SUPPLEMENTAL 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: 2002-00134-2-J1
Issue Date: 19 July 2004
Expiration Date: 2 August 2004

To Whom It May Concern:

On August 6, 2003, the New York District Corps of Engineers issued Public Notice No. 2002-00134-2-J1 describing a proposal by Neptune Regional Transmission Service, LLC, to install a submarine electric cable connecting the First Energy Raritan substation in Sayreville, New Jersey to a Long Island Power Authority substation in the Town of Hempstead, New York.

Subsequent to the close of the comment period, the applicant revised the scope of work and requested Department of the Army authorization pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

A detailed description and plans of the applicant's **revised scope of work** are enclosed to assist in your review.

ALL COMMENTS REGARDING THIS PUBLIC NOTICE 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. **Please note that issuance of this Public Notice is to solicit comments on the modified proposal only.**

Any person may request, in writing, before this supplemental 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 may affect three species of marine turtles or their critical habitat, five species of whales, and piping plover (Charadrius melodus). Pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the District Engineer is consulting with the appropriate Federal agencies to determine the presence of, and potential impacts to, listed species or their critical habitat in the amended project area.

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 196 (Public Law 104-267) 16 U.S.C. 1801 et.seq., requires federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions, permitted or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). The District Engineer has made the preliminary determination that the site-specific effects are not likely to be substantial provided cable installation along the modified route occurs during the same installation windows as previously prescribed (i.e. cable installation shall not be performed between January 1 and May 31 and work in Federal Navigation channel crossings would not occur between November 15 and May 31); thereby minimizing or avoiding potential direct and indirect impacts to EFH. However, consultation with NMFS concerning this supplemental public notice will be undertaken and concluded prior to the final decision.

Based upon information provided by the applicant, the proposed amended route change is not expected to adversely impact cultural resources. However, a copy of this amended public notice will be sent to

the New York State Office of Parks, Recreation and Historic Preservation and the New Jersey Historic Preservation Office, and necessary consultations will be undertaken to ensure that the requirements of Section 106 of the National Historical Preservation Act of 1966 (Public Law 89-665; 16 U.S.C. 470-470m as amended 16 U.S.C. 460b, 470i, 4701-470n) are satisfied.

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 modification to the 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 amended public notice, we are requesting concurrence with, objection to, or waiver of the applicant's certification by the States of New York and New Jersey. No permit decision will be made until one of these actions occur. For activities within the coastal zone of New York 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, 41 State Street, Albany, New York 12231, Telephone Number (519) 474-6000. For activities within the coastal zone of New Jersey the applicant's certification and accompanying information is available from the New Jersey Department of Environmental Protection, Bureau of Coastal Regulation, CN 401, 501 East State Street, Second Floor, Trenton, New Jersey 08625-0401, Telephone Number (609) 633-2289. Comments regarding the applicant's certification should be so addressed.

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

- **New York State Public Service Commission Certificate of Environmental Compatibility and Public Need**
- **New Jersey Department of Environmental Protection Permit**

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 Mary Ann Miller at (212) 264-3740.

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

For/ Richard L. Tomer
Chief, Regulatory Branch

Enclosures

WORK DESCRIPTION

The applicant, Neptune Regional Transmission System, LLC, (NeptuneRTS) has revised the scope and location of work for their proposal to install a submarine electrical cable connecting the First Energy Raritan substation in Sayreville, Middlesex County, New Jersey to the Long Island Power Authority substation in the Town of Hempstead, New York.

The original proposal, involved installing a 600 MW (500kV) submarine transmission cable. This high voltage direct current (HVDC) cable would be an integrated return cable (IRC), which would include, in a single 7 inch diameter cable, the main conductor and the return path. The majority of the route, approximately 53 miles, was to be submerged; 14 miles of it would be buried primarily along the Wantagh State Parkway. Off-shore, it was to be installed using water-jetting technology. Installation would occur in a two part process: cable laying and cable burial. The cable would be positioned on the seabed along the identified route. A submersible, self-propelled water-jetting machine would then be attached to the cable. Burial would be accomplished by fluidizing the seabed with low-pressure water released from jets and directed backwards, which would allow the cable to sink under its own weight. The water-jetting machine would then move forward allowing the fluidized material to settle and backfill the trench. The majority of the upland HVDC cable system would be installed by conventional open cut excavation, buried 3 to 4 feet in an open trench, 5 to 5.5 feet deep and 5 feet wide and then covered with a pre-cast concrete slab and re-covered with the soil removed during trenching. Directional Drilling would be used at certain roadways, railroad crossings and wetland to avoid impacts by drilling under them.

In the original proposal, the cable was to be routed from the First Energy Raritan Substation in Sayreville to an ACDC converter station. The cable was to be routed from the converter station through the Raritan River east into Raritan Bay. The route was to continue east into the Atlantic Ocean to a point southwest of Jones Inlet. The cable was then to be routed northeast through Jones Inlet, then east, south of Meadow Island and Jones Island, beneath the Meadowbrook State Parkway and horizontally directionally drilled (HDD) under Sloop Channel, Goose Creek and Island Creek to a landfall adjacent to Jones Beach State Park Fishing Piers. From landfall, the route was to continue north approximately 12.2 miles within the Jones Beach Causeway and Wantagh State Parkway rights of way to a converter station on Duffy Avenue, to be constructed east of the Wantagh State Parkway. An AC cable would exit the converter station and proceed south, on the east side of Wantagh State Parkway for approximately 1.7 miles, to the Newbridge Road substation in Town of Hempstead, New York.

NeptuneRTS is proposing the following modifications to the original proposal:

- The cable would make landfall on Jones Island directly from the Atlantic Ocean, rather than passing through Jones Inlet and Hempstead Bay and making landfall on the bay side of Jones Island. This change would involve routing the cable in the ocean, for approximately four additional miles, east of where the existing route turns north into Jones Inlet, to a point due south of the Jones Beach State Park clock tower; where it would make landfall from the south directly onto Jones Island, and would rejoin the currently proposed route at the southern end of the Jones Beach Causeway. The total in-water cable length will be the same as in the original

route, except installation would be in the ocean rather than Hempstead Bay. A single HDD pit located on Jones Island would be used to drill south approximately 2,000 feet, and north approximately 1,500 feet. The southern HDD would allow the cable to be buried at a depth of 30 to 40 feet and terminate in an exit pit in the sea floor approximately 700 feet from the shoreline to a depth of 6 feet below the seabed, at a water depth of approximately 25 feet. The northern HDD would terminate in an exit pit to be located at the northern edge of Parking Lot #2. When drilling is completed, conduit would be pulled through the drilled bore holes, capped and marked, and the drilling and exit pits would be temporarily refilled and covered. Proceeding north from Parking Lot #2, conduit would be laid in an open trench, dug in the shoulder of a ramp that connects with the Jones Beach Causeway. Concurrent with the installation of the conduit, the trench would be refilled to the previously existing grade, and vegetation and other features restored to the extent necessary to allow unimpaired use of the park in the interim until installation is completed. When the cable is delivered, the entry and exit pits would be excavated and the cable would be pulled from the cable ship through the previously installed conduit to the entry pit and from the Parking Lot #2 exit pit to the entry pit, where the two sections would be spliced. The drilling and exit pits would then be permanently filled, restored to grade, and vegetation and other features would be restored to their original conditions. All drilling fluids utilized would be disposed of in a suitable upland disposal site.

