PUBLIC NOTICE

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

In replying refer to:
Public Notice Number: **NAN-2022-00165-EBR**
Issue Date: November 22, 2022
Expiration Date: December 22, 2022

The New York District, of the U.S. Army 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: National Railroad Passenger Corporation (Amtrak)
Attn: David Trujillo Reyes
400 W 31st Street, 5th floor
New York, New York 10001

ACTIVITY: Submarine Cable Installation

WATERWAY: Harlem River

LOCATION: Spuyten Duyvil Bridge between the Boroughs of Manhattan and the Bronx, 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 William.Bruno@usace.army.mil BEFORE THE EXPIRATION DATE OF THIS NOTICE; otherwise, it will be presumed that there are no objections to the activity.

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

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

Any person may request, in writing, before this public notice expires, that a public hearing be held to collect information necessary to consider this application. Requests for public hearings shall state, with particularity, the reasons why a public hearing should be held. It should be noted that information submitted by 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 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 being conducted and will be concluded prior to the final decision.

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 received water quality certification New York State Department of Environmental Conservation, Permit ID 2-9902-00067/00015, with an effective date of August 15, 2022, in accordance with Section 401 of the Clean Water Act.

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. In a letter dated May 9, 2022, New York State Department of State issued a Coastal Zone Management Concurrence with Consistency Certification, F-2022-0110, for the proposed work.

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

*****PLEASE USE THE 18-CHARACTER FILE NUMBER ON ALL CORRESPONDENCE WITH THIS OFFICE*****

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 T. 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.

Rosita Miranda Date: 2022.09.22 17:28:41 -04'00'

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

Encl

*****PLEASE USE THE 18-CHARACTER FILE NUMBER ON ALL CORRESPONDENCE WITH THIS OFFICE*****

DESCRIPTION OF PROPOSED WORK

The applicant, National Railroad Passenger Corporation (Amtrak), has requested Department of the Army authorization for submarine cable installation activities in the Harlem River at the Spuyten Duyvil Bridge between the Boroughs of Manhattan and the Bronx, City of New York, New York.

The installation of a total of approximately 515-linear-feet of new submarine electrical power cables installed within three (3) HDPE ducts per channel crossing and temporarily overlain by concrete mattresses to hold the ducts underwater until backfill can be placed. Within the boundaries of the Federal Project, the cable ducts are proposed to be buried a minimum of 7-feet below the existing bottom conditions and 15-feet below the authorized depth of the Federal Project, as measured from the top of the cable ducts. Outside the boundaries of the Federal Project the cable ducts are proposed to be buried a minimum of 4-feet as measured from the top of the ducts. The ducts are proposed to be buried via trench excavation method and the excavated material is proposed to be removed and disposed at a state-approved upland facility. The excavated material is proposed to be replaced with clean gravel.

The temporary concrete mattresses are pre-fabricated and temporarily cover a total area of approximately 4,000 square feet. The top of the submarine cable ducts will be buried to a minimum elevation of 30-feet below MLLW. A total of approximately 1,590 cubic yards of dredged material will be excavated from an approximately 4,000 square foot area. The material will be de-watered and trucked to a state approved upland disposal site. A total of approximately 1,590 cubic yards of new gravel will placed in the excavated trench on top of the new cables. A total of one-hundred ten (110) HZ 18-inch-diameter king piles and one-hundred six (106) AZ sheet piles are proposed to be temporarily installed along the cable route for stabilization purposes. All existing temporary cables and structures will be removed.

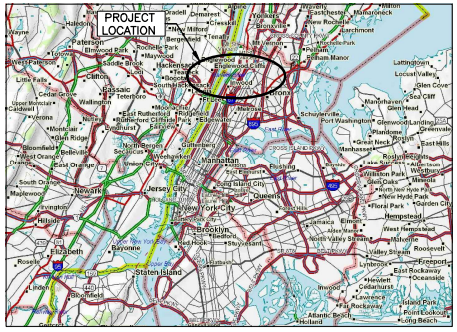
The applicant has stated they have avoided, minimized and mitigated for proposed impacts by minimizing the project area to the smallest area practicable.

The applicant’s stated purpose for this regulated work is to replace the existing deteriorated power supply for the existing swing bridge.

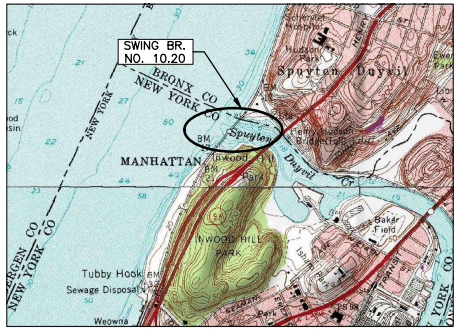
USACE FILE: NAN-2022-00165-EBR

Amtrak®

BRIDGE NO. 10.20
SPUYTEN DUYVIL SWING BRIDGE
NEW YORK, NEW YORK
SUBMARINE CABLE REPLACEMENT



LOCATION PLAN



KEY PLAN

DRAWING LIST		
SHEET NO.	DRAWING NO.	DESCRIPTION
1	X–001	COVER SHEET
2	E–002	GENERAL PLAN AND ELEVATION
3	E–004	CABLE CONDUIT AND ROUTING DETAILS
4	E–005	SUBMARINE CABINET DETAILS
5	E–006	CABLE MOUNTING DETAILS 1 OF 2
6	E–007	CABLE MOUNTING DETAILS 2 OF 2
7	E–008	SUBMARINE CABLE MOUNTING DETAILS
8	G–001	CABLE PLAN AND PROFILE

No.	Revisions	Date	By
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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved | Date

PERMIT APPLICATION DRAWINGS

Hardesty & Hanover | 850 Bear Tavern Rd Suite 206 West Trenton, NJ 08628 (609) 538-8233

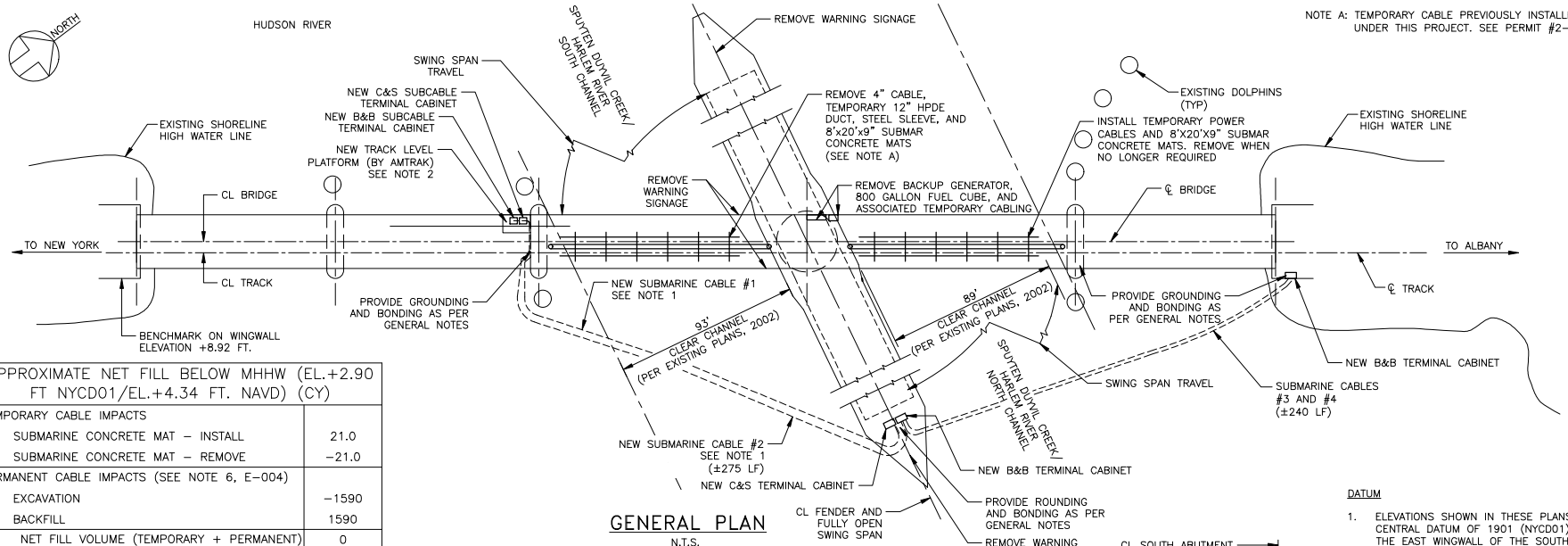
NEW YORK NY
SPUYTEN DUYVIL BRIDGE
SUBMARINE CABLE REPLACEMENT
GENERAL NOTES AND SCOPE OF WORK

