETER WHERE DEPTH TO BOTTOM OF SEWER CRADLE IS LESS THAN 1 FEET.

   B. WHERE DEPTH IS 10 FEET OR MORE TO BOTTOM OF SEWER CRADLE, THE HORIZONTAL CLEARANCE SHALL BE INCREASED BY 1 FOOT FOR EACH ADDITIONAL 5 FEET OF DEPTH OVER THE 10 FEET, OR PORTION THEREOF.

6. THE DRAWINGS SHOWING PROPOSED WATER MAINS AND APPURTENANCES TO BE LAID ARE DIAGRAMMATICAL ONLY. WATER MAINS SHALL BE LAID AS SHOWN ON THE DRAWINGS AND/OR AS DIRECTED BY THE ENGINEER. THE EXACT LOCATION AT WHICH THE WATER MAIN SHALL BE LAID AND THE VALVES, HYDRANTS AND OTHER APPURTENANCES ETC. WILL BE DETERMINED BY THE ENGINEER AS THE WORK PROGRESSES. HOWEVER, THE EXACT LOCATION OF THE NEW WATER MAIN SHALL BE IN CONFORMANCE WITH NOTES NUMBERED S2B AND S2C ON THIS SHEET, REGARDING EXISTING SEWERS.

7. PROPOSED ALIGNMENT OF TRUNK MAINS ARE BASED UPON THE BEST SUBSURFACE INFORMATION AVAILABLE. THIS INFORMATION IS NOT HOWEVER, GUARANTEED, AND THE EXACT LOCATION OF THE MAIN MAY BE VARIED FROM THAT SHOWN.

8. FROST: THE ATTENTION OF THE DESIGN-BUILDER IS CALLED TO THE FACT THAT WORK MAY BE REQUIRED DURING THE PERIOD FROM DECEMBER 15TH TO MARCH 15TH, THE ENGINEER RESERVES THE RIGHT, HOWEVER, TO DISCONTINUE WORK AT ANY TIME BETWEEN THIS PERIOD IF, IN THEIR OPINION, WEATHER OR FROST CONDITIONS ARE SUCH THAT SATISFACTORY WORK OR BACKFILL CANNOT BE PERFORMED. WATER SUPPLY SHUTDOWNS OF DISTRIBUTION MAINS WILL NOT BE PERMITTED UNLESS THE 9 AM TEMPERATURE IS AT LEAST 27 DEGREES FAHRENHEIT AND RISING.

9. THE DESIGN-BUILDER IS TO USE AN APPROVED SHEETING METHOD DURING THE WATER MAIN CONSTRUCTION. SHOULD THE DESIGN-BUILDER UTILIZE THE TRENCH BOXES OR STEEL PLATE/PANEL SHEETING SYSTEM. APPROVAL IS CONTINGENT UPON THE DESIGN-BUILDER'S SUBMITTAL OF A DETAIL PROCEDURE FOR THE INSTALLATION OF THE SYSTEM, WHICH INCLUDES METHODS FOR THE ACCOMMODATION OF UNDERGROUND UTILITY SERVICES BOTH CITY AND PRIVATELY OWNED.

10. THE DESIGN-BUILDER SHALL SUBMIT FOR REVIEW SHEETING AND BRACING DESIGN, PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK.

11. TRUNK MAIN SHUTDOWNS SHALL BE COORDINATED WITH BWSO AS DATE RESTRICTIONS MAY APPLY.

12. ALL TRUNK MAIN SHUTDOWNS MUST BE COORDINATED WITH THE NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER AND SEWER OPERATIONS (BWSO) MANHATTAN DISTRIBUTION ENGINEER IN ADVANCE OF SHUTDOWN REQUEST. TRUNK MAIN SHUTDOWNS DEPEND ON ACTIVITIES OCCURRING IN THE WATER DISTRIBUTION SYSTEM AT THE TIME OF THE REQUEST. THE DESIGN-BUILDER SHALL COORDINATE A TRUNK MAIN SHUTDOWN MEETING WITH THE BWSO DISTRIBUTION ENGINEER ONE (1) MONTH MINIMUM BEFORE THE REQUEST DATE.

NOTES TO USERS

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was New York State Plane FIPSZONE 3104. The horizontal **datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the National Geodetic Vertical Datum of 1929. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3182
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the Department of Information Technology and Telecommunication, City of New York. This information was derived from digital orthophotos produced at a scale of 1:1,200 with 2-foot pixel resolution from photography dated 2004.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations** and **floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for annotated streams may differ from what is shown on previous maps.

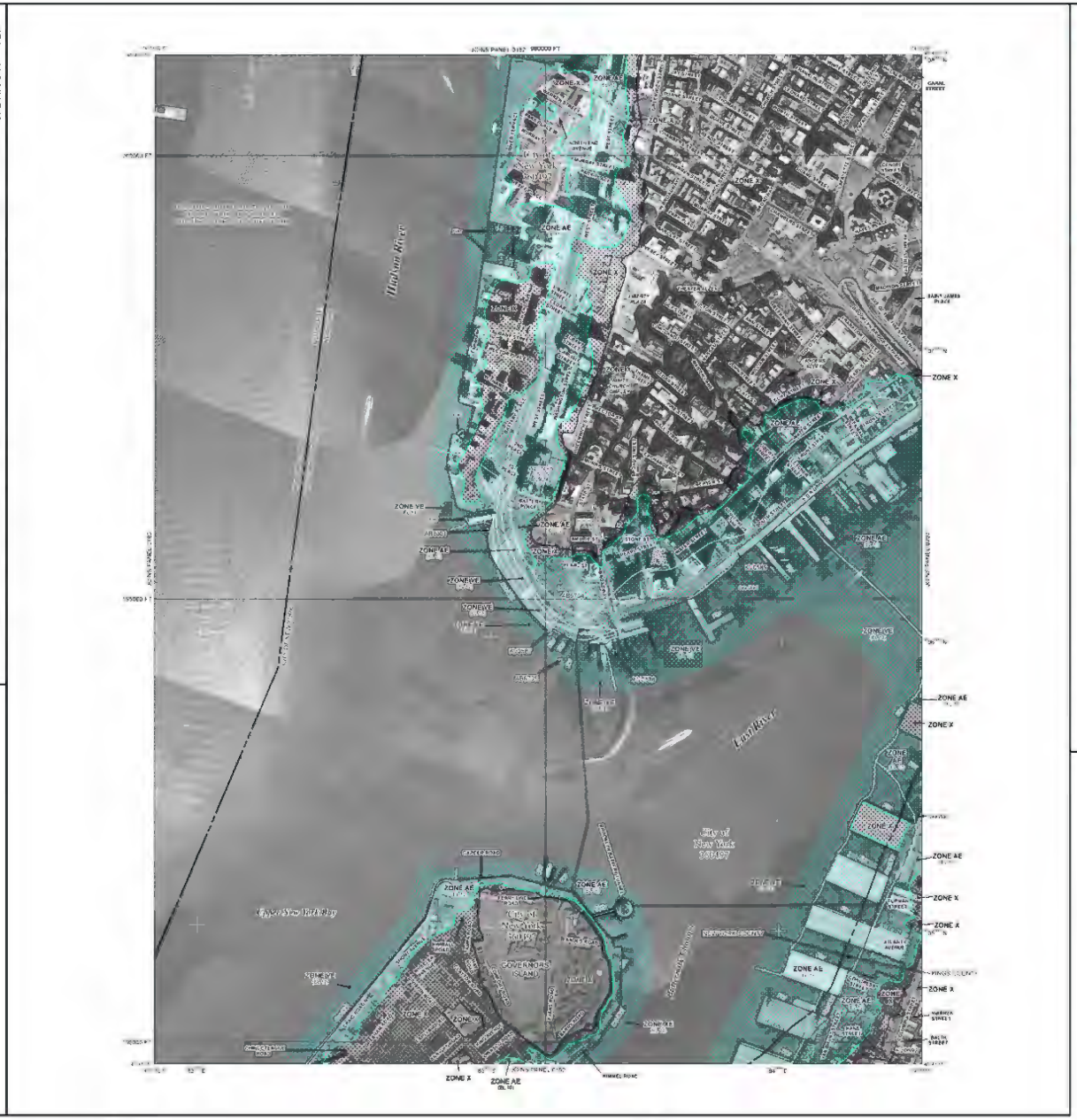
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map showing the layout of map panels for this jurisdiction.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.

NOTE: FIRM MAPS PROVIDED BY FEMA. THIS SHEET IS FOR REFERENCE ONLY AND NOT THE WORK PRODUCT OF ARCADIS.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.

ZONE AE — Base Flood Elevations determined.

ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

Base Flood Elevation line and value; elevation in feet*

Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the National Geodetic Vertical Datum of 1929

Cross section line

Transect line

87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), western hemisphere

1000-meter Universal Transverse Mercator grid values, zone 18

6000000 FT — 5000-foot grid ticks: New York State Plane coordinate system, Long Island zone (FIPSZONE 3104), Lambert Conformal Conic projection

DX5510 — Bench mark (see explanation in notes to users)

5511 — River mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

INITIAL FIRM DATE: June 30, 1974

FLOOD INSURANCE RATE MAP REVISIONS: June 15, 1978

FLOOD INSURANCE RATE MAP EFFECTIVE: November 16, 1983

FLOOD INSURANCE RATE MAP REVISIONS: September 5, 2007 - to change Special Flood Hazard Areas, to reflect updated topographic information, and to update map format

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

PANEL 0184F

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF NEW YORK, NEW YORK
BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES

PANEL 184 OF 457

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
NEW YORK, CITY OF	360497	0184	F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
3604970184F

MAP REVISED
SEPTEMBER 5, 2007

Federal Emergency Management Agency

Turner Ruiz
ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

GENERAL
FEMA FIRM MAP 2007

DECEMBER 2024

DWG: G-208

NOTES TO USERS

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Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' National Geodetic Vertical Datum of 1929 (NGVD 29). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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National Geodetic Survey
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Silver Spring, Maryland 20910-3282
(301) 713-3242

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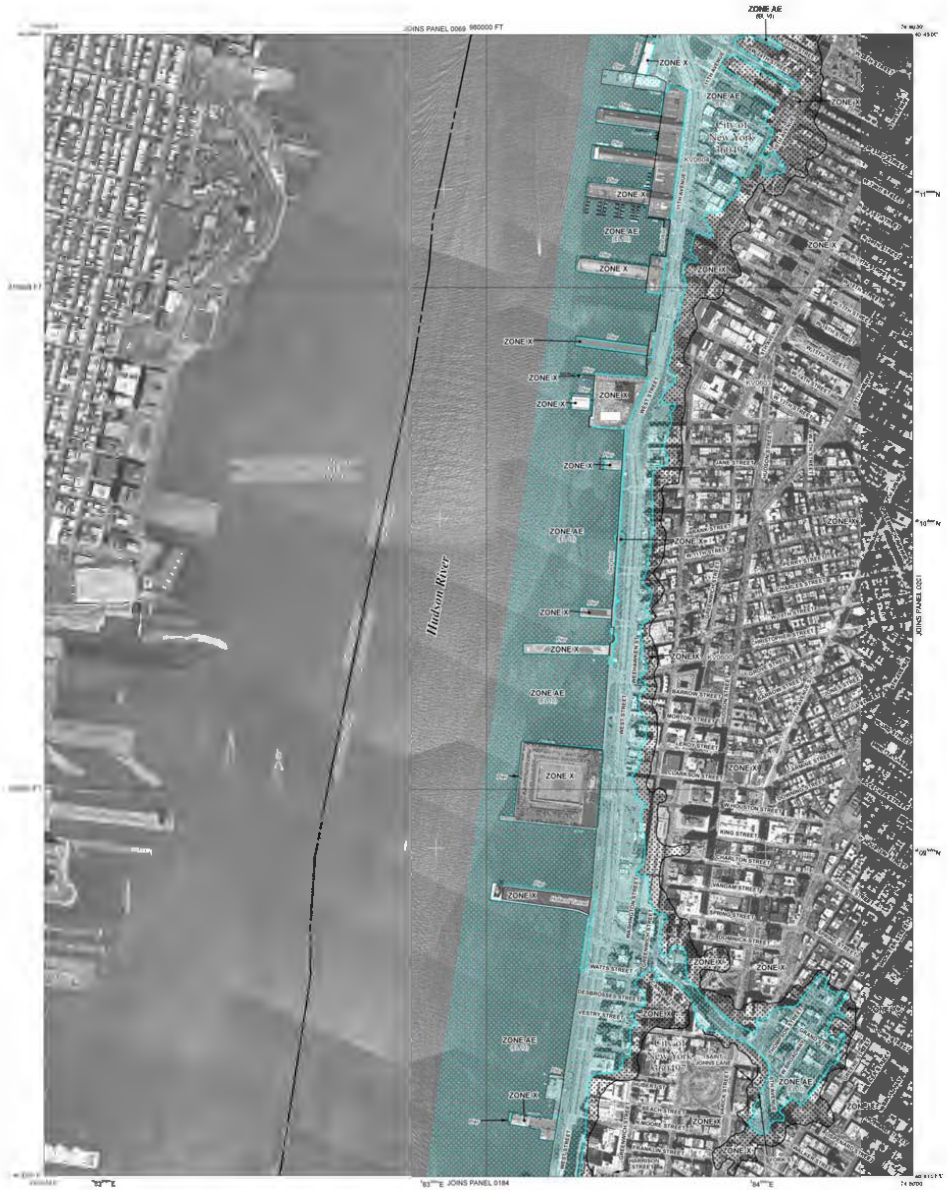

LEGEND

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The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

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FLOODWAY AREAS IN ZONE AE

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1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

513 — Base Flood Elevation line and value; elevation in feet*

(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the National Geodetic Vertical Datum of 1929

Cross section line

Transect line

97°07'49", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

3975000 FT — 1000-meter Universal Transverse Mercator grid values, zone 18

800000 FT — 5000-foot grid ticks: New York State Plane coordinate system, Long Island zone (FIPSZONE 3104), Lambert Conformal Conic projection

DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)

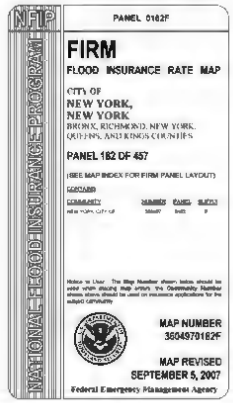
M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
June 30, 1974
FLOOD HAZARD BOUNDARY MAP REVISIONS
June 17, 1976
FLOOD INSURANCE RATE MAP EFFECTIVE
November 16, 1982
FLOOD INSURANCE RATE MAP REVISIONS
September 5, 2007 - to change Special Flood Hazard Areas, to reflect updated topographic information, and to update road names

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
500 0 1000 2000 FEET
150 0 150 300 METERS



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NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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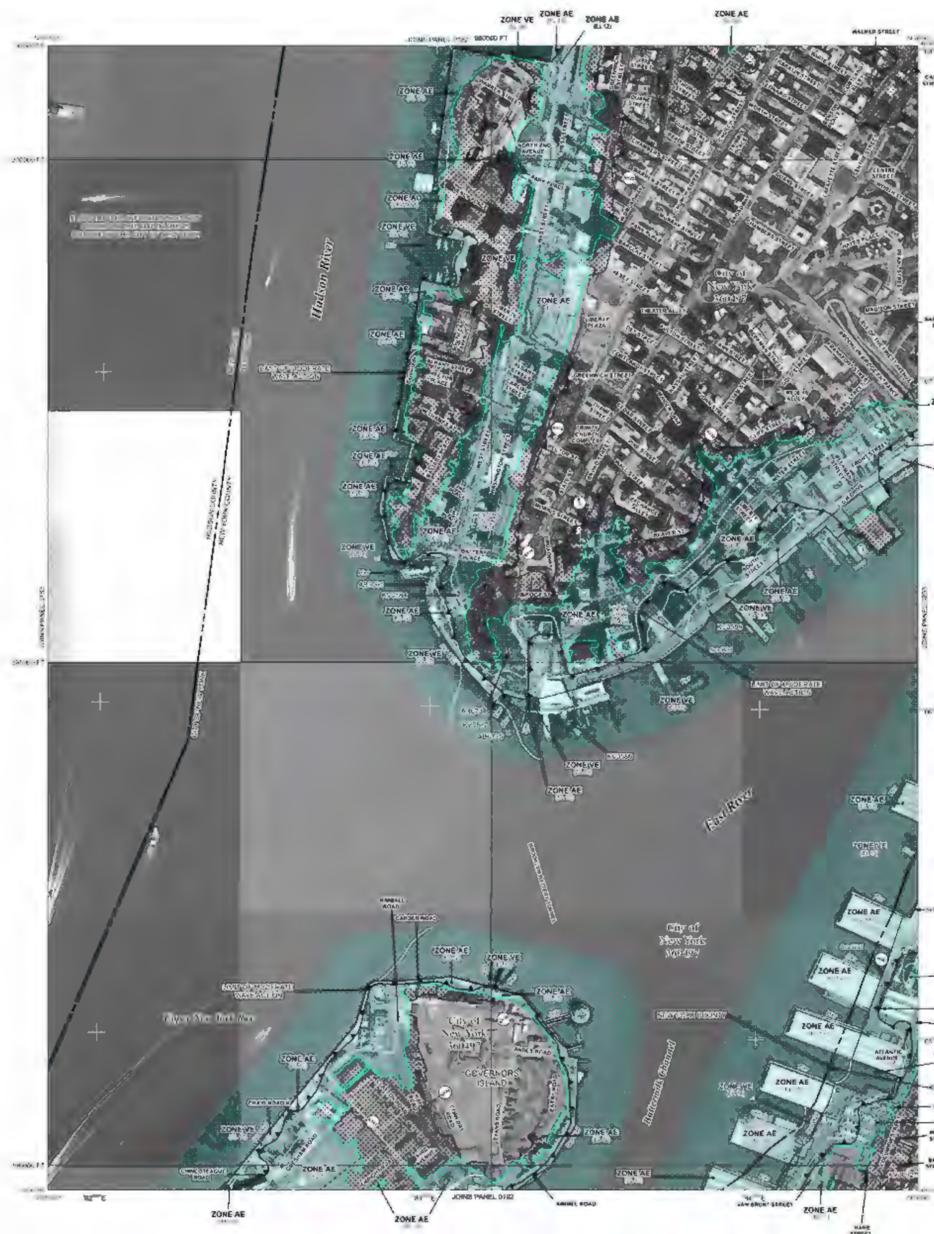

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

OTHER AREAS

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

MAP SCALE 1" = 500'

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0184G

FIRM

FLOOD INSURANCE RATE MAP

CITY OF,
NEW YORK
NEW YORK
BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES

PANEL 184 OF 457

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

PRELIMINARY
DECEMBER 5, 2013

MAP NUMBER
3604970184G

MAP REVISED

Federal Emergency Management Agency

Turner-Cruz
ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

GENERAL
FEMA FIRM MAP 2013

DECEMBER 2024

DWG: G-210

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on the map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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Base map information shown on this FIRM was provided in digital format by the Department of Information Technology and Telecommunication, City of New York (DoITT). This information was derived from digital orthophotos produced at a scale of 1:1,200 with 2-foot pixel resolution from photography dated April 2008.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

The AE Zone category has been divided by a Limit of Moderate Wave Action (LiMWA). The LiMWA represents the approximate landward limit of the 1.5 - foot breaking wave. The effects of wave heights between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

For information on available products associated with this FIRM visit the Map Service Center (MSC) website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

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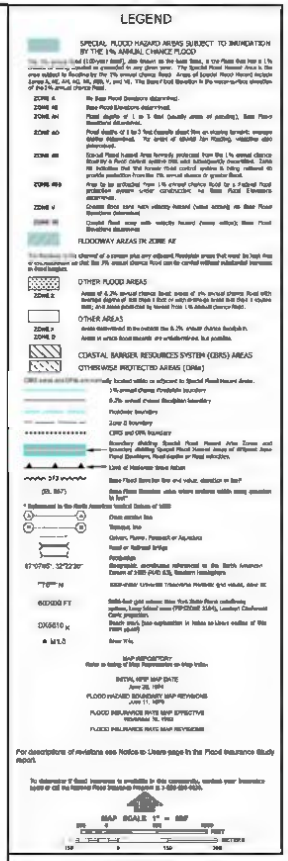
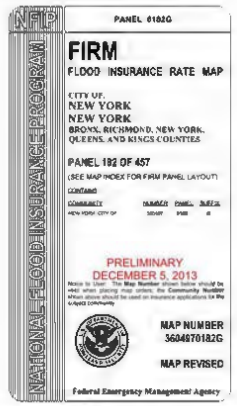




Turner and CRUZ

ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

GENERAL
FEMA FIRM MAP 2013

DECEMBER 2024

DWG: G-211

Legend

- Alignment
- Tax Block Polygon with Tax Lot Numbers
  - 16
  - 142

N

NOTE: 2023 NYC DIGITAL TAX MAP PROVIDED BY THE DEPARTMENT OF FINANCE. THIS SHEET IS FOR REFERENCE ONLY AND NOT THE WORK PRODUCT OF ARCADIS.

GRAPHIC SCALE

0 150 300 600 900 1,200 Feet

NOTE:
1. 2023 NYC DIGITAL TAX MAP PROVIDED BY THE DEPARTMENT OF FINANCE

LOWER MANHATTAN, NEW YORK
NORTH/WEST BATTERY PARK CITY RESILIENCY PROJECT

TAX MAP

Turner KRUZ ARCADIS | FIGURE 3

Turner KRUZ ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

GENERAL
NYC TAX MAP

DECEMBER 2024

DWG: G-212

USACE FILE: NAN-2024-00433-EMI

12/4/2024 4:02:48 PM

Autodesk Docs://AUS-30147585-NWBPCR/G-NWBPCR-R23.rvt

Reach 1A

Block	Lot	Address	Ownership (Owner of Lot)	Lessee
None	None	Route 9A Right-of Way	New York State Department of Transportation	None
16	12	Marginal Street, Wharf, or Place	NYC Department of Parks & Recreation	None
16	215	345 CHAMBERS STREET	Battery Park City Authority	NYC Board of Education
142	25	80 N. MOORE STREET / 378 GREENWICH...	Independence Plaza Associates, LLC	None
142	50	208 WEST STREET	Dormitory Authority of the State of New York	None

Reach 2B

Block	Lot	Address	Ownership (Owner of Lot)	Lessee
16	3	401 SOUTH END AVENUE	Battery Park City Authority	Battery Park City Authority
16	12	Marginal Street, Wharf, or Place	Hudson River Park Trust (NYCDPR?)	None
16	210	399 CHAMBERS STREET	Battery Park City Authority	Tribeca Point L.L.C. (formerly Tribeca Landing L.L.C.)
16	215	345 CHAMBERS STREET	Battery Park City Authority	NYC Board of Education

Reach 3A

Block	Lot	Address	Ownership (Owner of Lot)	Lessee
16	3	401 SOUTH END AVENUE	Battery Park City Authority	Battery Park City Authority

Reach 4B

Block	Lot	Address	Ownership (Owner of Lot)	Lessee
16	225	1 N0RTH END AVENUE	Battery Park City Authority	BOP One North End Ave LLC
16	3	401 SOUTH END AVENUE	Battery Park City Authority	Battery Park City Authority

Reach 5A

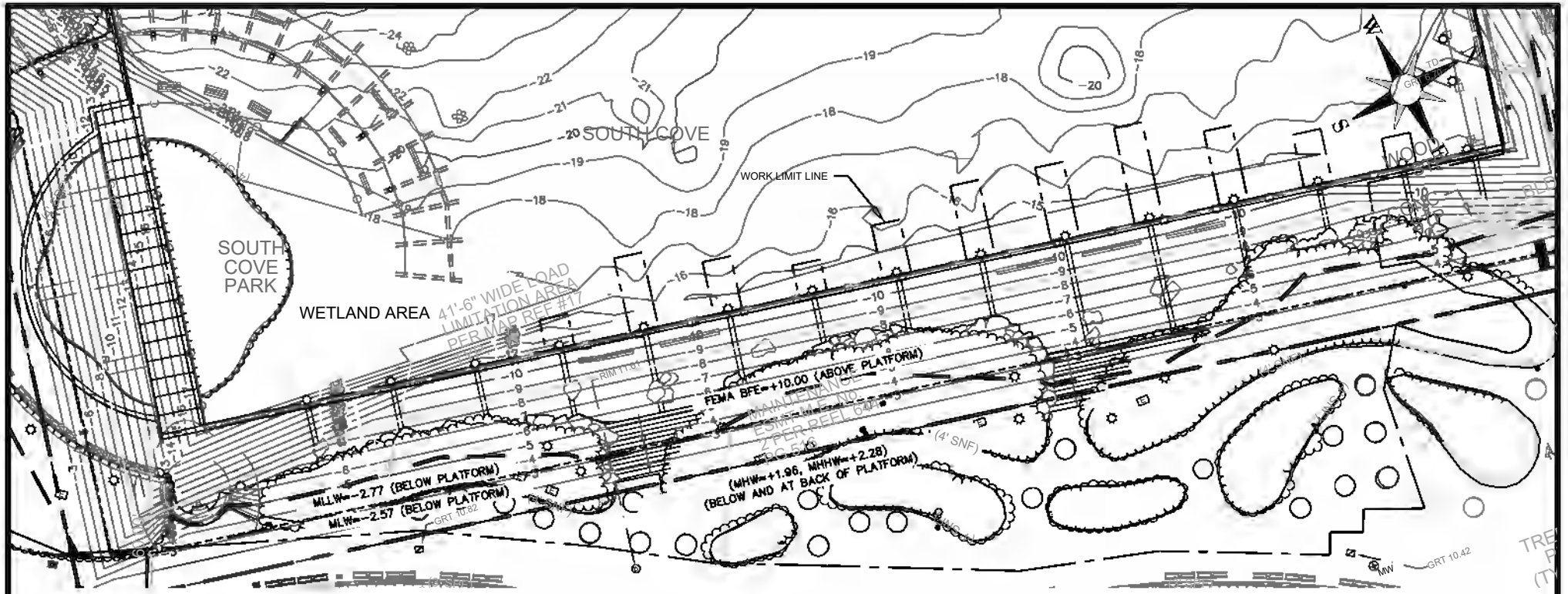
Block	Lot	Address	Ownership (Owner of Lot)	Lessee
16	3	401 SOUTH END AVENUE	Battery Park City Authority	Battery Park City Authority
16	125	225 LIBERTY STREET	Battery Park City Authority	WFP Tower B CO. L.P./Brookfield Properties
16	150	250 VESEY STREET	Battery Park City Authority	WFP Tower D CO. L.P./Brookfield Properties
16	100	345 SOUTH END AVENUE	Battery Park City Authority	Marina Towers Associates, L.P.

Reach 6A

Block	Lot	Address	Ownership (Owner of...	Lessee
16	3	401 SOUTH END AVENUE	Battery Park City Authority	Battery Park City Authority
16	100	345 SOUTH END AVENUE	Battery Park City Authority	Marina Towers Associates, L.P.
16	90	377 RECTOR PLACE	Battery Park City Authority	Mariner's Cove Site J Associates
16	95	320 ALBANY STREET	Battery Park City Authority	Hudson Tower Associates (Hudson Tower Condominium)
16	65	380 RECTOR PLACE	Battery Park City Authority	Mariner's Cove Site K Associates
16	45	21 SOUTH END AVENUE	Battery Park City Authority	South Cove III Associates

Reach 7A

Block	Lot	Address	Ownership (Owner of Lot)	Lessee
16	3	401 SOUTH END AVENUE	Battery Park City Authority	Battery Park City Authority
16	20	70 BATTERY PLACE	Battery Park City Authority	BPC12 Associates L.L.C.
16	15	50 BATTERY PLACE	Battery Park City Authority	Dematteis Battery Park Associates, LLC
16	7511	2 SOUTH END AVENUE	Battery Park City Authority	Cove Club



LEGEND:

MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
— — —	FEMA BASE FLOOD ELEVATION (BFE)
- - - - - - - -	MEAN LOW WATER (MLW)
- - - -	MEAN LOW LOWER WATER (MLLW)
— - —	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
— — — —	BATHYMETRIC SURVEY
— —	TIDAL WETLAND LIMITS
— · · · —	REACH C NAVIGATIONAL CHANNEL LIMITS

NOTES:

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4. REGULATED TIDAL WETLANDS ADJACENT AREA LIMITS CORRESPOND TO THE FACE OF THE EXISTING BULKHEAD AT THE PROJECT SITE. FOR FURTHER DETAILS, REFER TO WETLANDS DELINEATION REPORT PREPARED BY MATRIX NEW WORLD ENGINEERING, JULY 2023.
5. IN WATER WORK 203 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
6. IN WATER WORK 1007 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

Turner Cruz
ARCADIS

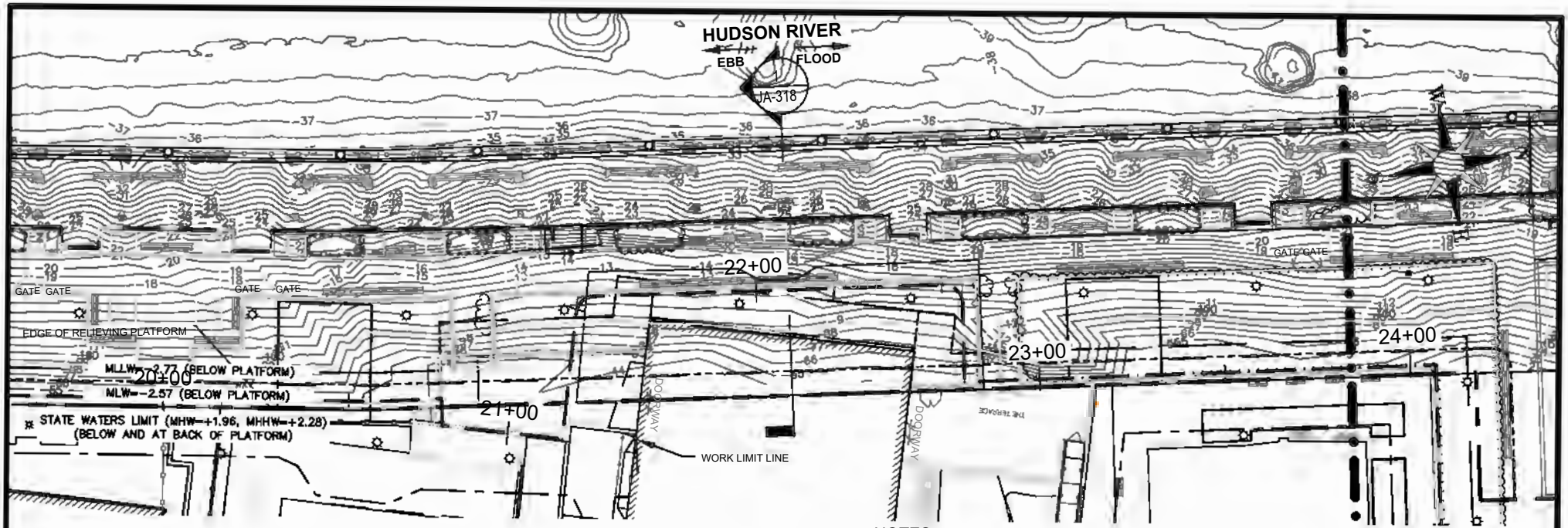
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EXISTING SITE CONDITIONS (TOPO)
AREA 1 - REACH 7

0 40 80 Feet

DECEMBER 2024

DWG: VT-101



LEGEND:

MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
	FEMA BASE FLOOD ELEVATION (BFE)
	MEAN LOW WATER (MLW)
	MEAN LOW LOWER WATER (MLLW)
	STATE WATERS LIMIT MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	BATHYMETRIC SURVEY
	TIDAL WETLAND LIMITS
	REACH C NAVIGATIONAL CHANNEL LIMITS

NOTES:

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5. IN WATER WORK 203 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
6. IN WATER WORK 1007 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

Turner ECRUZ
ARCADIS

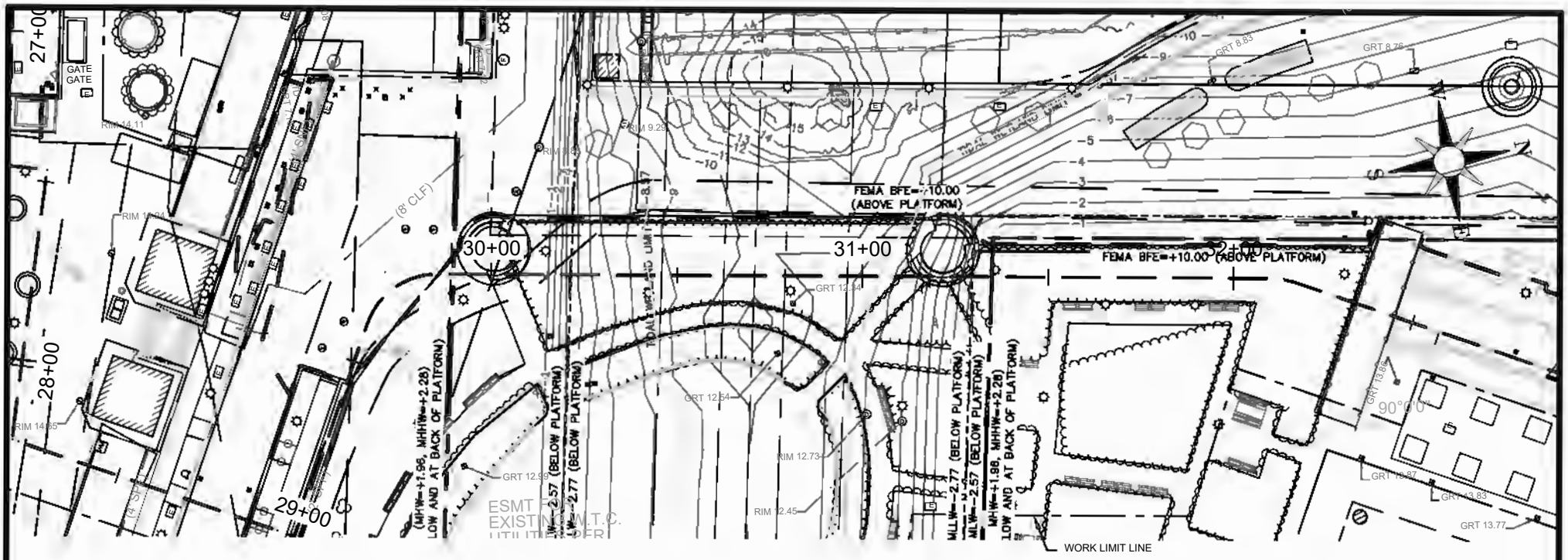
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EXISTING SITE CONDITIONS (TOPO)
AREA 5 - REACH 6