The remainder of the route would be open cuts in the maintained shoulder of the ramp to Jones Beach Causeway from Parking Lot #2 and the shoulder of Jones Beach Causeway to the point at the Fisherman's Pier landfall, where it would rejoin the previously approved upland route.

- NeptuneRTS would be using a different cable system, which applicant states would operate at temperature and electromagnetic frequencies comparable to the IRC cable. The new cable design consists of separate high voltage delivery and return cables, and an optical fiber cable to be installed in one trench. Installation technologies for cable burial would include a Hydro-plow as well as the CapJet system. Although the new design consists of separate rather than integrated, high voltage and return cables, the applicant states there are no material differences in sediment disturbance and re-suspension resulting from them. The applicant states that although the Hydro-plow has different operating characteristics, those differences would not result in any material difference in potential environmental impacts. Trench size and sediment dispersion would be no greater than previously proposed. The primary differences between the two cable systems are: 1) whereas CapJet would bury the cable after it had been laid on the sea floor, the Hydro-plow conducts a simultaneous lay and bury operation; 2) Hydro-plow is towed rather than self-propelled, and 3) Hydro-plow directly buries the cable to the desired depth, rather than using the weight of the cable to achieve burial.

- The cable route through lower New York Bay would be modified so the cable would cross Ambrose Channel and be installed parallel to the exiting Transco pipeline, rather than passing south and east of Ambrose Channel.

This would involve eliminating the portion of the currently proposed route that proceeds southeast, parallel to, and then northeast, around the eastern end of Ambrose Channel. The proposed change would involve routing the cable parallel to the Transco pipeline for a distance

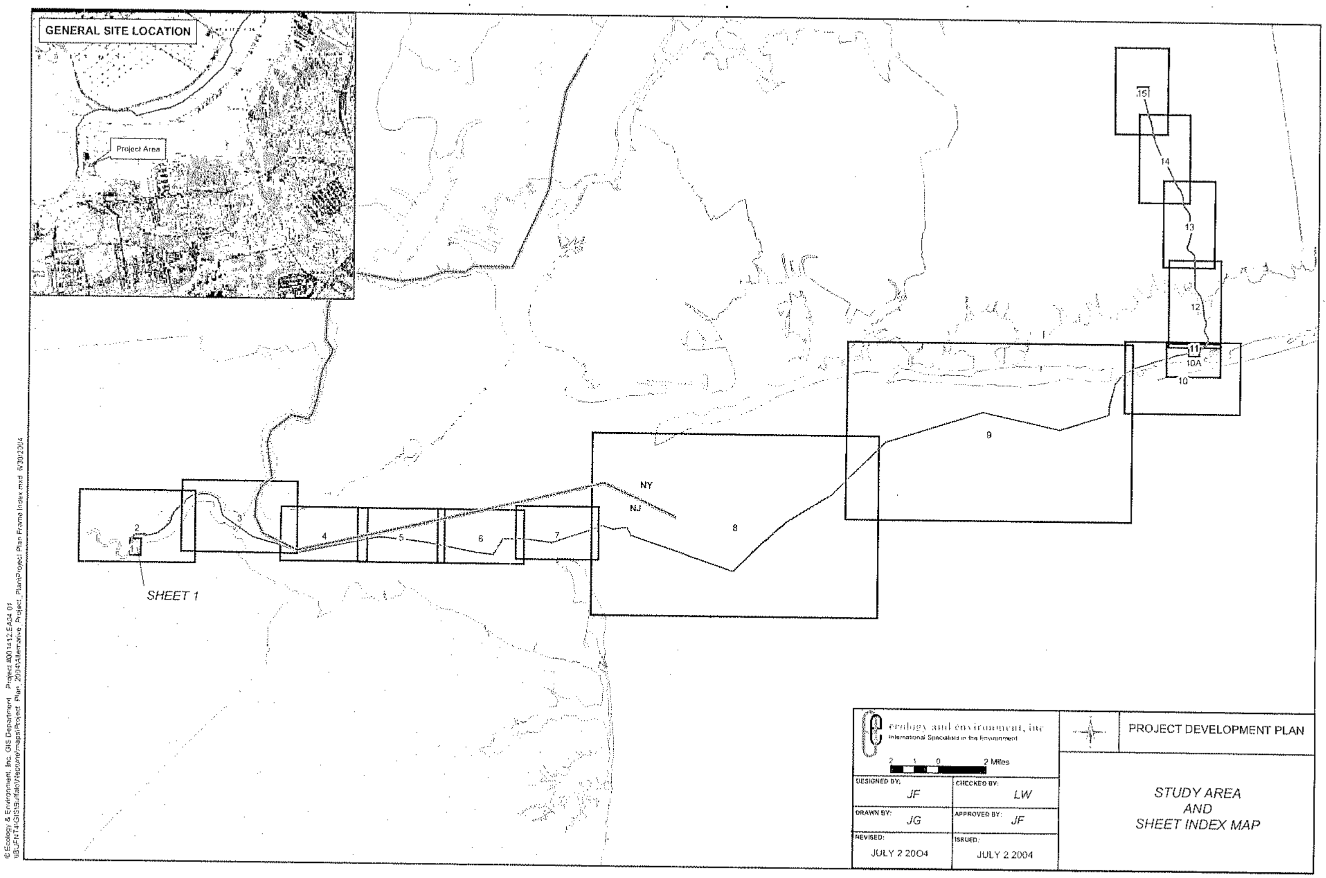
of approximately 12.5 miles, after crossing Ambrose Channel.

- Dredging in Ambrose Channel to install the cable would require removal of approximately 177,000 cubic yards of sand, by clamshell dredge or self-loading hopper dredge. The sand removed during dredging would be either processed at an upland facility for use in construction aggregate, or at an approved upland disposal site.

- Revisions of original dredge volumes indicated in the initial public notice, have been refined and now include side slopes, end transitions, and Ambrose Channel dredging. The original dredge amount was estimated to be 23,662 cubic yards. The total volume is now anticipated to be 259,054 cubic yards.

The Jones Beach landfall and the revised route through Ambrose Channel are being undertaken to address issues that were raised in relation to the initial public notice.

The stated purpose of this project is to connect electricity load centers in New York with transmission and generating resources in New Jersey to reduce existing transmission congestion and allow more flexibility for power providers to meet the needs of electricity users.