Designed TK | Drawn JVA | Checked MJT | Date 02/04/2022

File No: NY01020
Work Elem. No:
Sheet No. 1 OF 8
Dwg. No. X–001

FILE NAME: L:\X-000_COVERS.DWG
PLOT SCALE: AS PLOTTED
STANDARD PEN TABLE: YES

USACE FILE: NAN-2022-00165-EBR

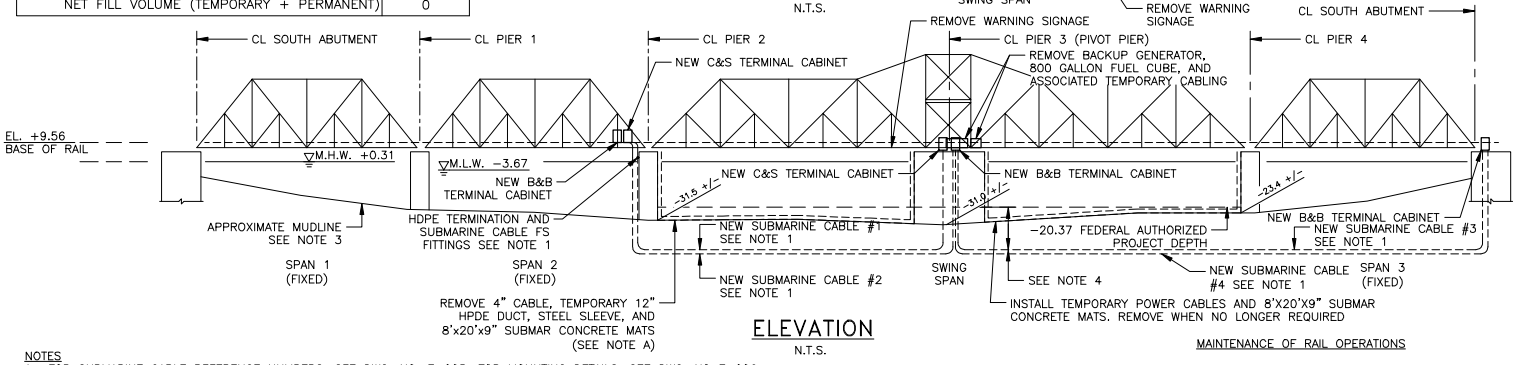


NOTE A: TEMPORARY CABLE PREVIOUSLY INSTALLED WILL BE REMOVED UNDER THIS PROJECT. SEE PERMIT #2-9902-00067-00001.

GENERAL PLAN

N.T.S.

APPROXIMATE NET FILL BELOW MHHW (EL.+2.90 FT NYCD01/EL.+4.34 FT. NAVD) (CY)	
TEMPORARY CABLE IMPACTS	
SUBMARINE CONCRETE MAT – INSTALL	21.0
SUBMARINE CONCRETE MAT – REMOVE	−21.0
PERMANENT CABLE IMPACTS (SEE NOTE 6, E-004)	
EXCAVATION	−1590
BACKFILL	1590
NET FILL VOLUME (TEMPORARY + PERMANENT)	0



ELEVATION

N.T.S.

NOTES

1. FOR SUBMARINE CABLE REFERENCE NUMBERS, SEE DWG. NO. E-005. FOR MOUNTING DETAILS, SEE DWG. NO E-006.
2. CONTRACTOR SHALL COORDINATE SUBMARINE TERMINAL CABINET LOCATION AT PIER 2 WITH NEW TRACK LEVEL PLATFORM INSTALLED BY AMTRAK.
3. MUDLINE SHOWN VISUALLY IS APPROXIMATE AND SHOULD NOT BE INTERPRETED TO INDICATE EXACT ELEVATIONS ALONG THE CHANNEL. FROM "CONDITION SURVEY OF SPUYTEN DUYVIL SUBMARINE CABLES" DATED MAY 2021 PROVIDED BY BOSWELL ENGINEERING, APPROXIMATE DEPTHS OF MUDLINE RELATIVE TO BOTTOM OF EXISTING TERMINAL BOXES (EL. = 0.0) ARE AS FOLLOWS:
   - 3.a. NORTH ABUTMENT MUDLINE EL. = −13.40'
   - 3.b. EAST FENDER EAST NOSE MUDLINE EL. = −36.00'
   - 3.c. PIER 2 SOUTH FACE MUDLINE EL. = −33.00'
4. THE HDPE DUCTS AND ANY PROTECTIVE SYSTEMS INSTALLED ABOVE THE DUCTS WILL BE INSTALLED A MINIMUM OF 7-FEET BELOW THE MUDLINE OR A MINIMUM OF 15-FEET BELOW THE FEDERAL AUTHORIZED PROJECT DEPTH, WHICHEVER IS DEEPER, OR AS PER USACE AND USCG REQUIREMENTS

MAINTENANCE OF NAVIGATION

1. DURING CONSTRUCTION, NAVIGATION WITHIN THE CLEARANCES INDICATED ON THE PLANS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT AS THE CONTRACTOR MAY OBTAIN COAST GUARD PERMISSION FOR TEMPORARY CLOSURE(S). SEE SPECIFICATIONS.
2. SOUTH CHANNEL TEMPORARY CABLE REMOVAL ANTICIPATED TO BE 5 DAY DURATION, FOLLOWED BY NORTH CHANNEL PERMANENT CABLE WORK ANTICIPATED TO BE 4 MONTHS, FOLLOWED BY SOUTH CHANNEL PERMANENT CABLE WORK ANTICIPATED TO BE 5 MONTHS.

MAINTENANCE OF RAIL OPERATIONS

1. DURING CONSTRUCTION, THE CONTRACTOR SHALL NOT INTERFERE WITH RAIL OPERATIONS EXCEPT AS SPECIFICALLY PERMITTED IN THE CONTRACTOR'S APPROVED SITE SPECIFIC WORK PLAN.
2. STAGING OF BRIDGE POWER AND C&S CABLES SHALL NOT INTERFERE WITH RAIL OPERATIONS EXCEPT AS SPECIFICALLY PERMITTED IN THE CONTRACTOR'S APPROVED SITE SPECIFIC WORK PLAN.
3. RELOCATION OF C&S CABLES TO BE DONE UNDER SUPERVISION OF AMTRAK SIGNAL GROUP.

DATUM

1. ELEVATIONS SHOWN IN THESE PLANS REFER TO NEW YORK CENTRAL DATUM OF 1901 (NYCD01). THE BENCHMARK ON THE EAST WINGWALL OF THE SOUTH ABUTMENT REFERS TO NYCD01. THIS IS THE SAME DATUM USED FOR 1988 BRIDGE RECONSTRUCTION PLANS AND 2007/8 WEST FENDER RECONSTRUCTION.