0 40 80 Feet

DECEMBER 2024

DWG: VT-105



LEGEND:

MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
— — —	FEMA BASE FLOOD ELEVATION (BFE)
- - - - - - - -	MEAN LOW WATER (MLW)
- - - -	MEAN LOW LOWER WATER (MLLW)
— - - —	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
— — — —	BATHYMETRIC SURVEY
— —	TIDAL WETLAND LIMITS
— · · · —	REACH C NAVIGATIONAL CHANNEL LIMITS

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5. IN WATER WORK 365 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
6. IN WATER WORK 1016 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

Turner Cruz
ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

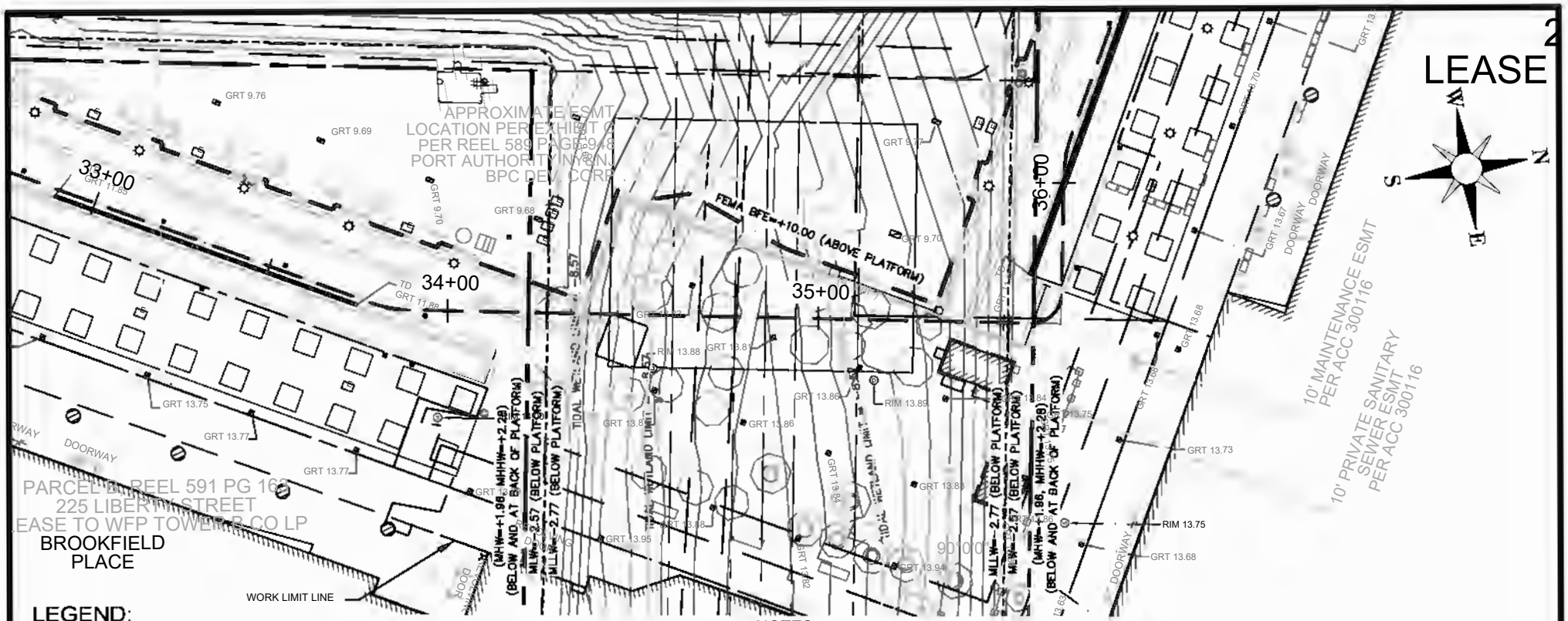
EXISTING SITE CONDITIONS (TOPO)
AREA 7 - REACH 5

0 40 80 Feet

DECEMBER 2024

DWG: VT-107

USACE FILE: NAN-2024-00433-EMI



LEGEND:

MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
— — —	FEMA BASE FLOOD ELEVATION (BFE)
- - - - - - - -	MEAN LOW WATER (MLW)
— — — —	MEAN LOW LOWER WATER (MLLW)
— - —	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
— — — —	BATHYMETRIC SURVEY
— —	TIDAL WETLAND LIMITS
— . . . —	REACH C NAVIGATIONAL CHANNEL LIMITS

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5. IN WATER WORK 462 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
6. IN WATER WORK 1073 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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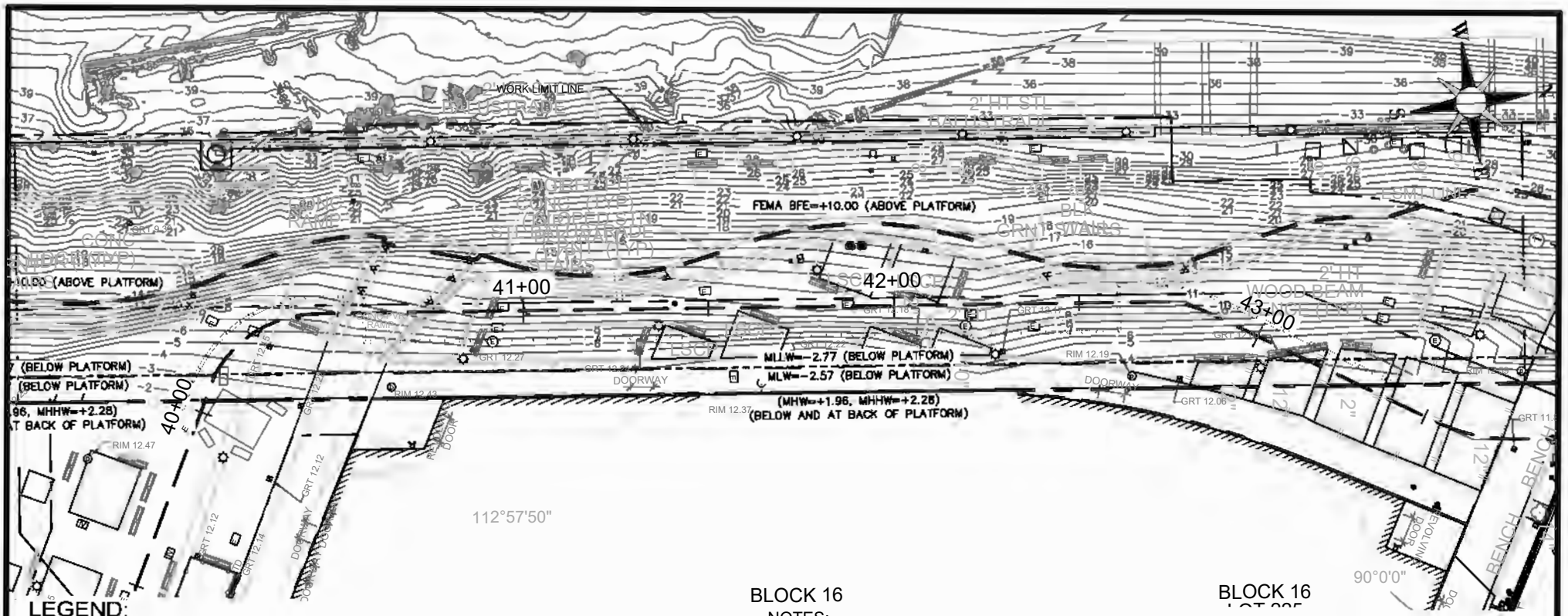
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EXISTING SITE CONDITIONS (TOPO)
AREA 8 - REACH 5

0 40 80 Feet

DECEMBER 2024

DWG: VT-108



LEGEND:

MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
— — —	FEMA BASE FLOOD ELEVATION (BFE)
- - - - - - - -	MEAN LOW WATER (MLW)
— — — —	MEAN LOW LOWER WATER (MLLW)
— - —	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
— — — —	BATHYMETRIC SURVEY
— —	TIDAL WETLAND LIMITS
— · · · —	REACH C NAVIGATIONAL CHANNEL LIMITS

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5. IN WATER WORK 2 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
6. IN WATER WORK 572 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

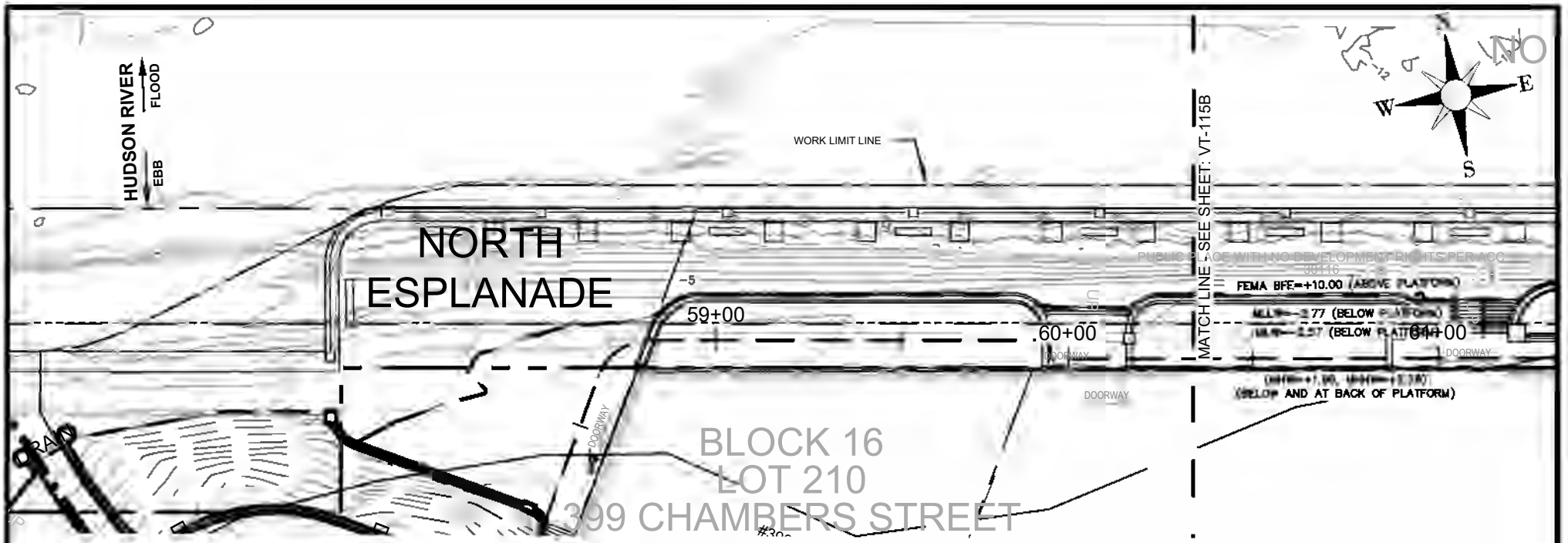
EXISTING SITE CONDITIONS (TOPO)
AREA 10 - REACH 4

0 40 80 Feet

DECEMBER 2024

DWG: VT-110

USACE FILE: NAN-2024-00433-EMI



LEGEND:

MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
— — —	FEMA BASE FLOOD ELEVATION (BFE)
- - - - - - - -	MEAN LOW WATER (MLW)
— — — —	MEAN LOW LOWER WATER (MLLW)
— - —	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
— — — —	BATHYMETRIC SURVEY
— —	TIDAL WETLAND LIMITS
— · · · —	REACH C NAVIGATIONAL CHANNEL LIMITS

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5. IN WATER WORK 439 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
6. IN WATER WORK 989 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

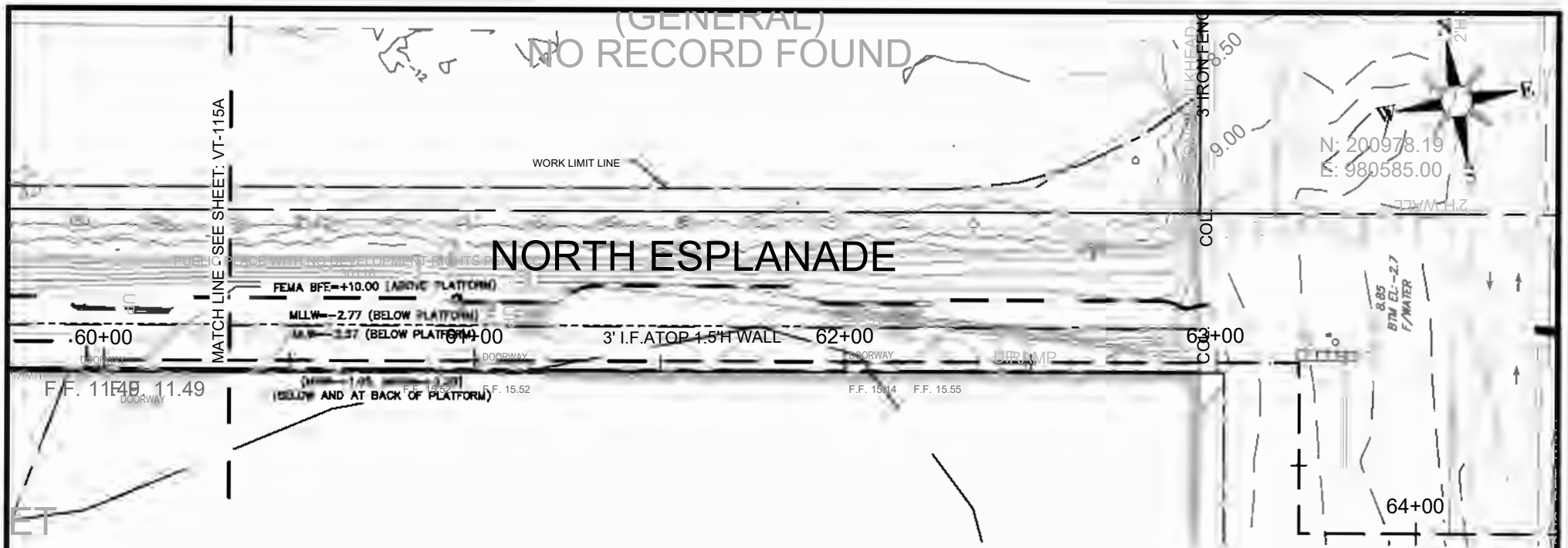
Turner Cruz
ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EXISTING SITE CONDITIONS (TOPO)
AREA 15 - REACH 2
0 40 80 Feet

DECEMBER 2024
DWG: VT-115A

USACE FILE: NAN-2024-00433-EMI



LEGEND:

MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
— — —	FEMA BASE FLOOD ELEVATION (BFE)
- - - - - - - -	MEAN LOW WATER (MLW)
- - - -	MEAN LOW LOWER WATER (MLLW)
— - - —	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
— — — —	BATHYMETRIC SURVEY
— —	TIDAL WETLAND LIMITS
— · · · —	REACH C NAVIGATIONAL CHANNEL LIMITS

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5. IN WATER WORK 439 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
6. IN WATER WORK 989 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

Turner Cruz
ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EXISTING SITE CONDITIONS (TOPO)
AREA 15 - REACH 2

0 40 80 Feet

DECEMBER 2024

DWG: VT-115B

NOTES:

1. THE DESIGN-BUILDER SHALL UPDATE AND SIGN A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS IN ACCORDANCE WITH DEP AND NYSDEC STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (LATEST EDITION) PRIOR TO STARTING THE WORK. NO WORK IN THE FIELD CAN START UNTIL THE SWPPP IS APPROVED.
2. ALL SOIL AND EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. INFORMATION SHOWN ON PLAN DRAWINGS REPRESENT AN APPROACH FOR CONTROLLING EROSION AND SEDIMENT. DEVISE AND IMPLEMENT MEASURES AS NEEDED TO ACCOMMODATE DESIGN-BUILDER'S CONSTRUCTION STAGING AND OTHER MEANS AND METHODS FOR COMPLETING CONTRACT WORK.
4. MINIMIZE THE DISCHARGE OF POLLUTANTS AND PREVENT ANY VIOLATIONS OF THE NEW YORK STATE WATER QUALITY STANDARDS IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY, PERMIT NO. GP-0-20-001 OR LATEST VERSION (GENERAL PERMIT).
5. IMPLEMENT AND MAINTAIN STORMWATER POLLUTION PREVENTION PLANS (SWPPP) IN ACCORDANCE WITH THE GENERAL PERMIT AND "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, ET. AL., NOVEMBER 2016, OR LATEST VERSION (NYS STANDARDS).
6. PROVIDE ALL PERSONNEL HAVING NECESSARY QUALIFICATIONS TO PREPARE AND IMPLEMENT THE SWPPP.
7. INSPECT ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES TO ENSURE EFFECTIVENESS AND IMPLEMENT ANY CORRECTIVE MEASURES IN ACCORDANCE WITH THE APPLICABLE PERMITS.
8. PREVENT STORMWATER RUNOFF FROM THE WORK AREA TO FLOW OFF SITE AREAS OR TO PERCOLATE INTO GROUNDWATER.
9. THE ACTUAL AREA AVAILABLE FOR THE DESIGN-BUILDER'S STAGING AREA WILL BE DETERMINED IN THE FIELD.
10. REMOVE AND DISPOSE OFF SITE ALL SILT AND SEDIMENT WHICH ACCUMULATES AT SEDIMENT CONTROL PRACTICES/DEVICES.
11. CLEANING OF ROADWAYS: DESIGN-BUILDER SHALL KEEP THE TRAVELED WAY FREE OF FOREIGN OBJECTS SUCH AS SPILLED EARTH, ROCK, TIMBER AND ANY OTHER ITEM THAT MAY FALL FROM TRANSPORTING VEHICLES, MATERIALS SPILLED BY OR DROPPED FROM THE UNDERCARRIAGE OF WAY CARRYING VEHICLE USED IN DESIGN-BUILDER'S HAULING OPERATIONS ALONG OR ACROSS ANY PUBLIC TRAVELED WAY SHALL BE REMOVED IMMEDIATELY.
12. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
13. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE NYSDEC AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
14. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
15. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
16. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
17. CLEAN THE WORK SITE AND EQUIPMENT CONSISTENT WITH THE SWPPP AND THE NYS STANDARDS.
18. ALL SITE ENTRANCES SHALL BE STABILIZED PER THE DETAIL "STABILIZED CONSTRUCTION ENTRANCE", SHEET EC-901, TO EFFECTIVELY CAPTURE MUD AND DEBRIS FROM VEHICLES BEFORE THEY ENTER PUBLIC STREETS.
19. SEE SHEET EC-901 "EROSION AND SEDIMENT CONTROL DETAILS" FOR DETAILS APPLICABLE TO EROSION AND SEDIMENT CONTROL PLANS. REFER TO THE NYS STANDARDS FOR ADDITIONAL DETAILS AS REQUIRED.
20. CONSTRUCTION FENCE SHALL BE OF SOLID WOOD CONSTRUCTION, 8 FEET HIGH, PAINTED HUNTER GREEN, AND MEETING ALL REQUIREMENTS OF NYC BC 3307 "PROTECTION OF PEDESTRIANS". THE FENCE LINE SHALL HAVE GATES OF SIMILAR CONSTRUCTION MEETING NYC BC 3307. SUBMIT SHOP DRAWINGS OF FENCE AND GATES, SEALED BY DESIGNED BY A REGISTERED DESIGN PROFESSIONAL, TO DESIGN-BUILDER FOR APPROVAL.
21. THE EXPOSURE OF AN AREA BY SITE PREPARATION SHALL BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME. EROSION AND SEDIMENT CONTROL REQUIREMENTS SHALL INCLUDE SURFACE STABILIZATION MEASURE APPLIED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASES, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENT CEASE. DISTURBED AREA MUST BE STABILIZED USING MULCH OR VEGETATION OR ANOTHER METHOD THAT DOES NOT REQUIRE SEED GERMINATION TO CONTROL EROSION. ANY GRADED AREAS NOT SUBJECT TO FURTHER DISTURBANCE OR CONSTRUCTION TRAFFIC SHALL BE IMMEDIATELY BROUGHT TO FINAL GRADE AND RECEIVE PERMANENT VEGETATION COVER.
22. IMMEDIATELY AFTER THE STOCKPILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL . ALL SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT BARRIER.

TEMPORARY EROSION AND SEDIMENT CONTROLS INSPECTION AND MAINTENANCE SCHEDULE

BMP	INSPECTION FREQUENCY	MAINTENANCE TO BE PERFORMED
COMPOST FILTER SOCK	WEEKLY AND AFTER RUNOFF EVENTS	MAINTENANCE SHALL BE PERFORMED AS NEEDED. SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE THIRD THE ORIGINAL HEIGHT OF THE BARRIER. COMPOST FILTER SOCK SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF COMPOST FILTER SOCK IS REDUCED. COMPOST FILTER SOCKS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATION AT THE COMPOST FILTER SOCK SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE COMPOST FILTER SOCK IS REMOVED.
CONSTRUCTION ENTRANCE	DAILY	DESIGN-BUILDER SHALL MAINTAIN/REPLACE MATERIAL AS NEEDED THROUGHOUT CONSTRUCTION TO MAINTAIN SPECIFIED MINIMUM THICKNESS DURING USE OF ACCESS ROAD. A STOCKPILE OF ROCK WILL BE MAINTAINED ON SITE FOR THIS PURPOSE.
SILT FENCE	WEEKLY AND AFTER RUNOFF EVENTS	MAINTENANCE SHALL BE PERFORMED AS NEEDED. SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE THIRD THE ORIGINAL HEIGHT OF THE BARRIER. SILT FENCE SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF SILT FENCE IS REDUCED. SILT FENCE SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATION AT THE SILT FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE SILT FENCE IS REMOVED.
TURBIDITY CURTAIN	DAILY	MAINTENANCE SHALL BE PERFORMED AS NEEDED. IF NECESSARY, REMOVE SEDIMENT DEPOSITED BEHIND THE CURTAIN PRIOR TO REMOVAL OF THE CURTAIN. THE CURTAIN SHALL BE REMOVED BY CAREFULLY PULLING IT TOWARD THE CONSTRUCTION SITE TO MINIMIZE RELEASE OF ATTACHED SEDIMENT. ANY FLOATING CONSTRUCTION OR NATURAL DEBRIS SHALL BE IMMEDIATELY REMOVED TO PREVENT DAMAGE TO THE CURTAIN. IF THE CURTAIN IS ORIENTED IN A MANNER THAT FACES THE PREVAILING WINDS, FREQUENT CHECKS OF THE ANCHORAGE SHALL BE MADE.
BUBBLE CURTAIN	PRIOR TO ANY PILE DRIVING ACTIVITIES	MAINTENANCE SHALL BE PERFORMED AS NEEDED.

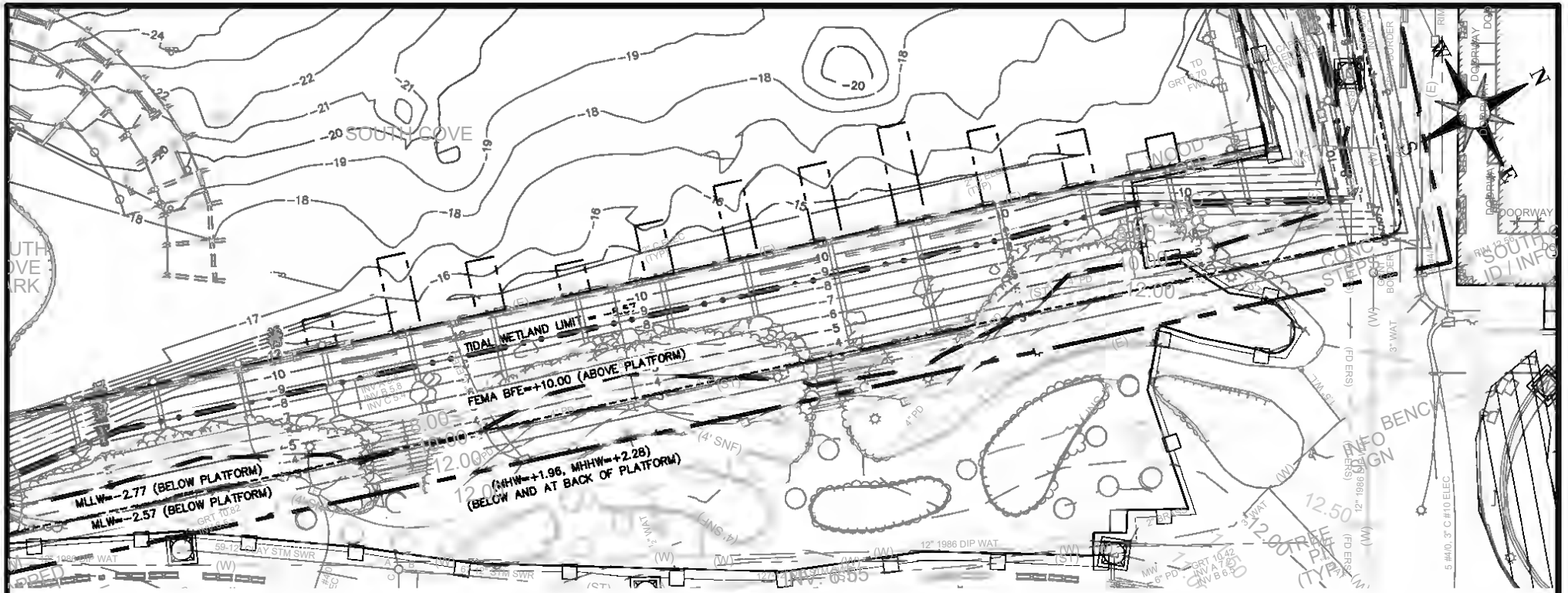
BUBBLE CURTAIN:

1. IMPLEMENT AND INSTALL BUBBLE CURTAIN TO REDUCE THE AMOUNT OF SUSPENDED SOLIDS DISPERSED DURING ANY PILE DRIVING ACTIVITIES AS WELL AS REDUCE THE EFFECT OF UNDERWATER SOUND WAVES FROM PILE DRIVING ACTIVITIES, AND CONTAIN ANY SOIL THAT MAY BE AFFECTED DURING THE OPERATION.

CONCRETE WASHOUT:

1. CONCRETE WASHOUT PITS SHALL BE UTILIZED FOR ALL CONCRETE WORK TO PREVENT DISCHARGE TO DRAINAGE WAYS, STREAMS, AND WETLANDS, AND INFILTRATION TO GROUND WATER IN ACCORDANCE WITH THE NYS ENVIRONMENTAL CONSERVATION LAW. WASH OUT PITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2016 NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL NYSDEC BLUE BOOK.
2. WASH OUT FACILITIES SHALL BE SELF-CONTAINED, AND LINED WITH PLASTIC SHEETING WITH A MINIMUM THICKNESS OF 10 MILLIMETERS. ACCUMULATED HARDENED CONCRETE MAY BE DISPOSED OF IN A SPOIL SITE.

USACE FILE: NAN-2024-00433-EMI



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	INLET PROTECTION
	SILT FENCE
	TURBIDITY CURTAIN
	STABILIZED CONSTRUCTION ENTRANCE
	STAGING AREA
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH (MHHW)
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	FEMA BASE FLOOD ELEVATION (BFE)
	BULKHEAD
	LIMIT OF WORK
	TIDAL WETLAND LIMITS

NOTES:

1. INLET PROTECTION TO BE INSTALLED AROUND ALL EXISTING CATCH BASINS AND STORM INLETS LOCATED WITHIN THE LIMIT OF WORK.
2. INLET PROTECTION TO BE INSTALLED AROUND PROPOSED CATCH BASINS AND INLETS IF WORK AREA REMAINS UNSTABLE.
3. SEDIMENT BARRIERS, SUCH AS SILT FENCES AND FILTER SOCKS, TO BE INSTALLED IN AREAS WHERE SOIL IS DISTURBED AND SURFACE FLOWS DRAIN IN THE DIRECTION OF THE PROTECTED AREA.
4. SILT FENCE TO BE SUBSTITUTED FOR COMPOST FILTER SOCK IN AREAS WHERE INSTALLATION OF SILT FENCE IS NOT FEASIBLE.
5. TURBIDITY CURTAIN TO BE PLACED FOR IN-WATER CONSTRUCTION. LOCATION AND EXTENT TO BE DETERMINED BY DESIGN-BUILDER.
6. IN WATER WORK 203 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
7. IN WATER WORK 1007 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

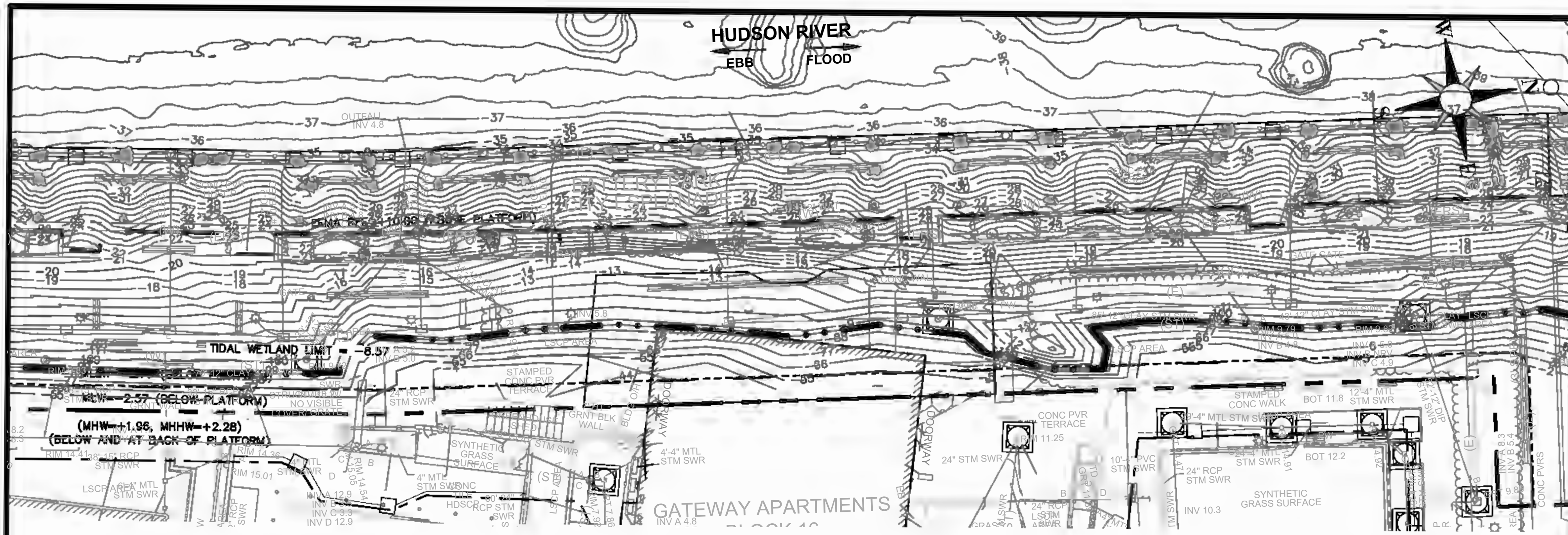
EROSION AND SEDIMENT CONTROL PLAN
AREA 1 - REACH 7

0 40 80 Feet

DECEMBER 2024

DWG: EC-101

USACE FILE: NAN-2024-00433-EMI



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
(symbol)	INLET PROTECTION
(symbol)	SILT FENCE
(symbol)	TURBIDITY CURTAIN
(symbol)	STABILIZED CONSTRUCTION ENTRANCE
(symbol)	STAGING AREA
(symbol)	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH (MHHW)
(symbol)	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
(symbol)	FEMA BASE FLOOD ELEVATION (BFE)
(symbol)	BULKHEAD
(symbol)	LIMIT OF WORK
(symbol)	TIDAL WETLAND LIMITS

NOTES:

