



# 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-2018-01090-EBR  
Issue Date: August 30, 2018  
Expiration Date: October 1, 2018

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).

APPLICANT: Metropolitan Transit Authority New York City Transit  
2 Broadway  
New York, NY 10004

WATERWAY: East River

LOCATION: Seaward of the existing Empire Pier, between North 5th and North 6th Streets,  
Borough of Brooklyn, Kings County, City of New York, New York

ACTIVITY: Installation of a temporary ferry landing

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

Comments submitted in response to this notice will be fully considered during the public interest review for this permit application. Comments provided will become part of the public record for this

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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 mail 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 adversely 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 applicant has completed consultation with the appropriate Federal agency to determine the presence of and potential impacts to listed species in the project area or their critical habitat and conservation recommendations have been provided to this office which will be considered as part of the final decision.

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, noise and vibrations during construction. 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. However, the applicant has completed consultation with NOAA/FS regarding EFH impacts and NOAA/FS has provided conservation recommendations to this office which will be considered as part of the final decision.

Based upon a review of the latest published version of the National Register of Historic Places, there are no known sites eligible for, or included in, the Register within the permit area. Presently unknown archeological, scientific, prehistorical, or historical data may be lost by work accomplished under the required permit.

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.

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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
- New York State Department of State

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. If you have any questions concerning this application, you may contact this office at (917) 790-8516 and ask for William Bruno.

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

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



**For and In behalf of**

Stephan A. Ryba  
Chief, Regulatory Branch

Enclosures

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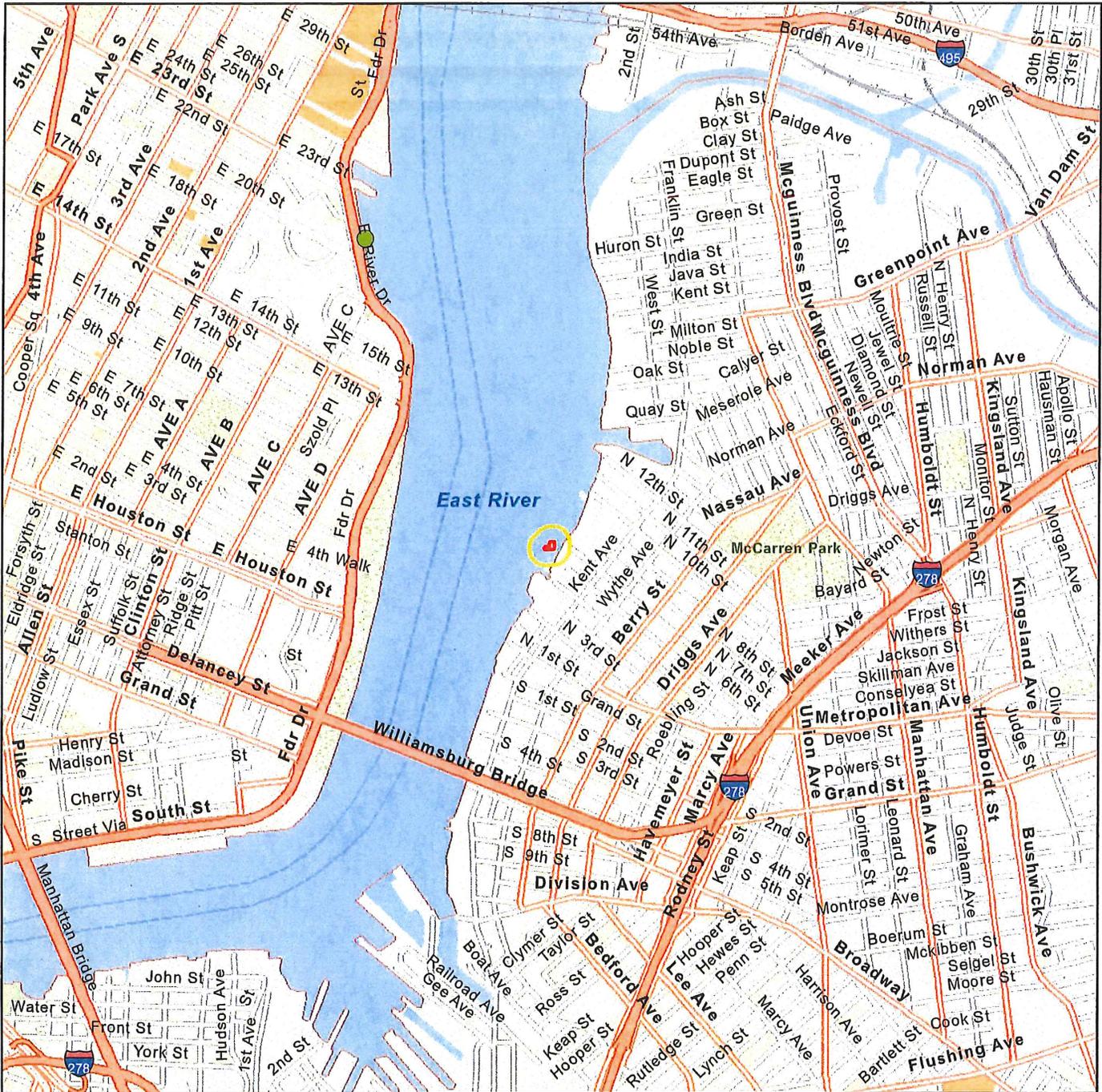
**WORK DESCRIPTION**

The applicant, Metropolitan Transit Authority New York City Transit, has requested Department of the Army authorization to install a temporary ferry landing. The project is located in the East River seaward of the existing Empire Pier, between North 5th and North 6th Streets, Borough of Brooklyn, Kings County, City of New York, New York.

The applicant proposes, approximately 57 feet from the terminus of the north side of the existing Empire Pier, the installation of a trapezoid-shaped fixed access platform, 18-foot-wide by 6-foot-long on the south side of the fixed access platform and 17-foot-long on the north side fixed access platform, supported by four (4) 16-inch-diameter steel piles leading to a 10-foot-wide by 80-foot-long gangway and a 35-foot-wide by 120-foot-long floating ferry landing, supported by six (6) 36-inch-diameter steel anchor piles. Also proposed are four (4) 36-inch-diameter steel donut fender piles.

The proposed ferry landing is to be installed between January 1, 2019 and February 28, 2019 and removed by July 31, 2020.

The stated purpose of this project is to provide an alternative public transit option for commuters between the Boroughs of Brooklyn and Manhattan during the proposed shutdown of the Canarsie Tunnels which the L-subway line runs through.



**Legend**

- Proposed Temporary Ferry Landing
- Project Action Area
- Stuvesant Cove, Manhattan - Service Connection



**Figure**  
**Site Location Map**

MTA New York City Transit  
Canarsie Tunnel Rehabilitation Project  
North Williamsburg Temporary Ferry Landing  
North Williamsburg, Brooklyn  
Kings County, New York