Neptune Regional Transmission System, LLC

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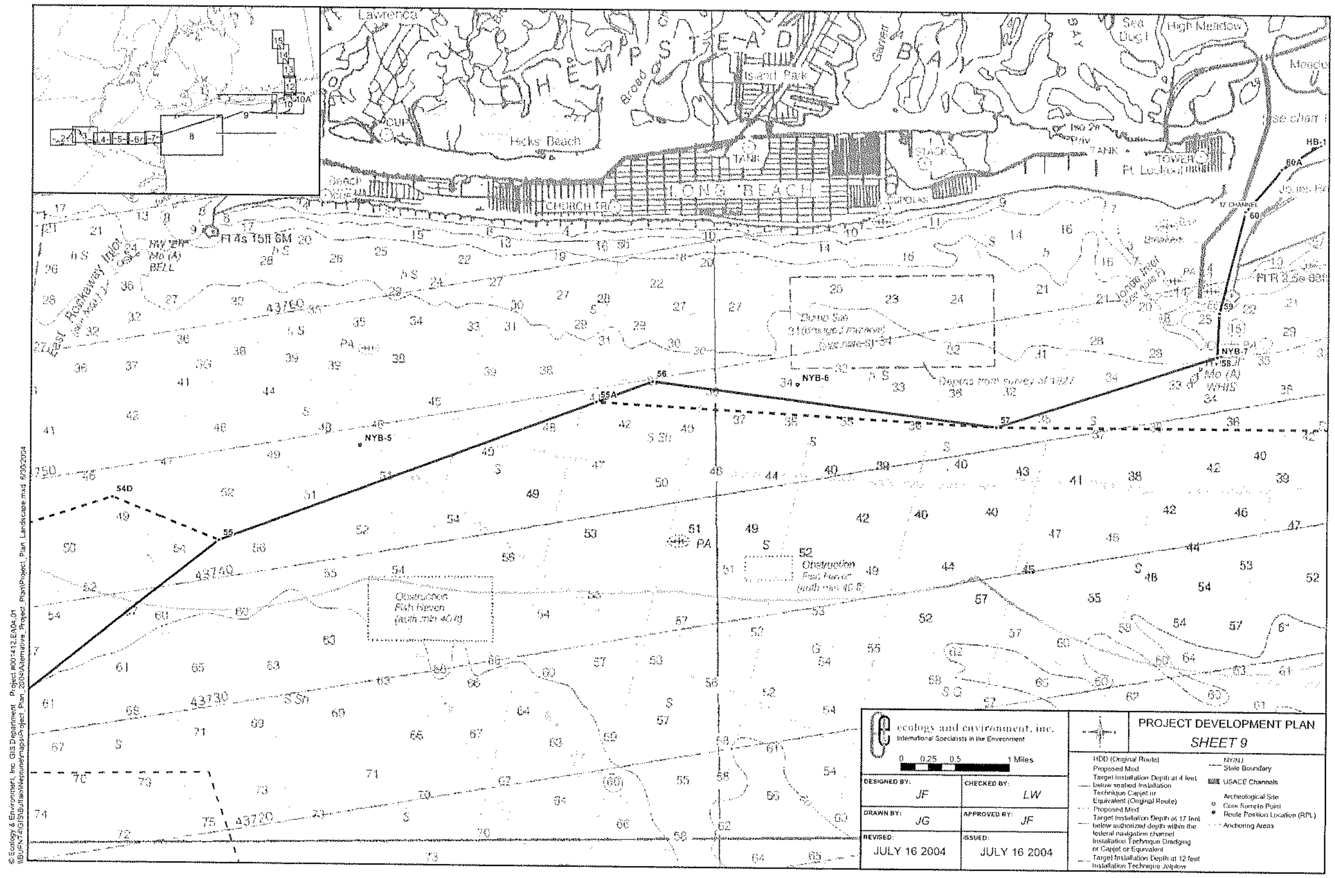
HEMPSTEAD BAY
Lawrence
Hicks Beach
Island Park
LONG BEACH
Pt. Lookout
High Meadow
East Rockaway Inlet
Jones Inlet
NYB-5
NYB-6
NYB-7
Obstruction Fish Haven (auth min 40 ft)
Dump Site
Depths from survey of 1927
ecology and environment, inc.
International Specialists in the Environment
0 0.25 0.5 1 Miles
DESIGNED BY: JF
CHECKED BY: LW
DRAWN BY: JG
APPROVED BY: JF
REVISED: JULY 16 2004
ISSUED: JULY 16 2004
PROJECT DEVELOPMENT PLAN
SHEET 9
HDD (Original Route)
Proposed Mod
NY/NJ State Boundary
USACE Channels
Archeological Site
Core Sample Point
Route Position Location (RPL)
Anchoring Areas

NEPTUNE REGIONAL TRANSMISSION SYSTEM, LLC 2002-00134-2-31

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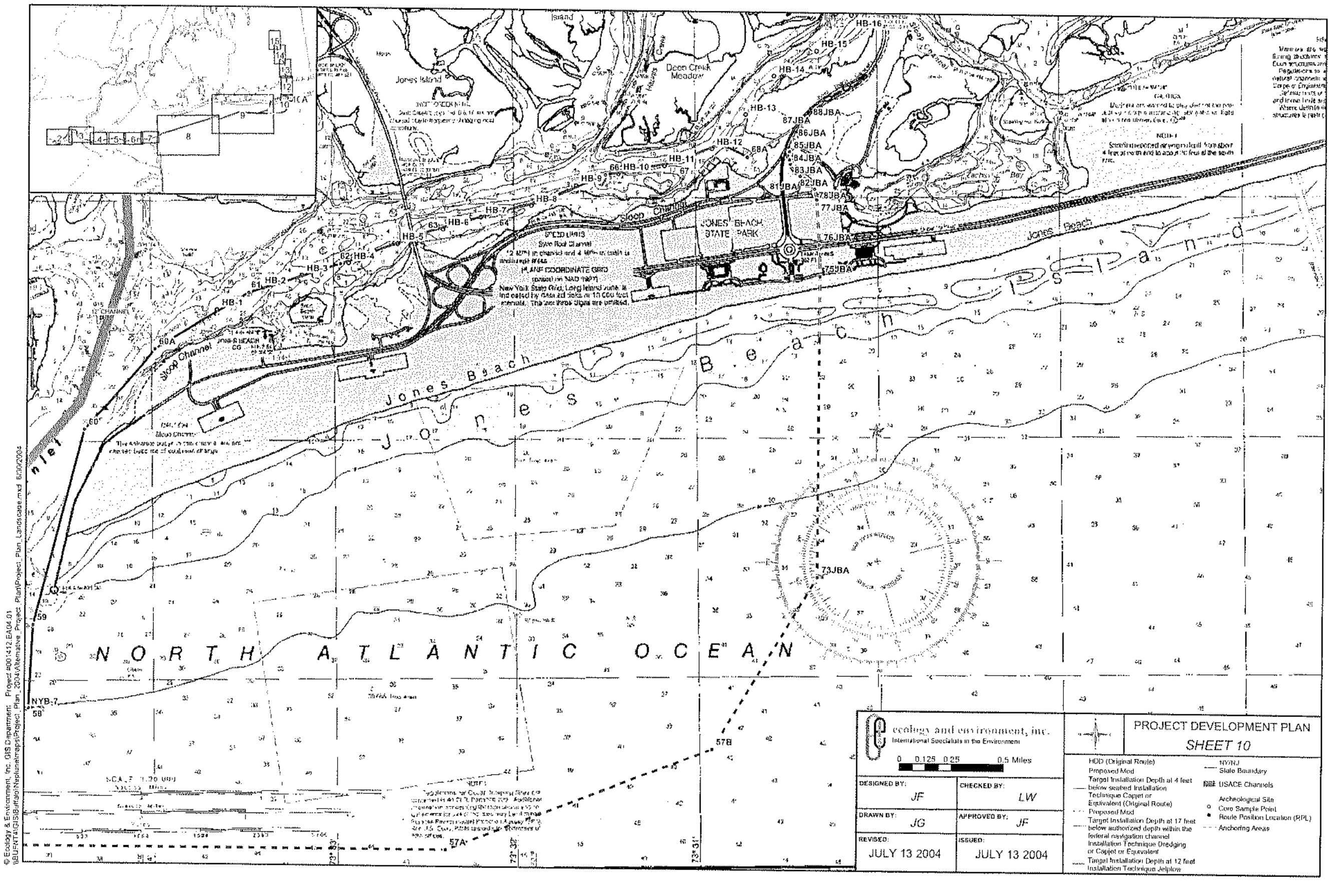
NORTH ATLANTIC OCEAN
Jones Beach
Jones Island
Deep Creek Meadow
JONES BEACH STATE PARK
Sloop Channel
ecology and environment, inc.
International Specialists in the Environment
0 0.125 0.25 0.5 Miles
PROJECT DEVELOPMENT PLAN
SHEET 10
DESIGNED BY: JF
CHECKED BY: LW
DRAWN BY: JG
APPROVED BY: JF
REVISED: JULY 13 2004
ISSUED: JULY 13 2004
HDD (Original Route)
Proposed Mod
Target Installation Depth at 4 feet below seabed Installation Technique Capjet or Equivalent (Original Route)
Proposed Mod
Target Installation Depth at 17 feet below authorized depth within the federal navigation channel Installation Technique Dredging or Capjet or Equivalent
Target Installation Depth at 12 feet Installation Technique Jetplow
NY/NJ State Boundary
USACE Channels
Archeological Site
Core Sample Point
Route Position Location (RPL)
Anchoring Areas