DATUM TRANSLATIONS

1. TO CONVERT NYCD01 DATUM TO NORTH AMERICAN VERTICAL DATUM (NAVD88), ADD 1.44 FEET TO NYCD01 ELEVATION.
2. TO CONVERT NYCD01 DATUM TO NATIONAL GEODETIC VERTICAL DATUM (NGVD29), ADD 2.48 FEET TO NYCD01 ELEVATION.

MEAN HIGH AND LOW WATER (MHW AND MLW)

1. MHW AND MLW ELEVATIONS ARE BASED ON INFORMATION FROM NOAA AT DYCKMAN STATION ID 8518902, PUBLISHED 12/04/2014. ACTUAL TIDAL CONDITIONS DURING CONSTRUCTION MAY VARY. THE CONTRACTOR SHALL BE PREPARED TO WORK UNDER HIGHER TIDAL CONDITIONS THAN HISTORIC DATA OF AVERAGE AND PAST TIDES MAY INDICATE.

   MHHW = +2.90 FT (NYCD01)

   MHW = +0.31 FT (NYCD01)

   MLW = −3.67 FT (NYCD01)

   MLLW = −5.37 FT (NYCD01)

REFERENCE ELEVATION

1. TOP OF EXISTING PIVOT PIER AT RIM IS +1.67 (NYCD01) AND AT CENTER BEARING IS −0.04 (NYCD01).

CHANNEL WIDTHS

1. CHANNEL WIDTHS SHOWN ARE TAKEN FROM 2002 NORTH SIDE PIVOT PIER FENDER REPAIRS DRAWINGS AND SHOULD BE CONSIDERED APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION.

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

PERMIT APPLICATION DRAWINGS

Hardesty & Hanover
850 Bear Tavern Rd
Suite 206
West Trenton, NJ 08628
(609) 538-8233

NEW YORK NY
SPUYTEN DUYVIL BRIDGE
SUBMARINE CABLE REPLACEMENT
GENERAL PLAN & ELEVATION

Designed	TK	Drawn	JVA	Checked	MJT	Date	09/02/2022

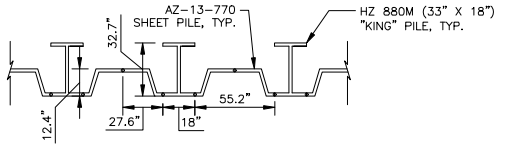
File No: NY01020
Work Elem. No:
Sheet No. 2 OF 8
Dwg. No. E-002

FILE NAME: E002 - GENERAL PLAN AND ELEVATION.DWG
PLOT SCALE: 1024/1024
PLOTTED ON: AUG 1, 1955

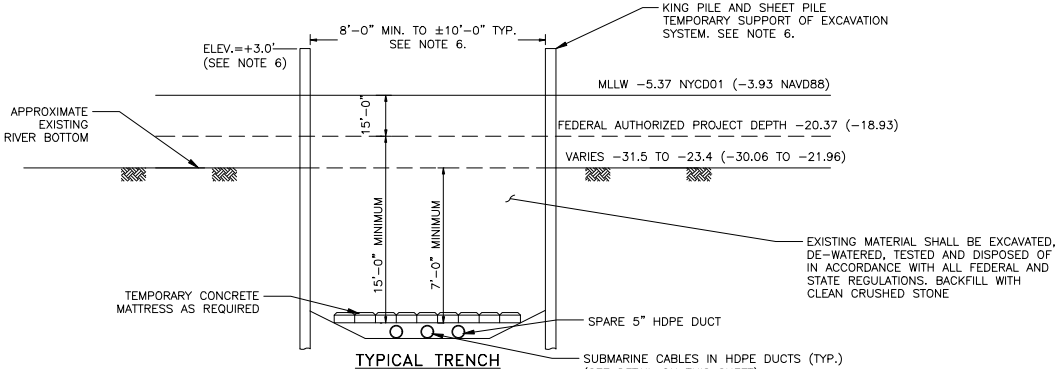
NOTES:

1. SEE TRENCH DETAILS FOR MINIMUM CABLE DEPTH WITHIN THE LIMITS OF THE REGULATED CHANNEL. PROVIDE A MINIMUM OF 4 FEET COER OUTSIDE THE FEDERAL CHANNEL. SEE CABLE PLAN AND PROFILE ON G–001.
2. THE EXISTING RIVER BOTTOM SHALL BE EXCAVATED AND REMOVED ENTIRELY AT THE SUBMARINE CABLE TRENCH. ALL CONSTRUCTION ACTIVITIES IN THE RIVER SHALL MEET THE NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC), USACE, AND UNITED STATES COAST GUARD PERMIT. BACKFILL WITH APPROVED MATERIAL. (SEE NOTE B).
3. THE TEMPORARY CABLES, CONDUIT, AND CONCRETE MATS INSTALLED UNDER THE EMERGENCY ACTION PLAN AND UNDER THIS WORK WILL BE REMOVED WHEN NO LONGER REQUIRED. (NYSDEC PERMIT #2–9902–00067–00001).
4. ENSURE RELIABLE OPERATION OF THE BRIDGE THROUGHOUT CONSTRUCTION BY MAINTAINING TEMPORARY CONNECTIONS AND GENERATOR BACKUP SYSTEMS.
5. THE EXISTING RIVER BOTTOM CONSISTS OF UNCONFIRMED MATERIAL. BEFORE TRENCHING THE CONTRACTOR SHALL VERIFY THE RIVER BOTTOM MATERIAL. THE TRENCH SHALL BE EXCAVATED SO THAT THE SIDES OF THE TRENCH SHALL STAND AT THEIR NATURAL SLOPE, ANTICIPATED TO BE 2H:1V.
6. TEMPORARY SUPPORT OF EXCAVATION (S.O.E) SYSTEM DEPICTED FROM PLANS ENTITLED "SPUYTEN DUYVIL SWING BRIDGE–SUBMARINE CABLE REPLACEMENT MANHATTAN/BRONX, NEW YORK, NY TEMPORARY SUPPORT OF EXCAVATION" DATED AUGUST 16, 2022 BY GZA ENVIRONMENTAL, INC. PROJECT NO. 02.0175756.00 T1.

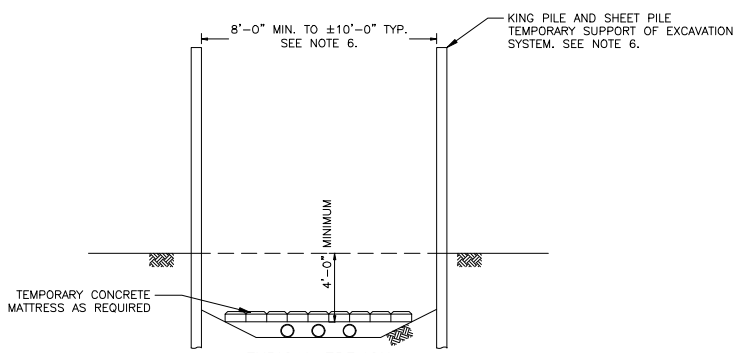
NOTE B: ALL TEMPORARY MEANS AND METHODS (CONCRETE MATS IF USED) SHALL BE REMOVED PRIOR TO FINAL BACKFILL OF THE TRENCH



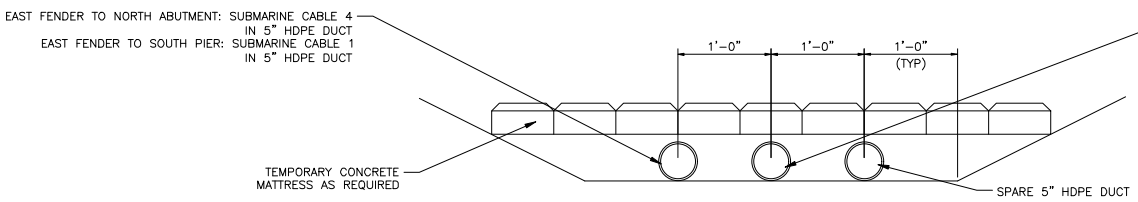
TEMPORARY S.O.E PILING SECTION DETAIL
N.T.S.
(SEE NOTE 6)



TYPICAL TRENCH
INSTALLATION METHOD–
WITHIN REGULATORY
CHANNEL LIMITS
N.T.S.