1. INLET PROTECTION TO BE INSTALLED AROUND ALL EXISTING CATCH BASINS AND STORM INLETS LOCATED WITHIN THE LIMIT OF WORK.
2. INLET PROTECTION TO BE INSTALLED AROUND PROPOSED CATCH BASINS AND INLETS IF WORK AREA REMAINS UNSTABLE.
3. SEDIMENT BARRIERS, SUCH AS SILT FENCES AND FILTER SOCKS, TO BE INSTALLED IN AREAS WHERE SOIL IS DISTURBED AND SURFACE FLOWS DRAIN IN THE DIRECTION OF THE PROTECTED AREA.
4. SILT FENCE TO BE SUBSTITUTED FOR COMPOST FILTER SOCK IN AREAS WHERE INSTALLATION OF SILT FENCE IS NOT FEASIBLE.
5. TURBIDITY CURTAIN TO BE PLACED FOR IN-WATER CONSTRUCTION. LOCATION AND EXTENT TO BE DETERMINED BY DESIGN-BUILDER.
6. IN WATER WORK 2 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
7. IN WATER WORK 705 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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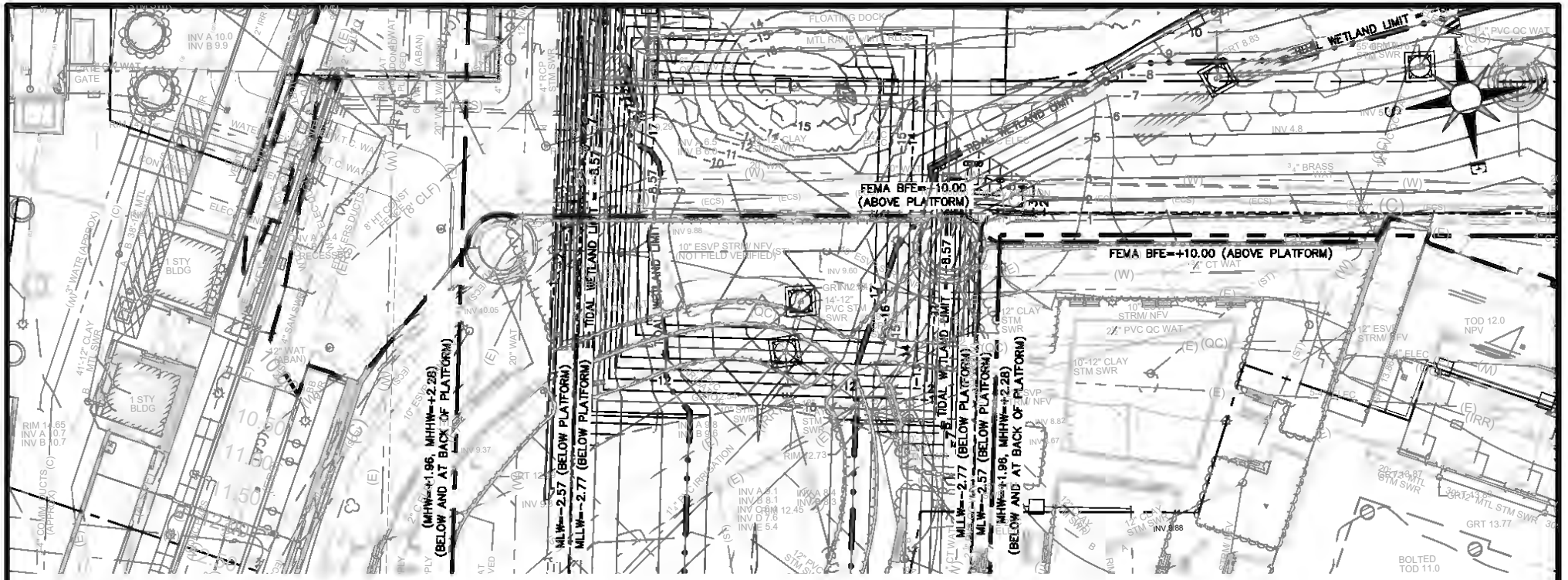
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EROSION AND SEDIMENT CONTROL PLAN
AREA 5 - REACH 6

0 40 80 Feet

DECEMBER 2024

DWG: EC-105



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	INLET PROTECTION
	SILT FENCE
	TURBIDITY CURTAIN
	STABILIZED CONSTRUCTION ENTRANCE
	STAGING AREA
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH (MHHW)
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	FEMA BASE FLOOD ELEVATION (BFE)
	BULKHEAD
	LIMIT OF WORK
	TIDAL WETLAND LIMITS

NOTES:

1. INLET PROTECTION TO BE INSTALLED AROUND ALL EXISTING CATCH BASINS AND STORM INLETS LOCATED WITHIN THE LIMIT OF WORK.
2. INLET PROTECTION TO BE INSTALLED AROUND PROPOSED CATCH BASINS AND INLETS IF WORK AREA REMAINS UNSTABLE.
3. SEDIMENT BARRIERS, SUCH AS SILT FENCES AND FILTER SOCKS, TO BE INSTALLED IN AREAS WHERE SOIL IS DISTURBED AND SURFACE FLOWS DRAIN IN THE DIRECTION OF THE PROTECTED AREA.
4. SILT FENCE TO BE SUBSTITUTED FOR COMPOST FILTER SOCK IN AREAS WHERE INSTALLATION OF SILT FENCE IS NOT FEASIBLE.
5. TURBIDITY CURTAIN TO BE PLACED FOR IN-WATER CONSTRUCTION. LOCATION AND EXTENT TO BE DETERMINED BY DESIGN-BUILDER.
6. IN WATER WORK 365 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
7. IN WATER WORK 1016 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

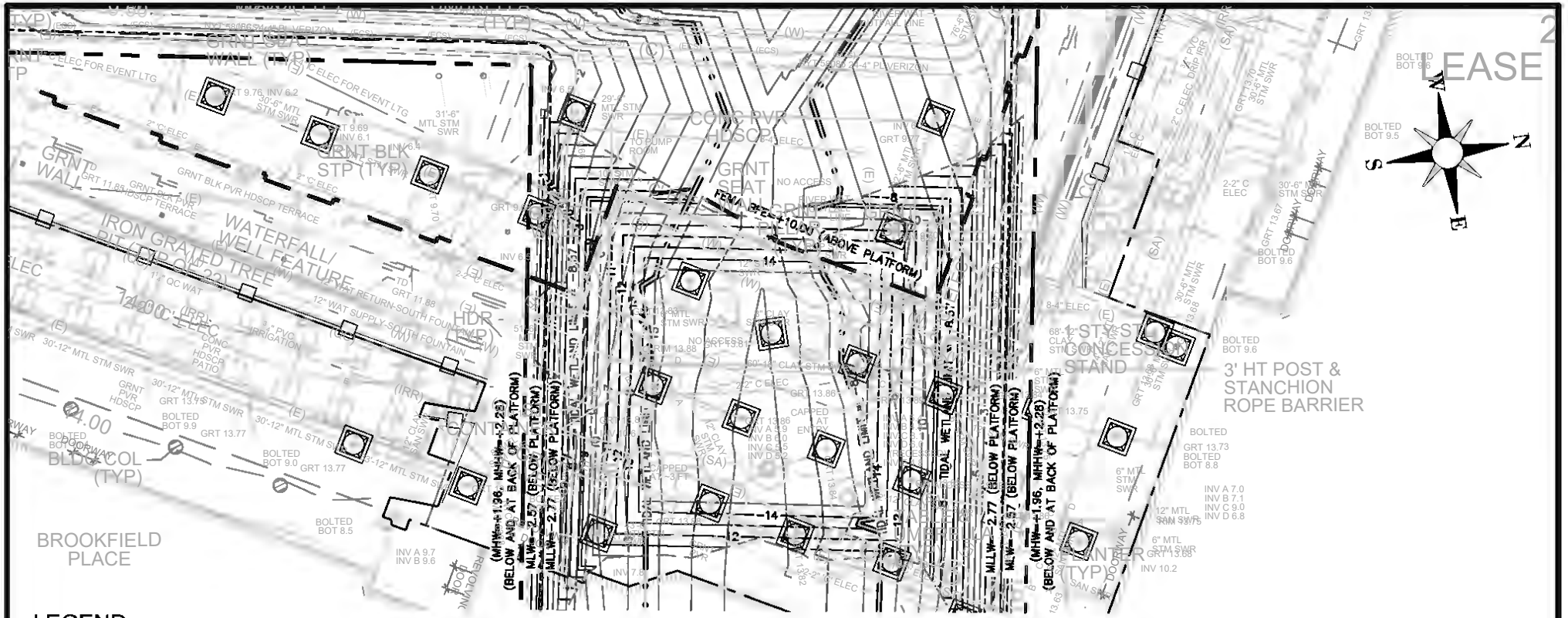
EROSION AND SEDIMENT CONTROL PLAN
AREA 7 - REACH 5

0 40 80 Feet

DECEMBER 2024

DWG: EC-107

USACE FILE: NAN-2024-00433-EMI



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	INLET PROTECTION
	SILT FENCE
	TURBIDITY CURTAIN
	STABILIZED CONSTRUCTION ENTRANCE
	STAGING AREA
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH (MHHW)
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	FEMA BASE FLOOD ELEVATION (BFE)
	BULKHEAD
	LIMIT OF WORK
	TIDAL WETLAND LIMITS

NOTES:

1. INLET PROTECTION TO BE INSTALLED AROUND ALL EXISTING CATCH BASINS AND STORM INLETS LOCATED WITHIN THE LIMIT OF WORK.
2. INLET PROTECTION TO BE INSTALLED AROUND PROPOSED CATCH BASINS AND INLETS IF WORK AREA REMAINS UNSTABLE.
3. SEDIMENT BARRIERS, SUCH AS SILT FENCES AND FILTER SOCKS, TO BE INSTALLED IN AREAS WHERE SOIL IS DISTURBED AND SURFACE FLOWS DRAIN IN THE DIRECTION OF THE PROTECTED AREA.
4. SILT FENCE TO BE SUBSTITUTED FOR COMPOST FILTER SOCK IN AREAS WHERE INSTALLATION OF SILT FENCE IS NOT FEASIBLE.
5. TURBIDITY CURTAIN TO BE PLACED FOR IN-WATER CONSTRUCTION. LOCATION AND EXTENT TO BE DETERMINED BY DESIGN-BUILDER.
6. IN WATER WORK 462 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
7. IN WATER WORK 1073 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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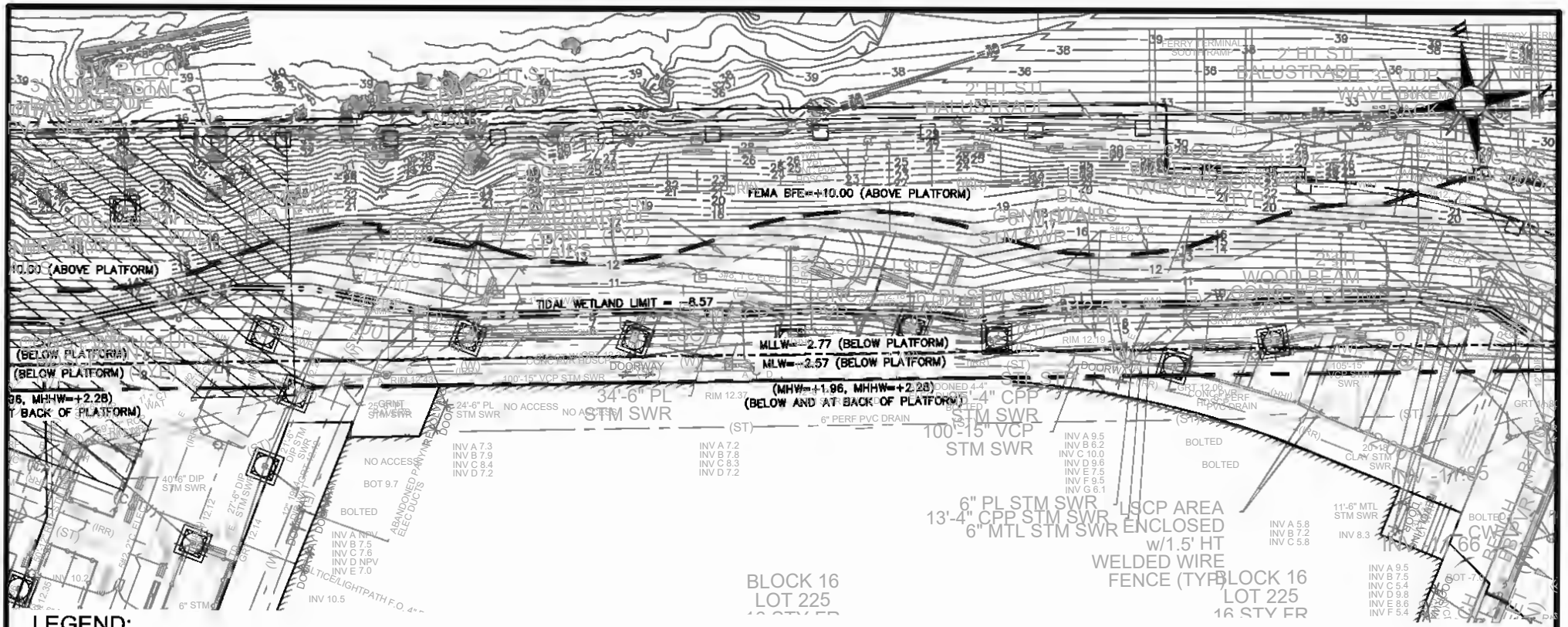
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EROSION AND SEDIMENT CONTROL PLAN
AREA 8 - REACH 5

0 40 80 Feet

DECEMBER 2024

DWG: EC-108



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	INLET PROTECTION
	SILT FENCE
	TURBIDITY CURTAIN
	STABILIZED CONSTRUCTION ENTRANCE
	STAGING AREA
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH (MHHW)
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	FEMA BASE FLOOD ELEVATION (BFE)
	BULKHEAD
	LIMIT OF WORK
	TIDAL WETLAND LIMITS

NOTES:

1. INLET PROTECTION TO BE INSTALLED AROUND ALL EXISTING CATCH BASINS AND STORM INLETS LOCATED WITHIN THE LIMIT OF WORK.
2. INLET PROTECTION TO BE INSTALLED AROUND PROPOSED CATCH BASINS AND INLETS IF WORK AREA REMAINS UNSTABLE.
3. SEDIMENT BARRIERS, SUCH AS SILT FENCES AND FILTER SOCKS, TO BE INSTALLED IN AREAS WHERE SOIL IS DISTURBED AND SURFACE FLOWS DRAIN IN THE DIRECTION OF THE PROTECTED AREA.
4. SILT FENCE TO BE SUBSTITUTED FOR COMPOST FILTER SOCK IN AREAS WHERE INSTALLATION OF SILT FENCE IS NOT FEASIBLE.
5. TURBIDITY CURTAIN TO BE PLACED FOR IN-WATER CONSTRUCTION. LOCATION AND EXTENT TO BE DETERMINED BY DESIGN-BUILDER.
6. IN WATER WORK 2 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
7. IN WATER WORK 572 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

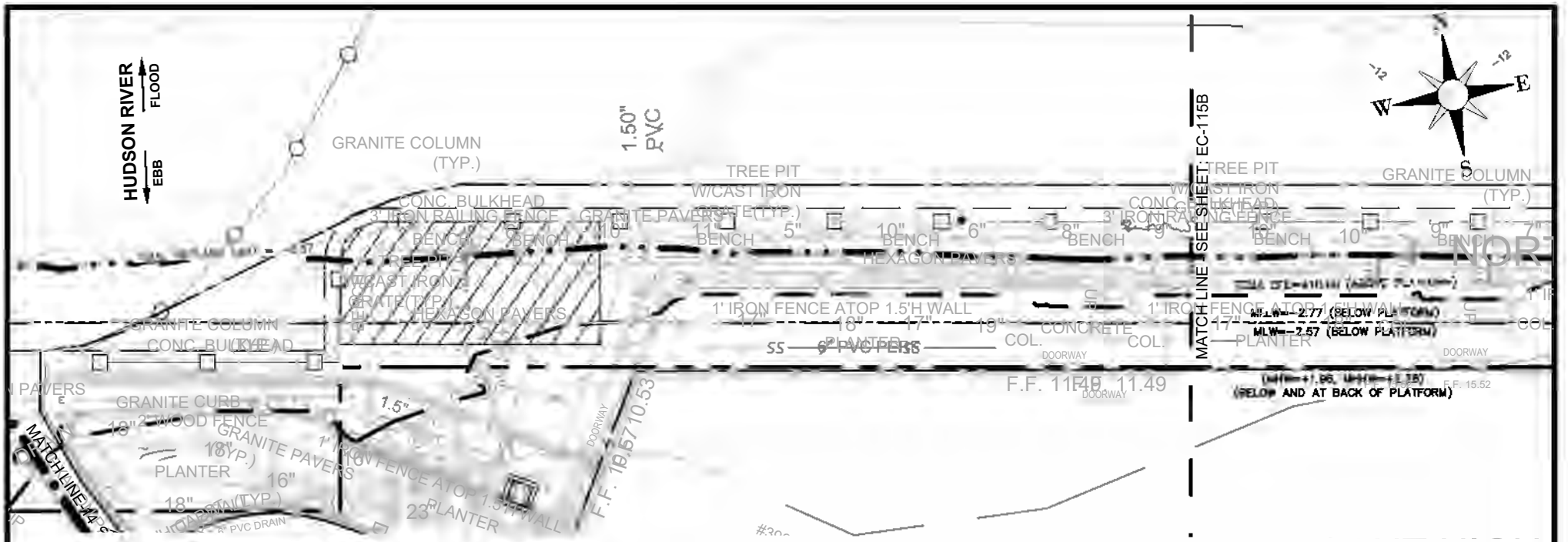
EROSION AND SEDIMENT CONTROL PLAN
AREA 10 - REACH 4

0 40 80 Feet

DECEMBER 2024

DWG: EC-110

USACE FILE: NAN-2024-00433-EMI



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	INLET PROTECTION
	SILT FENCE
	TURBIDITY CURTAIN
	STABILIZED CONSTRUCTION ENTRANCE
	STAGING AREA
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH (MHHW)
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	FEMA BASE FLOOD ELEVATION (BFE)
	BULKHEAD
	LIMIT OF WORK
	TIDAL WETLAND LIMITS

NOTES:

1. INLET PROTECTION TO BE INSTALLED AROUND ALL EXISTING CATCH BASINS AND STORM INLETS LOCATED WITHIN THE LIMIT OF WORK.
2. INLET PROTECTION TO BE INSTALLED AROUND PROPOSED CATCH BASINS AND INLETS IF WORK AREA REMAINS UNSTABLE.
3. SEDIMENT BARRIERS, SUCH AS SILT FENCES AND FILTER SOCKS, TO BE INSTALLED IN AREAS WHERE SOIL IS DISTURBED AND SURFACE FLOWS DRAIN IN THE DIRECTION OF THE PROTECTED AREA.
4. SILT FENCE TO BE SUBSTITUTED FOR COMPOST FILTER SOCK IN AREAS WHERE INSTALLATION OF SILT FENCE IS NOT FEASIBLE.
5. TURBIDITY CURTAIN TO BE PLACED FOR IN-WATER CONSTRUCTION. LOCATION AND EXTENT TO BE DETERMINED BY DESIGN-BUILDER.
6. IN WATER WORK 439 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
7. IN WATER WORK 989 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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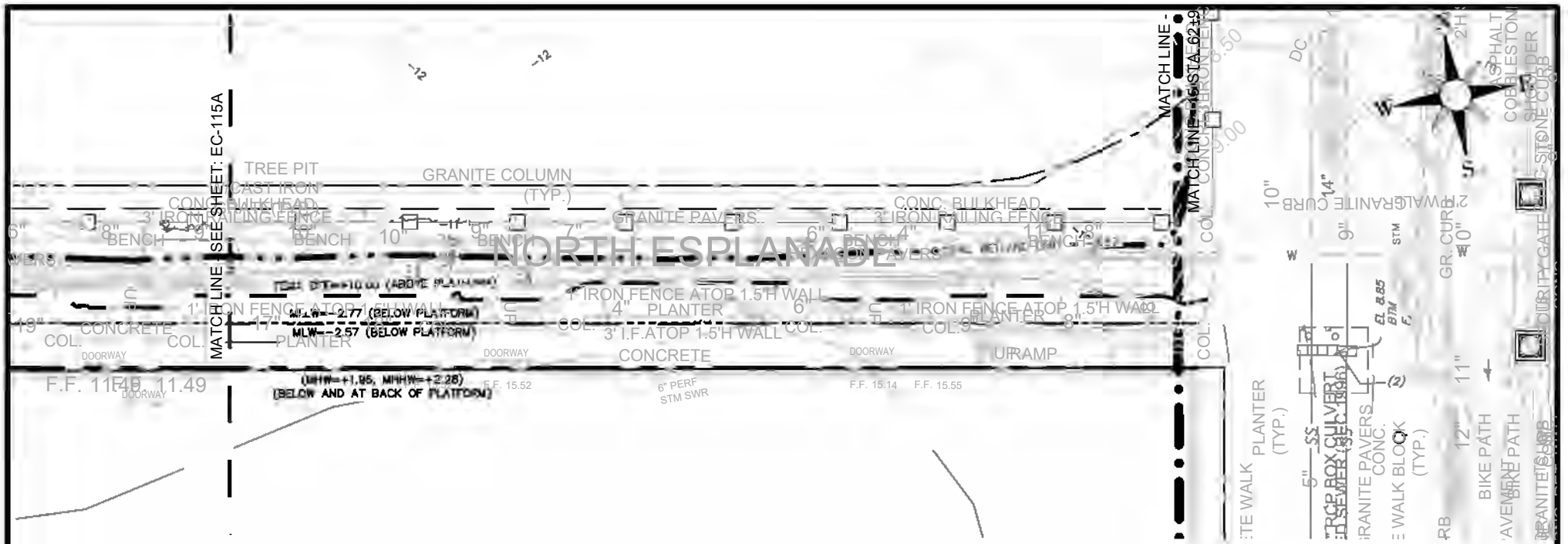
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EROSION AND SEDIMENT CONTROL PLAN
AREA 15 - REACH 2

0 40 80 Feet

DECEMBER 2024

DWG: EC-115A



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	INLET PROTECTION
	SILT FENCE
	TURBIDITY CURTAIN
	STABILIZED CONSTRUCTION ENTRANCE
	STAGING AREA
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH (MHHW)
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	FEMA BASE FLOOD ELEVATION (BFE)
	BULKHEAD
	LIMIT OF WORK
	TIDAL WETLAND LIMITS

NOTES:

1. INLET PROTECTION TO BE INSTALLED AROUND ALL EXISTING CATCH BASINS AND STORM INLETS LOCATED WITHIN THE LIMIT OF WORK.
2. INLET PROTECTION TO BE INSTALLED AROUND PROPOSED CATCH BASINS AND INLETS IF WORK AREA REMAINS UNSTABLE.
3. SEDIMENT BARRIERS, SUCH AS SILT FENCES AND FILTER SOCKS, TO BE INSTALLED IN AREAS WHERE SOIL IS DISTURBED AND SURFACE FLOWS DRAIN IN THE DIRECTION OF THE PROTECTED AREA.
4. SILT FENCE TO BE SUBSTITUTED FOR COMPOST FILTER SOCK IN AREAS WHERE INSTALLATION OF SILT FENCE IS NOT FEASIBLE.
5. TURBIDITY CURTAIN TO BE PLACED FOR IN-WATER CONSTRUCTION. LOCATION AND EXTENT TO BE DETERMINED BY DESIGN-BUILDER.
6. IN WATER WORK 439 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
7. IN WATER WORK 989 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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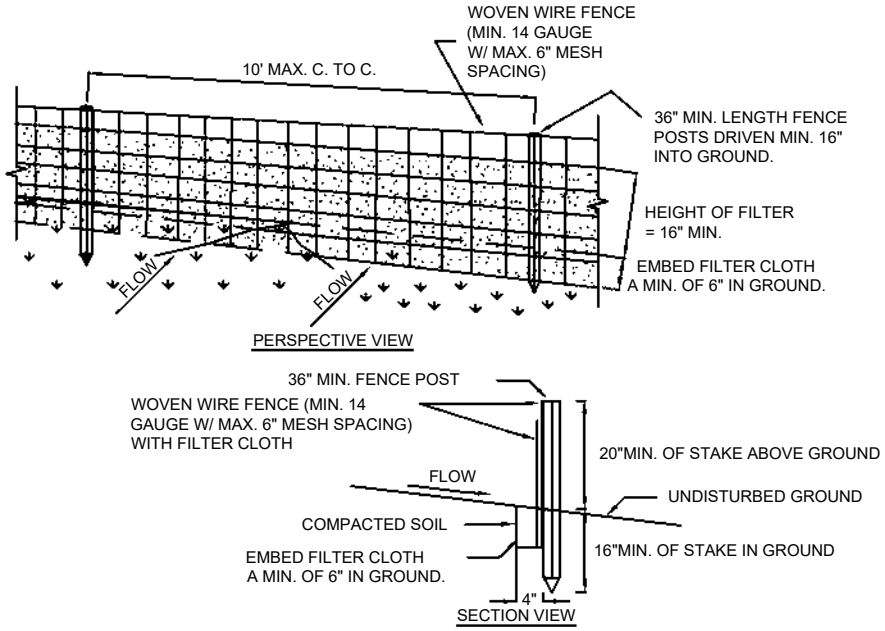
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EROSION AND SEDIMENT CONTROL PLAN
AREA 15 - REACH 2

0 40 80 Feet

DECEMBER 2024

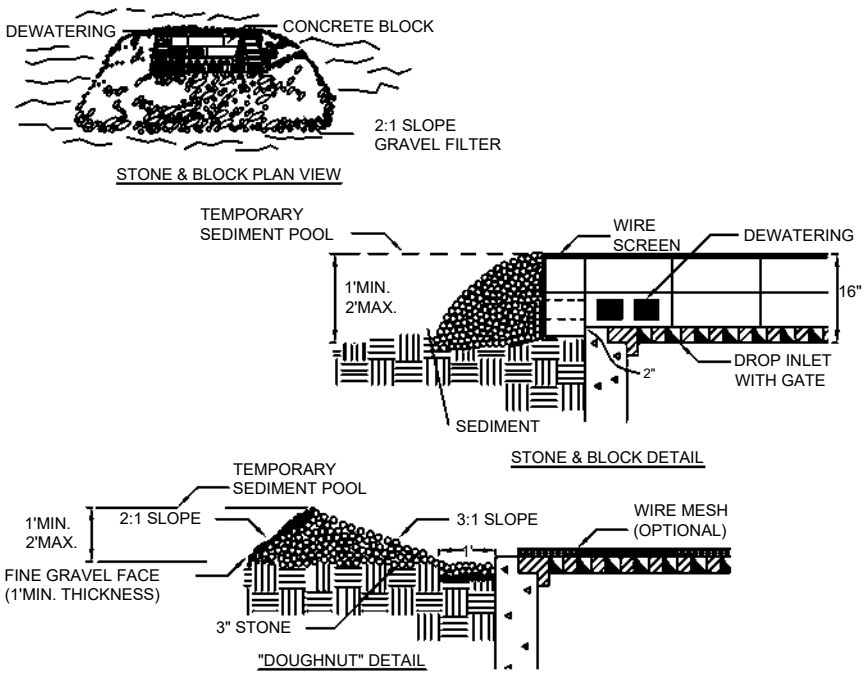
DWG: EC-115B



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

1 SILT FENCE
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

MAXIMUM DRAINAGE AREA 1 ACRE

2 INLET PROTECTION
NOT TO SCALE

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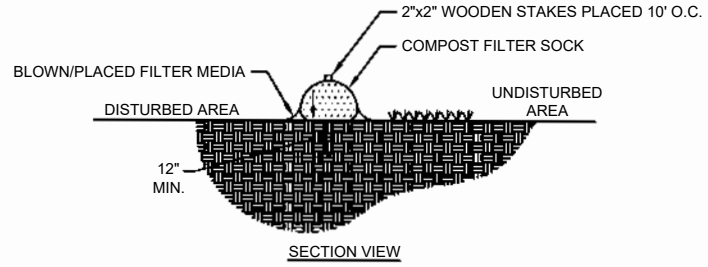
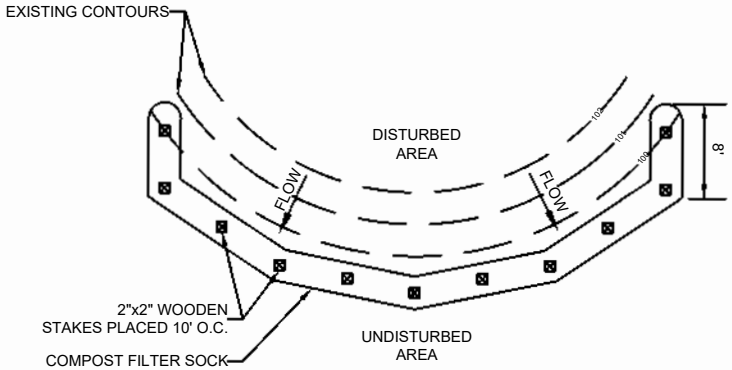
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

EROSION AND SEDIMENT CONTROL DETAILS

DECEMBER 2024
DWG: EC-901



SECTION VIEW



PLAN VIEW

1. SOCK FABRIC SHALL MEET THE STANDARDS LISTED ON TABLE 5.1 IN THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" PER NYSDEC. COMPOST SHALL MEET THE STANDARDS LISTED ON TABLE 5.2 IN THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" PER NYSDEC.

2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 5.2). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON PAGE 5.7 IN THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" PER NYSDEC. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.

3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

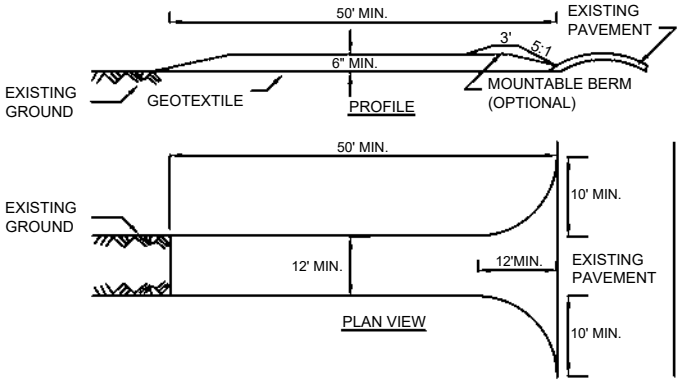
5. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

6. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCKS, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND

3 COMPOST FILTER SOCK

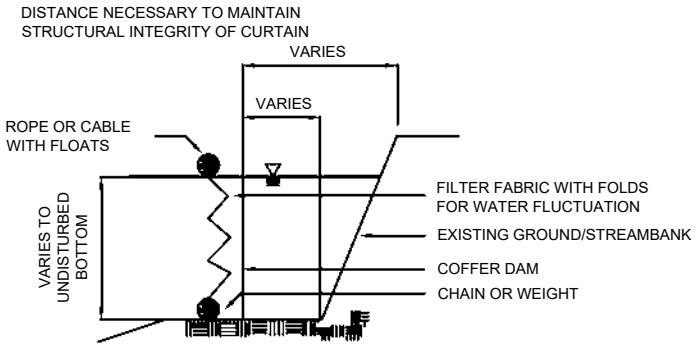
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN DURING CONSTRUCTION ONLY.

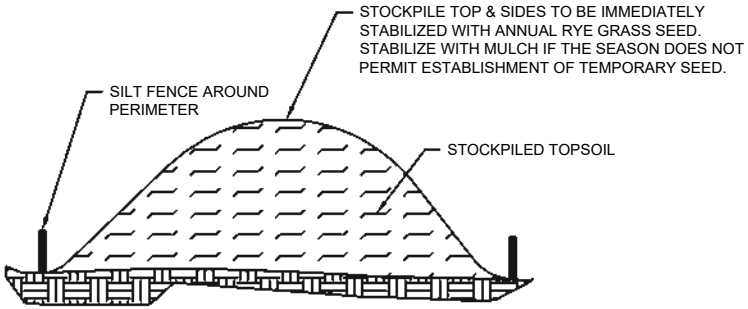
4 STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



CONSTRUCTION NOTES FOR TURBIDITY CURTAIN

1. TURBIDITY CURTAIN SHALL BE LOCATED BEYOND THE LATERAL LIMITS OF ANY CONSTRUCTION ACTIVITY AND FIRMLY ANCHORED IN PLACE.
2. THE ALIGNMENT SHALL BE SET AS CLOSE AS POSSIBLE TO THE WORK AREA BUT NOT SO CLOSE AS TO BE DISTURBED BY CONSTRUCTION EQUIPMENT.
3. THE HEIGHT OF THE CURTAIN SHALL BE 20 PERCENT GREATER THAN THE DEPTH OF THE WATER TO ALLOW FOR WATER LEVEL FLUCTUATIONS.
4. THE AREA OF PROPOSED INSTALLATION OF THE CURTAIN SHOULD BE INSPECTED FOR OBSTACLES AND IMPEDIMENTS THAT COULD DAMAGE THE CURTAIN OR IMPAIR ITS EFFECTIVENESS TO RETAIN SEDIMENT.
5. TURBIDITY CURTAIN SHALL BE INSPECTED DAILY AND MAINTAINED AS REQUIRED WHILE INSTALLED.

5 TURBIDITY CURTAIN
NOT TO SCALE



CONSTRUCTION NOTES FOR SOIL STOCKPILING

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.

2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.