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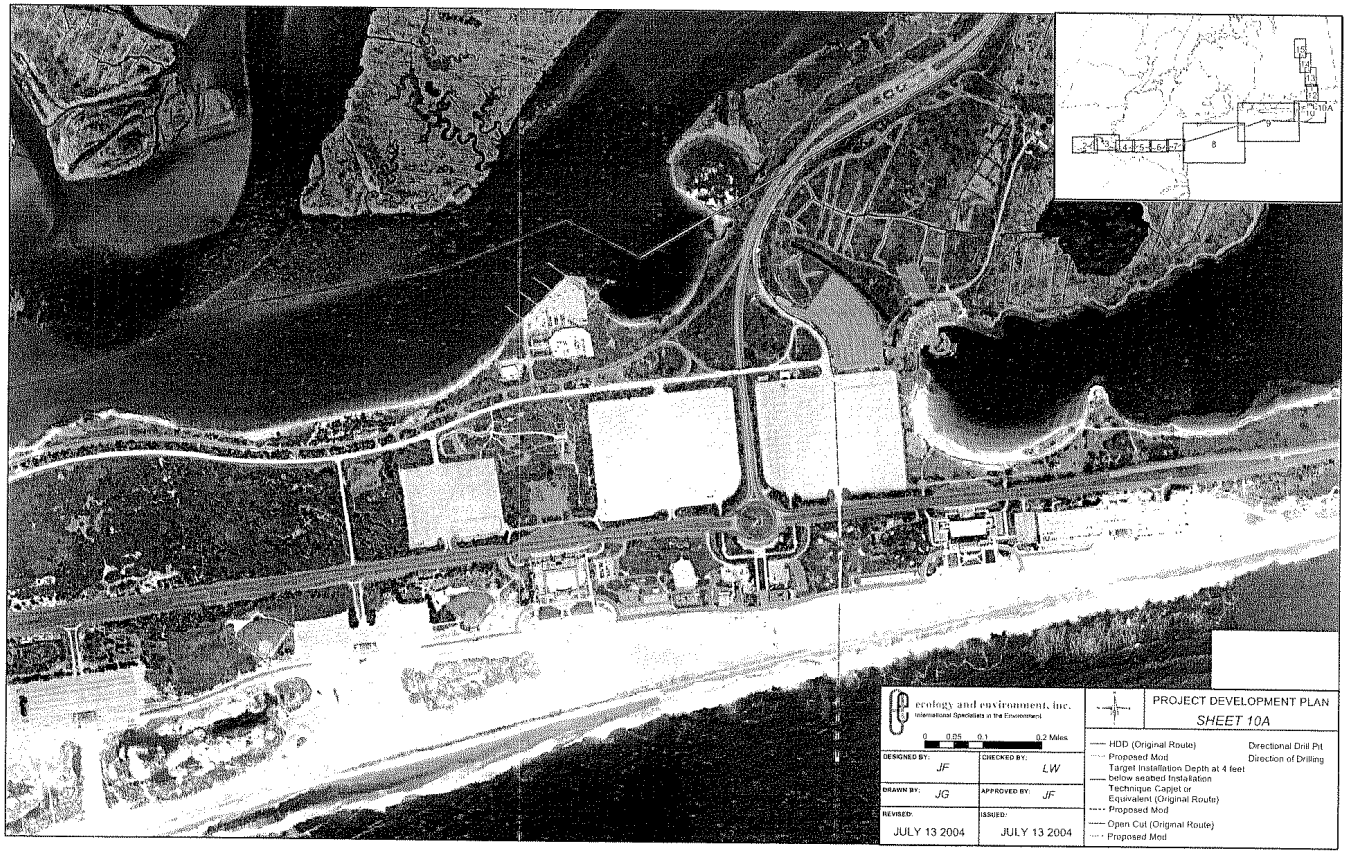