TYPICAL TRENCH
INSTALLATION METHOD–
OUTSIDE REGULATORY
CHANNEL LIMITS
N.T.S.



TYPICAL TRENCH
CABLE ARRANGEMENT
N.T.S.

FILE NAME: E004 – CONDUIT CABLE AND ROUTING DETAILS.DWG
PLOT SCALE: 1024/1024
PLOTTED ON: 9/2/2022 11:11:11 AM

No.	Revisions	Date	By
1	XXXX	MM/DD/YY	XXX

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Approved	Date

PERMIT APPLICATION DRAWINGS

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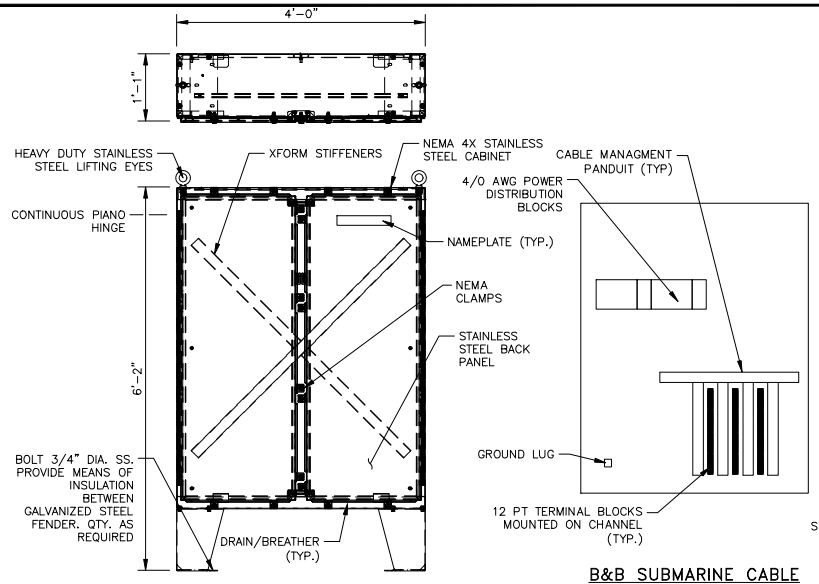
(609) 538–8233

NEW YORK NY
SPUYTEN DUYVIL BRIDGE
SUBMARINE CABLE REPLACEMENT
CABLE CONDUIT AND ROUTING DETAILS

Designed	TK	Drawn	ST	Checked	MT	Date	09/02/2022

File No:	NY01020
Work Elem. No:	
Sheet No.	3 OF 8
Dwg. No.	E–004



EAST FENDER (B&B/C&S), SOUTH C&S, AND NORTH B&B SUBMARINE CABLE TERMINATION CABINET DETAILS

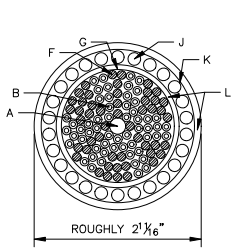
0 1 2
1" = 1'-0"

B&B SUBMARINE CABLE TERMINATION CABINET BACK PANEL

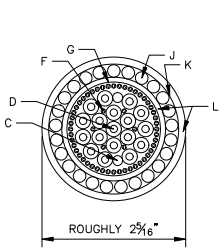
0 1 2
1" = 1'-0"

SOUTH PIER B&B SUBMARINE CABLE TERMINATION CABINET

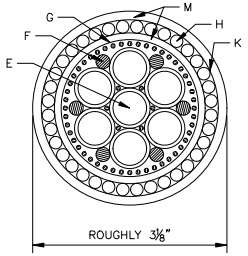
0 1 2
1" = 1'-0"



CABLE 1: C&S SUBMARINE CABLE
(QTY: 1)



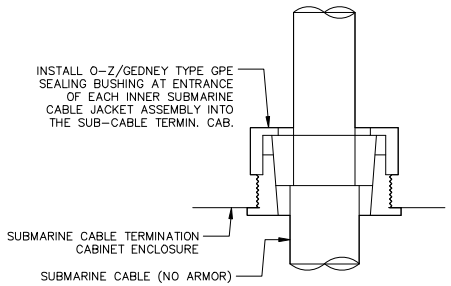
CABLE 2 & 3: SOUTH/NORTH SUBMARINE CABLE
(QTY: 2)



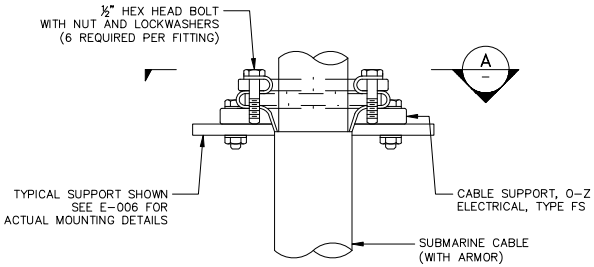
CABLE 4: B&B SUBMARINE CABLE
(QTY: 1)

LEGEND:

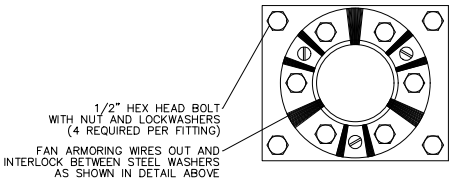
A. SINGLE MODE FIBER OPTIC CABLE (12 STRAND)
B. #14 AWG XLP INSULATION – 2KV (QTY 57)
C. TSP #18 AWG XLP INSULATION – 2KV (QTY 2)
D. #10 AWG XLP INSULATION – 2KV (QTY 18)
E. #4/0 AWG XLP INSULATION – 2KV (QTY 7)
F. NON-HYGROSCOPIC FILLERS, AS NECESSARY
G. RUBBER/FABRIC TAPE
H. #4 BWG (.238") GALVANIZED STEEL WIRES COVERED WITH HDPE
J. #6 BWG (.203") GALVANIZED STEEL WIRES COVERED WITH HDPE
K. .002" CORRUGATED POLYESTER TAPE
L. .110 WALL SUNLIGHT AND WEATHER RESISTANT BLACK HDPE JACKET
M. .140 WALL SUNLIGHT AND WEATHER RESISTANT BLACK HDPE JACKET



SUBMARINE CABLE ENTRY AT TERMINAL CABINET
N.T.S.



SUBMARINE CABLE ENTRY DETAILS
N.T.S.



SUBMARINE CABLE PARTIAL PLAN SECTION A-A
N.T.S.

NOTES:

1. THE CONTRACTOR SHALL DETERMINE THE TRUE LENGTH OF EACH SUBMARINE CABLE BETWEEN EACH SUBMARINE TERMINAL CABINET. THE TRUE LENGTH INCLUDES SUFFICIENT EXCESS LENGTH TO ACCOMMODATE PULLING EYES, ADEQUATE SLACK FOR CABLE SETTLING, CABLE CLAMPING AND CONNECTIONS. SPLICING OR JOINING OF CONDUCTORS BETWEEN THESE POINTS WILL NOT BE PERMITTED.
2. CONTRACTOR SHALL SUBMIT THE EXACT GPS COORDINATES OF THE NEWLY INSTALLED DUCTS.
3. CONTRACTOR TO COORDINATE FINAL CABINET SIZE FOR C&S SUBMARINE CABLE TERMINATION CABINET WITH AMTRAK.
4. CONTRACTOR SHALL PROVIDE PERMANENT PLACARD INDICATING THE MIXED VOLTAGES WITHIN THE SUBMARINE CABLE TERMINAL CABINET.
5. CONTRACTOR SHALL BOND SUBMARINE CABLE ARMOR AT EACH FS FITTING WITH #2/0 BONDING JUMPER.