ASGECI Project # 4303

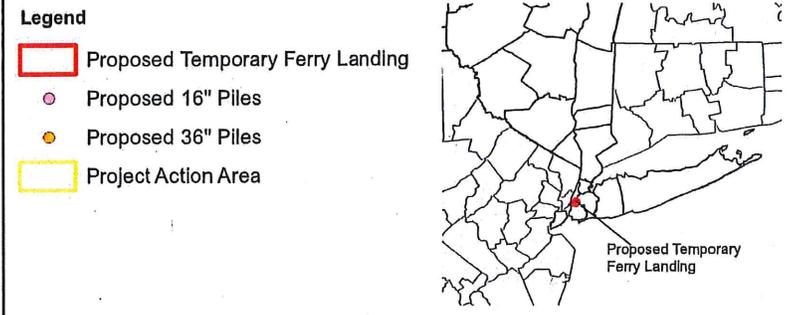
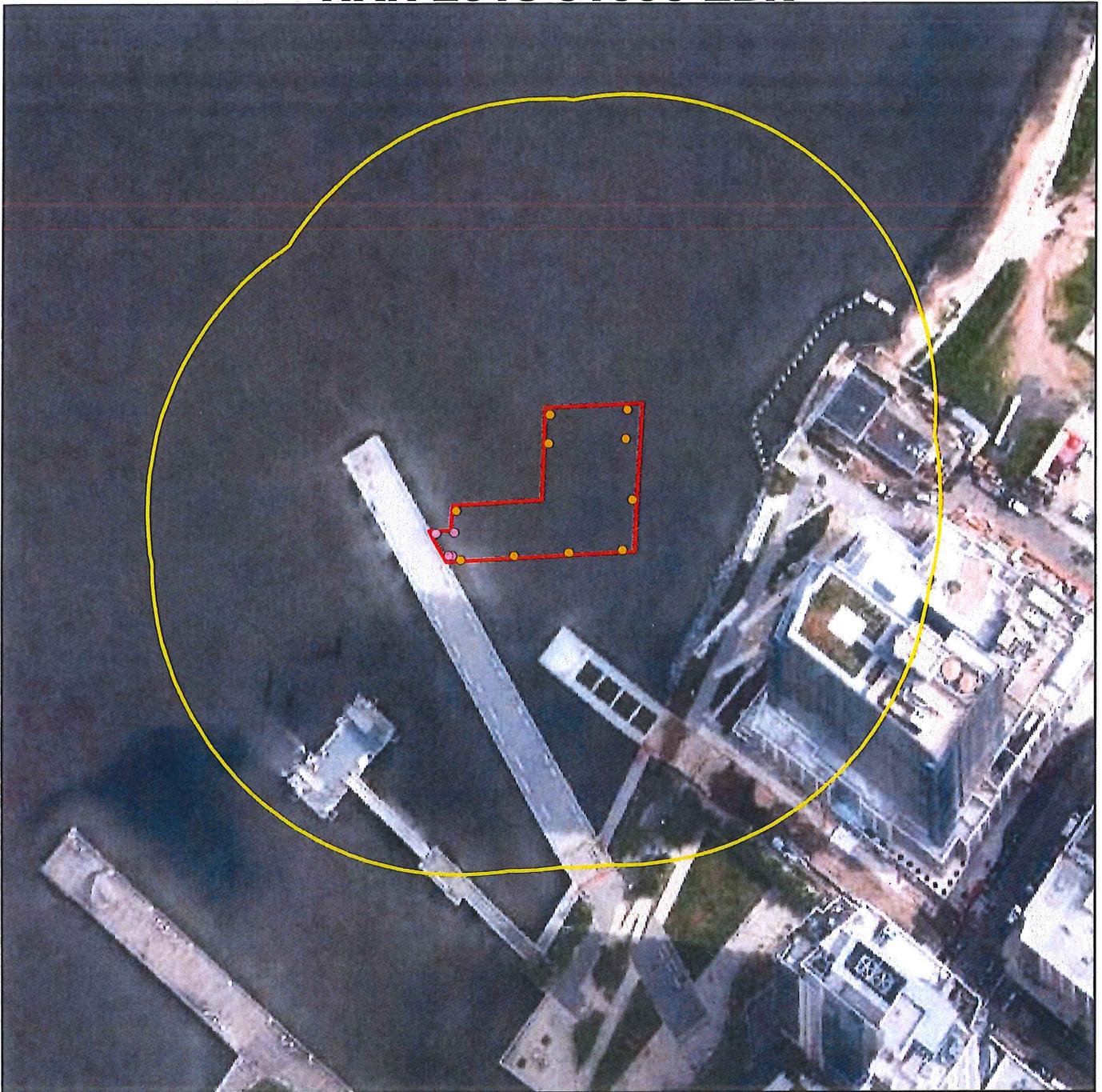
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Feet

**AMY S. GREENE**  
**ENVIRONMENTAL**  
**CONSULTANTS, LLC**

Sources:  
Proposed Temporary Ferry Landing provided by New York City Transit Authority,  
Preliminary Proposed Ferry Landing Plan, Sheet FL-2 (Figure 2 Plan), April 13, 2018.  
ESRI Street Map North America, Tele Atlas North America, Inc.,  
published by ESRI® Data & Maps, Redlands, California, 2010.



**Sources:**  
 Proposed Temporary Ferry Landing and Proposed Piles provided by New York City Transit Authority, Preliminary Proposed Ferry Landing Plan, Sheet FL-2 (Figure 2 Plan), April 13, 2018.  
 2016 Imagery in Kings County, NY Statewide Digital Orthoimagery Program (NYS DOP) Imagery Coverage, Statewide Web Map Service Regional Coverage from 2000 to 2016, NYS Division of Homeland Security and Emergency Services (DHSES), NYS Cyber Security, distributed 2017.

Figure  
Aerial Map

MTA New York City Transit  
 Canarsie Tunnel Rehabilitation Project  
 North Williamsburg Temporary Ferry Landing  
 North Williamsburg, Brooklyn  
 Kings County, New York

ASGECI Project # 4303

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Feet

**AMY S. GREENE  
 ENVIRONMENTAL  
 CONSULTANTS.**

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- DESIGN CRITERIA:**
- DESIGN INTENT:** THE DESIGN AND CONSTRUCTION FOR THE TEMPORARY FERRY LANDING AND PILE FOUNDATION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OUTLINED BELOW.
  - BUILDING CODES:** THE DESIGN SHALL BE PERFORMED IN ACCORDANCE WITH THE 2016 NEW YORK CITY BUILDING CODE. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THIS CODE AND LOCAL REQUIREMENTS.
  - SERVICE CONDITION:** DENOTES THE MAXIMUM ALLOWABLE ENVIRONMENTAL CONDITIONS WITHIN WHICH THE STRUCTURE IS DESIGNED TO OPERATE. FACTOR OF SAFETY IN ACCORDANCE WITH CODE.
  - SEISMIC CONDITION:** DENOTES THE MAXIMUM ALLOWABLE ENVIRONMENTAL CONDITIONS WITHIN WHICH THE STRUCTURE IS DESIGNED TO MAINTAIN ITS STRUCTURAL INTEGRITY. FACTOR OF SAFETY = 1.15 AGAINST YIELD OF STEEL OR FAILURE OF CONCRETE.
  - WALKWAY CIVILIAN FERRY SERVICES – STRUCTURAL DESIGN CRITERIA – NOVEMBER 2016**
  - DESIGN LOADS:**
    - LIVE LOADS:**
      - LIVE LOAD ON PEDESTRIAN PLATFORMS.
      - PIER DECK, AND MARINE STRUCTURES = 100 PSF
      - SUPERIMPOSED DEAD LOAD = 15 PSF
      - WIND LOADS (ASCE 7-10)
        - WIND SPEED = 98 MPH (PER NYC BUILDING CODE)
        - FORCE COEFFICIENT = 0.8 (EXPOSURE C)
        - IMPORTANCE FACTOR = 1.0
        - GUST EFFECT FACTOR = 0.85
    - WATER LEVEL ANALYSIS:**
      - FEMA BASE FLOOD ELEVATION = 15 FT (NAVD83)
      - DESIGN STILL WATER ELEVATION = 11.55 FT (BHO) PRELIMINARY FIRM
      - DESIGN STILL WATER ELEVATION = 9.00 FT (NAVD83)
      - DESIGN STILL WATER ELEVATION = [8.15 FT (BHO) 2013 PRELIMINARY FIS]
    - WAVE ANALYSIS:**
      - SERVICE DESIGN WAVE HEIGHT = 2.0 FT
      - SERVICE DESIGN WAVE PERIOD = 2 TO 3 SECONDS
      - DESIGN EVENT WAVE HEIGHT = 4.2 FT
      - DESIGN EVENT WAVE PERIOD = 3.2 SECONDS
      - DESIGN WAVE = H<sub>s</sub>
    - F. FERRY LANDING ANALYSIS:**
      - DESIGN VESSEL DISPLACEMENT = 56 TONS
      - BERTHING VELOCITY = 1.5 KNOTS
      - IMPACT VELOCITY = 4.0 KNOTS
    - G. HANDRAILS DESIGNED FOR EMERGENCY IMPACT LOADING, FOR PROTECTION OF VESSEL AND TERMINAL STRUCTURE, NOT INTENDED AS MOORING STRUCTURES.**