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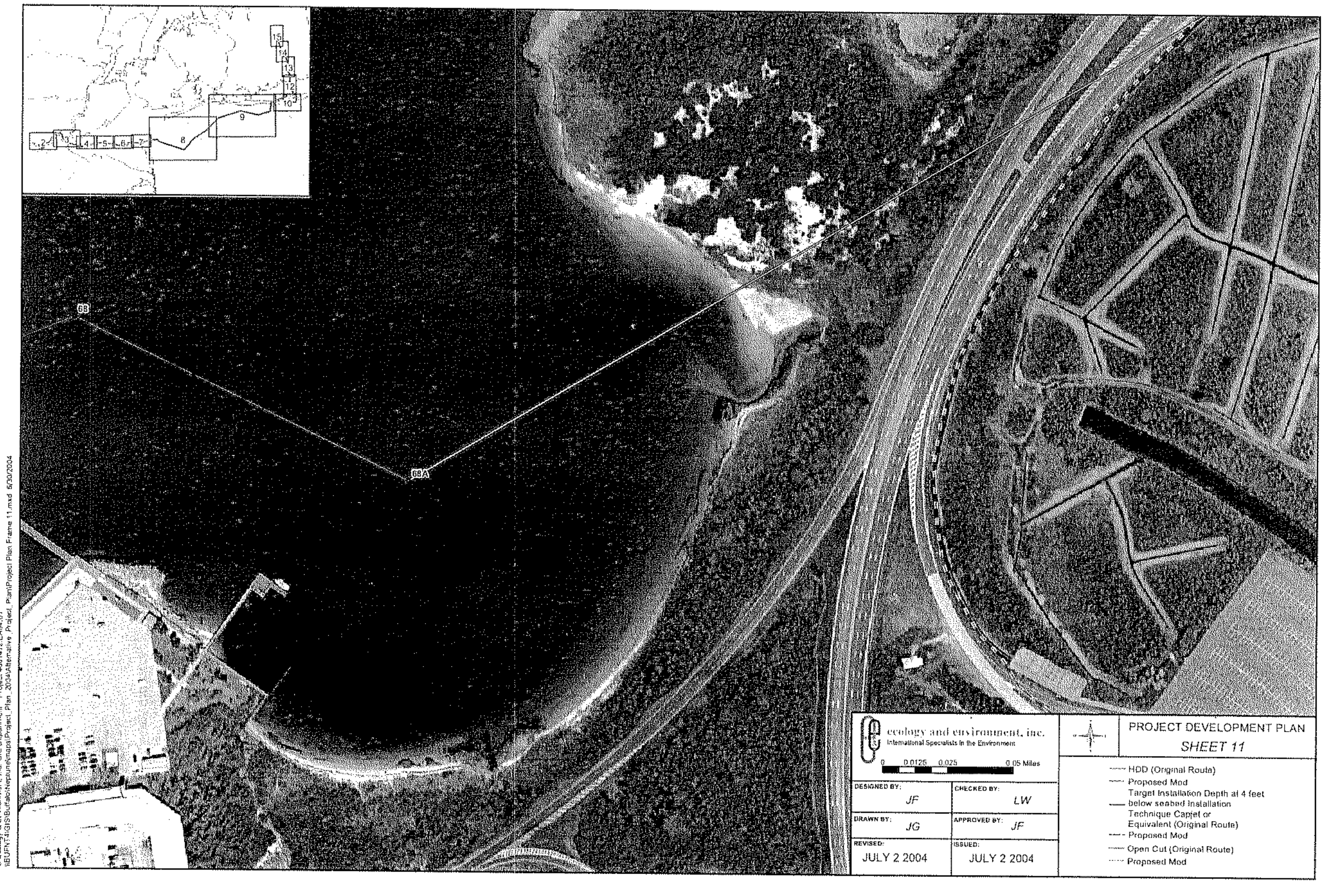

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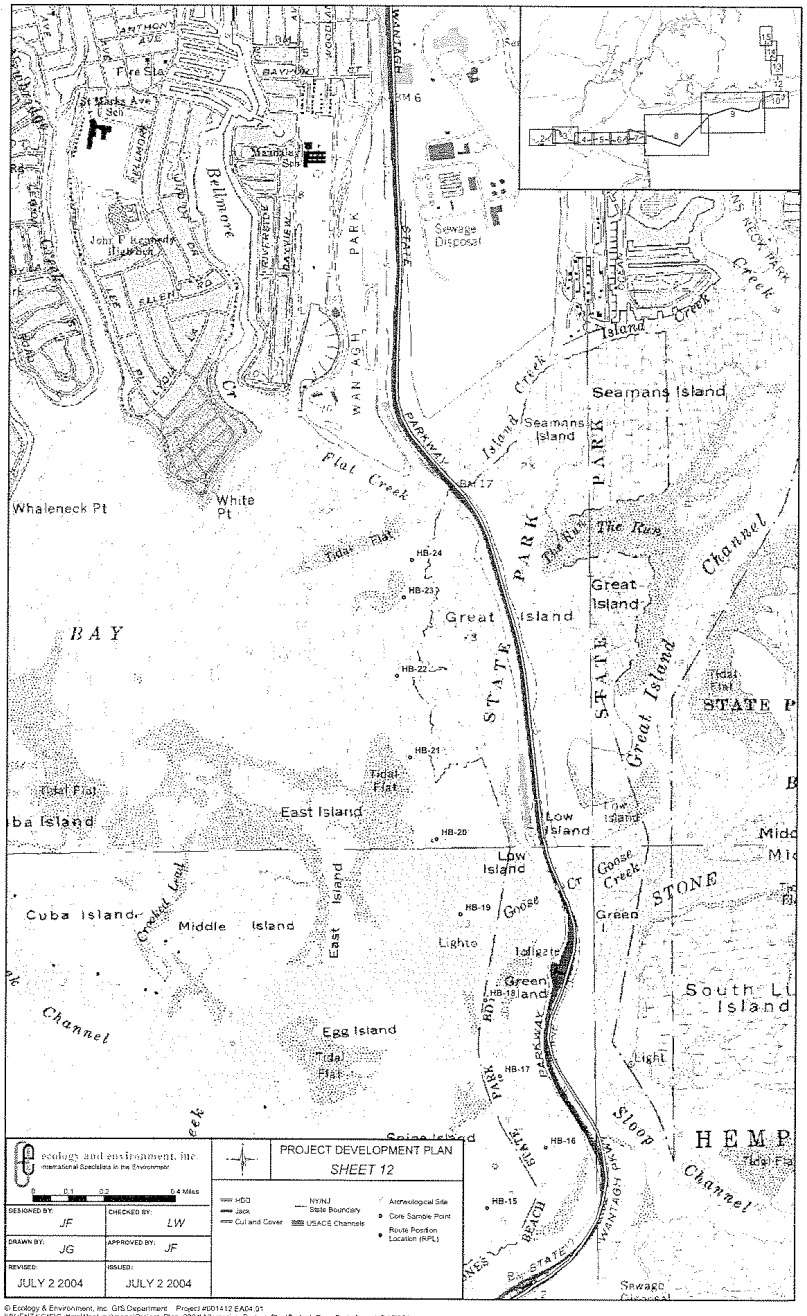

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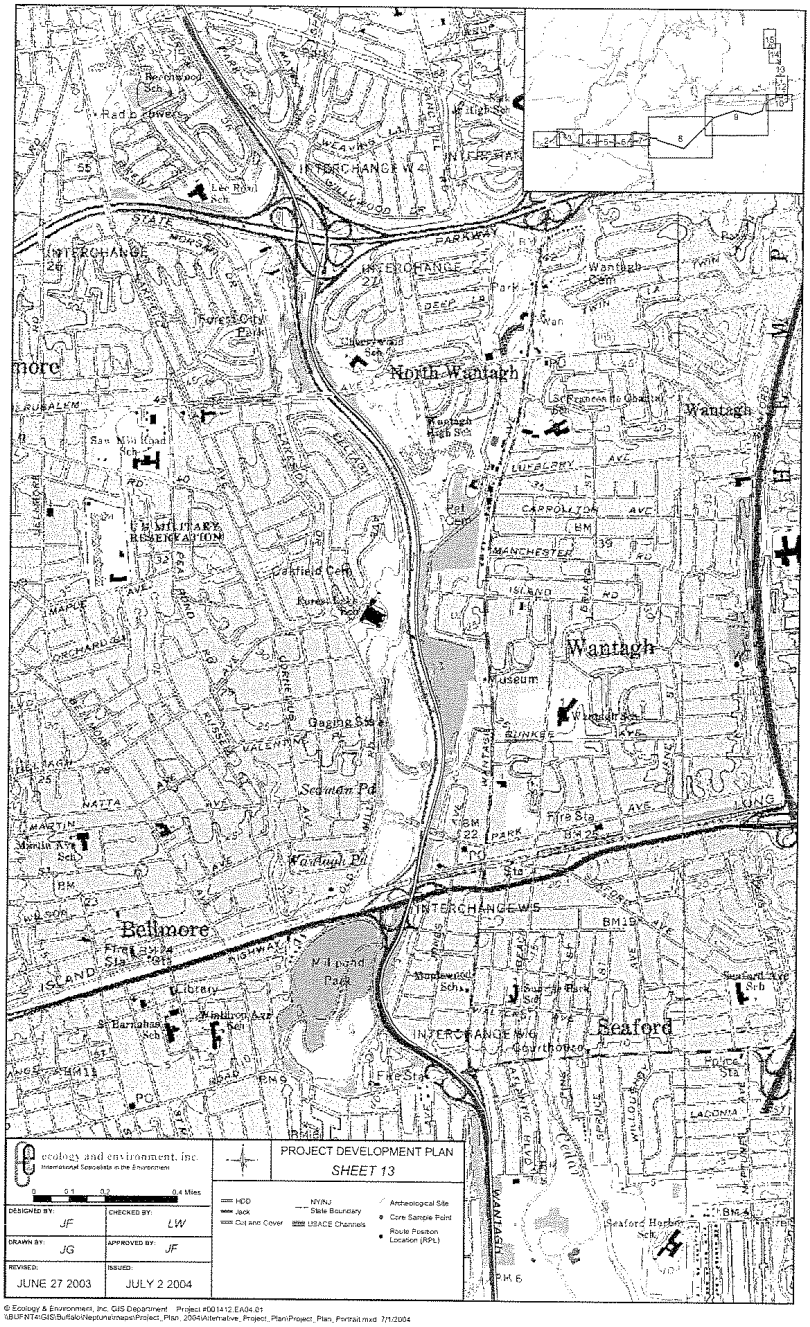