FILE NAME: E005 - CABINET DETAILING
PLOT SCALE: 2(MOUNTED
STANDARD PEN TABLE: STB

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

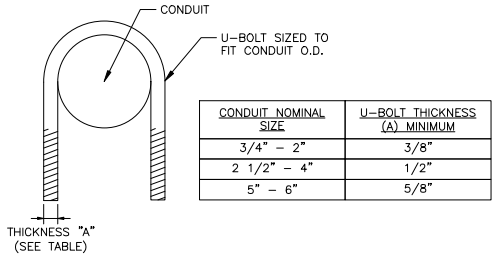
PERMIT APPLICATION DRAWINGS

Hardesty & Hanover | 850 Bear Tavern Rd Suite 206 West Trenton, NJ 08628 (609) 538-8233

NEW YORK NY
SPUYTEN DUYVIL BRIDGE
SUBMARINE CABLE REPLACEMENT
SUBMARINE CABINET DETAILS

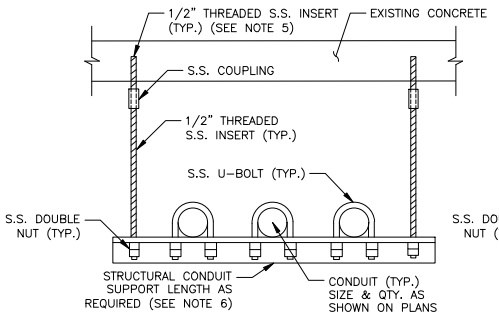
Designed	TK	Drawn	JVA	Checked	MJT	Date	02/04/2022

File No: NY01020
Work Elem. No:
Sheet No. 4 OF 8
Dwg. No. E-005



CONDUIT NOMINAL SIZE	U-BOLT THICKNESS (A) MINIMUM
3/4" – 2"	3/8"
2 1/2" – 4"	1/2"
5" – 6"	5/8"

U-BOLT DIMENSIONS
(PVC COATED U-BOLTS FOR USE WITH PVC-RGS CONDUIT)



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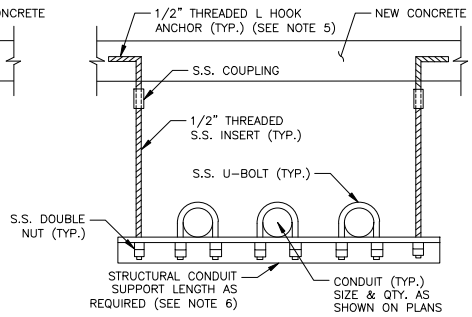
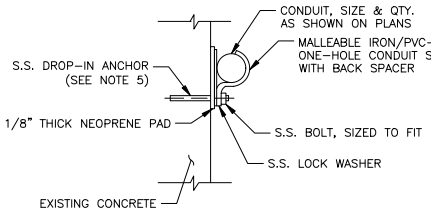


(HANGING FROM NEW CONCRETE)

METHOD A



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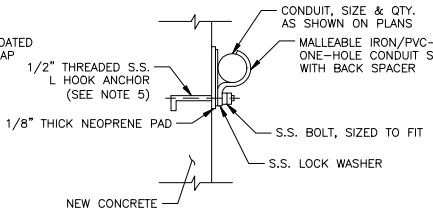
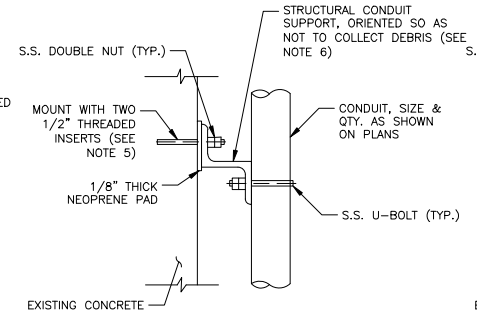


(DIRECT TO NEW CONCRETE)

METHOD B



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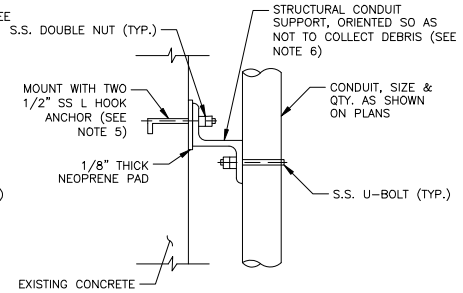

(HANGING FROM NEW CONCRETE)

METHOD A

CONDUIT ATTACHMENT METHODS TO CONCRETE
N.T.S.

NOTES:

1. CONDUIT MOUNTING METHODS SHOWN ARE INTENDED TO GIVE OVERVIEW OF ACCEPTABLE STANDARD OF QUALITY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL CONDUIT MOUNTING AND/OR SUPPORTING METHODS TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. CONDUIT MOUNTING METHODS SHOWN ARE BASED ON RGS AND PVC COATED RGS CONDUIT. ADAPT DETAILS AS REQUIRED TO ACCOMMODATE OTHER TYPES OF CONDUITS, SUCH AS RECOMMENDED BY CONDUIT MANUFACTURER(S).
3. PROVIDE SHOP DRAWINGS FOR ALL MATERIALS AND METHODS USED FOR CONDUIT MOUNTING, INCLUDING DRILLING OF STRUCTURAL STEEL. CONTRACTOR MAY PROPOSE ALTERNATE METHODS OF CONDUIT MOUNTING PROVIDED THEY MEET THE SAME STANDARD OF QUALITY SHOWN. THE ENGINEER SHALL HAVE THE RIGHT TO REVIEW/APPROVE ALTERNATE METHODS.
4. UNLESS OTHERWISE NOTED, ALL STAINLESS STEEL PROVIDED SHALL BE TYPE 316 OR BETTER.
5. L HOOK ANCHORS SHALL BE USED FOR NEW, WET CONCRETE. ALL CONCRETE SHALL BE CONSIDERED NEW FOR THIS PROJECT. FOR CONCRETE IN EXISTENCE PRIOR TO THIS PROJECT, USE DETAILS FOR EXISTING CONCRETE. THREADED INSERT/DROP-IN ANCHORS SHALL BE TYPE A4 STAINLESS STEEL OR BETTER, ANCHORED TO THE CONCRETE USING AN EPOXY SYSTEM. THE ASSEMBLY SHALL BE PROVIDED BY A SINGLE MANUFACTURER RATED FOR OVERHEAD USE IN CRACKED CONCRETE UNDER SEISMIC CONDITIONS, IN DAMP CONDITIONS/HEAVY CONDENSATION. ANCHORS SHALL BE INSTALLED AS PER MANUFACTURER'S REQUIREMENTS, AND SHALL HAVE A PULL OUT STRENGTH GREATER THAN 2000 POUNDS.
6. STRUCTURAL CONDUIT SUPPORTS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. STRUCTURAL CONDUIT SUPPORTS SHALL CONSIST OF 1/2" THICK ANGLES, ZEES, AND PLATES, CONFIGURED AS REQUIRED TO MEET FIELD CONDITIONS. ANGLES AND PLATES SHALL BE 2" x 2" MINIMUM. HOLES SHALL BE DRILLED FOR U-BOLTS AND ATTACHMENTS AS REQUIRED.
7. NOT ALL CONDUITS ARE SHOWN. CONTRACTOR TO REFER TO RISER DIAGRAMS AND DETERMINE TOTAL ACTUAL NUMBER OF CONDUITS AND SIZE AS REQUIRED TO PROVIDE A FULLY COMPLETE AND FUNCTIONING SYSTEM.