- GENERAL NOTES:**
- THE OPERATOR IS RESPONSIBLE FOR ENSURING ALL WORK CONFORMS WITH ALL FEDERAL, STATE, COUNTY OR LOCAL CODES HAVING JURISDICTION OVER SUCH WORK.
  - OPERATOR IS SOLELY RESPONSIBLE FOR MEANS, METHODS, AND SAFETY OF WORK.
  - DIMENSIONS SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM CLIENT PROVIDED DRAWINGS AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. ACCORDINGLY, THE OPERATOR WILL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURES IMPACTED BY THE NEW WORK TO ASSURE CONSISTENCY WITH THE PROPOSED CONSTRUCTION PLANS THAT IS THE OPERATOR SHALL VERIFY ACTUAL CONDITIONS, DIMENSIONS, CLEARANCES, ELEVATIONS, AND OTHER INFORMATION INDICATED IN THE DOCUMENTS PRIOR TO ORDERING ANY MATERIALS, COMMENCING ANY FABRICATIONS, OR PERFORMING ANY WORK. THE OPERATOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF ANY FIELD CONDITIONS WHICH MAY DIFFER FROM THAT REPRESENTED PRIOR TO COMMENCING WORK.
  - PRIOR TO COMMENCING WORK, THE OPERATOR SHALL VISIT THE SITE AND SHALL IDENTIFY ANY UTILITIES, STRUCTURES, OR ANY OTHER ELEMENTS WHICH MAY IMPERE WORK, UTILITY AND/OR STRUCTURE RELOCATION. IF NECESSARY, SHALL BE COORDINATED THROUGH THE OWNERS REPRESENTATIVE AT NO ADDITIONAL COST.
  - PRIOR TO COMMENCING ANY WORK, THE OPERATOR SHALL SCHEDULE AND COORDINATE ALL WORK THROUGH THE OWNERS REPRESENTATIVE AND ANY OTHER CONSTRUCTION OPERATIONS THAT MAY BE AFFECTED BY THE PROJECT. THE OPERATOR SHALL COORDINATE THE WORK SO AS TO MINIMIZE INTERRUPTIONS IN FACILITY OPERATIONS. ACCESS AND EGRESS.
  - THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND SAFETY PROCEDURES TO ENSURE PERSONNEL HEALTH AND SAFETY. THE OPERATOR MUST MAINTAIN A SAFE AND CLEAN WORK ENVIRONMENT AND SHALL ASSURE PROPER PERSONAL PROTECTIVE EQUIPMENT IS WORN AT ALL TIMES. IN AREAS WHERE PEDESTRIAN AND/OR VEHICULAR TRAFFIC MAY BE AFFECTED BY THE WORK, THE OPERATOR SHALL CORON OFF THE WORK AREA.
  - THE OPERATOR IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH THE TERMS AND CONDITIONS OF ALL PERMITS ISSUED BY ANY REGULATING AGENCY HAVING JURISDICTION OVER THE WORK OF THIS PROJECT.
  - THE OPERATOR SHALL EXERCISE EXTREME CARE TO PREVENT DAMAGE TO EXISTING STRUCTURES BY OR AS A RESULT OF HIS OPERATIONS. ANY DAMAGE RESULTING FROM THE OPERATOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST.
  - ALL DEBRIS AS A RESULT OF, OR IN THE IMMEDIATE VICINITY OF THE WORK SHALL BE RECOVERED AND PROPERLY DISPOSED OF BY THE OPERATOR AT NO ADDITIONAL COST.
  - THE OPERATOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ALL CONSTRUCTION DEBRIS OR WASTE FROM FALLING INTO THE WATER. ANY DEBRIS FALLING INTO THE WATER SHALL BE RECOVERED AND PROPERLY DISPOSED.
  - OPERATOR'S STORAGE AREA: DUE TO THE SITE'S WATERFRONT LOCATION, ALL NECESSARY MEASURES SHALL BE TAKEN TO PREVENT ANY BY METHOD, OIL, CONSTRUCTION DEBRIS, STOCKPILED MATERIALS, AND OTHER MATERIALS ON THE SITE, FROM ENTERING THE WATERWAY, STAGING/LAYDOWN AREAS, AS APPROVED BY THE OWNER'S REPRESENTATIVE. SHALL BE RESTORED BY THE OPERATOR TO THE EXISTING CONDITION. IN ADDITION, THE OPERATOR SHALL REPLACE ALL DAMAGED MATERIALS AS A RESULT OF HIS OPERATIONS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
  - OPERATOR SHALL COORDINATE AND STAGE WORK, LAY DOWN, AND STORAGE AREA LOCATIONS AND ACCESS WITH OWNER PRIOR TO START OF WORK.
  - IT IS THE OPERATOR'S RESPONSIBILITY TO VERIFY, COORDINATE AND STAGE OR SEQUENCE HIS WORK WITH ANY OTHER PLANNED OR ONGOING CONSTRUCTION ACTIVITIES AT THE SITE.
  - ALL CONSTRUCTION AND RELATED ACTIVITIES SHALL BE CONDUCTED DURING NORMAL DAYTIME WORKING HOURS.

- SUBMITTALS:**
- THE OPERATOR SHALL SUPPLY ALL SUBMITTALS STATED BELOW AND LISTED IN THE PROJECT SPECIFICATIONS.
- SHOP DRAWINGS/ERECTOR DRAWINGS:**
    - PILE PLAN W/ IDENTIFICATION OF TEST PILES
    - DETAIL PLAN OF EQUIPMENT AND PROCEDURES FOR PILE DRIVING AND TESTING
    - ACCESS PLATFORM DRAWINGS
  - PRODUCT DATA:**
    - DRIVING SYSTEM
    - GRATING
  - TESTING RESULTS:**
    - STONE GRADATION
    - STONE MATERIAL
  - CERTIFICATES:**
    - LABORATORY SPECIFICATION
    - STEEL SHAPE MILL CERTIFICATES
    - STEEL PIPE PILE MILL CERTIFICATES
    - WELDERS AWS CERTIFICATES
    - CONCRETE ADMIXTURES FROM THE MANUFACTURER.

- DELIVERY, STORAGE AND HANDLING:**
- DELIVER MATERIALS TO THE CONSTRUCTION SITE AT APPROPRIATE INTERVALS SO AS TO ENSURE UNINTERRUPTED PROGRESS OF WORK.
  - MATERIALS SHALL BE STORED OFFSITE IN AN AREA DESIGNATED OR APPROVED BY THE OWNER. STRUCTURAL STEEL SHALL BE DRAINED PROPERLY, ADEQUATE DRAINING AND PROTECTION SHALL BE PROVIDED TO PREVENT DISTORTION AND OTHER DAMAGE. STRUCTURAL STEEL SHALL BE STORED ON TIMBER AND NOT ON WOOD CRACKERS, AND OTHERWISE HANDLED SO AS NOT TO DAMAGE SHOP PAINT. ALL SECTIONS WHICH ARE TO BE PLACED IN GROUND STORAGE SHALL BE READILY ACCESSIBLE FOR INSPECTION.
  - MATERIALS WHICH FAIL TO COMPLY WITH SPECIFIED REQUIREMENTS, EITHER AT THE SHOP OR CONSTRUCTION SITE, SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH A LIKE QUALITY MATERIAL, WITHOUT ADDITIONAL COST TO THE OWNER, AND WITHOUT CAUSING DELAY IN WORK.

- SURFACE PREPARATIONS:**
- SURFACE PREPARATION AND PAINTING OF STEEL SURFACES AND WELDS SHALL BE ACCORDING TO THE REQUIREMENTS OF SSPC AND FOLLOWING NOTES.
  - THE ENTIRE SURFACE PREPARATION AND PAINTING, WHETHER THE LOCATION OF THE WORK IS IN THE SHOP OR FIELD, SHALL MEET THE REQUIREMENTS OF SSPC AND NOTES.
  - PREPARE ALL STEEL SURFACES TO BE PAINTED BY ABRAISIVE BLASTING IN ACCORDANCE WITH SSPC-SP10 USING EXPOSURE BLAST MEDIA.
  - PROVIDE A SHARP, ANGULAR, UNIFORM ANCHOR PATTERN WITH A PROFILE HEIGHT OF 2-3 MILS. UNLESS THE REQUIREMENTS OF THE COATING MANUFACTURER ARE MORE RESTRICTIVE. PEAK COUNTS PER SQUARE INCH SHALL BE 80 OR GREATER WHEN TESTED IN ACCORDANCE WITH ASTM A413, METHOD C.