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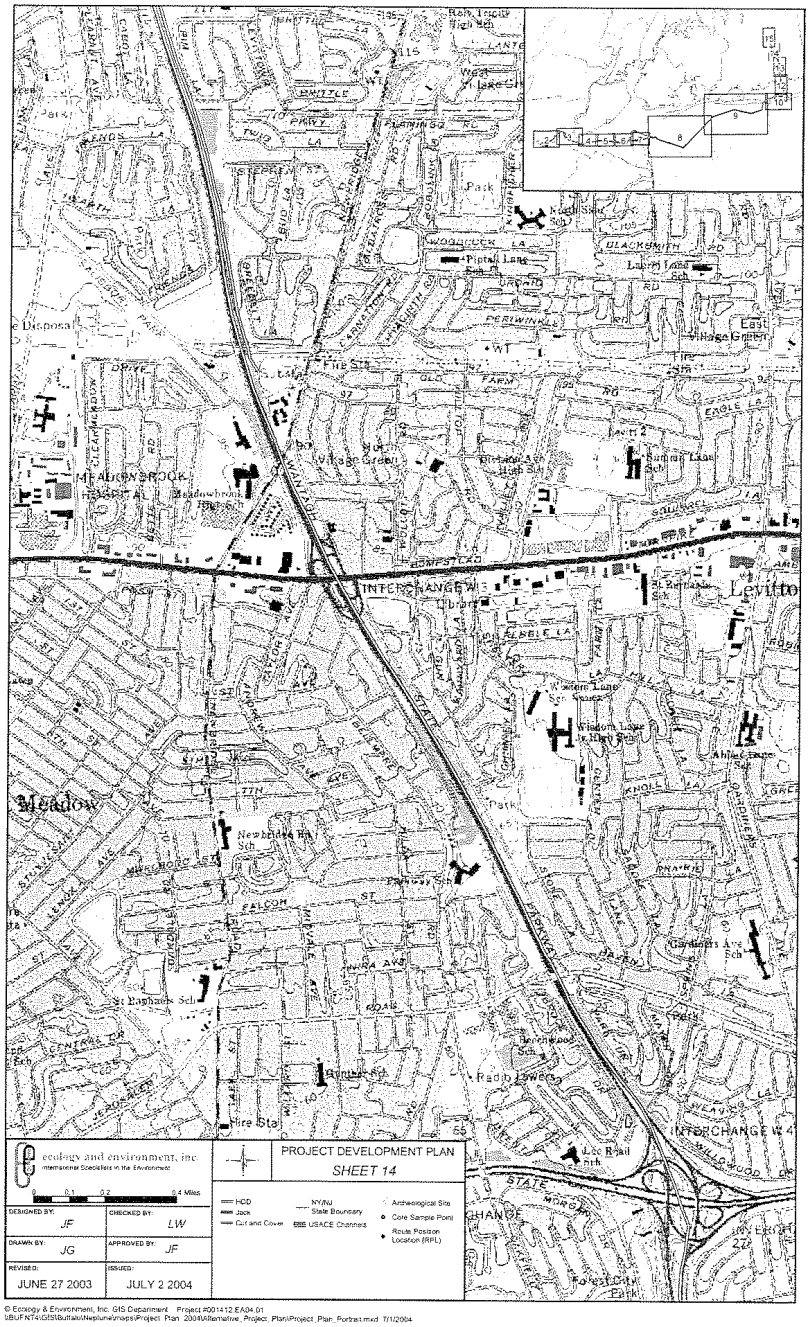

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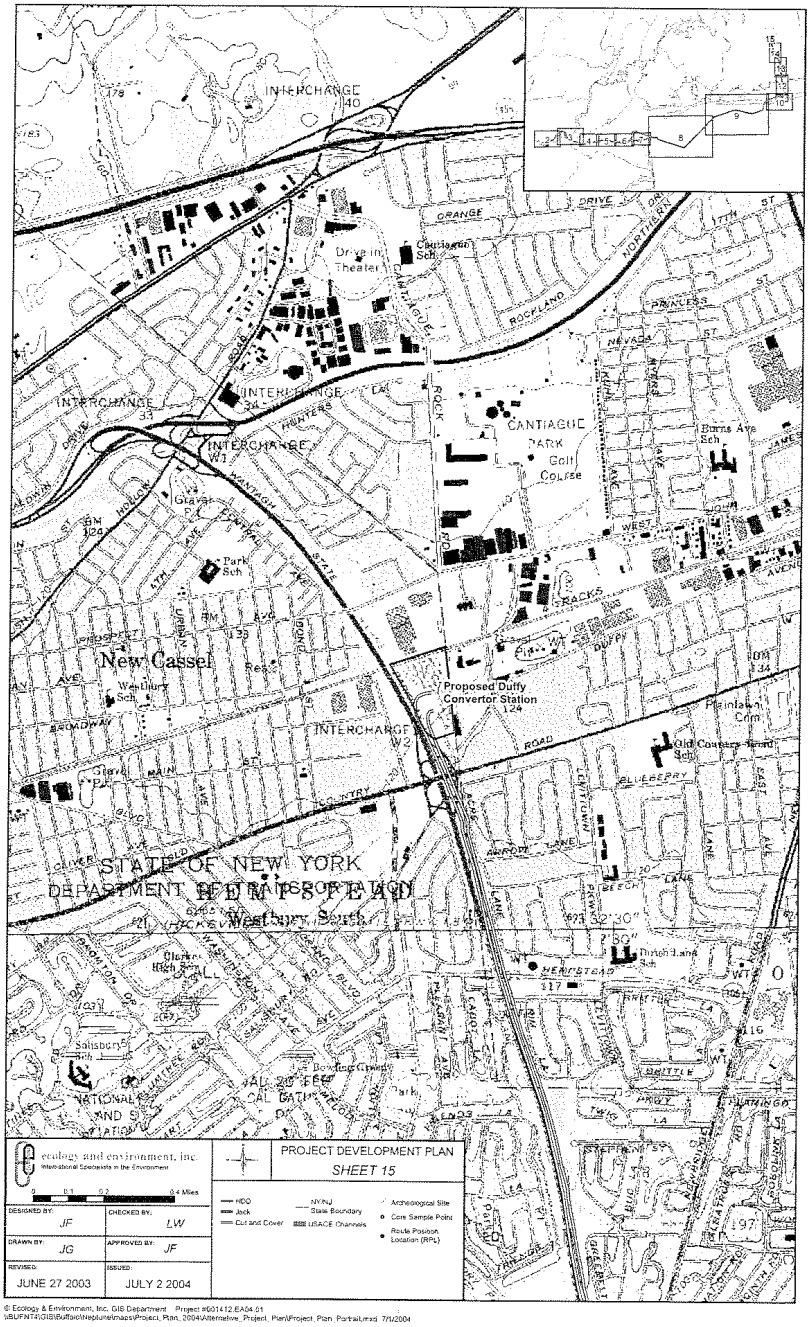