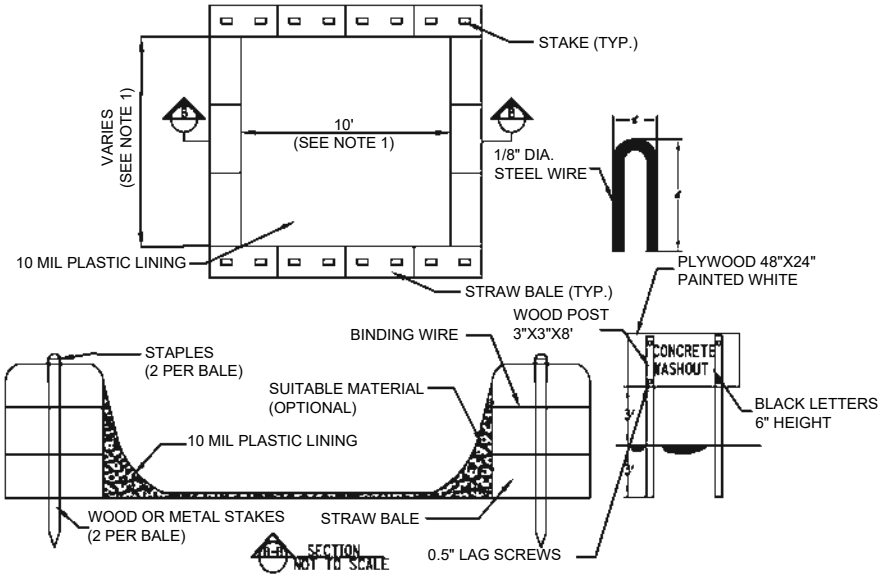
3. THE GROUND SURFACE WHERE SOIL WILL BE STOCKPILED SHALL BE COVERED WITH A MINIMUM OF 0.25 MM OR 2 LAYERS OF 0.15 MM POLYETHYLENE SHEETING OR AN APPROVED EQUAL MATERIAL.

4. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING.

5. A MINIMUM OF 12" MUST BE MAINTAINED BETWEEN THE TOE OF THE STOCKPILE AND THE EDGE OF THE FENCE ON ALL SIDES.

6. PRIOR TO THE END OF EACH WORK DAY, STOCKPILES SHALL BE COMPLETELY COVERED WITH POLYETHYLENE SHEETING. STOCK PILE COVERS SHALL BE WEIGHTED OR SECURED BY APPROPRIATE MEANS. ALL SEAMS SHALL BE OVERLAPPED AND SEALED. DAMAGED COVER SHALL BE REPAIRED OR REPLACED BY THE DESIGN-BUILDER WITHIN 24 HOURS AFTER NOTIFICATION.

6 SOIL STOCKPILING
NOT TO SCALE



CONSTRUCTION NOTES FOR CONCRETE WASHOUT

1. ACTUAL LAYOUT AND LOCATION TO BE DETERMINED IN FIELD.

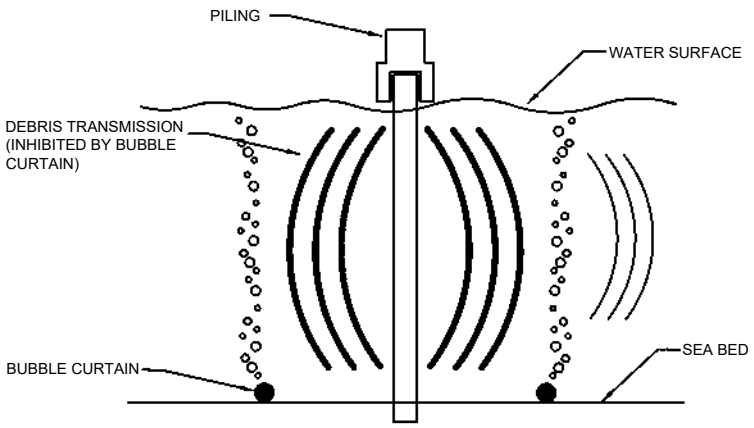
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 5 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

3. LOCATE WASHOUT AREA AT LEAST 50-FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES. DO NOT ALLOW RUNOFF FROM THIS AREA BY CONSTRUCTING A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH FOR LIQUID OR SOLID WASTE.

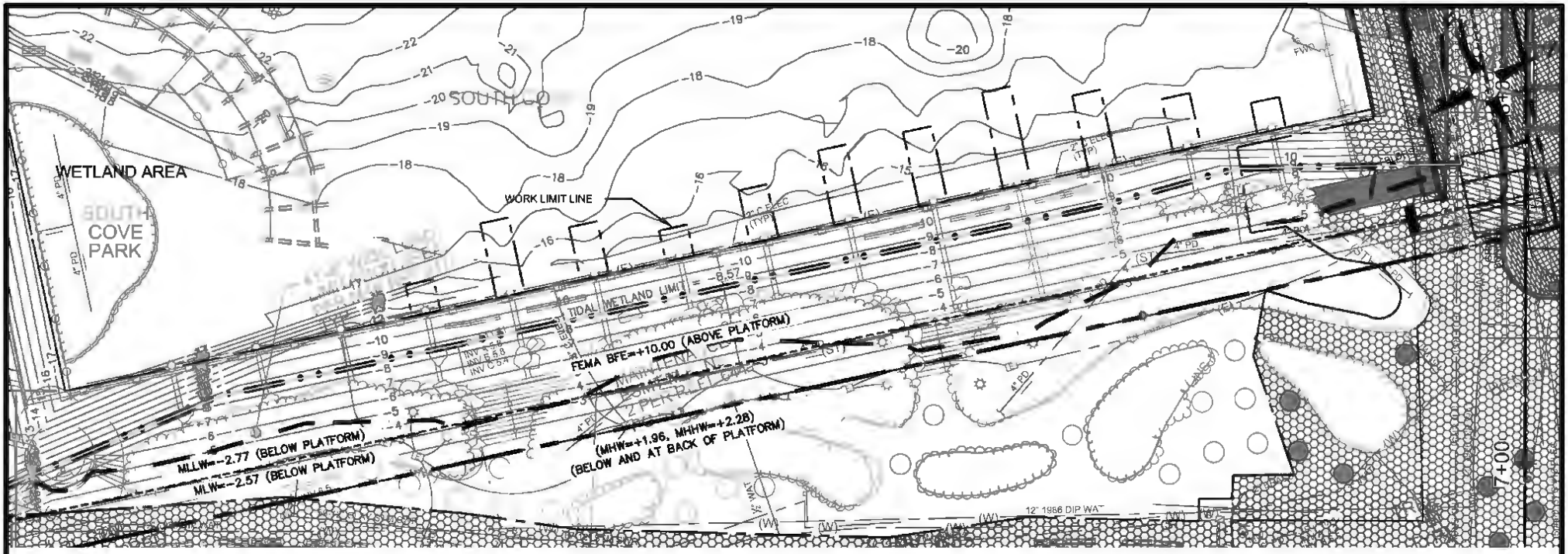
4. WASH OUT WASTES INTO THE TEMPORARY PIT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED PROPERLY.

5. TEMPORARY CONCRETE WASHOUT FACILITY (TYPE ABOVE GRADE) SHALL BE CONSTRUCTED AS SHOWN ON THE DETAILS WITH A RECOMMENDED MINIMUM LENGTH AND MINIMUM WIDTH OF 10-FEET, BUT WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

7 CONCRETE WASHOUT
NOT TO SCALE



8 BUBBLE CURTAIN
NOT TO SCALE



LEGEND:

- REMOVE EXISTING STONE PAVING
- REMOVE EXISTING CONCRETE WALK/PAVERS
- REMOVE EXISTING HEX PAVERS
- REMOVE EXISTING ASPHALT
- REMOVE EXISTING GRANITE PAVING
- REMOVE EXISTING CONCRETE PAVEMENT
- REMOVE EXISTING BRICK PAVERS
- REMOVE HARDSCAPE AND BACKFILL TO EXPOSE TOPPING SLAB
- REMOVE HARDSCAPE, BACKFILL, TOPPING AND PRECAST/PRESTRESSED CONCRETE PANEL
- REMOVE EXISTING LANDSCAPING
- REMOVE EXISTING FEATURE.

- FEMA BASE FLOOD ELEVATION (BFE)
- MEAN LOW WATER (MLW), MEAN LOW LOWER WATER (MLLW)
- MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
- TIDAL WETLAND LIMITS
- REACH C NAVIGATIONAL CHANNEL LIMITS

- TEMPORARY REMOVAL OF LEDGER BEAM TO ENABLE CONSTRUCTION OF TIE-IN WALL; INTERIM MEASURES SUCH AS BRACING OF AFFECTED BENTS MIGHT BE NECESSARY
- REMOVE DECK AT SELECTIVE LOCATIONS ONLY AS REQUIRED TO INSTALL THE NEW DRILLED SHAFTS, AS WELL AS THE SEAWALL; BENTS AND EXTERIOR BEAMS ARE TO REMAIN.

1. IN WATER WORK 203 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
2. IN WATER WORK 1007 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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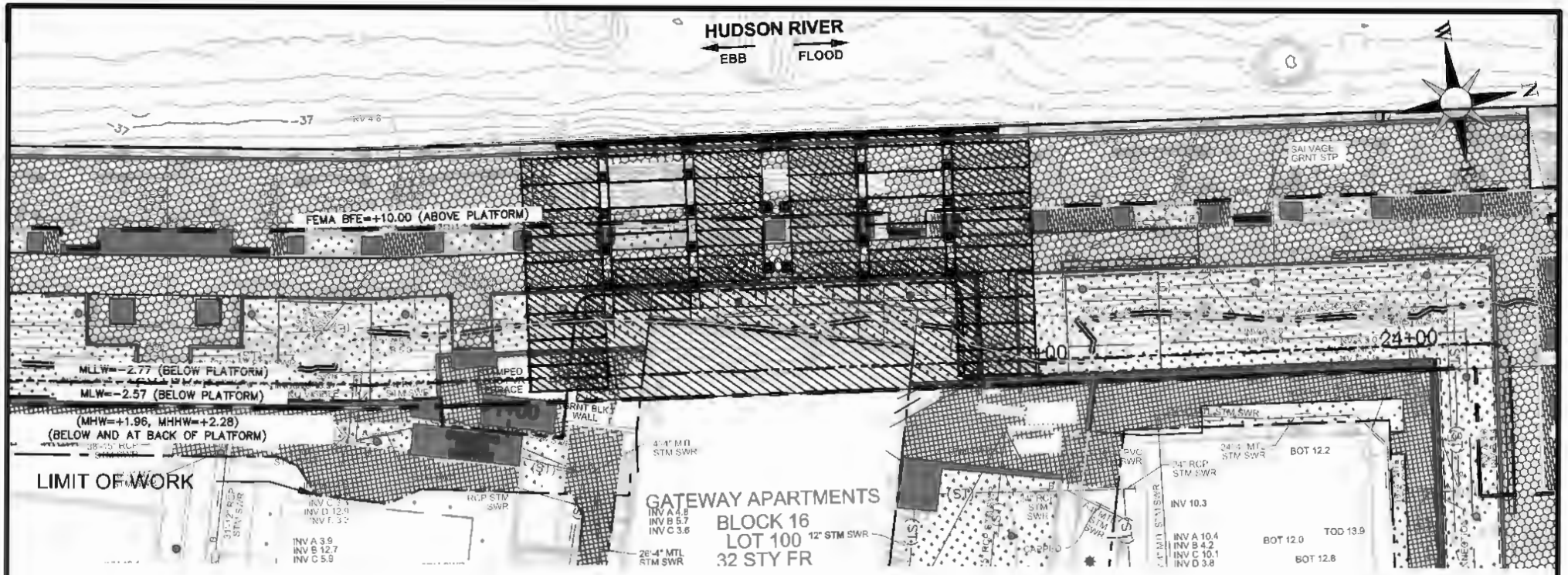
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

SITE DEMOLITION PLAN
AREA 1 - REACH 7

0 40 80 Feet

DECEMBER 2024
DWG: CD-101

USACE FILE: NAN-2024-00433-EMI



LEGEND:

- REMOVE EXISTING STONE PAVING
- REMOVE EXISTING CONCRETE WALK/PAVERS
- REMOVE EXISTING HEX PAVERS
- REMOVE EXISTING ASPHALT
- REMOVE EXISTING GRANITE PAVING
- REMOVE EXISTING CONCRETE PAVEMENT
- REMOVE EXISTING BRICK PAVERS
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- REMOVE HARDSCAPE, BACKFILL, TOPPING AND PRECAST/PRESTRESSED CONCRETE PANEL
- REMOVE EXISTING LANDSCAPING
- REMOVE EXISTING FEATURE.
- FEMA BASE FLOOD ELEVATION (BFE)
- MEAN LOW WATER (MLW), MEAN LOW LOWER WATER (MLLW)
- MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
- TEMPORARY REMOVAL OF LEDGER BEAM TO ENABLE CONSTRUCTION OF TIE-IN WALL; INTERIM MEASURES SUCH AS BRACING OF AFFECTED BENTS MIGHT BE NECESSARY
- REMOVE DECK AT SELECTIVE LOCATIONS ONLY AS REQUIRED TO INSTALL THE NEW DRILLED SHAFTS, AS WELL AS THE SEAWALL; BENTS AND EXTERIOR BEAMS ARE TO REMAIN.
- TIDAL WETLAND LIMITS
- REACH C NAVIGATIONAL CHANNEL LIMITS

NOTES:

1. IN WATER WORK 2 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
2. IN WATER WORK 705 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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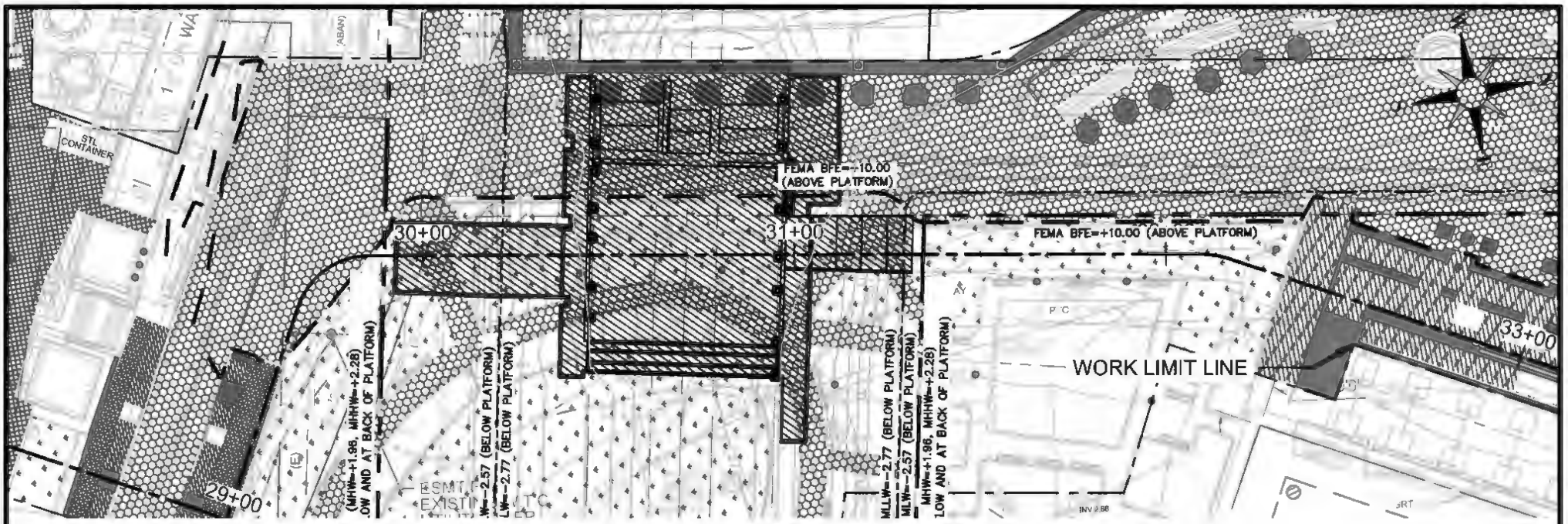
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

SITE DEMOLITION PLAN
AREA 5 - REACH 6
0 40 80 Feet

DECEMBER 2024
DWG: CD-105



LEGEND:

- REMOVE EXISTING STONE PAVING
- REMOVE EXISTING CONCRETE WALK/PAVERS
- REMOVE EXISTING HEX PAVERS
- REMOVE EXISTING ASPHALT
- REMOVE EXISTING GRANITE PAVING
- REMOVE EXISTING CONCRETE PAVEMENT
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- REMOVE HARDSCAPE AND BACKFILL TO EXPOSE TOPPING SLAB
- REMOVE HARDSCAPE, BACKFILL, TOPPING AND PRECAST/PRESTRESSED CONCRETE PANEL
- REMOVE EXISTING LANDSCAPING
- REMOVE EXISTING FEATURE.
- FEMA BASE FLOOD ELEVATION (BFE)
- MEAN LOW WATER (MLW), MEAN LOW LOWER WATER (MLLW)
- MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
- TIDAL WETLAND LIMITS
- REACH C NAVIGATIONAL CHANNEL LIMITS
- TEMPORARY REMOVAL OF LEDGER BEAM TO ENABLE CONSTRUCTION OF TIE-IN WALL; INTERIM MEASURES SUCH AS BRACING OF AFFECTED BENTS MIGHT BE NECESSARY
- REMOVE DECK AT SELECTIVE LOCATIONS ONLY AS REQUIRED TO INSTALL THE NEW DRILLED SHAFTS, AS WELL AS THE SEAWALL; BENTS AND EXTERIOR BEAMS ARE TO REMAIN.

NOTES:

1. IN WATER WORK 365 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
2. IN WATER WORK 1016 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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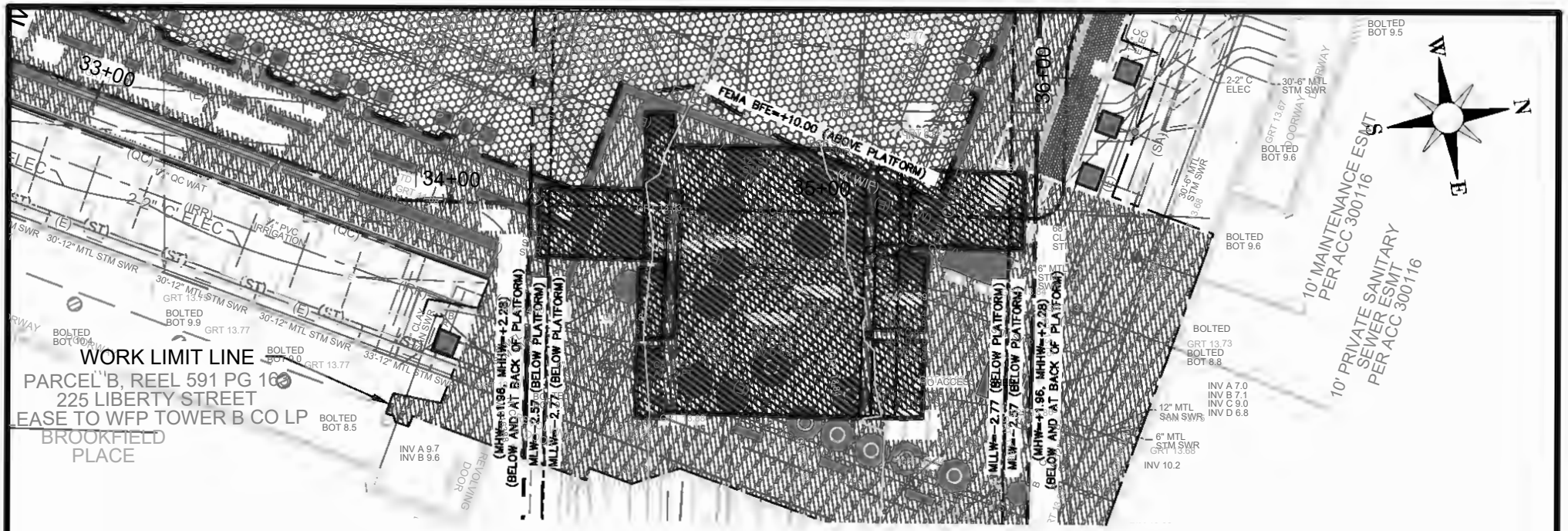
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

SITE DEMOLITION PLAN
AREA 7 - REACH 5

0 40 80 Feet

DECEMBER 2024
DWG: CD-107

USACE FILE: NAN-2024-00433-EMI



LEGEND:

- REMOVE EXISTING STONE PAVING
- REMOVE EXISTING CONCRETE WALK/PAVERS
- REMOVE EXISTING HEX PAVERS
- REMOVE EXISTING ASPHALT
- REMOVE EXISTING GRANITE PAVING
- REMOVE EXISTING CONCRETE PAVEMENT
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- REMOVE HARDSCAPE AND BACKFILL TO EXPOSE TOPPING SLAB
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- REMOVE EXISTING FEATURE.
- FEMA BASE FLOOD ELEVATION (BFE)
- MEAN LOW WATER (MLW), MEAN LOW LOWER WATER (MLLW)
- MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
- TIDAL WETLAND LIMITS
- TEMPORARY REMOVAL OF LEDGER BEAM TO ENABLE CONSTRUCTION OF TIE-IN WALL; INTERIM MEASURES SUCH AS BRACING OF AFFECTED BENTS MIGHT BE NECESSARY
- REMOVE DECK AT SELECTIVE LOCATIONS ONLY AS REQUIRED TO INSTALL THE NEW DRILLED SHAFTS, AS WELL AS THE SEAWALL; BENTS AND EXTERIOR BEAMS ARE TO REMAIN.

NOTES:

1. IN WATER WORK 462 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
2. IN WATER WORK 1073 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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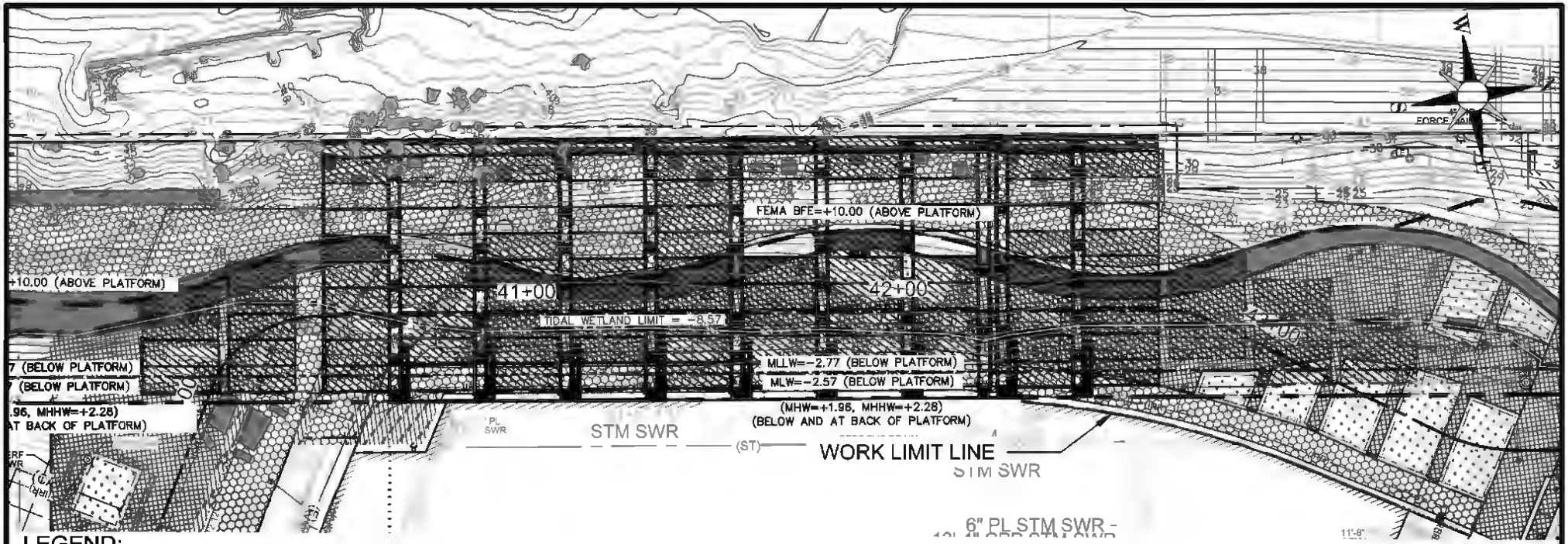
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

SITE DEMOLITION PLAN
AREA 8 - REACH 5

0 40 80 Feet

DECEMBER 2024

DWG: CD-108



LEGEND:

- REMOVE EXISTING STONE PAVING
- REMOVE EXISTING CONCRETE WALK/PAVERS
- REMOVE EXISTING HEX PAVERS
- REMOVE EXISTING ASPHALT
- REMOVE EXISTING GRANITE PAVING
- REMOVE EXISTING CONCRETE PAVEMENT
- REMOVE EXISTING BRICK PAVERS
- REMOVE HARDSCAPE AND BACKFILL TO EXPOSE TOPPING SLAB
- REMOVE HARDSCAPE, BACKFILL, TOPPING AND PRECAST/PRESTRESSED CONCRETE PANEL
- REMOVE EXISTING LANDSCAPING
- REMOVE EXISTING FEATURE.

TEMPORARY REMOVAL OF LEDGER BEAM TO ENABLE CONSTRUCTION OF TIE-IN WALL; INTERIM MEASURES SUCH AS BRACING OF AFFECTED BENTS MIGHT BE NECESSARY

REMOVE DECK AT SELECTIVE LOCATIONS ONLY AS REQUIRED TO INSTALL THE NEW DRILLED SHAFTS, AS WELL AS THE SEAWALL; BENTS AND EXTERIOR BEAMS ARE TO REMAIN.

- FEMA BASE FLOOD ELEVATION (BFE)
- MEAN LOW WATER (MLW), MEAN LOW LOWER WATER (MLLW)
- MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
- TIDAL WETLAND LIMITS
- REACH C NAVIGATIONAL CHANNEL LIMITS

NOTES:

1. IN WATER WORK 2 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
2. IN WATER WORK 572 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

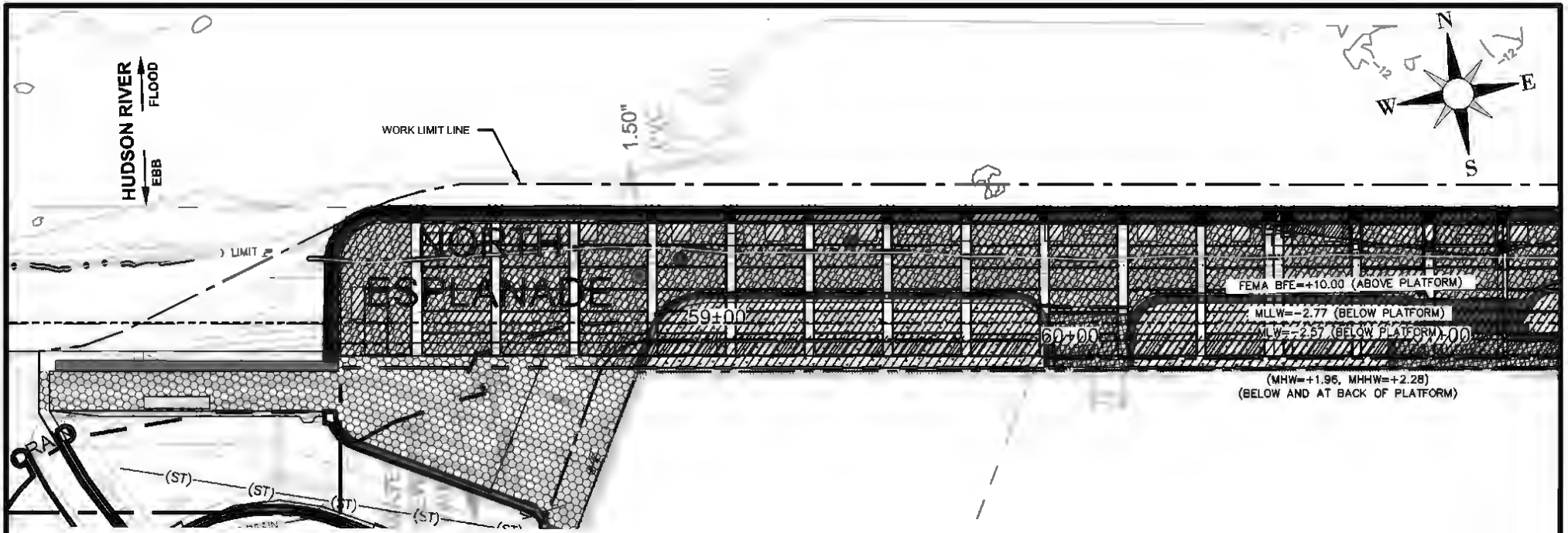
SITE DEMOLITION PLAN
AREA 10 - REACH 4

0 40 80 Feet

DECEMBER 2024

DWG: CD-110

USACE FILE: NAN-2024-00433-EMI



LEGEND:

- REMOVE EXISTING STONE PAVING
- REMOVE EXISTING CONCRETE WALK/PAVERS
- REMOVE EXISTING HEX PAVERS
- REMOVE EXISTING ASPHALT
- REMOVE EXISTING GRANITE PAVING
- REMOVE EXISTING CONCRETE PAVEMENT
- REMOVE EXISTING BRICK PAVERS
- REMOVE HARDSCAPE AND BACKFILL TO EXPOSE TOPPING SLAB
- REMOVE HARDSCAPE, BACKFILL, TOPPING AND PRECAST/PRESTRESSED CONCRETE PANEL
- REMOVE EXISTING LANDSCAPING
- REMOVE EXISTING FEATURE.

TEMPORARY REMOVAL OF LEDGER BEAM TO ENABLE CONSTRUCTION OF TIE-IN WALL; INTERIM MEASURES SUCH AS BRACING OF AFFECTED BENTS MIGHT BE NECESSARY

REMOVE DECK AT SELECTIVE LOCATIONS ONLY AS REQUIRED TO INSTALL THE NEW DRILLED SHAFTS, AS WELL AS THE SEAWALL; BENTS AND EXTERIOR BEAMS ARE TO REMAIN.

- FEMA BASE FLOOD ELEVATION (BFE)
- MEAN LOW WATER (MLW), MEAN LOW LOWER WATER (MLLW)
- MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
- TIDAL WETLAND LIMITS
- REACH C NAVIGATIONAL CHANNEL LIMITS

NOTES:

1. IN WATER WORK 439 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
2. IN WATER WORK 989 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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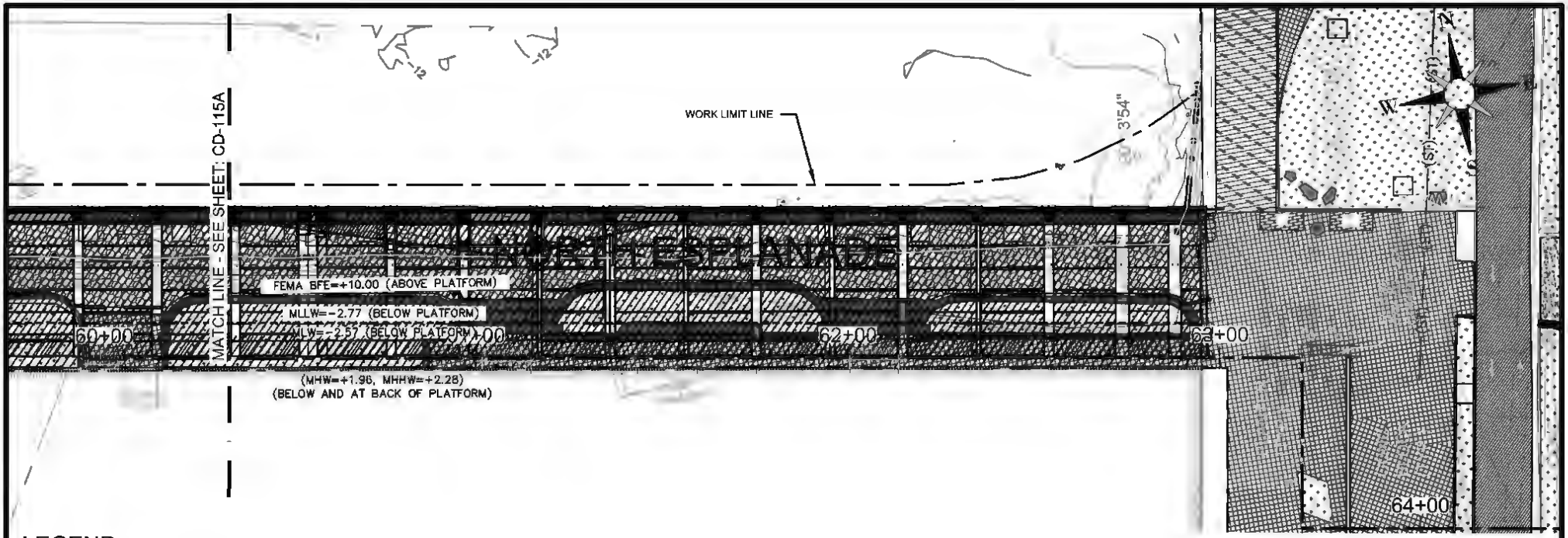
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

SITE DEMOLITION PLAN
AREA 15 - REACH 2

0 40 80 Feet

DECEMBER 2024
DWG: CD-115A



LEGEND:

- REMOVE EXISTING STONE PAVING
- REMOVE EXISTING CONCRETE WALK/PAVERS
- REMOVE EXISTING HEX PAVERS
- REMOVE EXISTING ASPHALT
- REMOVE EXISTING GRANITE PAVING
- REMOVE EXISTING CONCRETE PAVEMENT
- REMOVE EXISTING BRICK PAVERS
- REMOVE HARDSCAPE AND BACKFILL TO EXPOSE TOPPING SLAB
- REMOVE HARDSCAPE, BACKFILL, TOPPING AND PRECAST/PRESTRESSED CONCRETE PANEL
- REMOVE EXISTING LANDSCAPING
- REMOVE EXISTING FEATURE.