- STEEL:**
- PILE SHALL BE DRIVEN IN THE PRESENCE OF A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF NEW YORK, ELONG PER FOOT, PILE ENERGY AND DEPTH OF PILE SHALL BE RECORDED AND QUANTIFIED TO THE OWNER AND ENGINEER OF RECORD (EOR) BY THE SUPERVISOR AND PROFESSIONAL ENGINEER. PILES SHALL NOT BE CUT OFF UNTIL THE EOR HAS DETERMINED THAT FURTHER RESTRIKING OR DRIVING WILL NOT BE REQUIRED.
  - MAXIMUM ALLOWABLE DEVIATION FOR PILES SHALL BE THREE (3) INCHES IN ANY DIRECTION AT THE CUT-OFF ELEVATION. OPERATOR SHALL PROVIDE SERVICE OF "AS-BUILT" PILE LOCATIONS INDICATING NORTH-SOUTH AND EAST-WEST OF THE CENTERLINE DIMENSIONS FROM THE THEORETICAL PILE CENTERLINE. PILES WHICH ARE OUT OF TOLERANCE OR DO NOT ACHIEVE THE REQUIRED STRENGTH WILL BE SUBJECT TO RESECTION. THE ENGINEERING COSTS OF THE RESECTION, ADDITIONAL PILES AND ADDITIONAL PILE CAP COST SHALL BE BORNE BY THE OPERATOR.
  - STEEL PIPE PILES SHALL HAVE MAXIMUM SWEEP OF 1/2" OVER THE LENGTH AS DELIVERED ON SITE.
  - IF REFUSAL OR ANY OBSTRUCTIONS ARE ENCOUNTERED PRIOR TO REACHING THE REQUIRED MINIMUM ALLOWABLE CAPACITY AND EMBEDMENT, NOTIFY ENGINEER IMMEDIATELY.
  - ACCESS PLATFORM PILES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
    - STEEL PIPE PILES SHALL BE MINIMUM 16" DIAMETER WITH 1/4" THICK WALLS AND CONFORM TO A552 OR 3 (MIN Fy=45 ksi) OR APPROVED EQUAL. PILES SHALL BE RECORDED AND QUANTIFIED TO THE OWNER AND ENGINEER OF RECORD (EOR) BY THE SUPERVISOR AND PROFESSIONAL ENGINEER. PILES SHALL NOT BE CUT OFF UNTIL THE EOR HAS DETERMINED THAT FURTHER RESTRIKING OR DRIVING WILL NOT BE REQUIRED.
    - ACCESS PLATFORM STEEL PIPE PILES SHALL BE DRIVEN TO AN ALLOWABLE AXIAL CAPACITY AND TO A MINIMUM TIP EMBEDMENT DETERMINED BY THE OPERATOR.
    - A MINIMUM OF TWO (2) ACCESS PLATFORM TEST PILES SHALL BE DRIVEN THROUGH INTERRUPTION. TEST PILES SHALL BE PRODUCTION PILES IN WHICH A PILE DRIVING ANALYSIS (PDA) OR APPROVED EQUAL ANALYSIS SHALL BE PERFORMED.
    - ACCESS PLATFORM PILES SHALL BE DRIVEN WITH THE SAME HAMMER AND DRIVING SYSTEM (INCLUDING CUSHION TYPE AND THICKNESS) AS USED FOR THE PDA TESTING. IF A DIFFERENT HAMMER OR DRIVING SYSTEM IS USED, CONDUCT PDA TESTING TO DEMONSTRATE THE PERFORMANCE OF THE NEW HAMMER AND ITS ABILITY TO SUCCESSFULLY INSTALL THE PILE TO THE REQUIRED DEPTH AND DRIVING RESISTANCE.
    - THE FINAL PRODUCTION PILE DRIVING CRITERIA INCLUDING MINIMUM PILE TIP ELEVATION AND DRIVING RESISTANCE SHALL BE PROVIDED BY THE OPERATOR BASED ON PDA TESTING.
  - FERRY LANDING PILES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
    - FERRY LANDING AND FENDER PILES SHALL BE MINIMUM 16" DIAMETER OPEN-ENDED STEEL PIPE PILE WITH 1/4" MINIMUM THICK WALLS AND CONFORM TO A552 OR 3 (MIN Fy=45 ksi) OR APPROVED EQUAL.
    - FERRY LANDING PLATFORM ANCHOR PILES AND FENDER PILES SHALL BE DRIVEN BY OPERATOR TO A MINIMUM SPECIFIED EMBEDMENT.
    - MINIMUM PILE EMBEDMENT DEPTH SHALL BE PROVIDED BY OPERATOR.
  - THE CONNECTION OF PILE SECTIONS SHALL DEVELOP THE FULL BEARING CAPACITY OF THE PILE. PILE SPLICES SHALL BE COMPLETED WITH PREQUALIFIED COMPLETE JOINT PENETRATION (CJP) JOINTS. OPERATOR TO PROVIDE AND SUBMIT CONNECTION DETAILS AND MATERIAL SPECIFICATIONS AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK FOR APPROVAL.
  - STEEL PIPE PILES SHALL BE SHOP PAINTED WITH TWO (2) COATS OF THINCO HI-BUILD THEME TAR SERIES-400-113 POLYAMINE EPOXY-COAL TAR OR APPROVED EQUAL PRIOR TO DRIVING. STEEL SURFACE SHALL BE PREPARED IN ACCORDANCE WITH SSPC SP10 NEAR WHITE BLAST CLEANING, TOUCH UP ABRASID AND DAMAGED AREAS IN THE FIELD IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. MINIMUM DRY FILM THICKNESS PER COAT = 8.0 MILS. PIPE PILES SHALL BE COATED FROM APPROXIMATELY 15 FT BELOW WATERLINE TO TOP OF PILE.
  - STEAM, PNEUMATIC, DIESEL, OR VIBRATORY HAMMER MAY BE USED TO DRIVE ALL PILING. ANY MATERIAL WHICH STOPS THE DRIVING INCLUDING EXISTING FILE STUDS SHALL BE REMOVED BY THE OPERATOR.

- INSTRUMENTATION MONITORING AND OBSERVATIONS:**
- OPERATOR ATTENTION IS DIRECTED TO THE IMPORTANCE OF MONITORING AND PROTECTION OF EXISTING CANALSIE TUNNELS AND ANY NEARBY STRUCTURE THAT IS IDENTIFIED BY OWNER OR ENGINEER AS SENSITIVE TO DISTURBANCE.
  - OPERATOR TO COORDINATE WITH NYCT OUTSIDE SUBJECTS PRIOR TO COMMENCING ANY PILE DRIVING OPERATIONS. NYCT TO BE PROVIDED FINAL PILE AND BARGE LAYOUT PLAN.
  - OPERATOR TO PROVIDE INSTRUMENTATION AND MONITORING PLAN FOR CANALSIE LINE TUNNELS TO NYCT FOR APPROVAL. VELOCITY MEASURES ARE TO BE INSTALLED IN THE SUBWAY TUNNEL AT CRITICAL LOCATIONS TO MONITOR INDUCED VIBRATIONS, INDUCED DISPLACEMENTS ALONG THE TUNNEL STRUCTURE AND TRACK. INSTRUMENT ARE TO BE MONITORED DURING DRIVING OR DRILLING. THE THRESHOLD MAXIMUM PERMISSIBLE VIBRATION AMPLITUDE CAUSED BY THE DRIVING OR DRILLING WILL BE 0.5 INCH PER SECOND. VALUES EXCEEDING THIS LEVEL WILL BE REVIEWED AND EVALUATED BY NYCT'S ENGINEER. IN NO CASE WILL PARTICLE VELOCITIES EXCEED THE UPSET LEVEL OF 2.0 INCHES PER SECOND.