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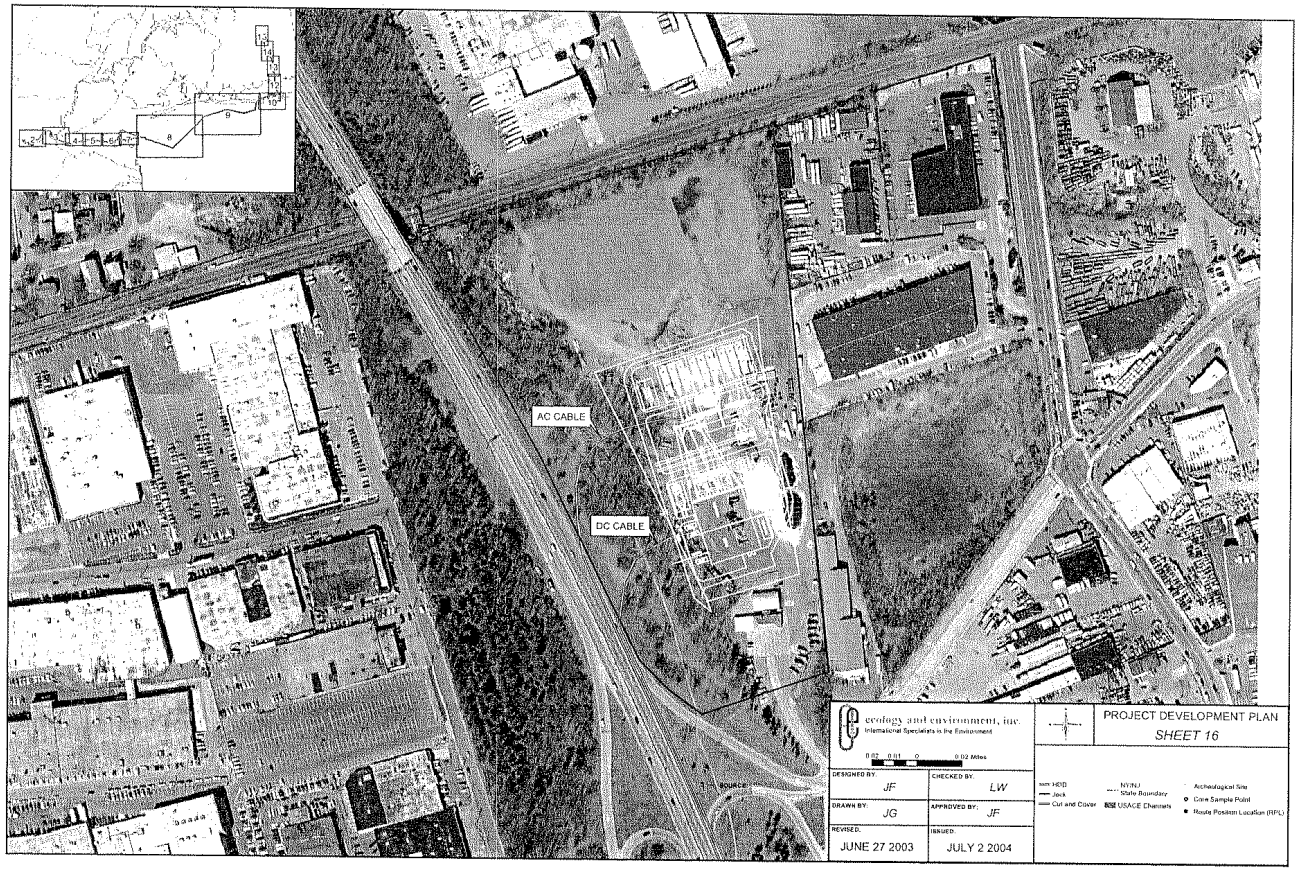

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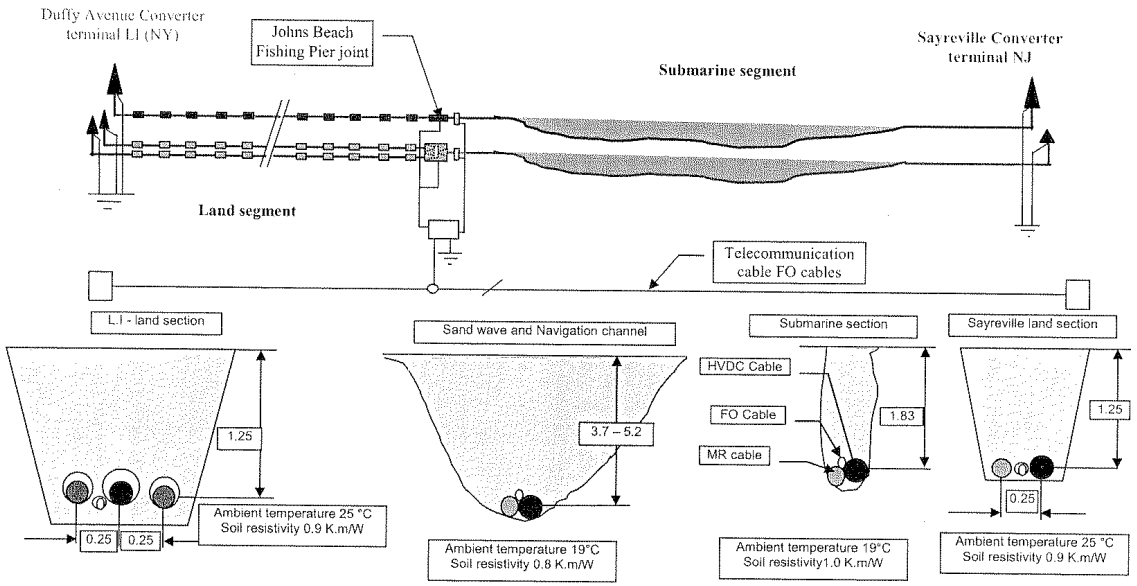

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3. TECHNICAL SOLUTION

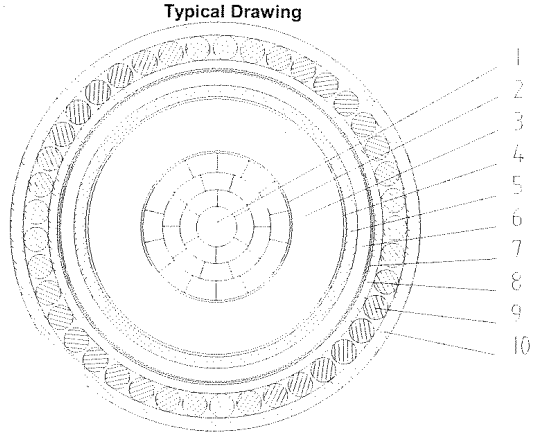
We give here some details about the proposed technical solution.