FILE NAME: E006 – CONDUIT MOUNTING DETAILS 1.DWG
PLOT SCALE: 2(SCALED TO STANDARD PER PAGE) = 1'-0"

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

PERMIT APPLICATION DRAWINGS

Hardesty & Hanover
850 Bear Tavern Rd
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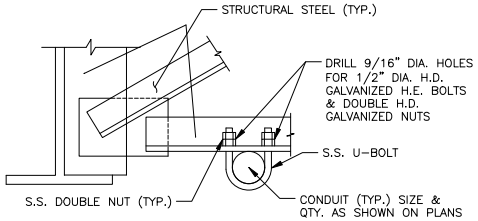
West Trenton, NJ 08628
(609) 538-8233

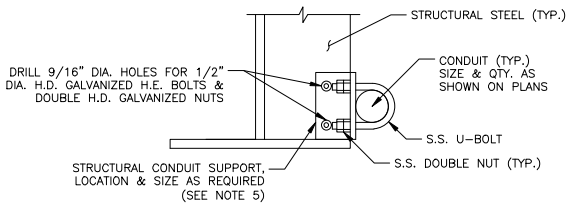
NEW YORK NY
SPUYTEN DUYVIL BRIDGE
SUBMARINE CABLE REPLACEMENT
CONDUIT MOUNTING DETAILS 1 OF 2

Designed	TK	Drawn	ST	Checked	MJT	Date	02/04/2022

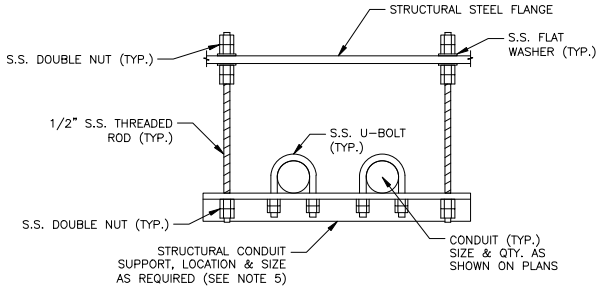
File No:	NY01020
Work Elem. No:	
Sheet No.	5 OF 8
Dwg. No.	E-006



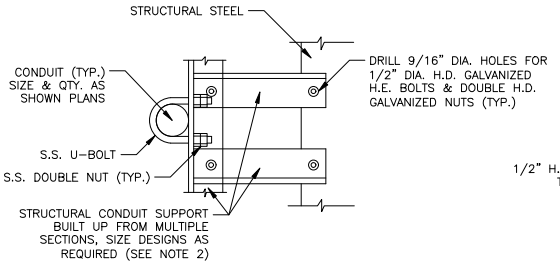
METHOD A
(USE OF STEEL FOR DIRECT CONDUIT MOUNTING)



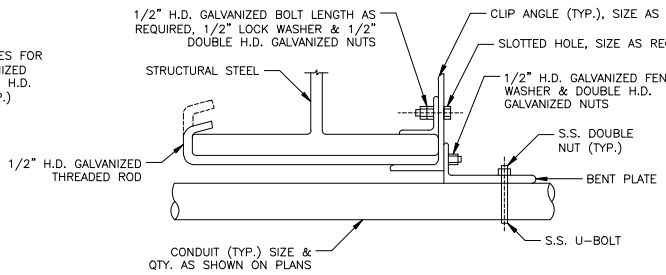
METHOD B
(CONDUIT ATTACHMENT TO STRUCTURAL STEEL)



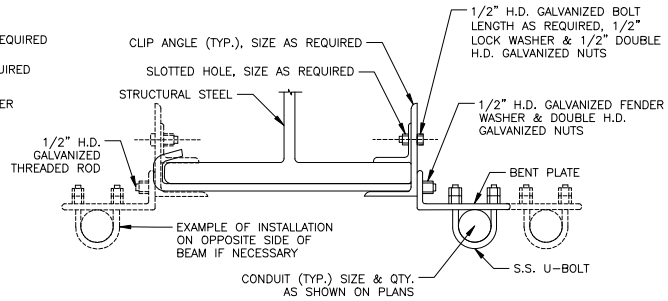
METHOD C
(HANGING FROM STRUCTURAL STEEL)



METHOD D
(BUILT-UP STRUCTURAL CONDUIT SUPPORT)



METHOD E
(BUILT-UP STRUCTURAL CONDUIT SUPPORT)



METHOD F
(HANGING FROM STRUCTURAL STEEL – PARALLEL)

CONDUIT ATTACHMENT METHODS TO STRUCTURAL STEEL

N.T.S.

NOTES:

1. CONDUIT MOUNTING METHODS SHOWN ARE INTENDED TO GIVE OVERVIEW OF ACCEPTABLE STANDARD OF QUALITY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL CONDUIT MOUNTING AND/OR SUPPORTING METHODS TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. CONDUIT MOUNTING METHODS SHOWN ARE BASED ON RGS AND PVC COATED RGS CONDUIT. ADAPT DETAILS AS REQUIRED TO ACCOMMODATE OTHER TYPES OF CONDUITS, SUCH AS RECOMMENDED BY CONDUIT MANUFACTURER(S).
3. PROVIDE SHOP DRAWINGS FOR ALL MATERIALS AND METHODS USED FOR CONDUIT MOUNTING, INCLUDING DRILLING OF STRUCTURAL STEEL. CONTRACTOR MAY PROPOSE ALTERNATE METHODS OF CONDUIT MOUNTING PROVIDED THEY MEET THE SAME STANDARD OF QUALITY SHOWN. THE ENGINEER SHALL HAVE THE RIGHT TO REVIEW/APPROVE ALTERNATE METHODS.
4. UNLESS OTHERWISE NOTED, ALL STAINLESS STEEL PROVIDED SHALL BE TYPE 316 OR BETTER.
5. STRUCTURAL CONDUIT SUPPORTS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123. STRUCTURAL CONDUIT SUPPORTS SHALL CONSIST OF 1/2" THICK ANGLES, ZEES, AND PLATES, CONFIGURED AS REQUIRED TO MEET FIELD CONDITIONS. ANGLES AND PLATES SHALL BE 2" x 2" MINIMUM. HOLES SHALL BE DRILLED FOR U-BOLTS AND ATTACHMENTS AS REQUIRED.
6. NOT ALL CONDUITS ARE SHOWN. CONTRACTOR TO REFER TO RISER DIAGRAMS AND DETERMINE TOTAL ACTUAL NUMBER OF CONDUITS AND SIZE AS REQUIRED TO PROVIDE A FULLY COMPLETE AND FUNCTIONING SYSTEM.
7. WELDING TO STRUCTURAL STEEL FOR CONDUIT OR ELECTRICAL MOUNTING SHALL NOT BE PERMITTED UNLESS SPECIFICALLY SHOWN ON THESE PLANS.
8. CONTRACTOR SHALL PROVIDE A NEOPRENE PAD BETWEEN STRUCTURAL STEEL AND PVC-RGS CONDUIT.