- STEEL CONSTRUCTION SHALL CONFORM TO AISC "STEEL CONSTRUCTION MANUAL", NINTH EDITION, AND SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AS ADOPTED MARCH 7, 2002.**
- MATERIALS FOR STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
    - ROLLED SHAPES AND PLATES ASTM A992 THREADED RODS ASTM A36
  - GALVANIZING: WHEDE STEEL PRODUCTS ARE SPECIFIED TO BE GALVANIZED. THEY SHALL BE HOT-DIP GALVANIZED, AFTER FABRICATION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AND OTHER REQUIREMENTS LISTED BELOW.
    - SPECIFICATION FOR ZINC (HOT-GALVANIZED) COATINGS ON PRODUCTS FABRICATED FROM ROLLED, DRESSED AND FINISHED STEEL SHAPES, PLATES AND STRIP – ASTM A153.
    - SPECIFICATION FOR ZINC COATINGS (HOT-DIP GALVANIZED) ON IRON AND STEEL HARDWARE – ASTM A153.
    - SPECIFICATION FOR ZINC COATING (HOT-DIP) ON ASSEMBLED STEEL PRODUCTS – ASTM A318.
    - THE ZINC COATING SHALL WEIGH NOT LESS THAN 2 OUNCES PER SQUARE FOOT.
    - ZINC DUST-ZINC OXIDE PRIMER CONFORMING TO MILITARY SPECIFICATION MIL-P-21009 SHALL BE APPLIED IN 2 COATS FOR REPAIRS TO DAMAGED SURFACES AFTER REMOVAL OF LOOSE CRACKED ZINC COATING.
    - PRIOR TO GALVANIZING, ALL WELDED CONNECTIONS SHALL BE SEALED ALL AROUND WITH A SEAL WELD. SEALED CONNECTIONS SHALL NOT BE MADE PRIOR TO GALVANIZING.
  - STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH TWO (2) COATS OF THINCO HI-BUILD THEME TAR SERIES-400-113 POLYAMINE EPOXY-COAL TAR OR APPROVED EQUAL. STEEL SURFACE SHALL BE PREPARED IN ACCORDANCE WITH SSPC SP10 NEAR WHITE BLAST CLEANING, TOUCH-UP ABRASID AND DAMAGED AREAS IN THE FIELD IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. MINIMUM DRY FILM THICKNESS PER COAT = 8.0 MILS. MINIMUM DRY FILM THICKNESS TOTAL = 16.0 MILS.

- WELDS:**
- ALL WELDING AND FABRICATION SHALL CONFORM WITH THE AMERICAN WELDING SOCIETY (AWS) AND REQUIREMENTS AND GUIDELINES.
  - ALL WELDERS SHALL BE CERTIFIED BY AWS GUIDELINES.
  - UNLESS OTHERWISE INDICATED, ALL FILLET WELDS SHALL BE CONTINUOUS AND DOUBLED SIDED. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION WELDED JOINTS.
  - ALL WELDS SHALL BE SUBJECT TO NON DESTRUCTIVE TESTING AT THE DISCRETION OF THE ENGINEER OF RECORD.
  - ALL ELECTRODES USED SHALL COMPLY WITH AWS OR AWS SPECIFICATION AND SHALL BE STORED IN ANHYDROGEN.
  - ANY DEFECTS SHALL BE CORRECTED IN ACCORDANCE WITH AWS RULES AT NO ADDITIONAL COST TO THE OWNER.
  - ALL PIPE PILE SPLICES SHALL BE COMPLETE JOINT PENETRATION GROOVE WELDS AND BE SUBJECT TO NON-DESTRUCTIVE TESTING.

- CONCRETE:**
- GRATING TO BE INSTALLED ACCORDING TO VERSA GRATE MANUFACTURER'S INSTRUCTIONS. STEEL CONNECTION COMPONENTS SHOULD BE NOT, DIP GALVANIZED.
- CONCRETE/MANUFACTURER COMPONENTS:**
- THESE COMPONENTS SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, UNLESS NOTED OTHERWISE.
  - OPERATOR MUST SUBMIT SHOP DRAWINGS, MANUFACTURER'S SPECIFICATIONS AND SIGNED AND SEALED CALCULATIONS FOR APPROVAL BY ENGINEER FOR ALL CONCRETE/MANUFACTURER'S COMPONENTS.
- NAVIGATIONAL LIGHTS:**
- NAVIGATIONAL LIGHTS SHALL BE SOLAR POWERED, WITH A 225 DEG. REMARKABLE FLASHING WHITE EVERY 4 SEC WITH A MINIMUM RANGE OF TWO NAUTICAL MILES AND FULLY ENCASED IN A WATERPROOF ENCLOSURE.
  - ALL NAVIGATIONAL LIGHTS SHALL CONFORM TO MARITIME PORT AUTHORITY (MPA) REGULATIONS.

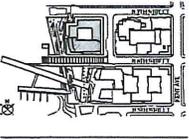
**ABBREVIATIONS:**

ADD'L	ADDITIONAL
ALT.	ALTERNATE
ARCH.	ARCHITECTURAL
APPROX.	APPROXIMATE OR APPROXIMATED
AVG.	AVERAGE
B OR BOT.	BOTTOM
BAL.	BALANCE
BM	BEAM
B.P.	BEARING PLATE
B.S.	BOTTOM OF SLAB
C	CADDER
C.G.	CENTER OF GRAVITY
C.I.P.	CAST IN PLACE
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONST.	CONSTRUCTION
C.S.	CONCRETE SLAB
DIA. OR Ø	DIAMETER
DWG.	DRAWING
DN(S)	DOWN(S)
EA.	EACH
EE.	EACH END
EP.	EACH FACE
EL. OR ELEV.	ELEVATION
EMBED.	EMBEDMENT
EQ.	EQUAL
EW.	EACH WAY
EXIST.	EXISTING
EXP. JT.	EXPANSION JOINT
FIN.	FINISH
FLR.	FLOOR
FLG.	FLANGE
FT OR '	FEET OR FOOT
GALV.	GALVANIZED
HOG	HOT DIP GALVANIZED
I.D.	INSIDE DIAMETER
IN OR "	INCH OR INCHES
LS.	LONG
MIN.	MINIMUM
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
PLATE	PLATE
S.	STAINLESS STEEL
THK.	THICK
T.O.S.	TOP OF SLAB
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
W/	WITH
WSE	WATER SURFACE ELEVATION

**TIDAL DATA**

	1447	160209	160208	BHO
HIGHEST OBSERVED-HURRICANE SANDY (OBSERVED LOCAL TIME 2013)	4.64	12.37	11.27	8.82
NAVD83	5.55	3.28	2.28	16.53
MHW	4.73	3.06	1.46	9.81
BHO, EPOCH 1/16 MHW/MSL DATUM	4.62	2.517	1.45	0
NAVD83	2.77	1.96	0	-14.55
MFL	2.37	0.99	-0.23	-10.55
MSL	2.53	0.86	-0.24	-10.60
MFL	2.47	0.85	-0.30	-11.75
NOV2005	1.87	0	-1.10	-13.55
MHW	1.20	-1.47	-2.57	-14.02
MFL	0	-1.67	-2.77	-14.22
LOWEST OBSERVED (1/1/76)	-4.20	-5.26	-7.06	18.81

- NOTES:**
- TIDAL DATA TAKEN FROM NOAA TIDAL LEVEL BENCHMARKS AT THE BATTERY, NY – STATION 8518750 (PRESENT EPOCH 1983-2001).
  - ELEVATIONS SHOWN IN FEET.