TEMPORARY REMOVAL OF LEDGER BEAM TO ENABLE CONSTRUCTION OF TIE-IN WALL; INTERIM MEASURES SUCH AS BRACING OF AFFECTED BENTS MIGHT BE NECESSARY

REMOVE DECK AT SELECTIVE LOCATIONS ONLY AS REQUIRED TO INSTALL THE NEW DRILLED SHAFTS, AS WELL AS THE SEAWALL; BENTS AND EXTERIOR BEAMS ARE TO REMAIN.

- FEMA BASE FLOOD ELEVATION (BFE)
- MEAN LOW WATER (MLW), MEAN LOW LOWER WATER (MLLW)
- MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
- TIDAL WETLAND LIMITS
- REACH C NAVIGATIONAL CHANNEL LIMITS

NOTES:

1. IN WATER WORK 439 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
2. IN WATER WORK 989 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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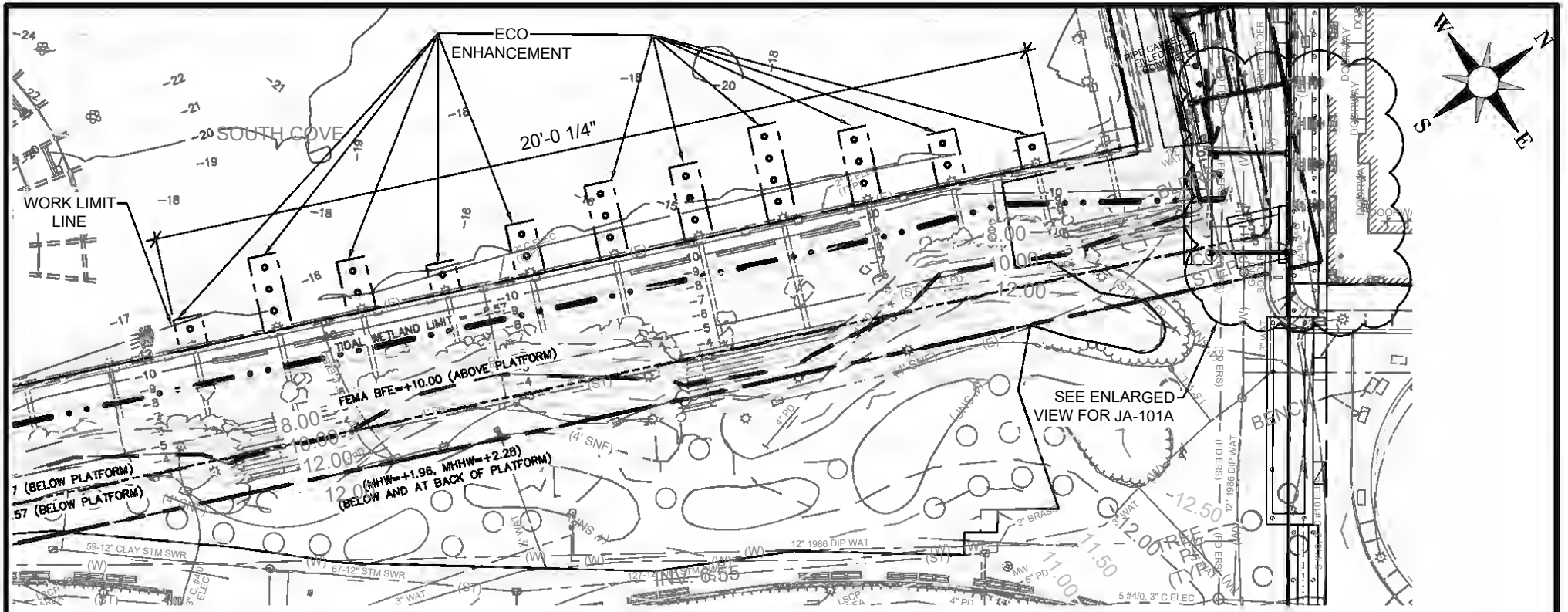
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

SITE DEMOLITION PLAN
AREA 15 - REACH 2

0 40 80 Feet

DECEMBER 2024
DWG: CD-115B



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	TIDAL WETLAND LIMITS
	REACH C NAVIGATIONAL CHANNEL LIMITS
	PROPOSED MICROPILE
	ECO ENHANCEMENT

NOTES:

1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.

USACE JURISDICTION - REACH 7 - OPEN WATER

SIZE	COUNT	AREA (SF)	VOLUME (MHHW-MUDLINE) (CY)	VOLUME (MHW-MUDLINE) (CY)
13.375" ø	4	4	2	1
ECOLOGICAL ENHANCEMENT PILES		35	12.8	12.4

NYSDEC JURISDICTION - REACH 7 (-6 TO 1.96) - TIDAL WETLANDS

SIZE	COUNT	AREA (SF)	VOLUME (MHW-TIDAL WETLAND) (CY)
13.375" ø	4	4	1

2. IN WATER WORK 203 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
3. IN WATER WORK 1007 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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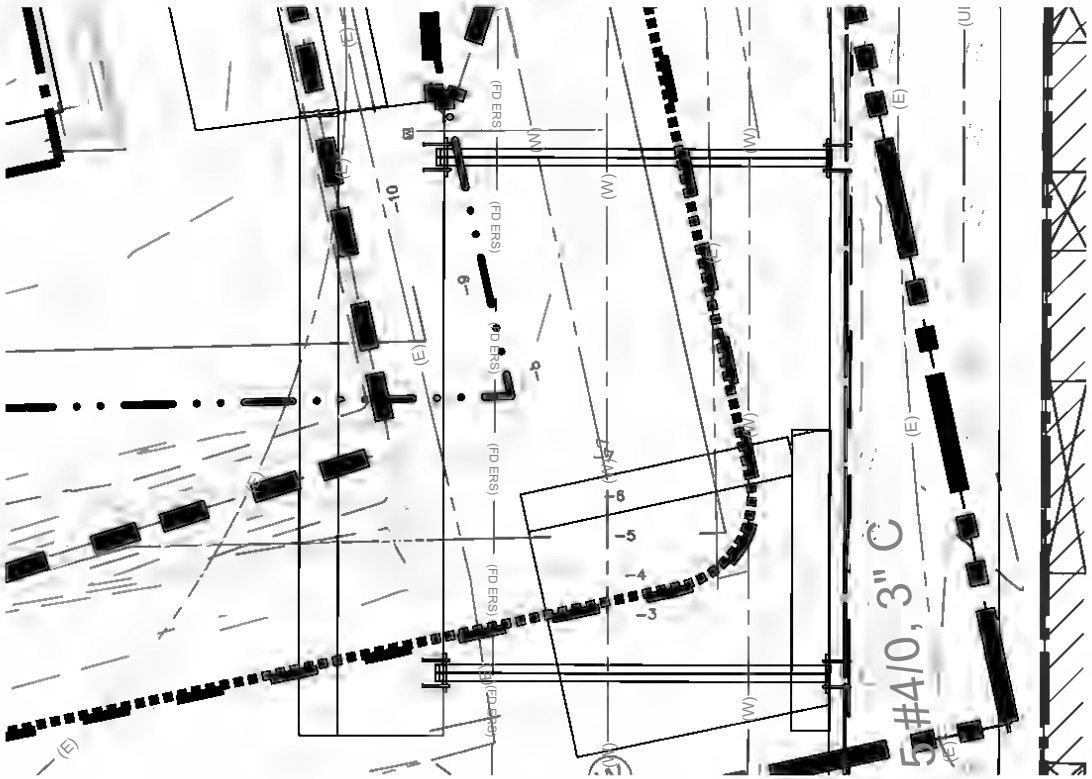
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROPOSED PLAN
AREA 1 - REACH 7

0 40 80 Feet

DECEMBER 2024

DWG: JA-101



ENLARGED VIEW JA-101

SCALE: 1" - 10'

LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	TIDAL WETLAND LIMITS
	REACH C NAVIGATIONAL CHANNEL LIMITS
	PROPOSED MICROPILE

NOTES:

1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.
2. IN WATER WORK 203 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
3. IN WATER WORK 1007 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

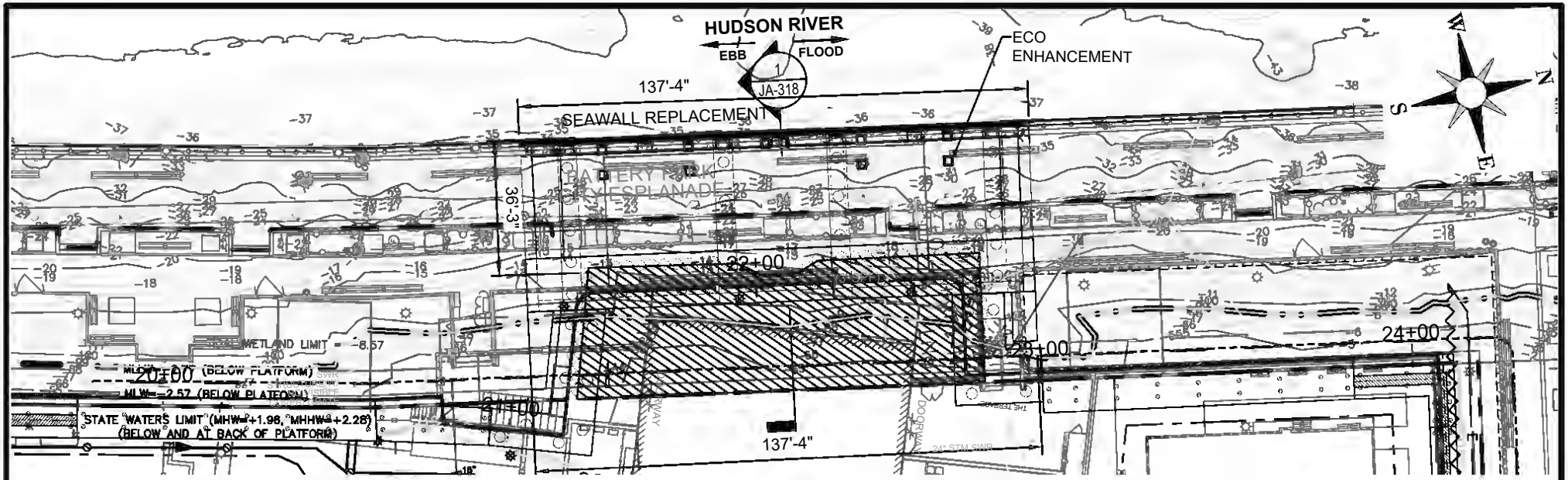
PROPOSED PLAN
AREA 1 - REACH 7

0 10 20 Feet

DECEMBER 2024

DWG: JA-101A

USACE FILE: NAN-2024-00433-EMI



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	TIDAL WETLAND LIMITS
	REACH C NAVIGATIONAL CHANNEL LIMITS
	PROPOSED IN-WATER LOW PERMEABILITY CLEAN FILL
○	36" DIA. DRILLED SHAFT
	36" DIA. O-PILE SHEETPILING
	PROPOSED MICROPILE
	ECO ENHANCEMENT

NOTES:

1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.
2. AT REACH 6, A RELIEVING PLATFORM IS DESIGNED TO BE CONSTRUCTED AT AN ELEVATION HIGHER THAN THE EXISTING RELIEVING PLATFORM AND ABOVE MHW AND MHHW.
3. IN WATER WORK 2 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
4. IN WATER WORK 705 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

REACH 6 - OPEN WATER

SIZE	" COUNT/ LINEAR FEET (LF)(')"	"PLAN AREA (SF)"	"VOLUME (MHHW-MUDLINE) (CY)"	"VOLUME (MHW-MUDLINE) (CY)"
36" DRILLED SHAFT	36	354	269	265
SEAWALL	137'-4"	157	42	37
36" O-PILE SHEETPILING	154 LF	368	192	187
LOW PERMEABILITY CLEAN FILL	--	3578	1504	1444
PLATFORM RECONSTRUCTION	--	6298	--	--
ECOLOGICAL ENHANCEMENT SEAWALL	--	17	4.8	4.6
ECOLOGICAL ENHACEMENT PILES	--	28.9	19.8	5

REACH 6 - TIDAL WETLANDS

SIZE	COUNT (LF)	"AREA (SF)"	"VOLUME (MHW-TIDAL WETLAND) (CY)"
36" DRILLED SHAFT	8	57	21
36" O-PILE SHEETPILING	65 LF	99	55
LOW PERMEABILITY CLEAN FILL	--	3549	1433

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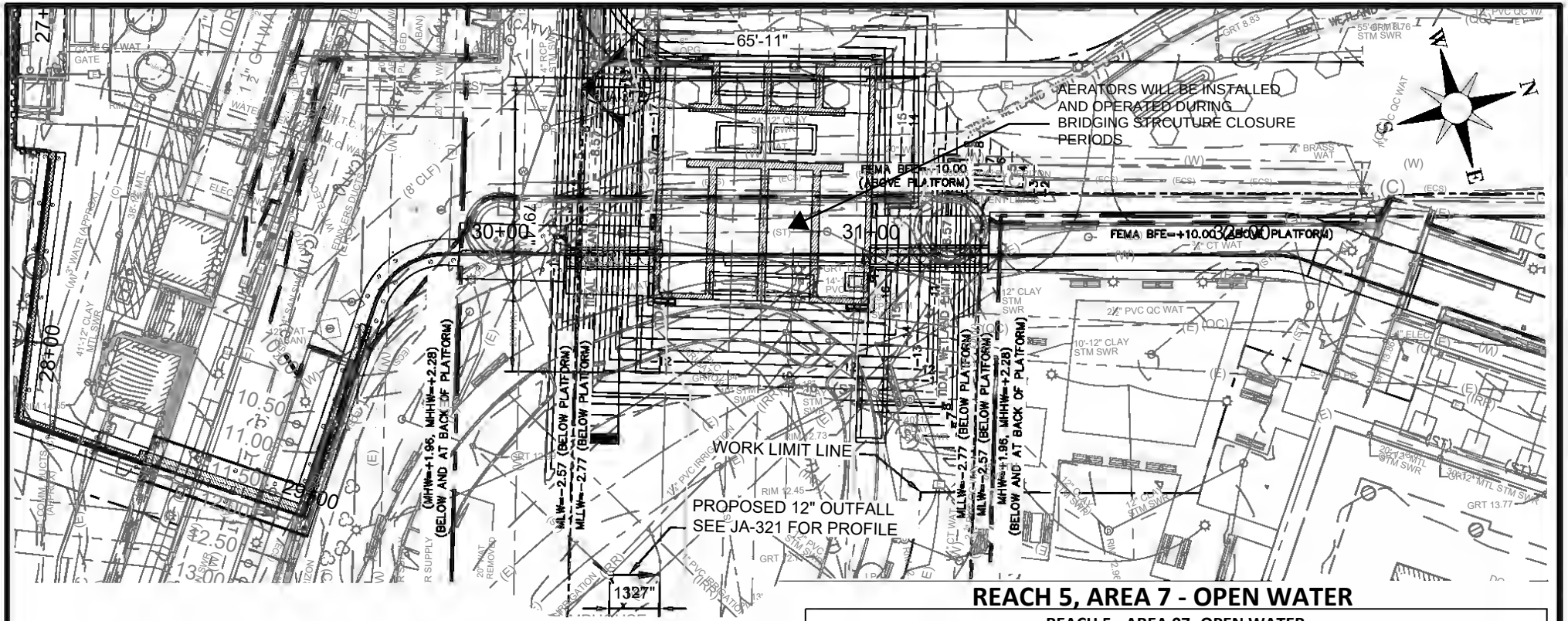
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROPOSED PLAN
AREA 5 - REACH 6
0 40 80 Feet

DECEMBER 2024
DWG: JA-105



REACH 5, AREA 7 - OPEN WATER

REACH 5 - AREA 07- OPEN WATER				
SIZE	"COUNT/ LINEAR FEET (LF)(')"	"AREA (SF)"	"VOLUME (MHHW-MUDLINE) (CY)"	"VOLUME (MHW-MUDLINE) (CY)"
13.375" MICROPILE	8	31	12	12
42" O-PILE SHEETPILING	53 LF	99	35	34
SOUTH BRIDGING STRUCTURE	--	3746	2160	2115
PLATFORM RECONSTRUCTION	--	3312	--	--

REACH 5 - AREA 07 - TIDAL WETLANDS			
SIZE	"COUNT/ LINEAR FEET (LF)(')"	"AREA (SF)"	"VOLUME (MHW-TIDAL WETLAND) (CY)"
13.375" MICROPILE	8.00	31.00	12.00
42" O-PILE SHEETPILING	53 LF	99	34

LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	TIDAL WETLAND LIMITS
	REACH C NAVIGATIONAL CHANNEL LIMITS
	42" DIA. O-PILE SHEETPILING
	PROPOSED MICROPILE
	DRILLED SHAFT PILES

NOTES:
1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.
2. IN WATER WORK 365 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
3. IN WATER WORK 1016 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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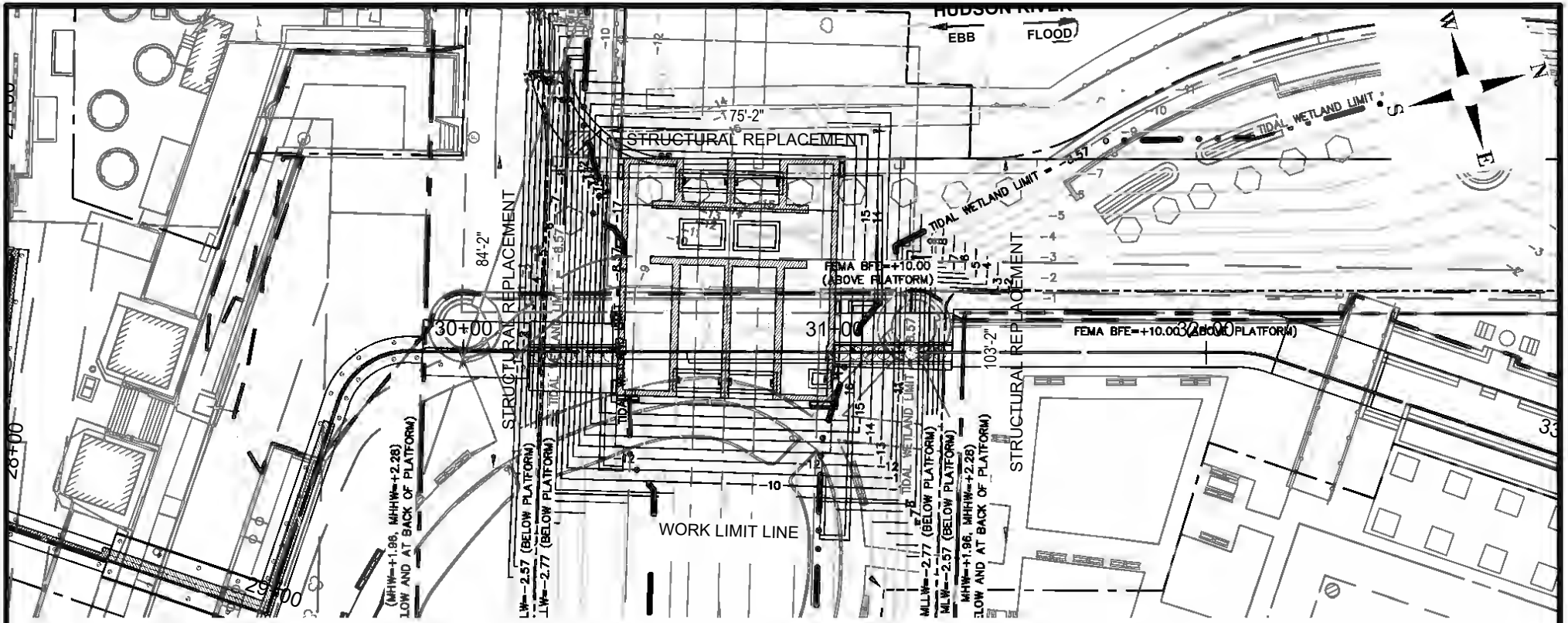
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROPOSED PLAN
AREA 7 - REACH 5
0 40 80 Feet

DECEMBER 2024
DWG: JA-107



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	EXISTING MUDLINE
	FUTURE MUDLINE
	CURRENT TIDAL WETLAND LIMITS
	DREDGING AREA AND TIDAL WETLANDS (-6) OVERLAP
	42" DIA. O-PILE SHEETPILING
	PROPOSED MICROPILE

REACH 5 AREA 7 - DREDGING - OPEN WATER		
LOCATION	"AREA (SF)"	"VOLUME (CY)"
SOUTH BRIDGING STRUCTURE	мн,слп	1,фсп

REACH 5 AREA 7 - DREDGING - TIDAL WETLAND		
LOCATION	"AREA (SF)"	"VOLUME (CY)"
SOUTH BRIDGING STRUCTURE	5,624	652

NOTES:

1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.
2. IN WATER WORK 365 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
3. IN WATER WORK 1016 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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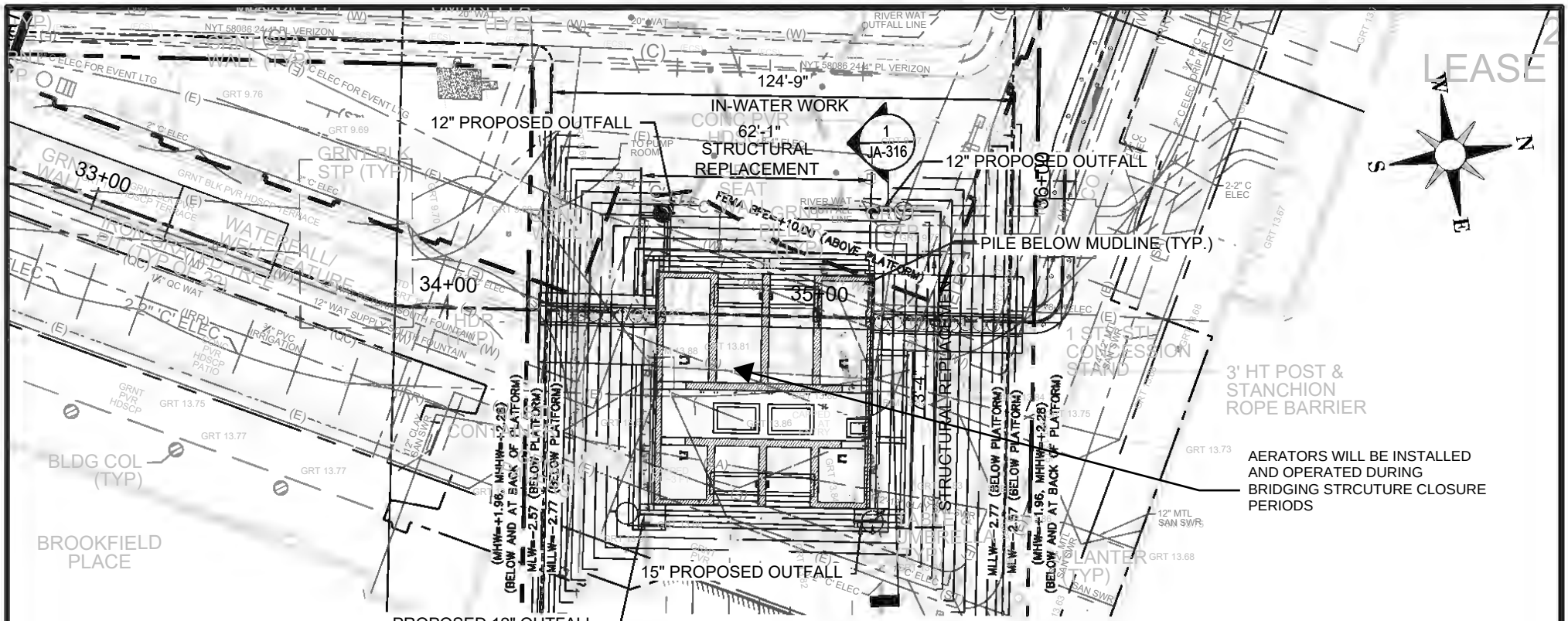
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROPOSED DREDGING PLAN
SOUTH BRIDGING STRUCTURE
AREA 7 - REACH 5

0 40 80 Feet

DECEMBER 2024

DWG: JA-107B



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	TIDAL WETLAND LIMITS
	REACH C NAVIGATIONAL CHANNEL LIMITS
	42" DIA. O-PILE SHEETPILING
	PROPOSED MICROPILE
	DRILLED SHAFT PILES

REACH 5 - AREA 08 - OPEN WATER

SIZE	"COUNT/ LINEAR FEET (LF)(')"	"AREA (SF)"	"VOLUME (MHHW-MUDLINE) (CY)"	"VOLUME (MHW-MUDLINE) (CY)"
42" O-PILE SHEETPILING	69 LF	127	45	43
NORTH BRIDGING STRUCTURE	--	3630	1607	1564
PLATFORM RECONSTRUCTION	--	2035	--	--

REACH 5 - AREA 08 - TIDAL WETLANDS

SIZE	"COUNT/ LINEAR FEET (LF)(')"	"AREA (SF)"	"VOLUME (MHW-TIDAL WETLAND) (CY)"
42" O-PILE SHEETPILING	69 LF	127	43

NOTES:

1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.
2. IN WATER WORK 462 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
3. IN WATER WORK 1073 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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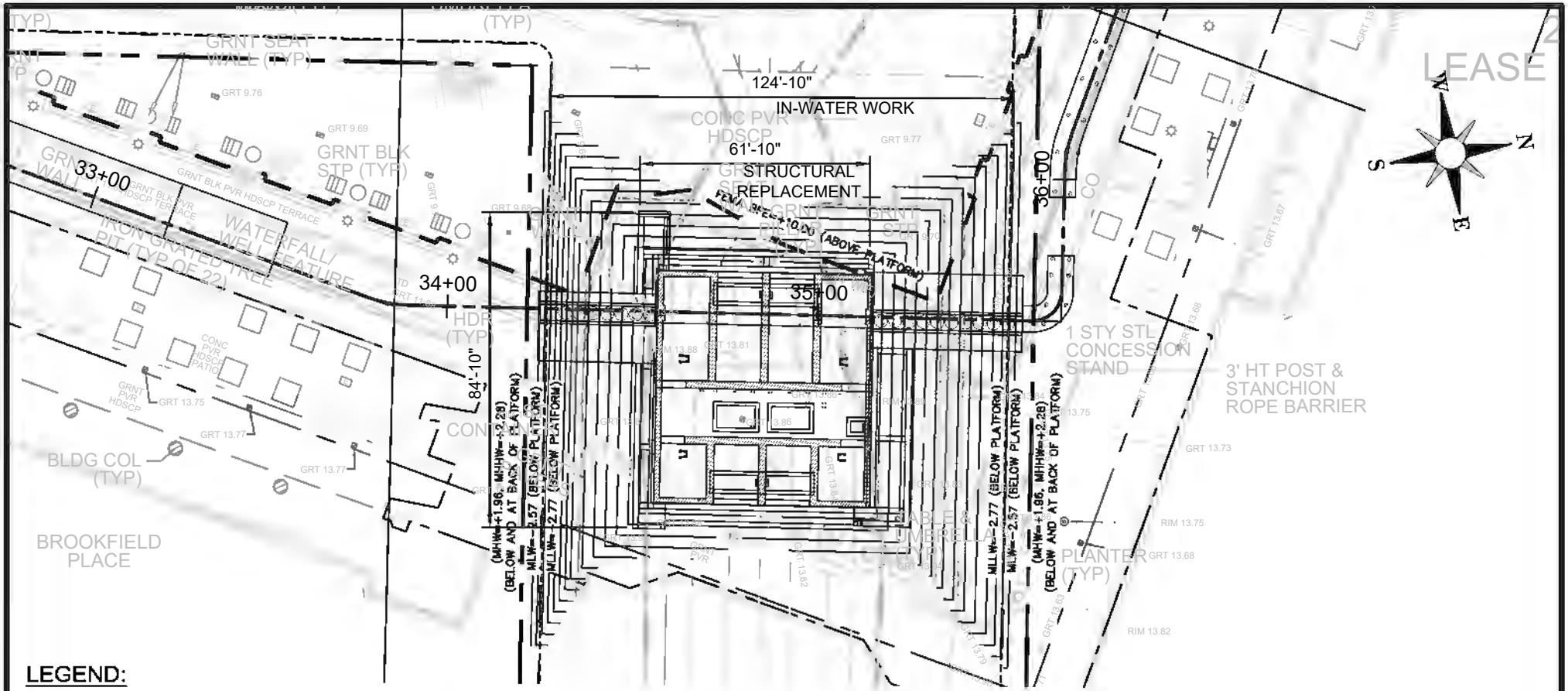
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROPOSED PLAN
AREA 8 - REACH 5
0 40 80 Feet

DECEMBER 2024
DWG: JA-108

USACE FILE: NAN-2024-00433-EMI



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	EXISTING MUDLINE
	FUTURE MUDLINE
	CURRENT TIDAL WETLAND LIMITS
	DREDGING AREA AND TIDAL WETLANDS (-6) OVERLAP
	42" DIA. O-PILE SHEETPILING
	PROPOSED MICROPILE
	DRILLED SHAFT PILES

REACH 5 AREA 8 - DREDGING - OPEN WATER		
LOCATION	"AREA (SF)"	"VOLUME (CY)"
NORTH BRIDGING STRUCTURE	[illegible]	[illegible]

REACH 5 AREA 8 - DREDGING - TIDAL WETLAND		
LOCATION	"AREA (SF)"	"VOLUME (CY)"
NORTH BRIDGING STRUCTURE	8,970	908

NOTES:

1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.
3. IN WATER WORK 462 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
4. IN WATER WORK 1073 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

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BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

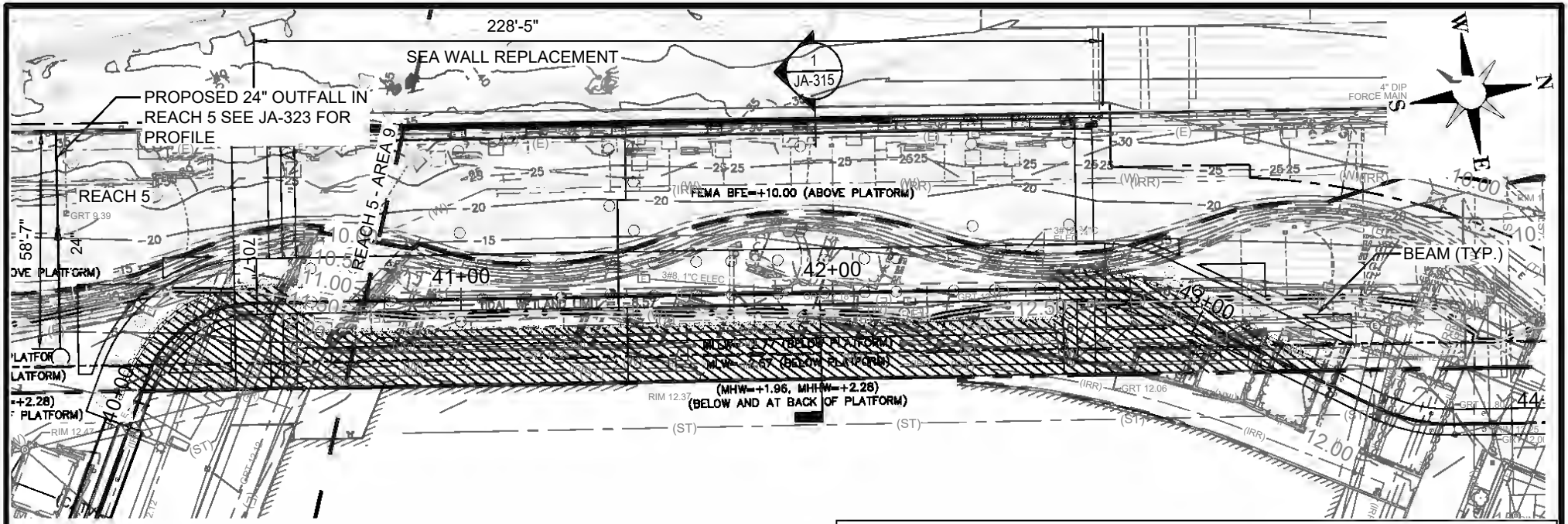
PROPOSED DREDGING PLAN
NORTH BRIDGING STRUCTURE
AREA 8 - REACH 5

0 40 80 Feet

DECEMBER 2024

DWG: JA-108B

USACE FILE: NAN-2024-00433-EMI



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	TIDAL WETLAND LIMITS
	PROPOSED IN-WATER LOW PERMEABILITY CLEAN FILL
	36" DIA. DRILLED SHAFT
	36" DIA. O-PILE SHEETPILING
	PROPOSED MICROPILE

NOTES:

1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.
2. AT REACH 6, A RELIEVING PLATFORM IS DESIGNED TO BE CONSTRUCTED AT AN ELEVATION HIGHER THAN THE EXISTING RELIEVING PLATFORM AND ABOVE MHW AND MHHW.
3. IN WATER WORK 2 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
4. IN WATER WORK 572 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

REACH 4 - OPEN WATER

SIZE	" COUNT/ LINEAR FEET (LF)(')"	"PLAN AREA (SF)"	"VOLUME (MHHW-MUDLINE) (CY)"	"VOLUME (MHW-MUDLINE) (CY)"
36" DRILLED SHAFT	79	669	369	360
SEAWALL	229 LF	306	81	77
36" O-PILE SHEETPILING	352 LF	764	187	178
LOW PERMEABILITY CLEAN FILL	--	5213	1143	1091
PLATFORM RECONSTRUCTION	--	16187	--	--
ECOLOGICAL ENHANCEMENT SEAWALL	--	28.5	8	7.7

REACH 4 - TIDAL WETLANDS

SIZE	"COUNT/ LINEAR FEET (LF)(')"	"PLAN AREA (SF)"	"VOLUME (MHW-TIDAL WETLAND) (CY)"
36" DRILLED SHAFT	10	98	21
36" O-PILE SHEETPILING	202 LF	424	104
LOW PERMEABILITY CLEAN FILL	--	4905	1026

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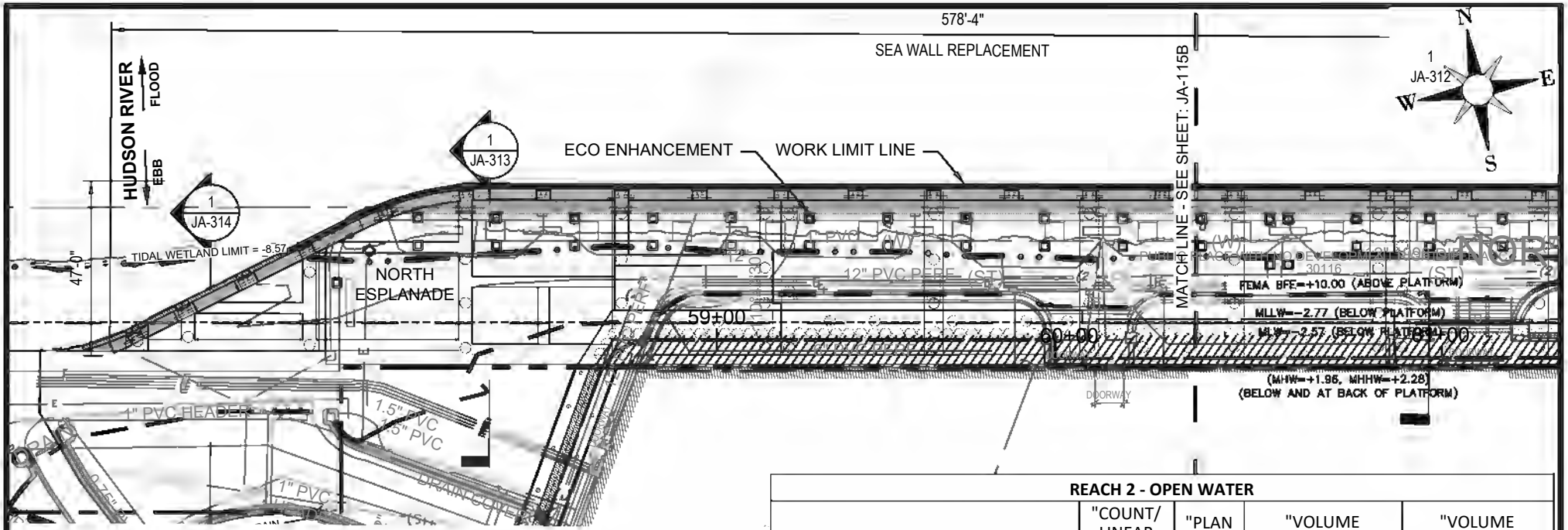
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROPOSED PLAN
AREA 10 - REACH 4
0 40 80 Feet

DECEMBER 2024
DWG: JA-110

USACE FILE: NAN-2024-00433-EMI



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	TIDAL WETLAND LIMITS
	PROPOSED IN-WATER LOW PERMEABILITY CLEAN FILL
	NEW OVERWATER STRUCTURE
	36" DIA. DRILLED SHAFT
	42" DIA. O-PILE SHEETPILING
	PROPOSED MICROPILE
	ECO ENHANCEMENT

NOTES:
1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.
2. IN WATER WORK 439 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
3. IN WATER WORK 989 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.