FILE NAME: E007 - CONDUIT MOUNTING DETAILS 2.DWG
PLOT SCALE: 2000.0000 '/ INCH
PLOTTED FOR: MIKE T YEH

No.	Revisions	Date	By

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STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

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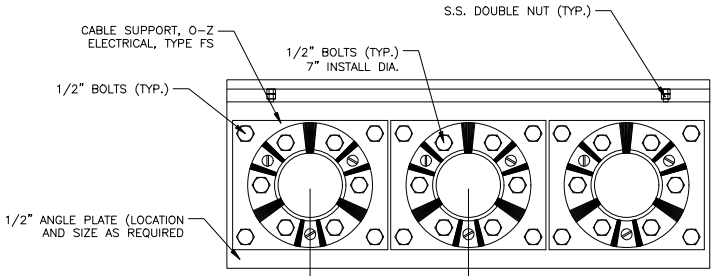
West Trenton, NJ 08628
(609) 538-8233

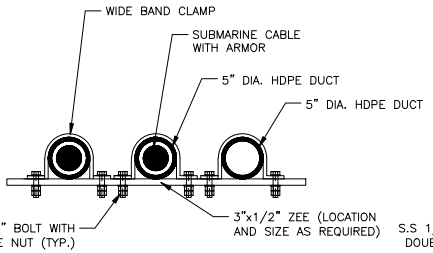
NEW YORK NY
SPUYTEN DUYVIL BRIDGE
SUBMARINE CABLE REPLACEMENT
CONDUIT MOUNTING DETAILS 2 OF 2

Designed	TK	Drawn	ST	Checked	MJT	Date	02/04/2022

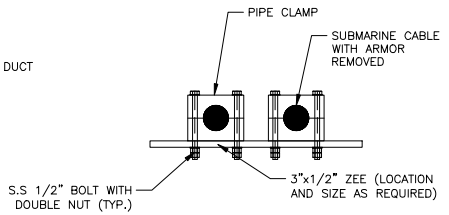
File No:	NY01020
Work Elem. No:	
Sheet No.	6 OF 8
Dwg. No.	E-007



SUPPORT TYPE FS MOUNTING
N.T.S.



HDPE DUCT MOUNTING TO EXISTING CONCRETE
N.T.S.



SUBMARINE CABLE MOUNTING TO EXISTING CONCRETE
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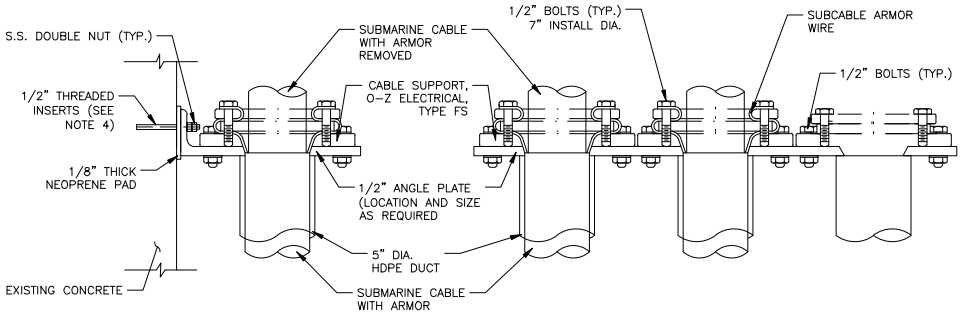

SUBMARINE CABLE SUPPORT TYPE FS MOUNTING TO EXISTING CONCRETE
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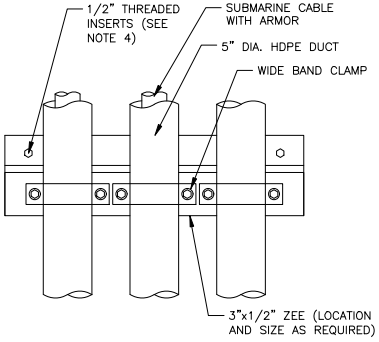
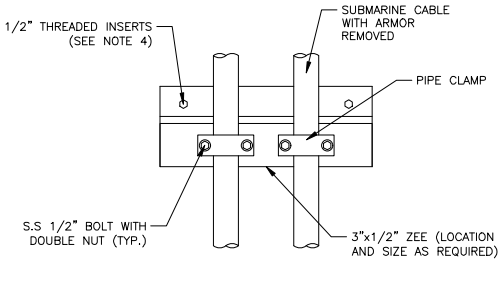


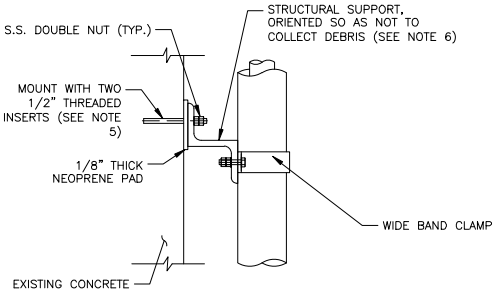
HDPE DUCT MOUNTING TO EXISTING CONCRETE
N.T.S.



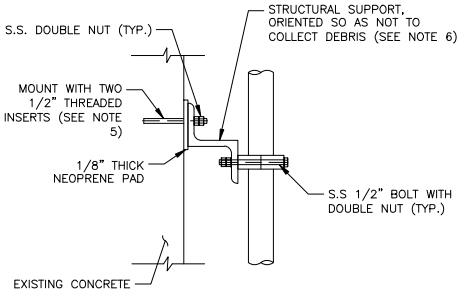
SUBMARINE CABLE MOUNTING TO EXISTING CONCRETE
N.T.S.

NOTES:

1. SUBMARINE CABLE MOUNTING METHODS SHOWN ARE INTENDED TO GIVE OVERVIEW OF ACCEPTABLE STANDARD OF QUALITY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL SUBMARINE CABLE MOUNTING AND/OR SUPPORTING METHODS TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. PROVIDE SHOP DRAWINGS FOR ALL MATERIALS AND METHODS USED FOR SUBMARINE CABLE MOUNTING, INCLUDING DRILLING OF STRUCTURAL STEEL. CONTRACTOR MAY PROPOSE ALTERNATE METHODS OF SUBMARINE CABLE MOUNTING PROVIDED THEY MEET THE SAME STANDARD OF QUALITY SHOWN. THE ENGINEER SHALL HAVE THE RIGHT TO REVIEW/APPROVE ALTERNATE METHODS.
3. UNLESS OTHERWISE NOTED, ALL STAINLESS STEEL PROVIDED SHALL BE TYPE 316 OR BETTER.
4. THREADED INSERT/DROP-IN ANCHORS SHALL BE TYPE A4 STAINLESS STEEL OR BETTER, ANCHORED TO THE CONCRETE USING AN EPOXY SYSTEM. THE ASSEMBLY SHALL BE PROVIDED BY A SINGLE MANUFACTURER RATED FOR OVERHEAD USE IN CRACKED CONCRETE UNDER SEISMIC CONDITIONS, IN DAMP CONDITIONS/HEAVY CONDENSATION. ANCHORS SHALL BE INSTALLED AS PER MANUFACTURER'S REQUIREMENTS, AND SHALL HAVE A PULL OUT STRENGTH GREATER THAN 2000 POUNDS.
5. STRUCTURAL SUBMARINE CABLE SUPPORTS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. STRUCTURAL SUBMARINE CABLE SUPPORTS SHALL CONSIST OF 1/2" THICK ANGLES, ZEES, AND PLATES, CONFIGURED AS REQUIRED TO MEET FIELD CONDITIONS. ANGLES AND PLATES SHALL BE 2" x 2" MINIMUM. HOLES SHALL BE DRILLED FOR 1/2" BOLTS AND ATTACHMENTS AS REQUIRED.
6. NOT ALL SUBMARINE CABLES ARE SHOWN. CONTRACTOR TO REFER TO DRAWINGS E-002 AND E-005 TO DETERMINE TOTAL ACTUAL NUMBER OF SUBMARINE CABLES AND SIZE AS REQUIRED TO PROVIDE A FULLY COMPLETE AND FUNCTIONING SYSTEM.
7. HDPE DUCT TO TERMINATE ABOVE ANTICIPATED MHW. FS FITTING TO BE FURTHER ABOVE THIS ELEVATION.



HDPE DUCT MOUNTING TO EXISTING CONCRETE
N.T.S.



SUBMARINE CABLE MOUNTING TO EXISTING CONCRETE
N.T.S.