30 % DESIGN

**New York City Transit Authority**

**WSP - PARSONS BRINCKERHOFF**  
 Structural Engineering  
 110 West 30th St  
 New York, NY 10019  
 (212) 465-2000

**North Williamsburg Temporary Ferry Landing Canarsie Tunnel Rehabilitation**

**GENERAL NOTES**

**REVISIONS**

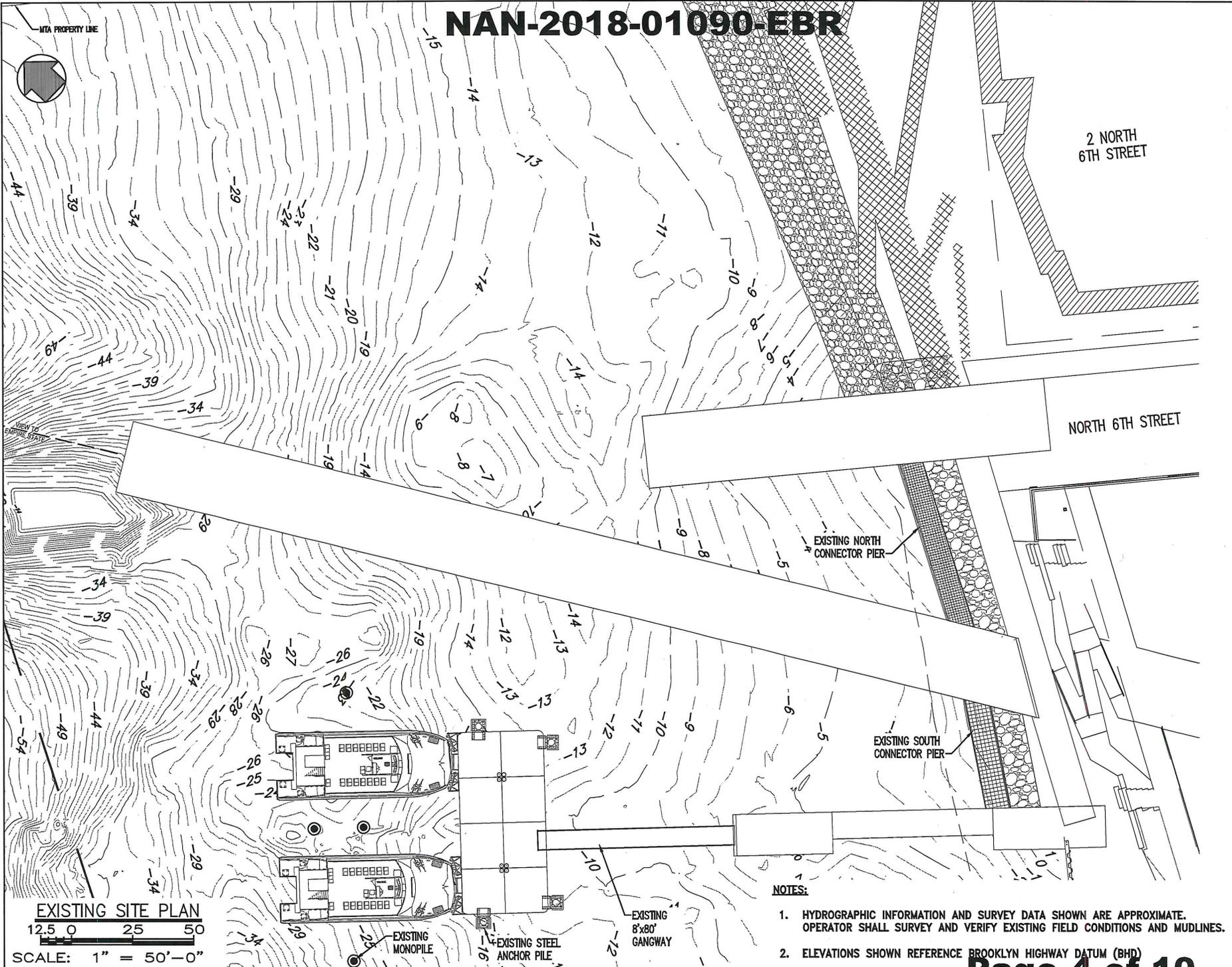
NO.	DATE	DESCRIPTION

**DATE PLOTTED:**

**SCALE:**

**G - 1**

# NAN-2018-01090-EBR



**EXISTING SITE PLAN**

12.5 0 25 50

SCALE: 1" = 50'-0"

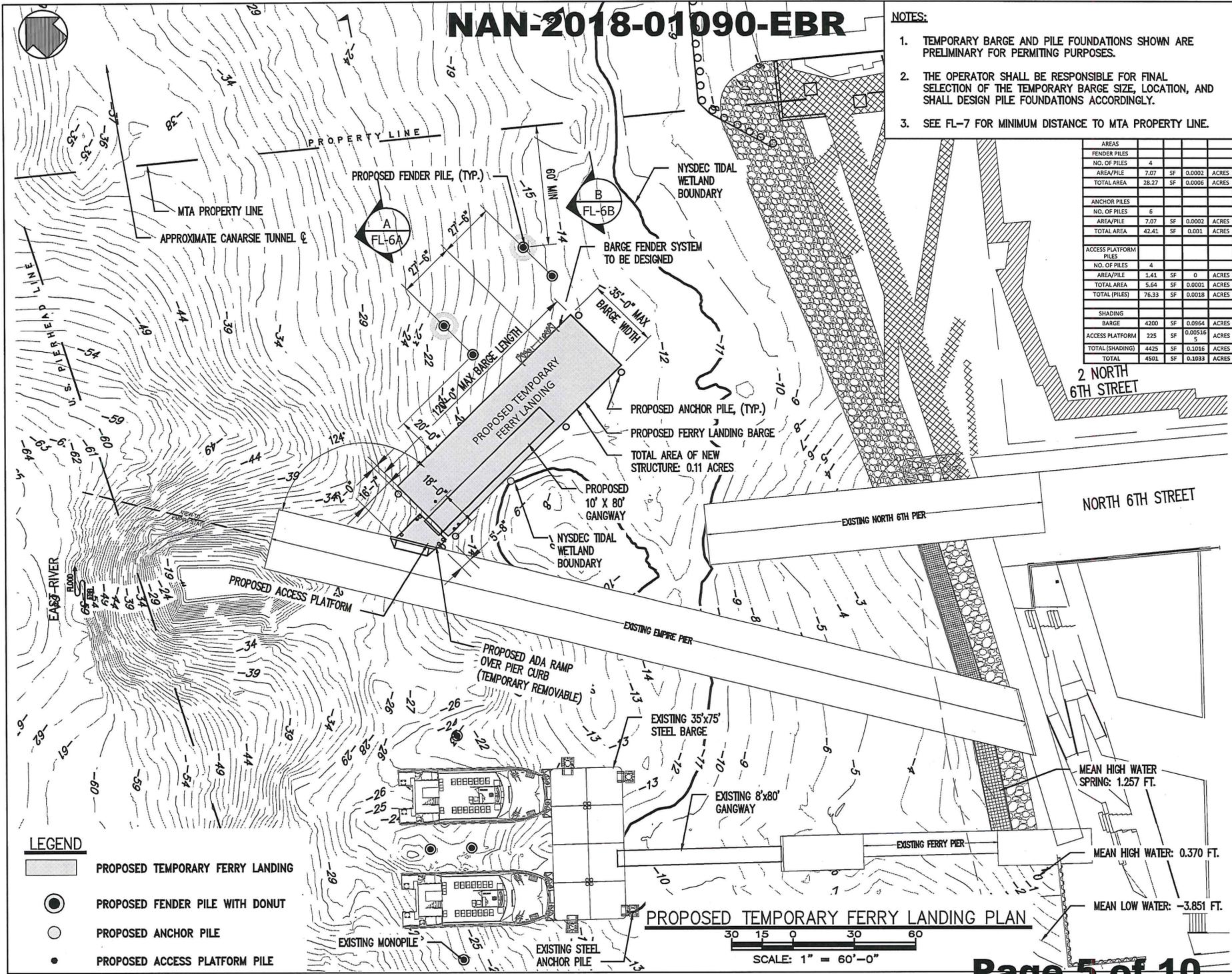
**NOTES:**

1. HYDROGRAPHIC INFORMATION AND SURVEY DATA SHOWN ARE APPROXIMATE. OPERATOR SHALL SURVEY AND VERIFY EXISTING FIELD CONDITIONS AND MUDLINES.
2. ELEVATIONS SHOWN REFERENCE BROOKLYN HIGHWAY DATUM (BHD)

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**NOTES:**

1. TEMPORARY BARGE AND PILE FOUNDATIONS SHOWN ARE PRELIMINARY FOR PERMITTING PURPOSES.
2. THE OPERATOR SHALL BE RESPONSIBLE FOR FINAL SELECTION OF THE TEMPORARY BARGE SIZE, LOCATION, AND SHALL DESIGN PILE FOUNDATIONS ACCORDINGLY.
3. SEE FL-7 FOR MINIMUM DISTANCE TO MTA PROPERTY LINE.