REACH 2 - OPEN WATER

SIZE	"COUNT/ LINEAR FEET (LF)(')"	"PLAN AREA (SF)"	"VOLUME (MHHW-MUDLINE) (CY)"	"VOLUME (MHW-MUDLINE) (CY)"
36" DRILLED SHAFT	91	818	229	219
36" O-PILE SHEETPILING	426 LF	1609	361	341
SEAWALL	556'-2"	716	198	190
LOW PERMEABILITY CLEAN FILL	--	2958	379	351
PLATFORM RECONSTRUCTION	--	25148	--	--
ECOLOGICAL ENHANCEMENT SEAWALL	--	72	20	19.5
ECOLOGICAL ENHANCEMENT PILES	--	147.3	34	28.2
NEW OVERWATER STRUCTURE	--	4688		

REACH 2 - TIDAL WETLANDS

SIZE	"COUNT/ LINEAR FEET (LF)(')"	"PLAN AREA (SF)"	"VOLUME (MHW-TIDAL WETLAND) (CY)"
36" DRILLED SHAFT	75	664	151
36" O-PILE SHEETPILING	426 LF	1609	341
LOW PERMEABILITY CLEAN FILL	--	2958	351

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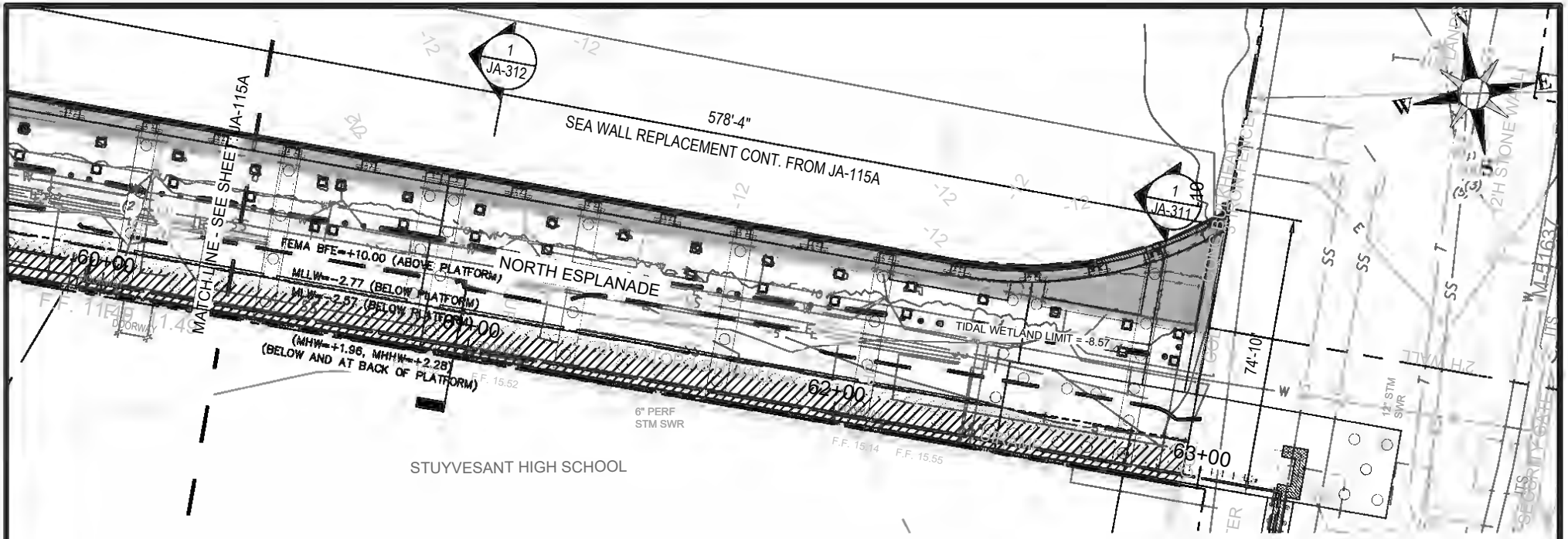
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROPOSED PLAN
AREA 15 - REACH 2
0 40 80 Feet

DECEMBER 2024
DWG: JA-115A



LEGEND:

FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
	FEMA BASE FLOOD ELEVATION
	MEAN LOW WATER (MLW), MEAN LOWER LOW WATER (MLLW)
	MEAN HIGH WATER (MHW), MEAN HIGHER HIGH WATER (MHHW)
	TIDAL WETLAND LIMITS
	PROPOSED IN-WATER LOW PERMEABILITY CLEAN FILL
	NEW OVERWATER STRUCTURE
	36" DIA. DRILLED SHAFT
	42" DIA. O-PILE SHEETPILING
	PROPOSED MICROPILE
	ECO ENHANCEMENT

DWG: JA-115B

NOTES:

1. REFER TO NYCDOT STANDARD DETAILS OF CONSTRUCTION FOR CONCRETE PAVEMENT, ASPHALT PAVEMENT, SIDEWALK AND OTHER SURFACE RESTORATION DETAILS.
2. IN WATER WORK 439 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH C.
3. IN WATER WORK 989 FEET AWAY FROM FEDERAL NAVIGATIONAL CHANNEL REACH A.
4. SEE JA-115A FOR REACH 2 TABLES.

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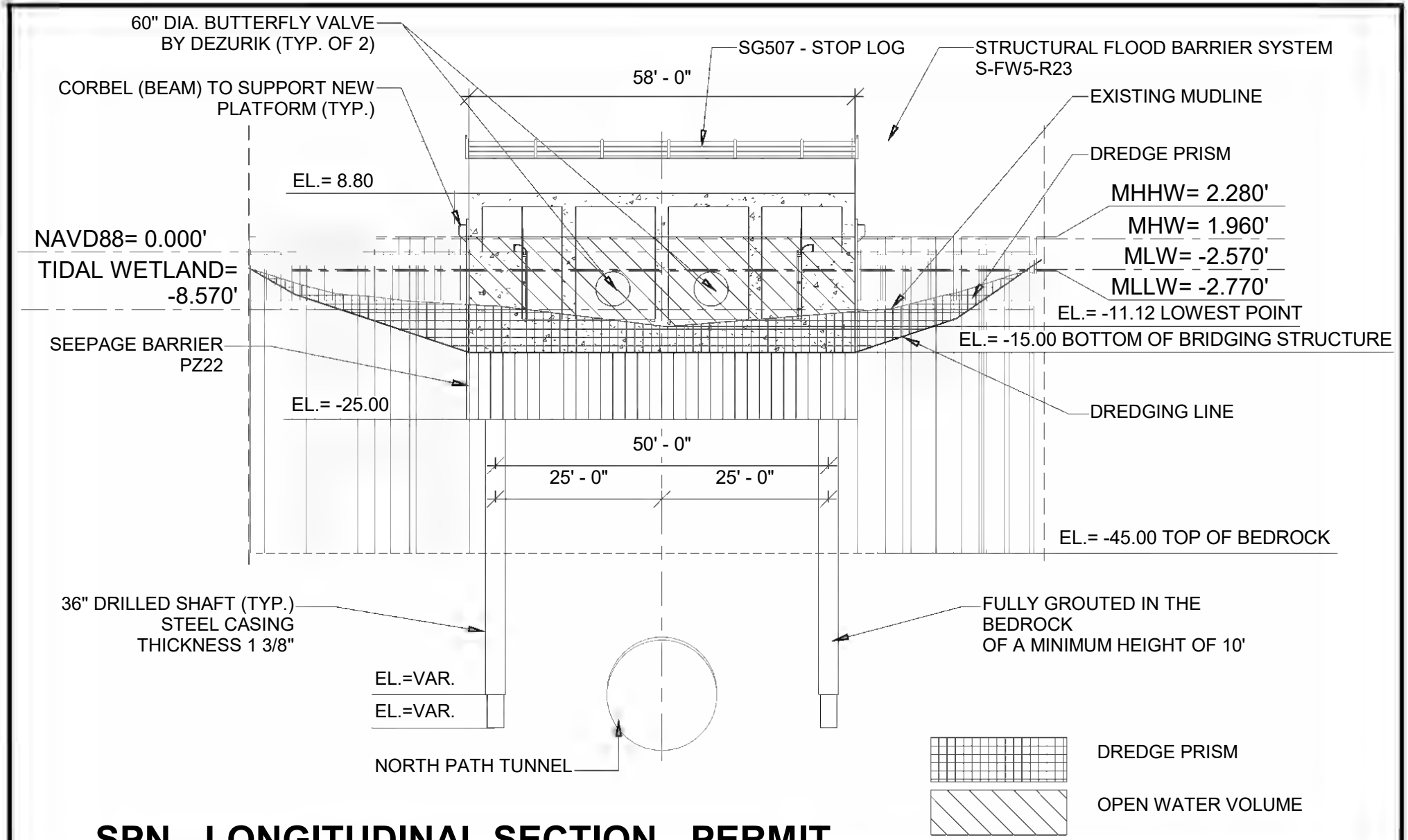
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROPOSED PLAN
AREA 15 - REACH 2

0 40 80 Feet

DECEMBER 2024

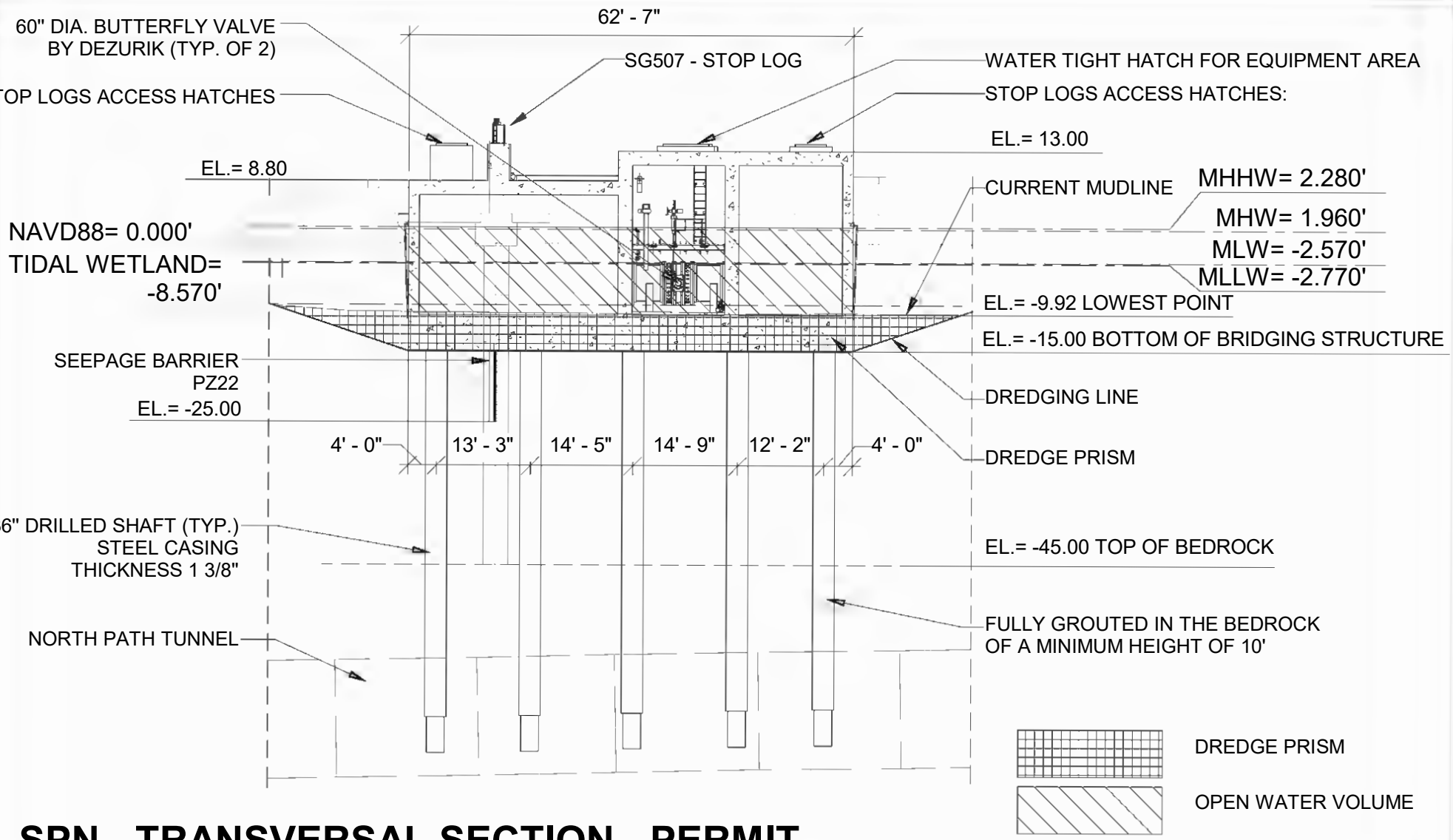
DWG: JA-115B



SPN - LONGITUDINAL SECTION - PERMIT

SCALE: 1" = 20'-0"

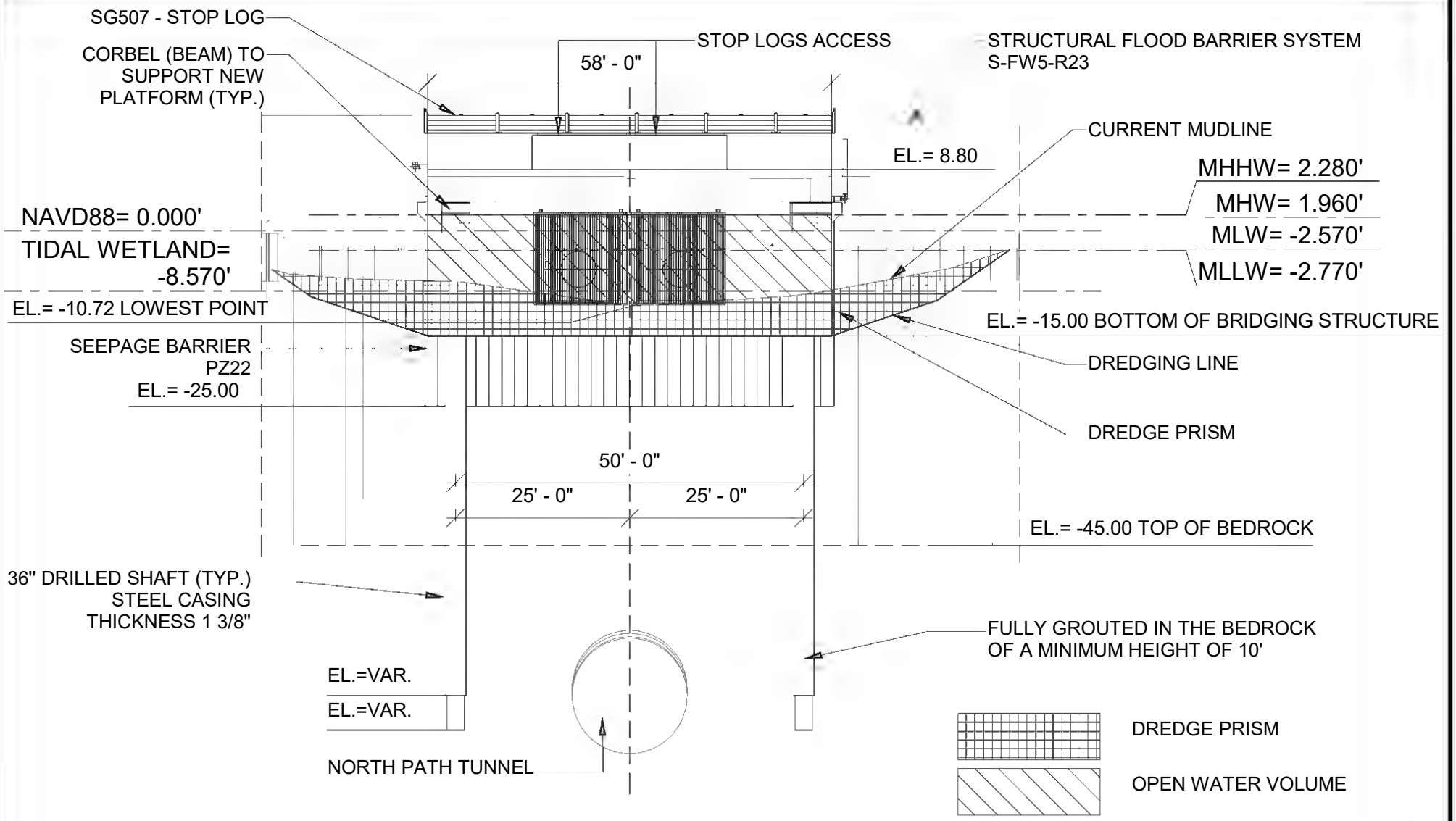
Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH / WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION PROPOSED LONGITUDINAL SECTION -NORTH BRIDGING STRUCTURE - REACH 5 SCALE: As indicated	DECEMBER 2024 DWG: JA-303 Page 51 of 72



SPN - TRANSVERSAL SECTION - PERMIT

SCALE: 1" = 20'-0"

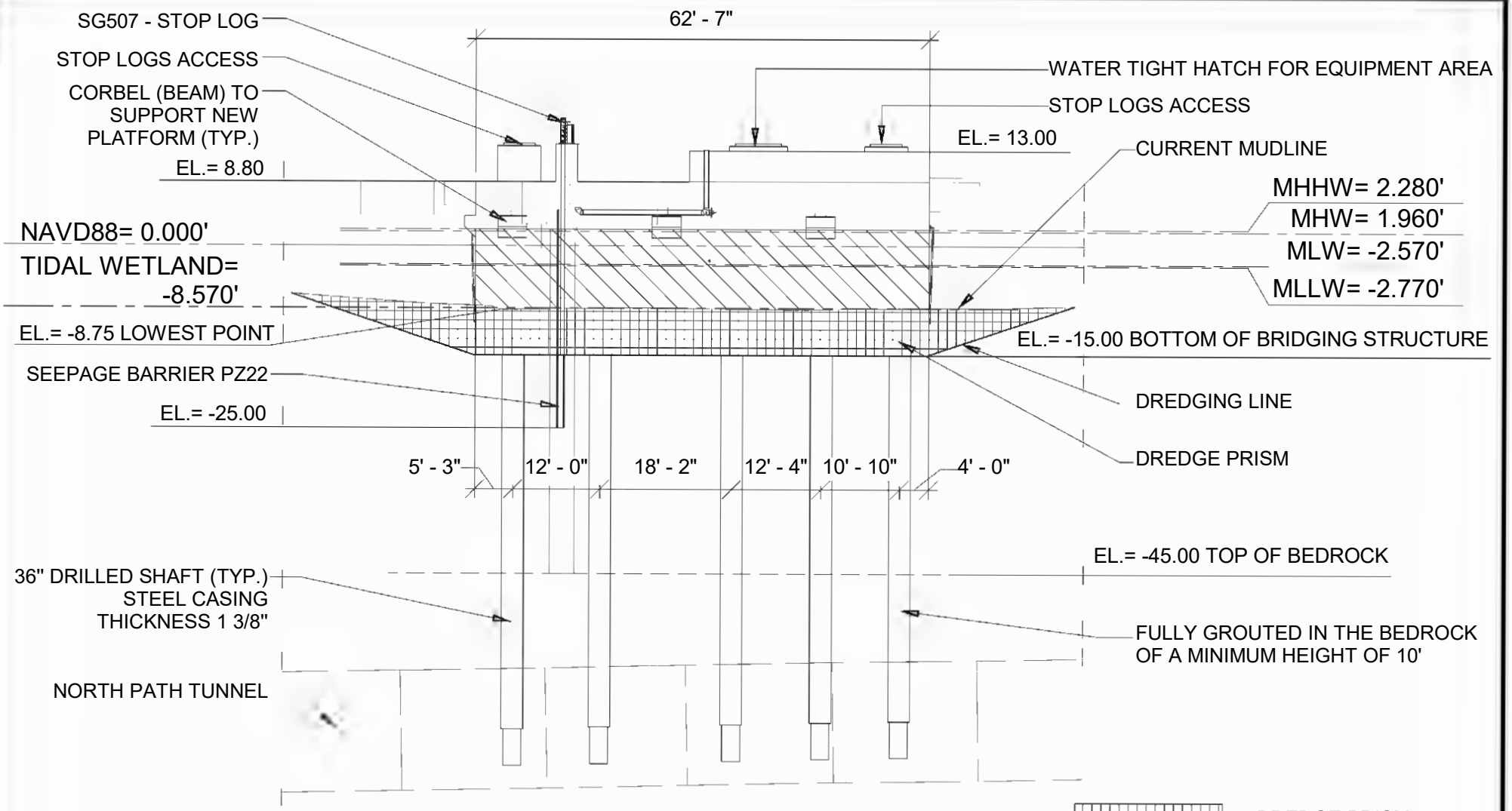
Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH / WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION PROPOSED TRANSVERSAL SECTION - NORTH BRIDGING STRUCTURE - REACH 5 SCALE: As indicated	DECEMBER 2024 DWG: JA-304 Page 52 of 72



SPN - FRONT ELEVATION - PERMIT

SCALE: 1" = 20'-0"

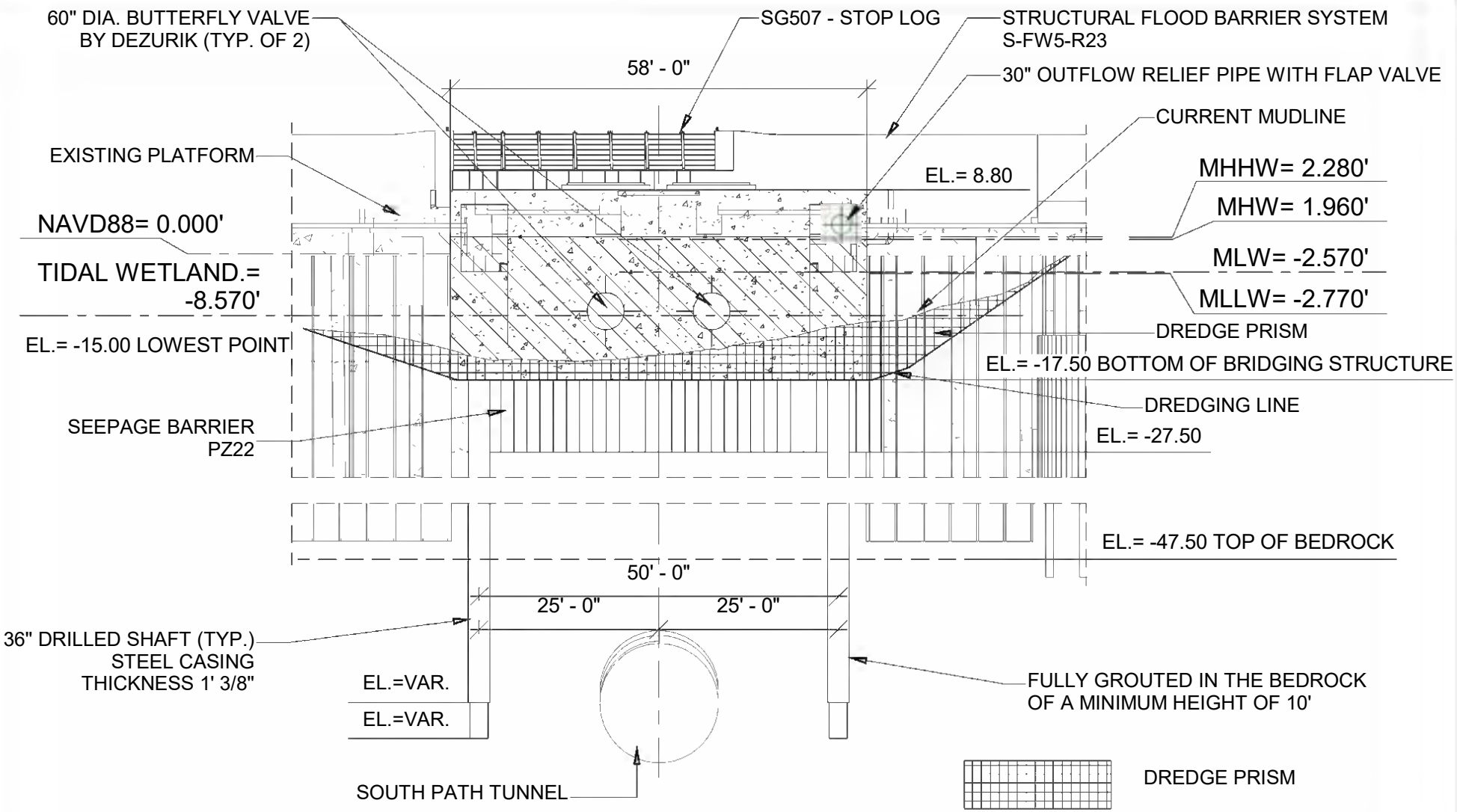
Turner Cruz ARCADIS	BATTERY PARK CITY AUTHORITY NORTH / WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION PROPOSED FRONT ELEVATION - NORTH BRIDGING STRUCTURE - REACH 5 SCALE: As indicated	DECEMBER 2024 DWG: JA-305 Page 53 of 72



SPN - SIDE ELEVATION - PERMIT

SCALE: 1" = 20'-0"

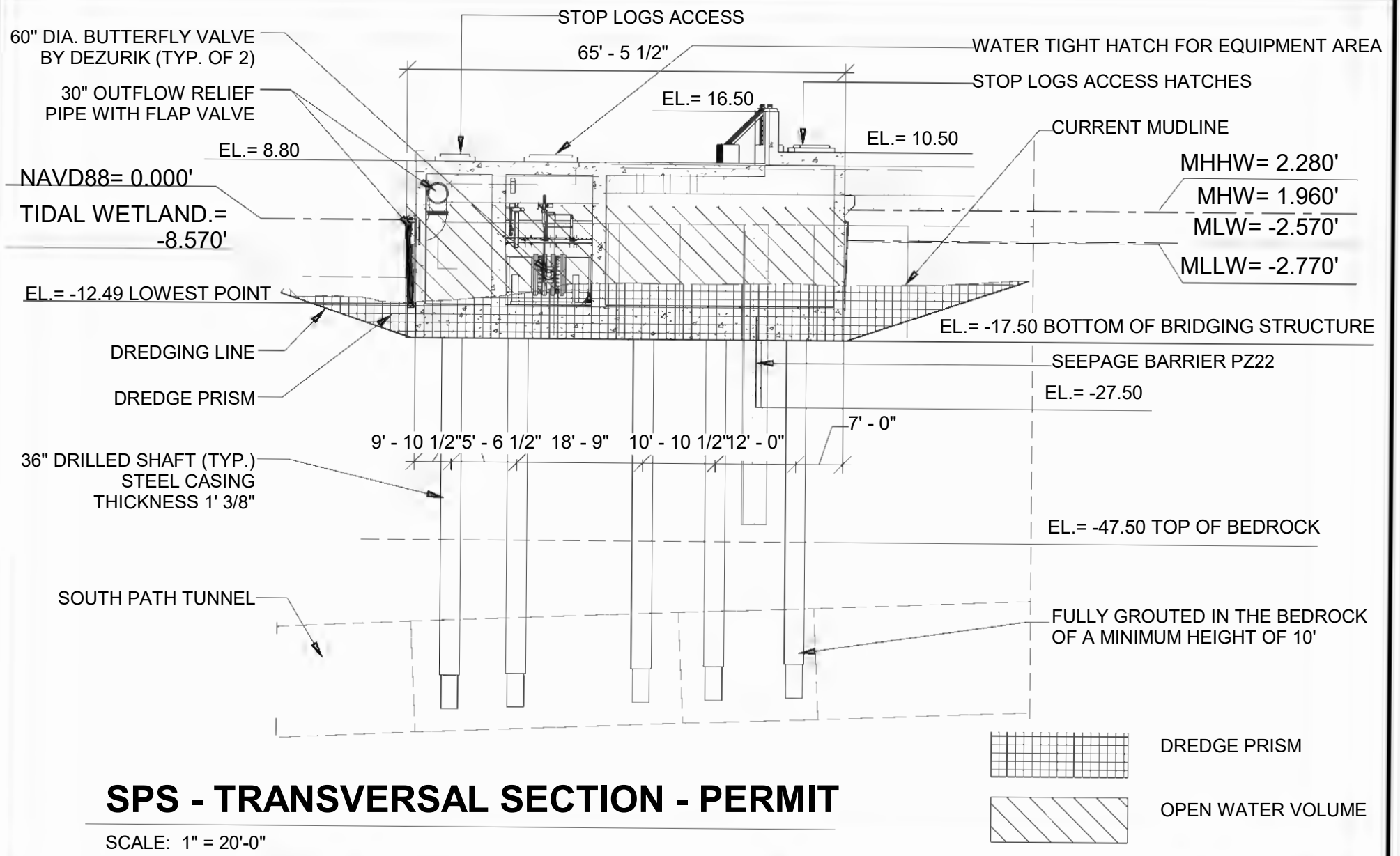
Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH / WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION PROPOSED SIDE ELEVATION - NORTH BRIDGING STRUCTURE - REACH 5 SCALE: As indicated	DECEMBER 2024 DWG: JA-306



SPS - LONGITUDINAL SECTION - PERMIT

SCALE: 1" = 20'-0"