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

PERMIT APPLICATION DRAWINGS

Hardesty & Hanover
850 Bear Tavern Rd
Suite 206
West Trenton, NJ 08628
(609) 538-8233

NEW YORK NY
SPUYTEN DUYVIL BRIDGE
SUBMARINE CABLE REPLACEMENT
SUBMARINE CABLE MOUNTING DETAILS

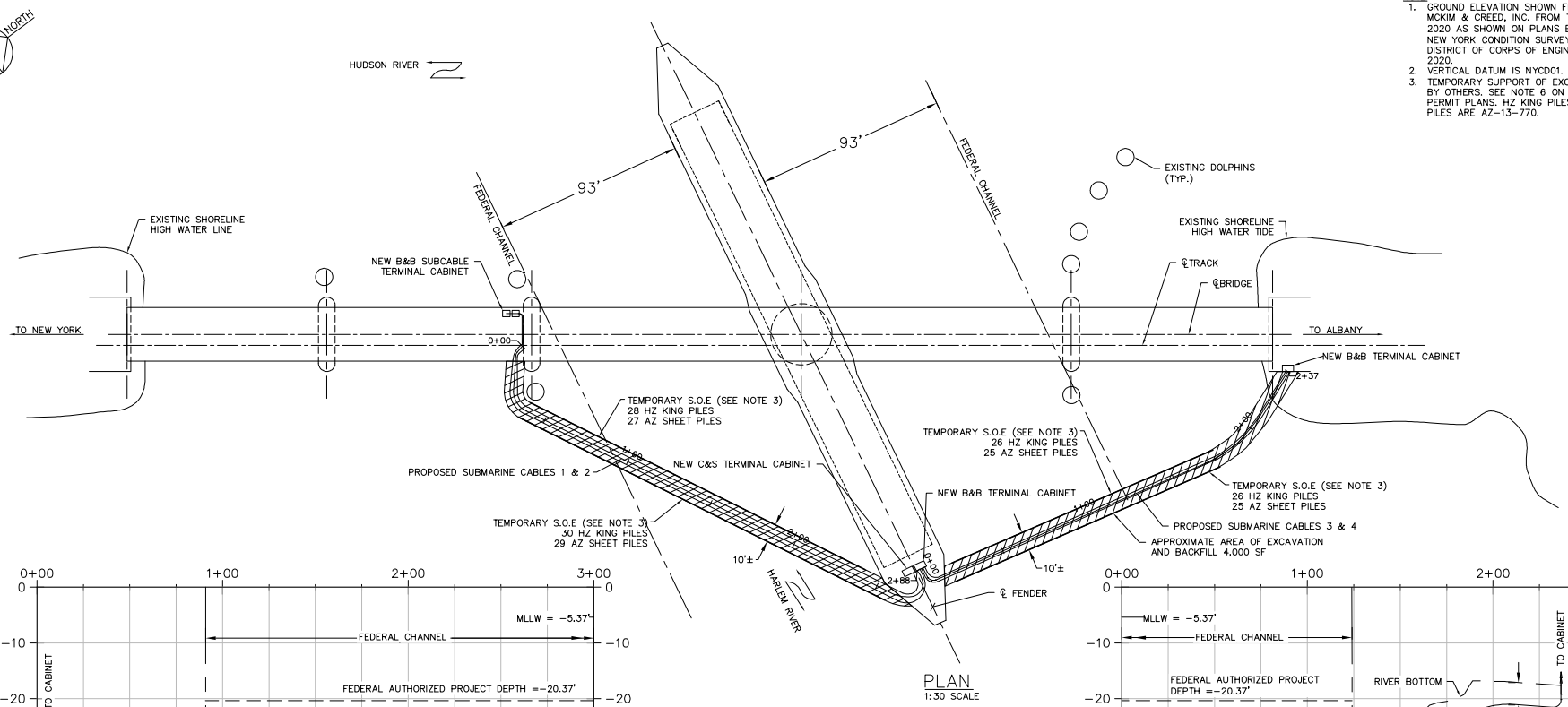
Designed	Drawn	Checked	Date
TK	JVA	MJT	02/04/2022

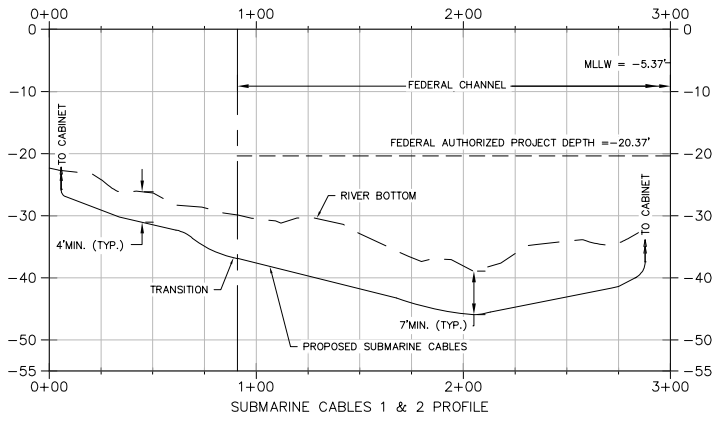
File No:	NY01020
Work Elem. No:	
Sheet No.	7 OF 8
Dwg. No.	E-008

FILE NAME: E008 - SUBMARINE CABLE MOUNTING DETAILS.DWG
PLOT SCALE: 2000.00 '/ INCH
STANDARD PEN TABLE: PLT

USACE FILE: NAN-2022-00165-EBR

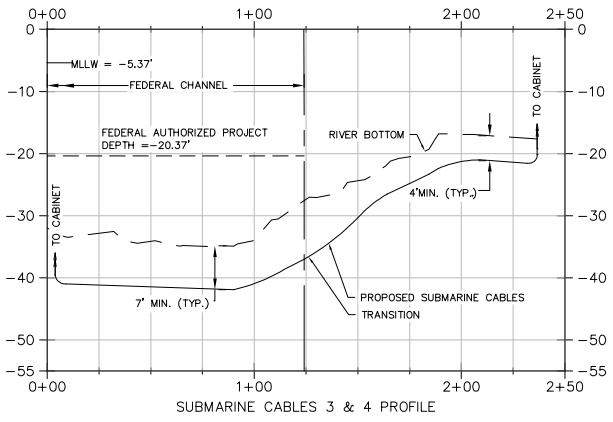
NOTE
1. GROUND ELEVATION SHOWN FROM SURVEY CONDUCTED BY MCKIM & CREED, INC. FROM THE DATES OF MAY 12–19, 2020 AS SHOWN ON PLANS ENTITLED: "HARLEM RIVER NEW YORK CONDITION SURVEY" DEPARTMENT OF ARMY NY DISTRICT OF CORPS OF ENGINEERS DATED JUNE 18TH, 2020.
2. VERTICAL DATUM IS NYCD01.
3. TEMPORARY SUPPORT OF EXCAVATION (S.O.E) DESIGNED BY OTHERS. SEE NOTE 6 ON SHEET E–004 OF THESE PERMIT PLANS. HZ KING PILES ARE HZ 880M. AZ SHEET PILES ARE AZ–13–770.





SUBMARINE CABLES 1 & 2 PROFILE

SCALE
V: 1:10
H: 1:30



SUBMARINE CABLES 3 & 4 PROFILE

SCALE
V: 1:10
H: 1:30

FILE NAME: SPUYTEN DUYVIL REVERSED PROFILES.DWG
PLOTTED: 10/3/2022 BY: MCKIM & CREED
STANDARD PEN TABLE: YES

No.	Revisions	Date	By

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NEW YORK NY
SPUYTEN DUYVIL BRIDGE
SUBMARINE CABLE REPLACEMENT
CABLE PLAN AND PROFILE

Designed	TK	Drawn	LAA	Checked	PJC	Date	09/02/2022

File No:	NY01020
Work Elem. No:	
Sheet No.	8 OF 8
Dwg. No.	G–001