AREAS			
<b>FENDER PILES</b>			
NO. OF PILES	4		
AREA/PILE	7.07	SF	0.0002 ACRES
TOTAL AREA	28.27	SF	0.0006 ACRES
<b>ANCHOR PILES</b>			
NO. OF PILES	6		
AREA/PILE	7.07	SF	0.0002 ACRES
TOTAL AREA	42.41	SF	0.001 ACRES
<b>ACCESS PLATFORM PILES</b>			
NO. OF PILES	4		
AREA/PILE	1.41	SF	0 ACRES
TOTAL AREA	5.64	SF	0.0001 ACRES
TOTAL (PILES)	76.33	SF	0.0018 ACRES
<b>SHADING</b>			
BARGE	4200	SF	0.0954 ACRES
ACCESS PLATFORM	225	SF	0.00516 ACRES
TOTAL (SHADING)	4425	SF	0.1016 ACRES
TOTAL	4501	SF	0.1033 ACRES

**LEGEND**

	PROPOSED TEMPORARY FERRY LANDING
	PROPOSED FENDER PILE WITH DONUT
	PROPOSED ANCHOR PILE
	PROPOSED ACCESS PLATFORM PILE

2 NORTH 6TH STREET

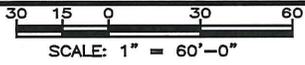
NORTH 6TH STREET

MEAN HIGH WATER SPRING: 1.257 FT.

MEAN HIGH WATER: 0.370 FT.

MEAN LOW WATER: -3.851 FT.

PROPOSED TEMPORARY FERRY LANDING PLAN



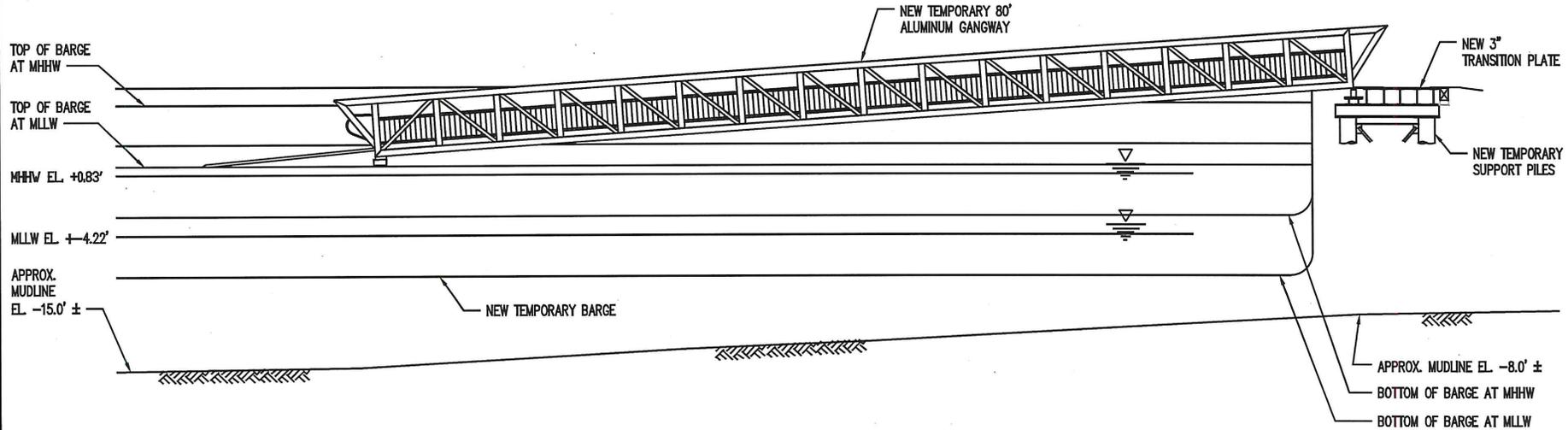
FL-3

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Transit Authority

Canarsie Tunnel Rehabilitation Project North  
Williamsburg Temporary Ferry Landing

PROPOSED TEMP. FERRY LANDING PLAN

# NAN-2018-01090-EBR



## RANGE OF MOTION

SCALE:  $\frac{3}{32}'' = 1'-0''$

GANGWAY SLOPE	
MHHW	0.0178 FT/FT
MLLW	0.0754 FT/FT

TIDAL DATA				
	MLLW	NGVD29	NAVD88	BHD
HIGHEST OBSERVED-HURRICANCE SANDY (10/30/2012, LOCAL TIME 21:24)	14.04	12.37	11.27	9.82
MHHW	5.05	3.38	2.28	0.83
MHW	4.75	3.06	1.96	0.51
BHD, BROOKLYN HIGHWAY DATUM	4.22	2.547	1.45	0
NAVD88	2.77	1.10	0	-1.45
MSL	2.57	0.90	-0.20	-1.65
DTL	2.53	0.86	-0.24	-1.69
MTL	2.47	0.80	-0.30	-1.75
NGVD29	1.67	0	-1.10	-2.55
MLW	0.20	-1.47	-2.57	-4.02
MLLW	0	-1.67	-2.77	-4.22
LOWEST OBSERVED (2/2/76)	-4.29	-5.96	-7.06	-8.51

### NOTES:

1. TIDAL DATA TAKEN FROM NOAA TIDAL LEVEL BENCHMARKS AT THE BATTERY, NY - STATION B518750 (PRESENT EPOCH 1983-2001).

2. ELEVATIONS SHOWN IN FEET.

### NOTES:

- ELEVATIONS SHOWN REFER TO BHD.
- BARGE DECK ELEMENTS AND ANCHOR PILES NOT SHOWN FOR CLARITY
- THE OPERATOR SHALL BE RESPONSIBLE FOR SELECTION OF TEMPORARY BARGE AND PROVIDE DESIGN ACCORDINGLY.