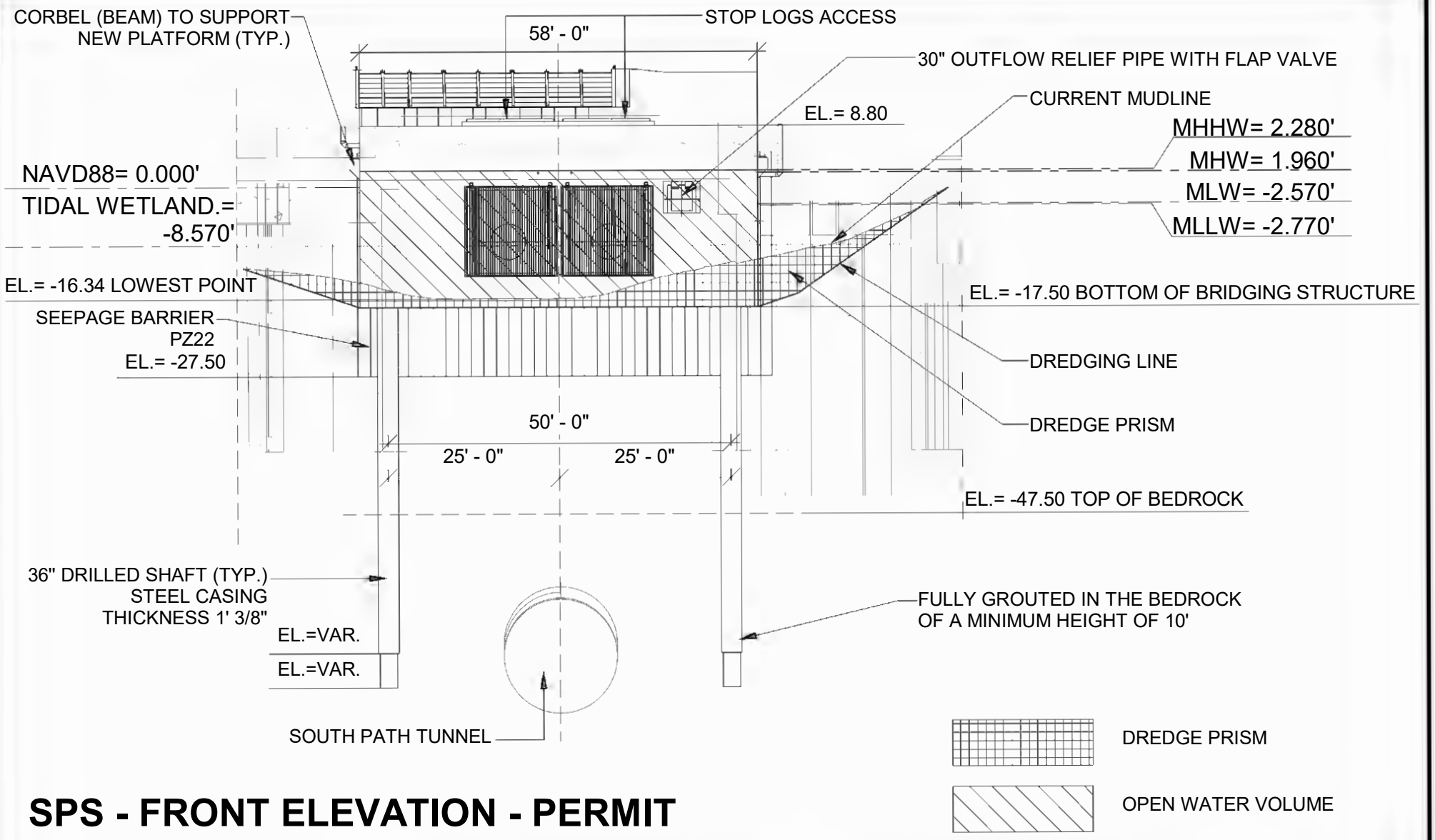
Turner CRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH / WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION PROPOSED LONGITUDINAL SECTION - SOUTH BRIDGING STRUCTURE - REACH 5 SCALE: As indicated	DECEMBER 2024 DWG: JA-307 Page 55 of 72



SPS - TRANSVERSAL SECTION - PERMIT

SCALE: 1" = 20'-0"

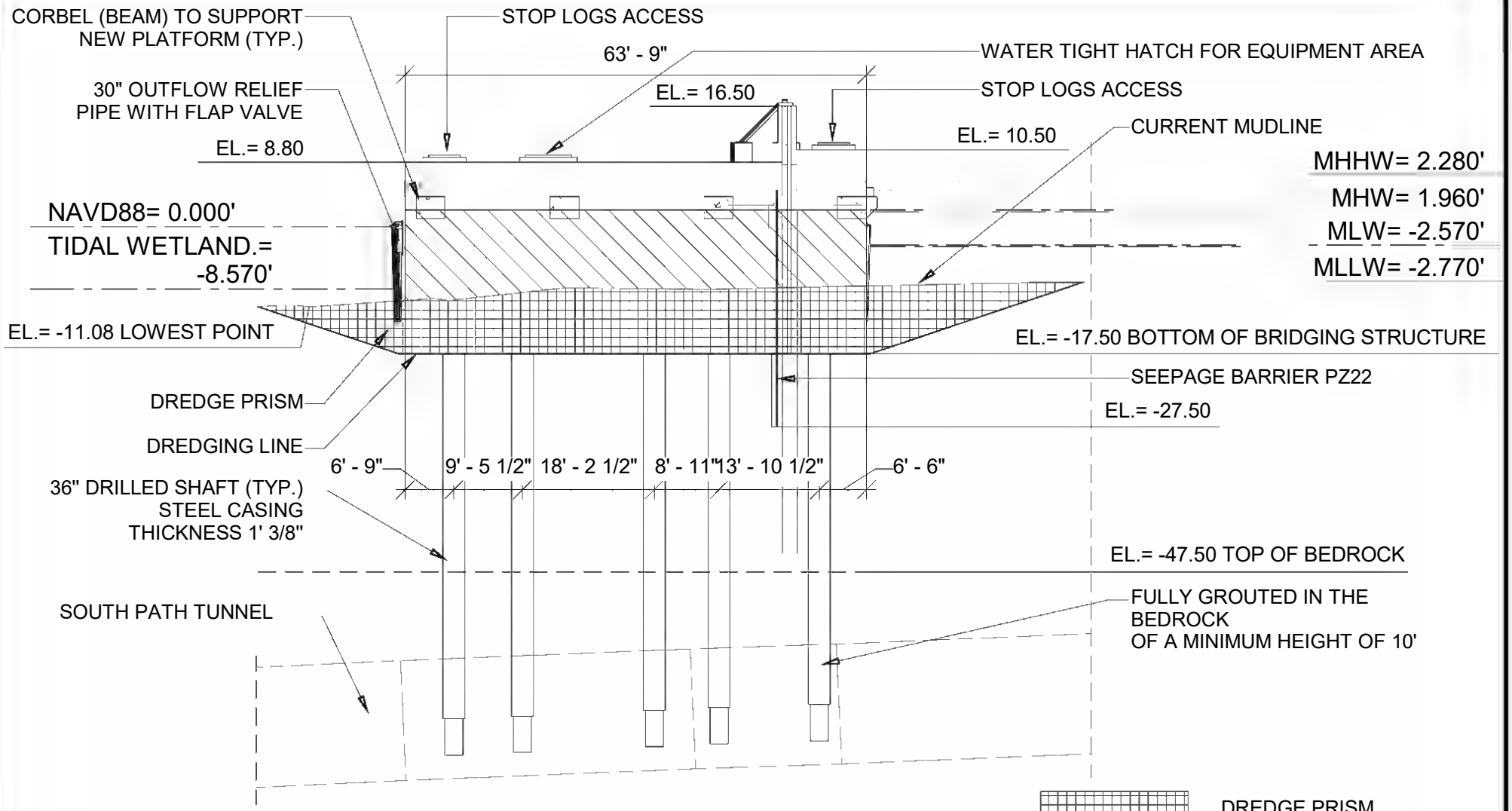
Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH / WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION PROPOSED TRANSVERSAL SECTION - SOUTH BRIDGING STRUCTURE- REACH 5 SCALE: As indicated	DECEMBER 2024 DWG: JA-308 Page 56 of 72



SPS - FRONT ELEVATION - PERMIT

SCALE: 1" = 20'-0"

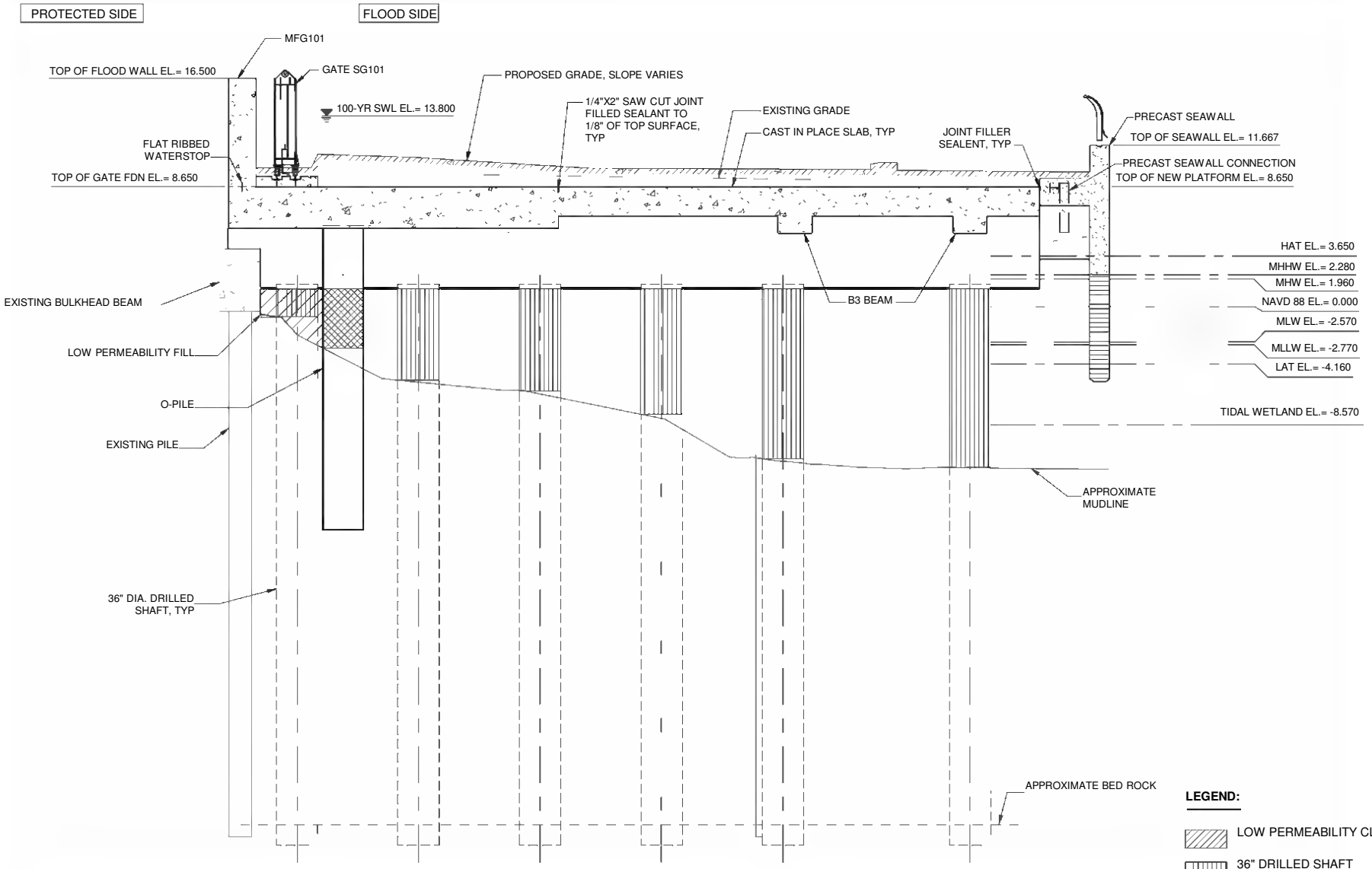
Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH / WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION PROPOSED FRONT ELEVATION - SOUTH BRIDGING STRUCTURE - REACH 5 SCALE: As indicated	DECEMBER 2024 DWG: JA-309 Page 57 of 72



SPS -SIDE ELEVATION - PERMIT

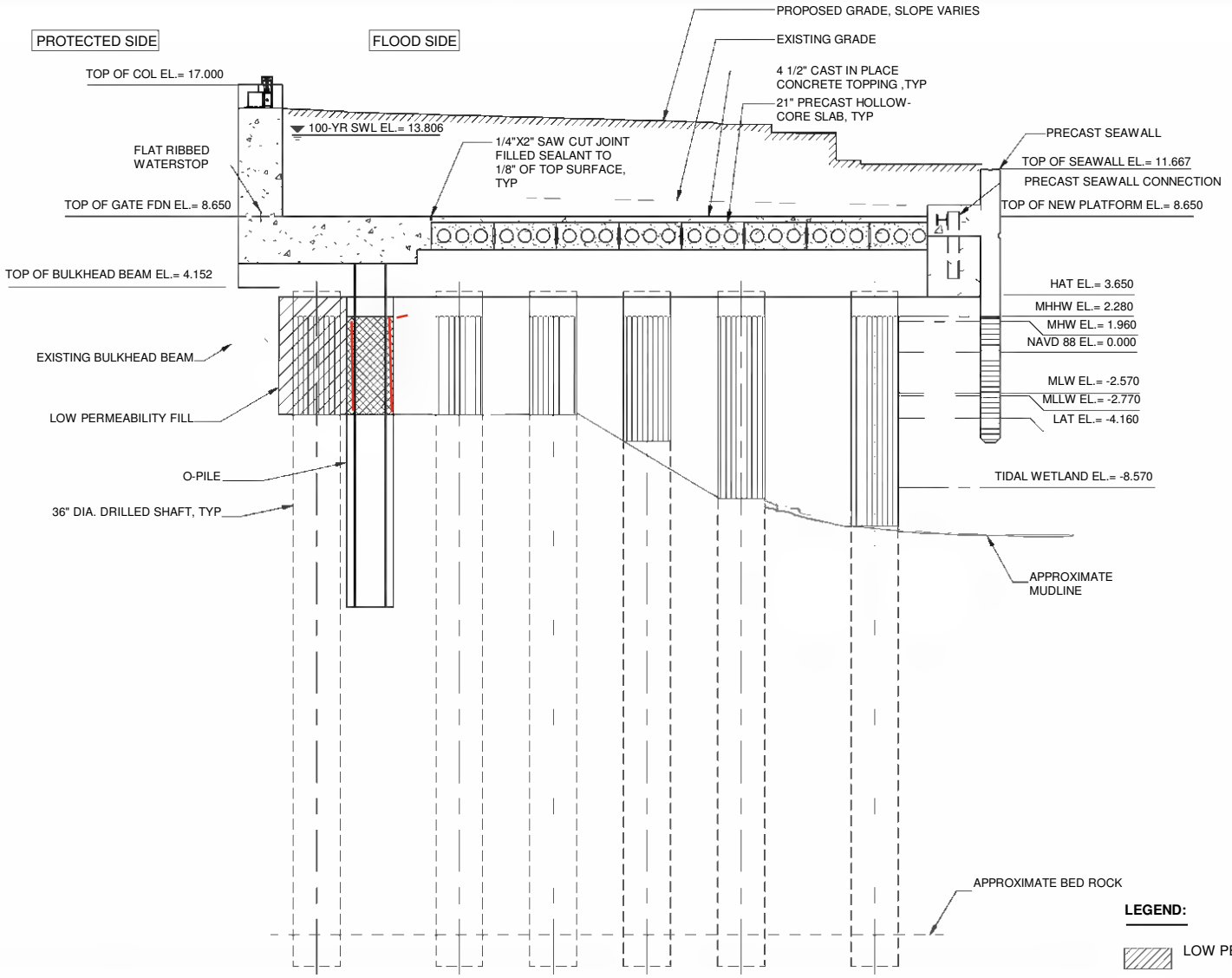
SCALE: 1" = 20'-0"

Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH / WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION PROPOSED SIDE ELEVATION - SOUTH BRIDGING STRUCTURE- REACH 5 SCALE: As indicated	DECEMBER 2024 DWG: JA-310 Page 58 of 72



1 **REACH 2 SECTION**
JA-115B SCALE: 3/32" = 1'-0"

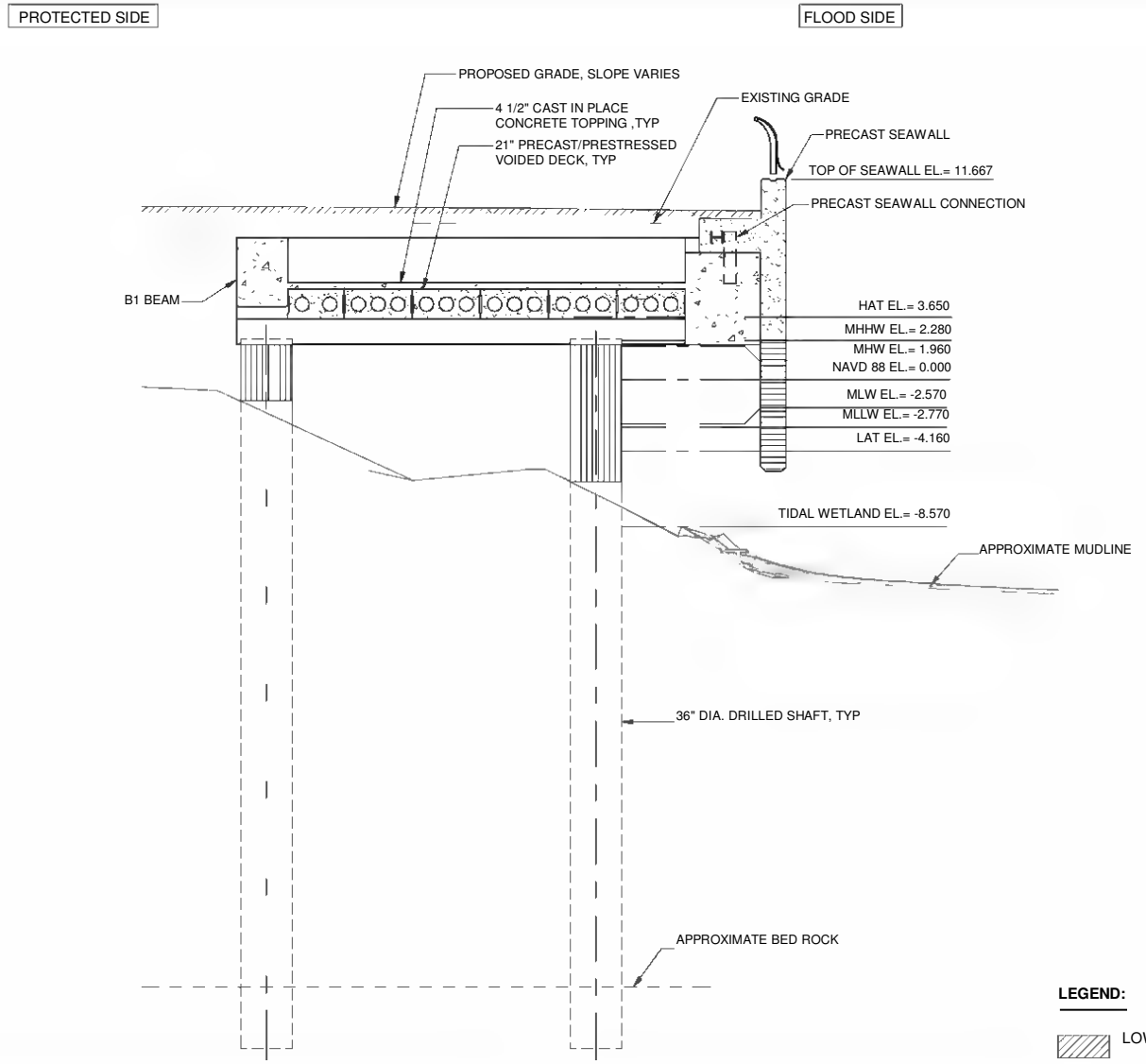
Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH/WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION TYPICAL IN-WATER PROPOSED PLATFORM SECTION REACH 2 SHEET 01 OF 04 SCALE: 3/32" = 1'-0"	DECEMBER 2024 DWG: JA-311



1 **REACH 2 SECTION**

JA115B JA106 SCALE: 3/32" = 1'-0"

Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH/WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION TYPICAL IN-WATER PROPOSED PLATFORM SECTION REACH 2 SHEET 02 OF 04 SCALE: 3/32" = 1'-0"	DECEMBER 2024 DWG: JA-312



1 JA-1130

REACH 2 ELEVATION

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

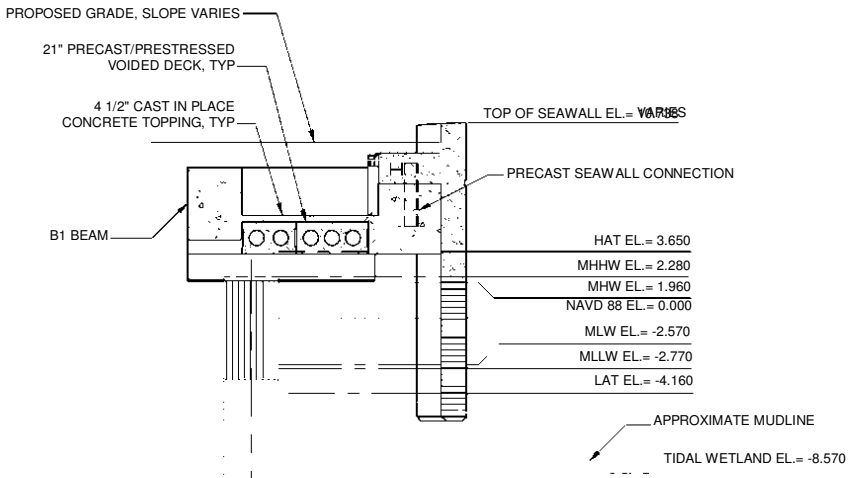
Turner ECRUZ ARCADIS

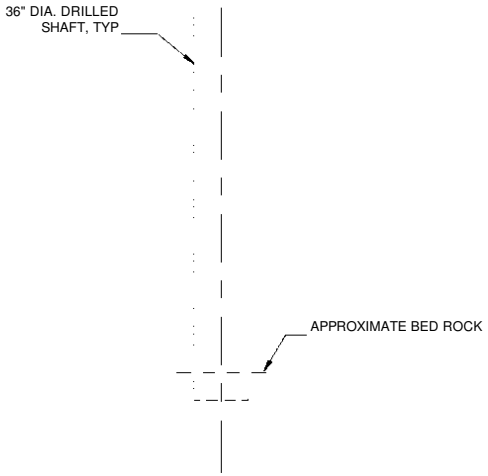
BATTERY PARK CITY AUTHORITY
NORTH/WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

JOINT APPLICATION
TYPICAL IN-WATER
PROPOSED PLATFORM SECTION REACH 2
SHEET 03 OF 04
SCALE: 3/32" = 1'-0"

DECEMBER 2024

DWG: JA-313





1 JA-150

REACH 2 SECTION

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

LEGEND:

- LOW PERMEABILITY CLEAN FILL
- 36" DRILLED SHAFT
- SEAWALL
- O-PILE SHEETPILING

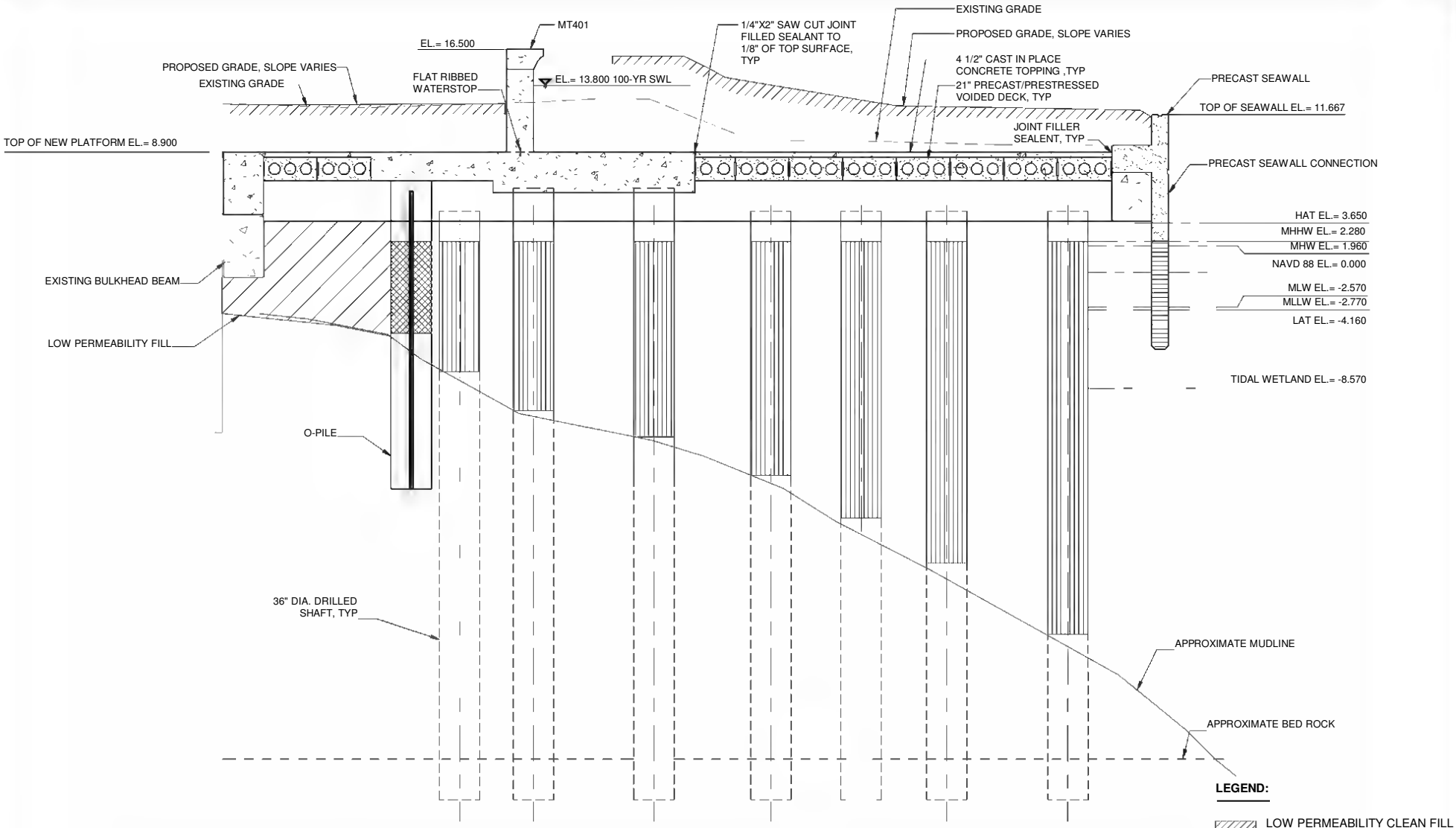
Turner Cruz ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH/WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

JOINT APPLICATION
TYPICAL IN-WATER
PROPOSED PLATFORM SECTION REACH 2
SHEET 04 OF 04
SCALE: 3/32" = 1'-0"

DECEMBER 2024

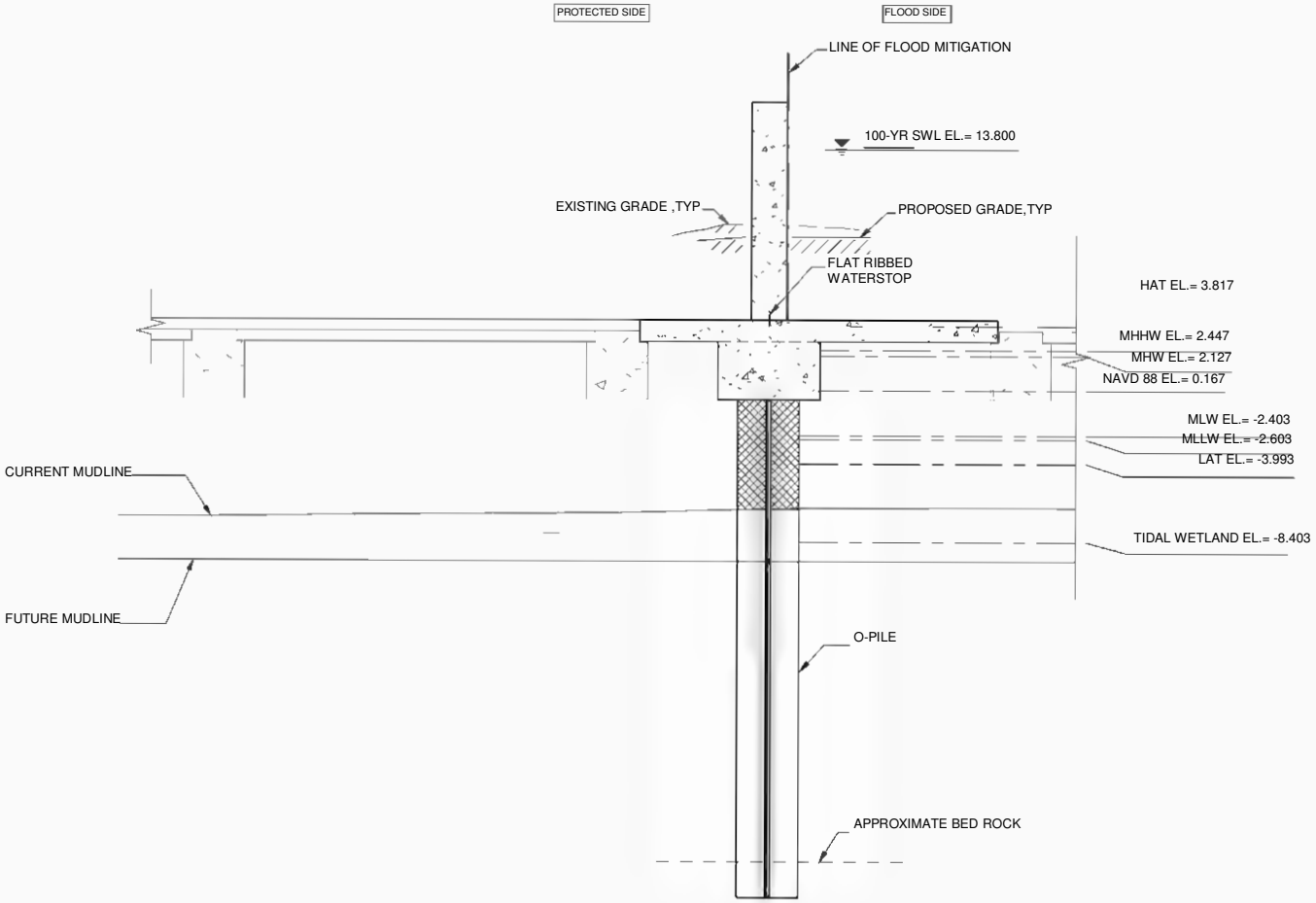
DWG: JA-314



1 JA-102 **REACH 4 SECTION**

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

Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH/WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION TYPICAL IN-WATER PROPOSED PLATFORM SECTION REACH 4 SHEET 01 OF 01 SCALE: 3/32" = 1'-0"	DECEMBER 2024 DWG: JA-315



1 JA-105

REACH 5 SECTION

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

LEGEND:

- LOW PERMEABILITY CLEAN FILL
- 36" DRILLED SHAFT
- SEAWALL
- O-PILE SHEETPILING

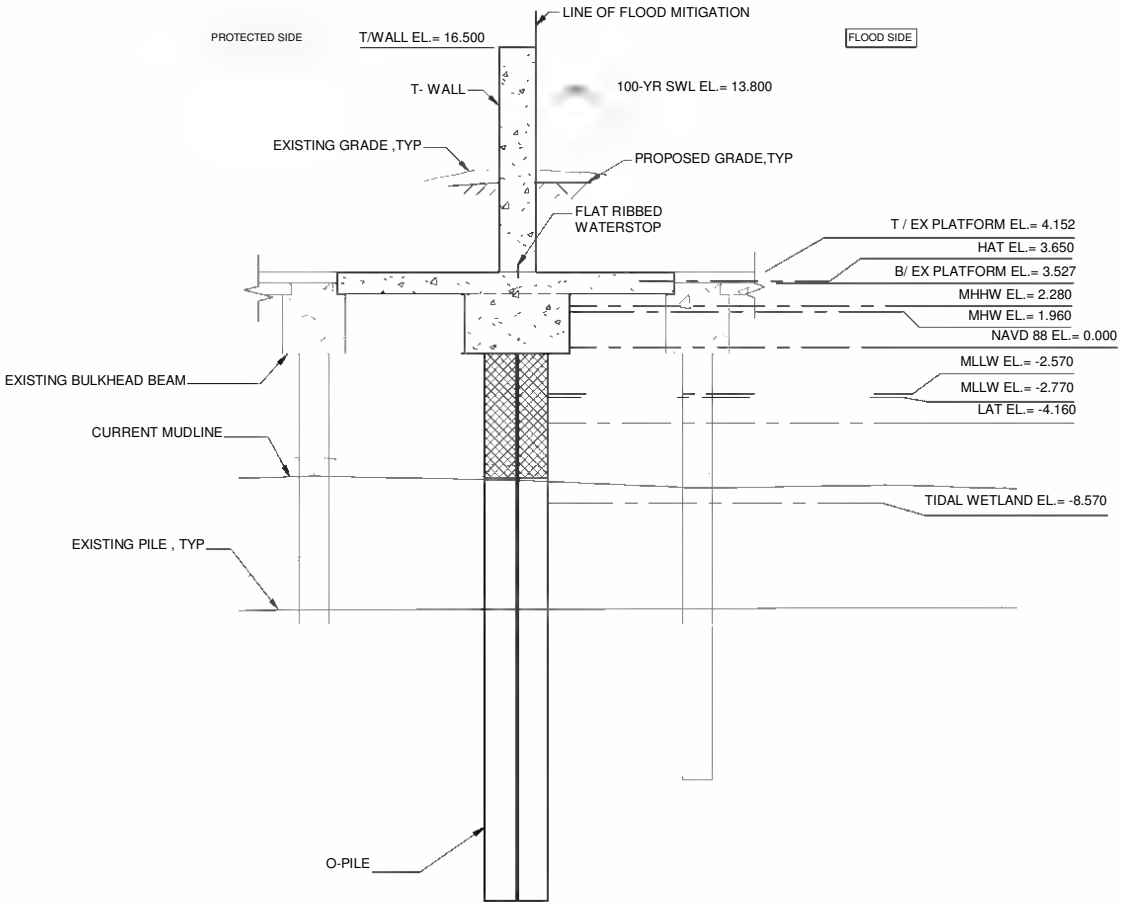
Turner ECRUZ ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH/WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