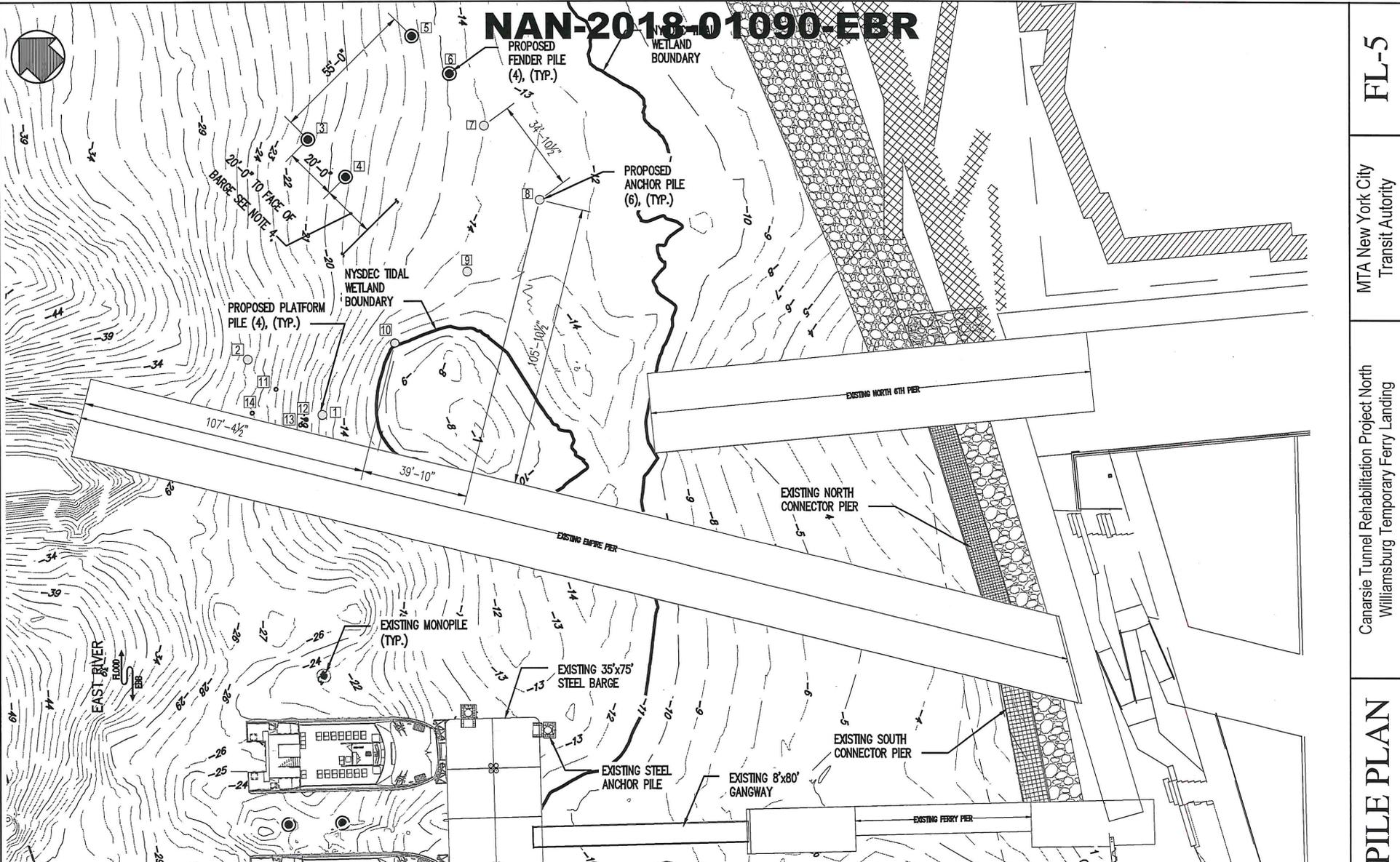
FL-4

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Canarsie Tunnel Rehabilitation Project North  
Williamsburg Temporary Ferry Landing

PRELIMINARY DETAIL

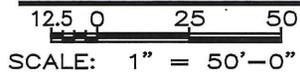
# NAN-2018-01090-EBR



## LEGEND

- 1 PILE NUMBER
- PROPOSED 36" (MIN.) x 3/4" (MIN.) WALL STEEL PIPE PILE WITH DONUT FENDER
- PROPOSED 36" (MIN.) x 3/4" (MIN.) WALL STEEL PIPE ANCHOR PILE
- PROPOSED 16" (MIN.) x 1/2" (MIN.) WALL STEEL PIPE ACCESS PLATFORM PILE

## PROPOSED PILE PLAN

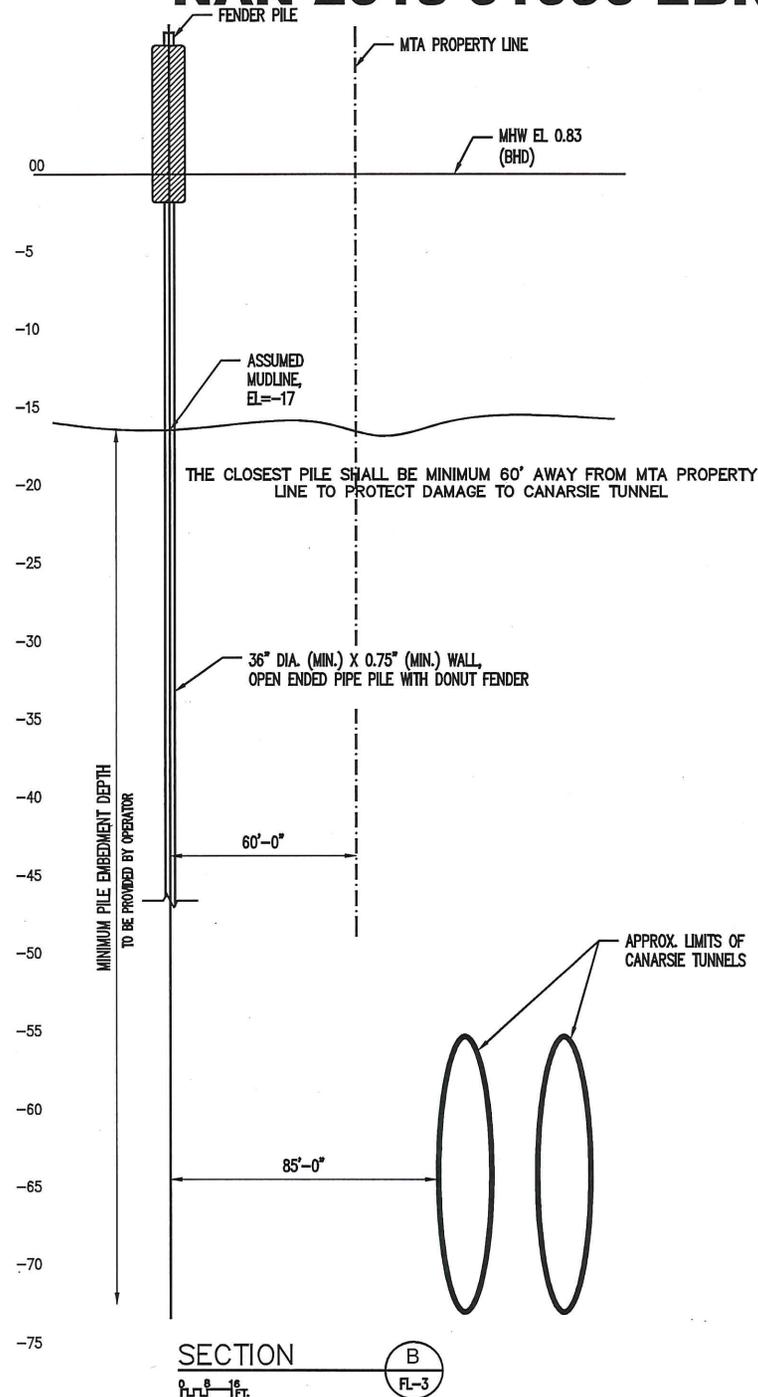


## NOTES:

1. ELEVATIONS SHOWN REFERENCE BROOKLYN HIGHWAY DATUM (BHD)
2. HYDROGRAPHIC INFORMATION AND SURVEY DATA SHOWN ARE APPROXIMATE. THE OPERATOR SHALL SURVEY AND VERIFY EXISTING CONDITIONS.
3. PILE CONFIGURATION SHOWN ON THIS DRAWING IS BASED ON A 120' X 35' BARGE WITH 4FT DRAFT AND 7FT FACEBOARD FOR PERMITTING PURPOSE.
4. LENGTH OF BARGE SELECTED WILL DETERMINE DIMENSION BETWEEN PILES. INSTALL PILES WITH 3 EQUAL SPACES FROM PILE C TO PILE C.
5. THE OPERATOR SHALL PERFORM SUBSURFACE INVESTIGATION AND SURVEY, NECESSARY FOR DESIGN OF PILE FOUNDATIONS.



# NAN-2018-01090-EBR



## NOTES:

1. THE PILE FOUNDATIONS SHOWN SHALL BE DESIGNED BY OPERATOR. THE OPERATOR SHALL PERFORM SUBSURFACE INVESTIGATION AND HYDROGRAPHIC SURVEY TO CONFIRM ACTUAL CONDITION BASED ON HIS SELECTION OF TEMPORARY BARGE LOCATION AND DIMENSIONS.
2. PILE CUTOFF ELEVATIONS FOR THE ANCHOR PILES AND MONOPILES SHALL PROVIDE FOR ADEQUATE CLEARANCE FOR THE BARGE AND FENDERS TO REMAIN IN PLACE DURING EXTREME STORM SURGES AND WEATHER EVENTS.

FL-6B

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Canarsie Tunnel Rehabilitation Project North  
Williamsburg Temporary Ferry Landing

PILE FOUNDATION SECTIONS



**Legend:**

-  Ferry Landings
-  Proposed Route

**Figure D-12**

PROJECT TITLE:  
CANARSIE FERRY  
PROPOSED FERRY ROUTE  
LOCATION MAP