JOINT APPLICATION
TYPICAL IN-WATER
PLATFORM SECTION REACH 5
SHEET 01 OF 02
SCALE: 3/32" = 1'-0"

DECEMBER 2024

DWG: JA-316



2 JA-106

REACH 5 SECTION

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

LEGEND:

- LOW PERMEABILITY CLEAN FILL
- 36" DRILLED SHAFT
- SEAWALL
- O-PILE SHEETPILING

Turner de Cruz

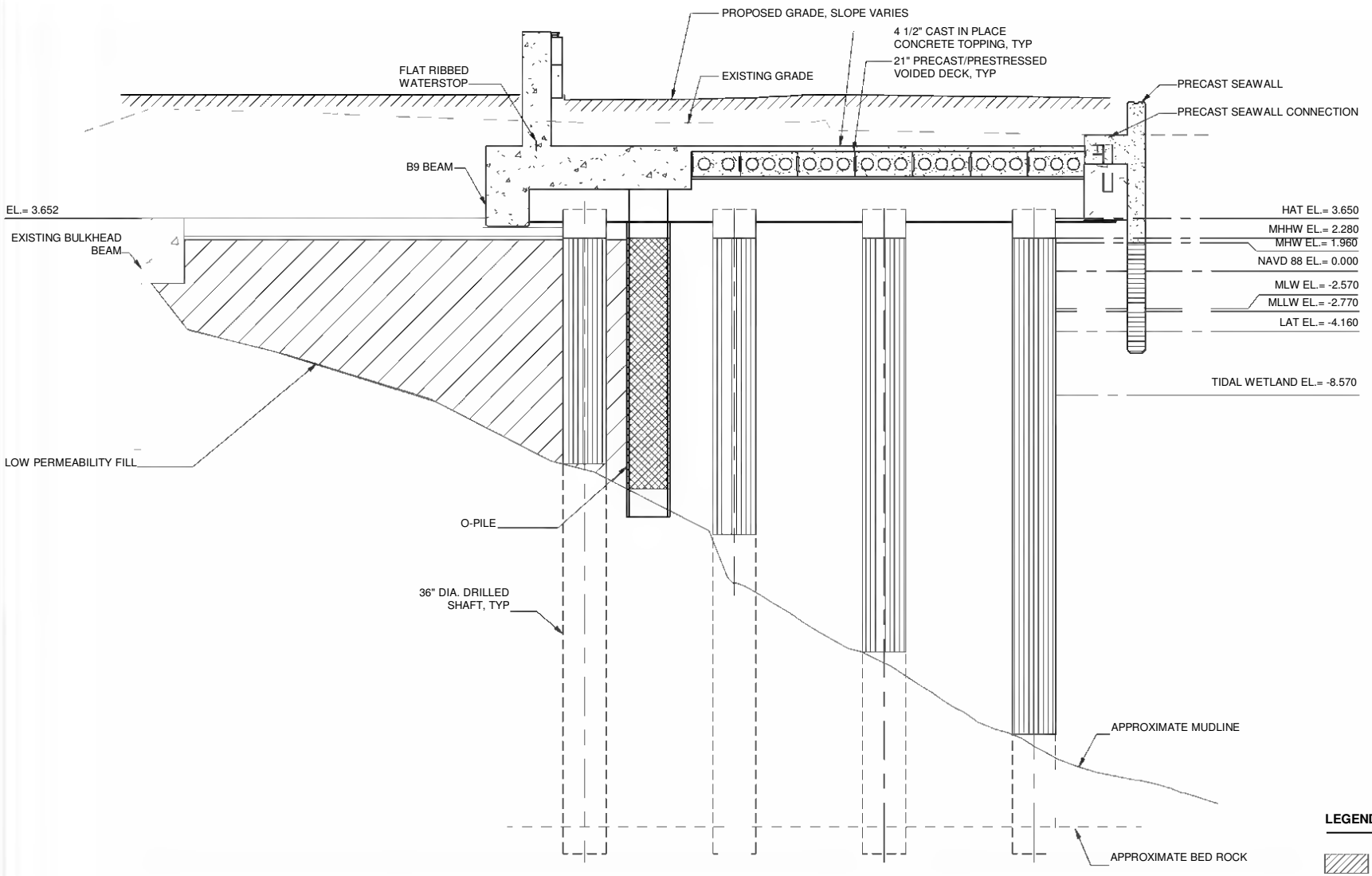
ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH/WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

JOINT APPLICATION
TYPICAL IN-WATER
PLATFORM SECTION REACH 5
SHEET 02 OF 02
SCALE: 3/32" = 1'-0"

DECEMBER 2024

DWG: JA-317



1 JA-103

REACH 6 SECTION

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

Turner de Cruz

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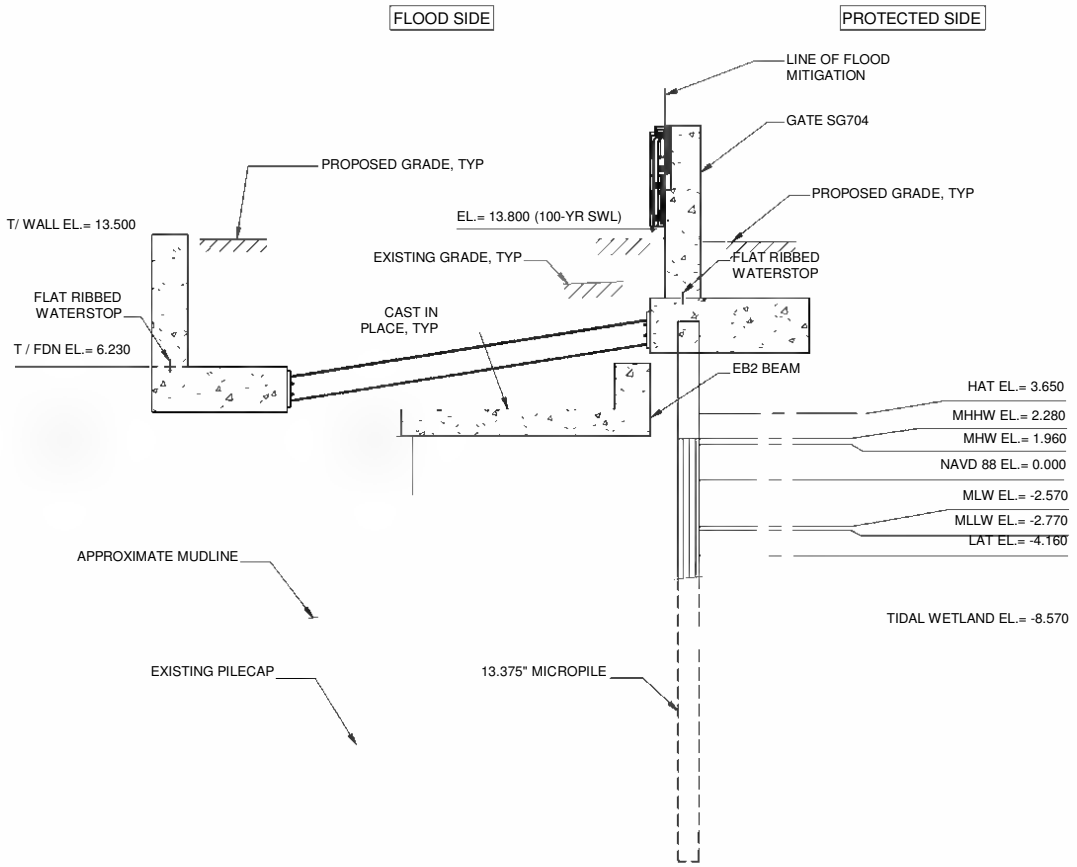
NORTH/WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

JOINT APPLICATION
TYPICAL IN-WATER
PROPOSED PLATFORM SECTION REACH 6
SHEET 01 OF 01
SCALE: 3/32" = 1'-0"

DECEMBER 2024

DWG: JA-318



1 JA-107

PLATFORM SECTION REACH 7

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

LEGEND:

- LOW PERMEABILITY CLEAN FILL
- 36" DRILLED SHAFT
- SEAWALL
- O-PILE SHEETPILING

Turner · CRUZ

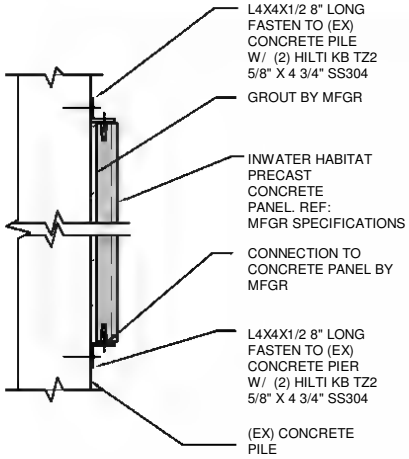
ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH/WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

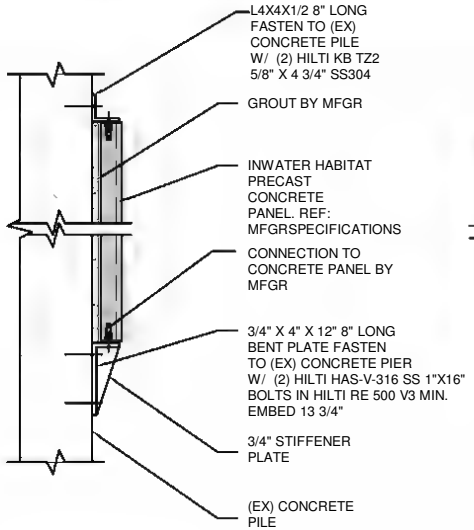
JOINT APPLICATION
TYPICAL IN-WATER
PLATFORM SECTION REACH 7
SHEET 01 OF 01
SCALE: 3/32" = 1'-0"

DECEMBER 2024

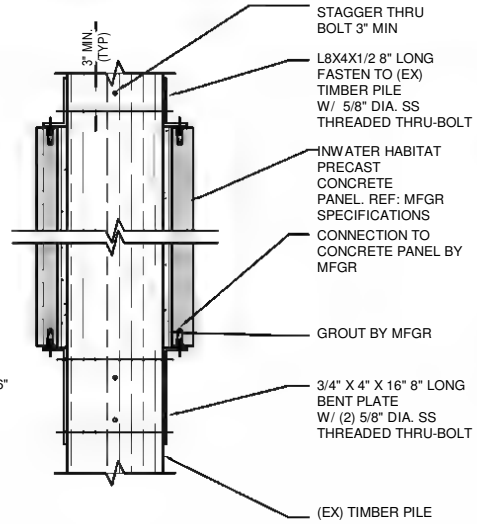
DWG: JA-319



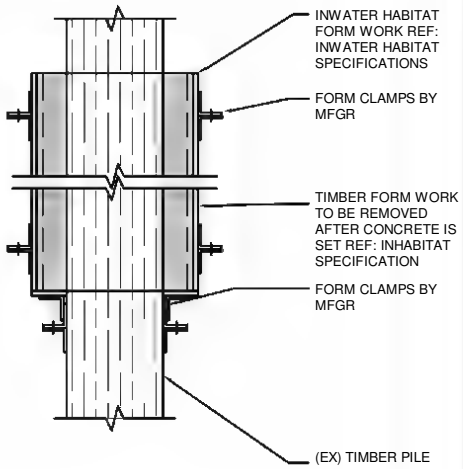
SECTION 1A



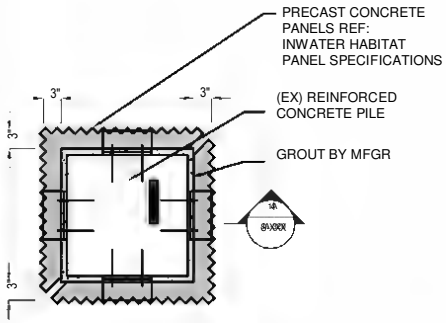
SECTION 2A



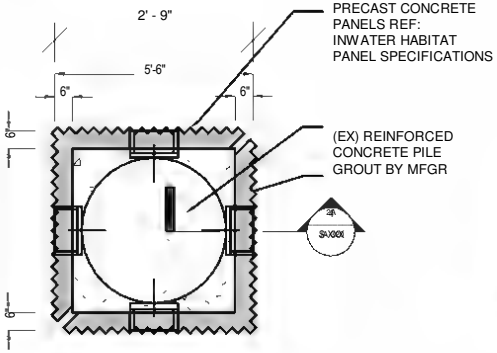
SECTION 3A



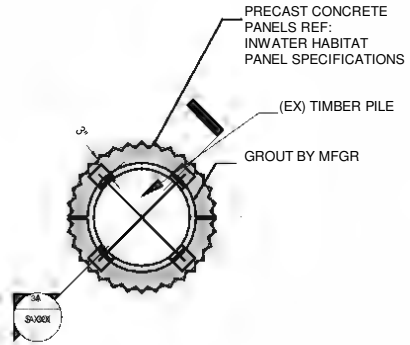
SECTION 4A



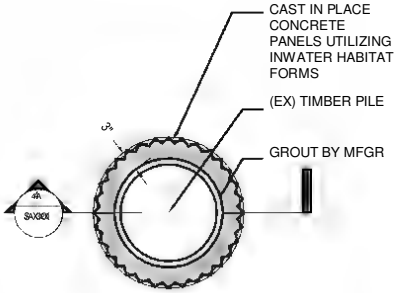
INWATER HABITAT PRECAST ~~RECTANGULAR REINFORCED CONCRETE~~



INWATER HABITAT PRECAST ~~CIRCULAR REINFORCED CONCRETE PILE~~



INWATER HABITAT PRECAST ~~TIMBER PILE THROUGH BOLT~~



INWATER HABITAT CAST ~~TIMBER PILE FORMWORK CLAMP~~

1 JA-320 **PILE DETAIL** SCALE: 3/8" = 1'-0"

2 JA-320 **DETAIL** SCALE: 3/8" = 1'-0"

3 JA-320 **CONNECTION DETAIL** SCALE: 3/8" = 1'-0"

4 JA-320 **CONNECTION DETAIL** SCALE: 3/8" = 1'-0"

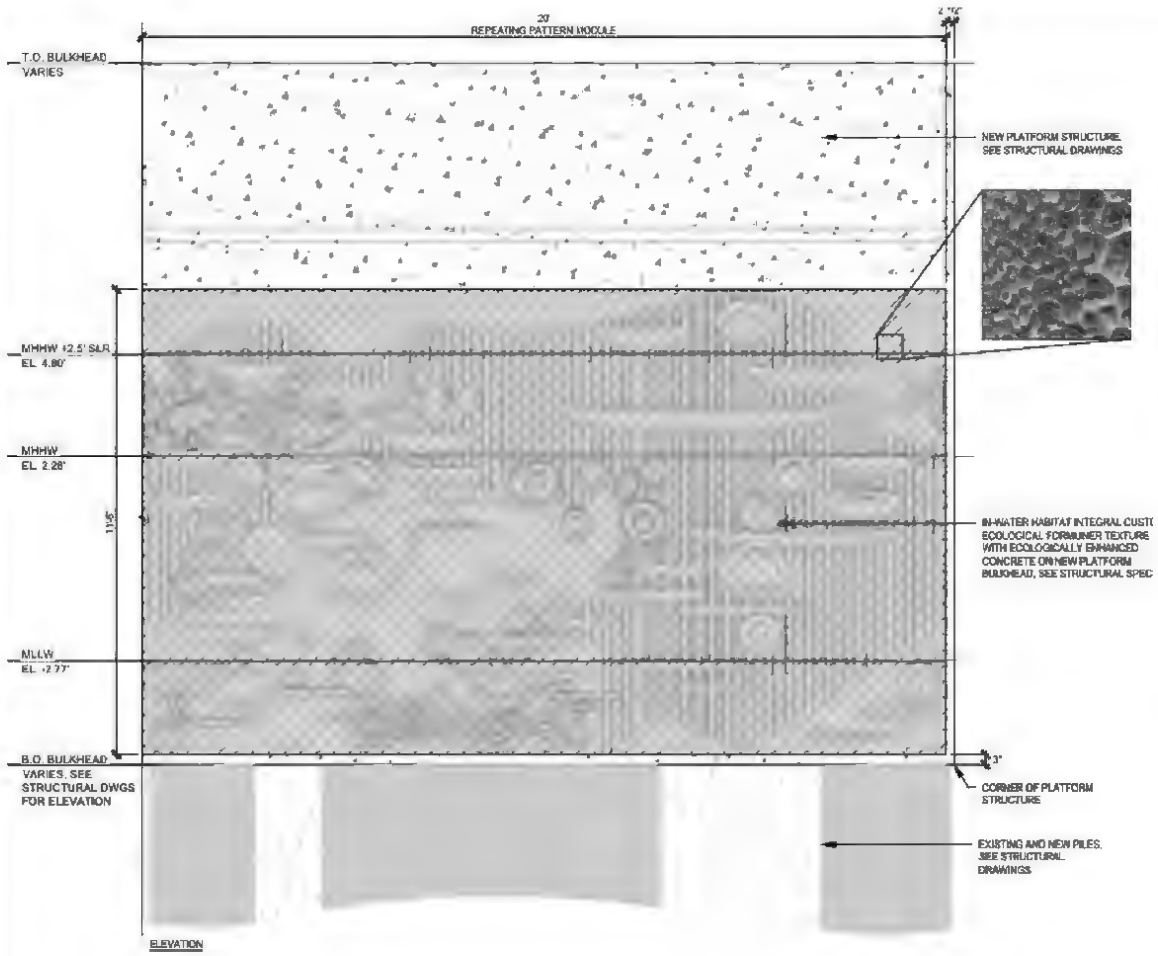
Turner ECRUZ ARCADIS

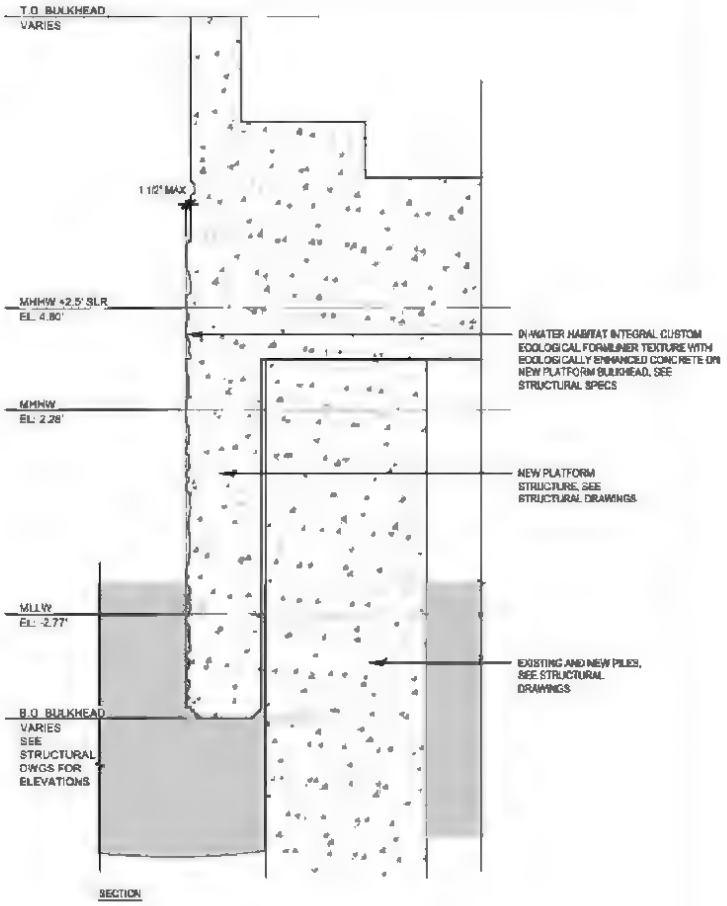
BATTERY PARK CITY AUTHORITY
NORTH/WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

JOINT APPLICATION
TYPICAL INWATER
HABITAT DETAILS
SHEET 01 OF 01
SCALE: 3/8" = 1'-0"

DECEMBER 2024

DWG: JA-320

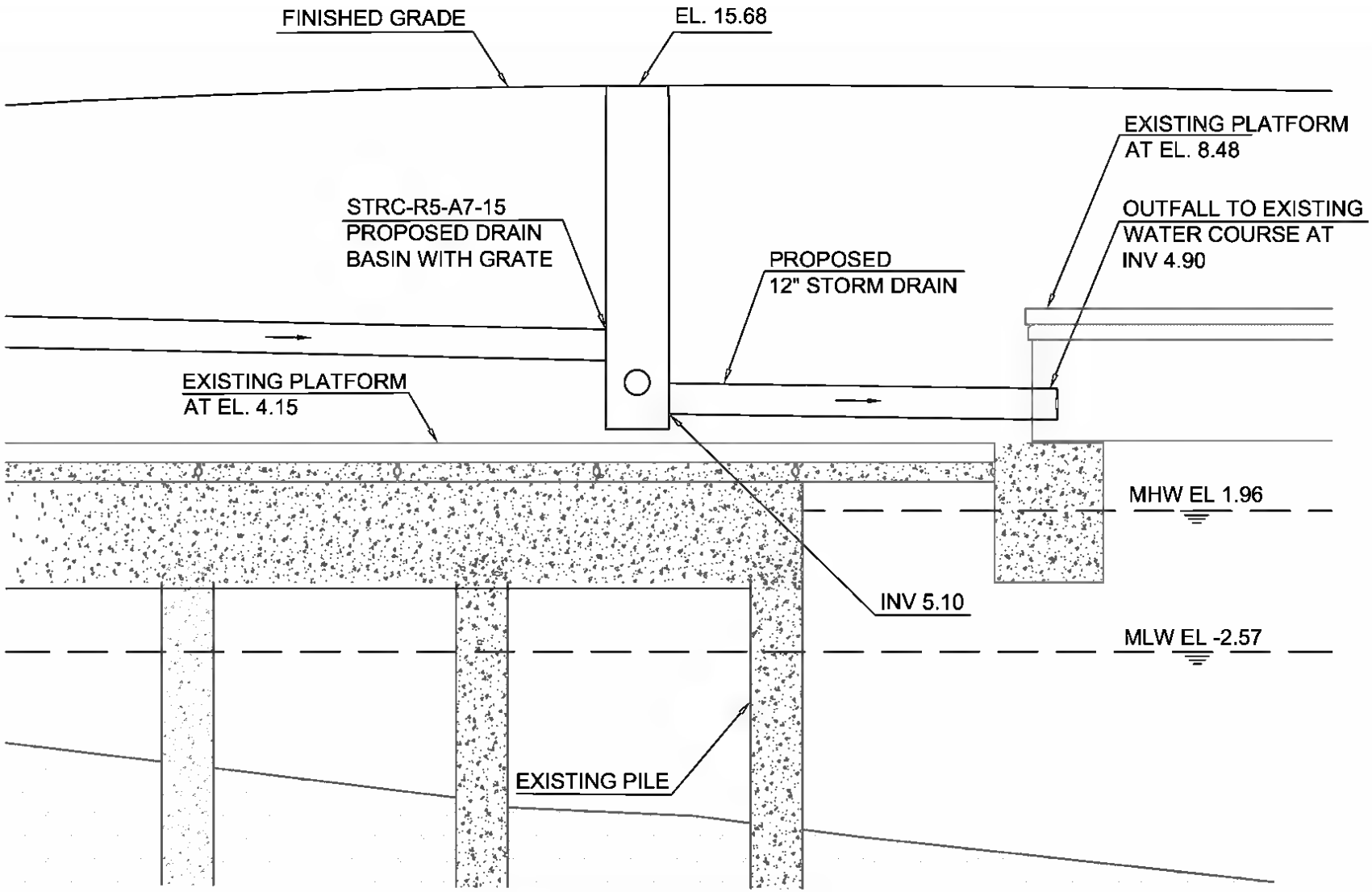




BULKHEAD HABITAT INTEGRAL TEXTURE

SCALE: 1" = 40'-0"

Turner ECRUZ ARCADIS	BATTERY PARK CITY AUTHORITY NORTH/WEST BATTERY PARK CITY RESILIENCY HUDSON RIVER BOROUGH OF MANHATTAN, NEW YORK	JOINT APPLICATION TYPICAL IN-WATER HABITAT DETAILS SHEET 02 OF 02 SCALE: 1" = 40'-0"	DECEMBER 2024 DWG: JA-320A



A
JA-103

12" PROFILE

SCALE: 1" = 5'

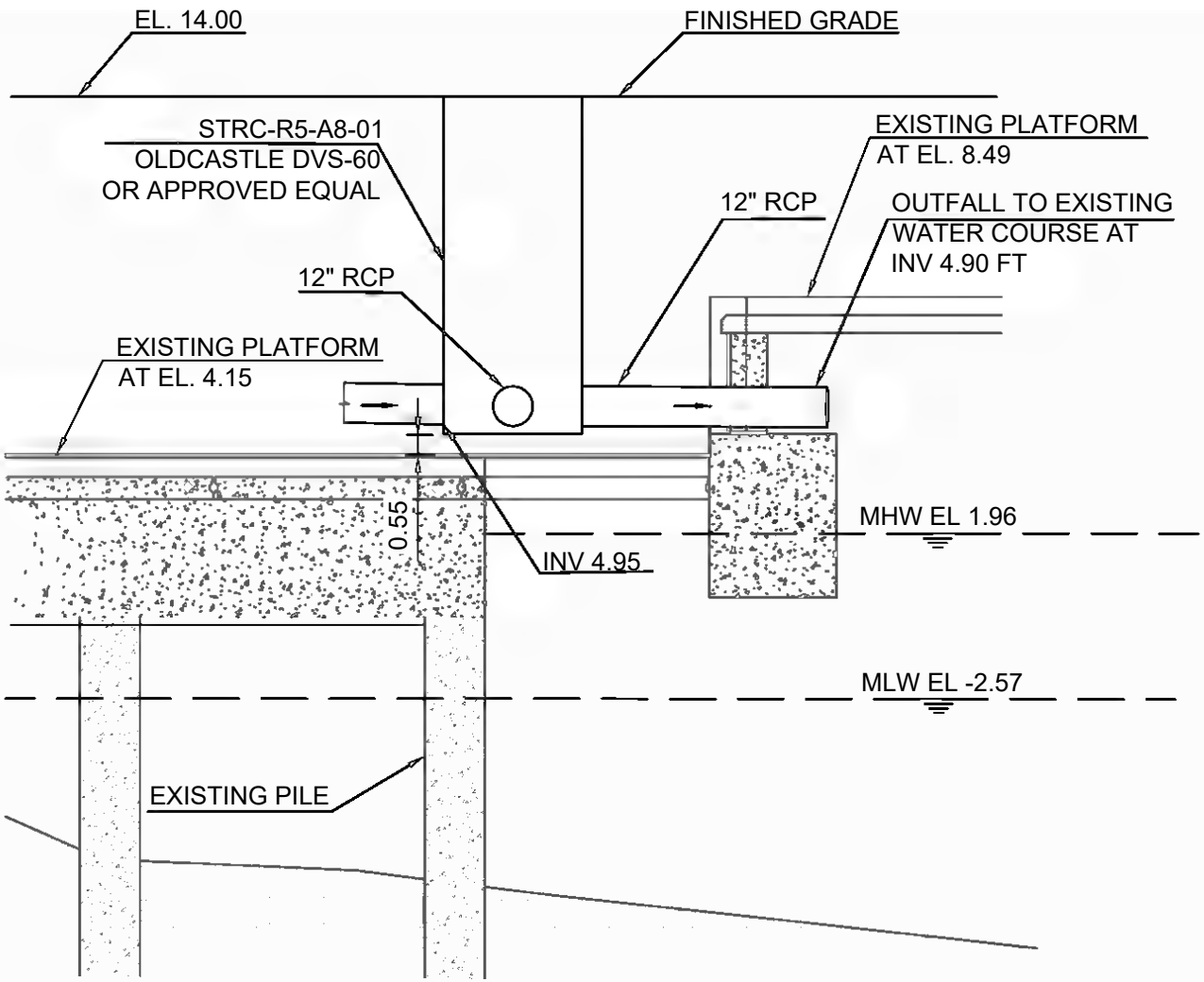
Turner ECRUZ
ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROFILE OF PROPOSED
12" STORM OUTFALL
AREA 7 - REACH 5

0 10 20 Feet

DECEMBER 2024
DWG: JA-321N



A
JA-108

12" PROFILE

SCALE: 1" = 5'

Turner ECRUZ
ARCADIS

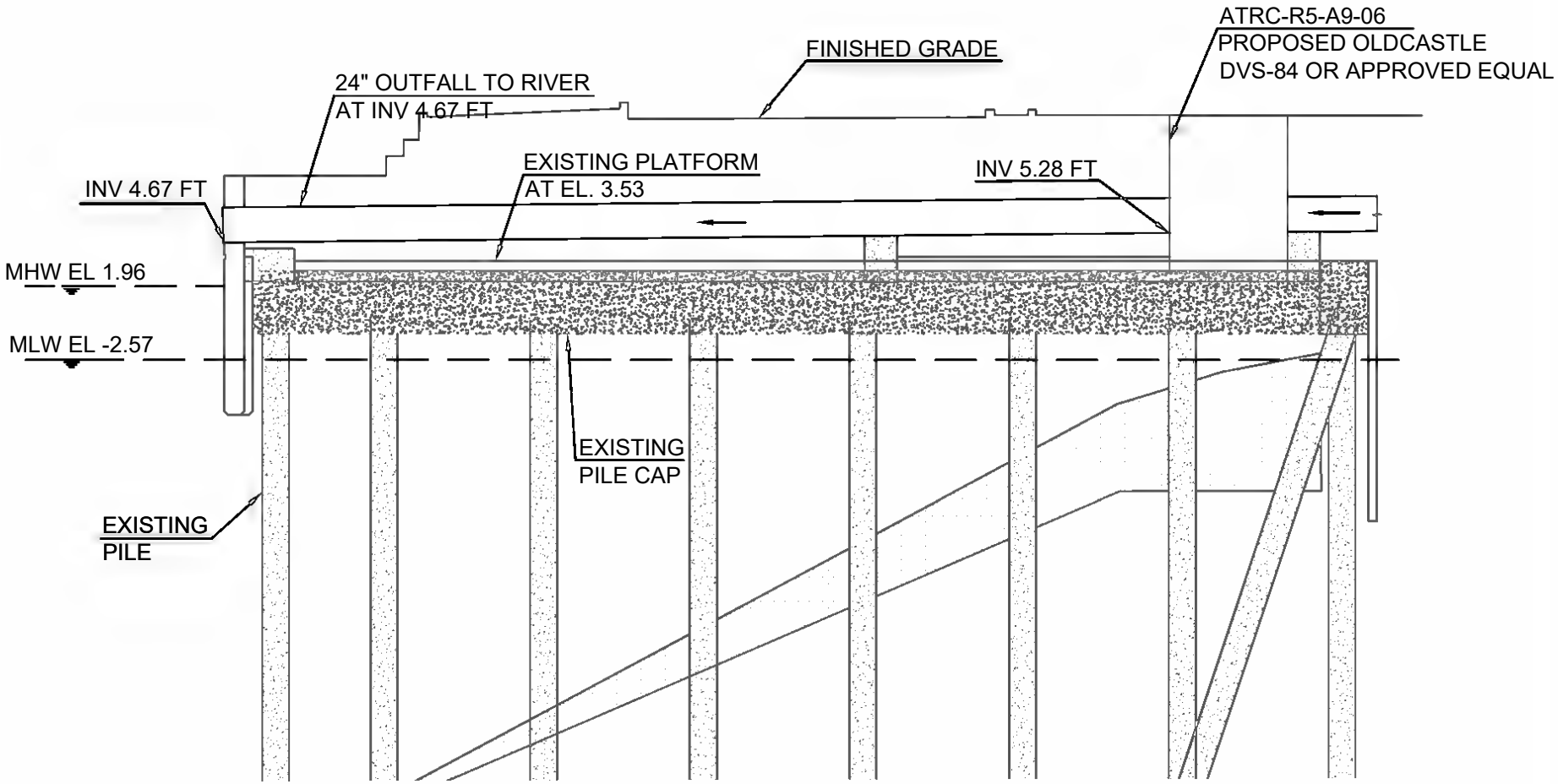
BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROFILE OF PROPOSED
12" STORM OUTFALL
AREA 8 - REACH 5

0 5 10 Feet

DECEMBER 2024

DWG: JA-312-TELECOM



A / JA-110 — 24" PROFILE

SCALE: 1" = 10'

Turner ECRUZ
ARCADIS

BATTERY PARK CITY AUTHORITY
NORTH / WEST BATTERY PARK CITY RESILIENCY
HUDSON RIVER
BOROUGH OF MANHATTAN, NEW YORK

PROFILE OF PROPOSED
24" STORM OUTFALL
AREA 10 - REACH 4

0 10 20 Feet

DECEMBER 2024

DWG: JA-323 CAUTLIGHT