Submarine Segment:

The HVDC 500 kV 2100 mm2, paper insulated MIND cable (CHLENJFJ type) and MV 20 kV 1900 mm2, XLPE insulated cable (RE4H1EJFJ type) are proposed.

3.1 HVDC 2100 mm2 500 kV Submarine cable

Typical Drawing



CONSTRUCTIONAL DETAILS		
1 - Copper Conductor: Description: Copper conductor of segmental strips Nominal cross section: Diameter of circular conductor:	 mm^2 mm	 2100 51.9
2 - Conductor Screen		
3 - Insulation: Description: Non-pressure assisted, mass impregnated, wood pulp paper tape insulation Thickness:	 mm	 19.5
4 - Insulation Screen		
5 - Lead Alloy Sheath: Description : Extruded Lead Alloy Nominal thickness Overall diameter :	 mm mm	 3.45 100

6 - PE Sheath: Description: Extruded black polyethylene sheath Nominal thickness Overall diameter :		 mm mm	 3.45 107
7 - Reinforcement: Description: Two layers of galvanised steel tapes Thickness		 mm	 0.3
8 - Bedding: Description/type: Polyester Tapes			
9 - Armour: Description: Galvanised steel wires Diameter of armour wire: Nominal diameter		 mm mm	 5.5 123
10 - Serving: Description/type: Polypropylene strings Nominal thickness		 mm	 3.5
Overall diameter of the cable		mm	131
Weight of cable	In air	kg/m	53.5
	In water		44

Electrical Data		
DC resistance of conductor at 20 °C	Ohm/km	0.0086
DC resistance at maximum operating temperature	Ohm/km	0.00978
Max. Losses at nominal load (600 MW)	W/m	14.6
Max. Losses at continuous overload (660 MW)	W/m	17.7
Max. Losses for 750 MW overload	W/m	22.83
Capacitance to neutral	µF/km	0.42

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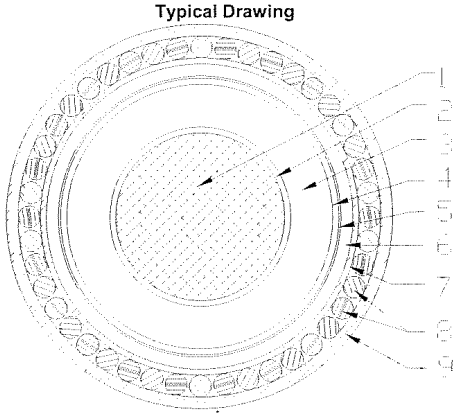
3.2 MV 1900 mm2 12/20 kV Metallic return Submarine cable

Typical Drawing



CONSTRUCTIONAL DETAILS 12/20 kV XLPE Insulated cable			
1	**Copper Conductor:** Description: Longitudinally water sealed stranded formed by segmental strips Nominal cross section: Nominal diameter:	 mm^2 mm	 1900 49.3
2	**Conductor screen:** Description: Tapes plus Extruded semi-conducting compound		
3	**Insulation:** Description: XLPE thermosetting insulating compound Nominal thickness:	 mm	 5.5
4	**Insulation Screen:** Description: Extruded semi-conducting compound		
5	**Metallic Shield:** Description: Two overlapped Copper tapes		
6	**PE Sheath:** Description: Extruded black polyethylene sheath Nominal thickness	 mm	 3.5
7	**Bedding:** Description: Polypropylene strings		
8	**Armour layer:** Description: Galvanised steel wires (*) Diameter of wires:	 mm	 5.5

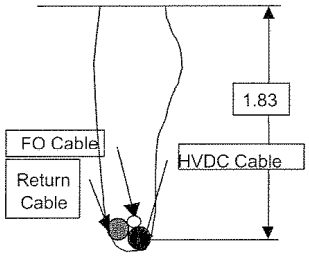
9	**Serving:** Description/type: Polypropylene strings Overall Diameter		mm	98
Cable weight		In air	kg/m	29.5
		In water		23

(*) Note: Armour is considered with all steel wires; steel wires alternate with PE rods may be considered, if necessary in order to reduce cable weight.

Electrical Data		
DC resistance of conductor at 20 °C	Ohm/km	0.00955
DC resistance at maximum operating temperature	Ohm/km	0.01086
Max. Losses at nominal load (600 MW)	W/m	16.2
Max. Losses at continuous overload (660 MW)	W/m	19.6
Max. Losses for 750 MW overload	W/m	25.4
Capacitance to neutral	µF/km	0.63

3.3 Maximum operating temperatures for submarine segment

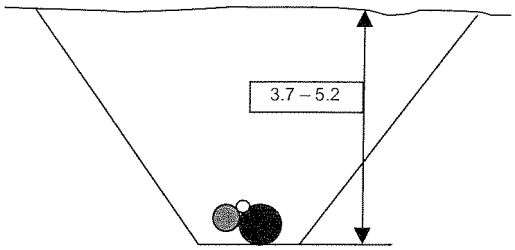
Normal embedment:



Ambient temperature 19 °C
Soil resistivity 1.0 K.m/W

		HVDC	RETURN
At 600 MW (1221 A)	°C	44.4	41.7
At 660 MW continuous overload	°C	50.4	47.1
At 750 MW overload	°C	52.8	48.9

Sand wave zone and navigation channel crossing

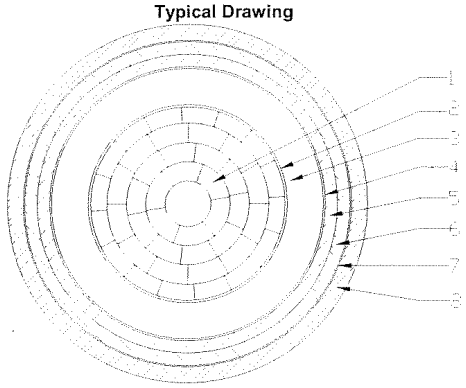


Ambient temperature 19 °C
Soil resistivity 0.8 K.m/W

		HVDC		RETURN	
Burial depth	m	5.2	3.7	5.2	3.7
At 600 MW (1221 A)	°C	44.8	43.4	42.1	40.7
At 660 MW continuous overload	°C	51.0	49.2	47.6	45.9
At 750 MW overload	°C	53.5	51.6	49.6	47.8

3.4 HVDC 2100 mm2 500 kV Land cable

Typical Drawing



From Bid Dredging Plan (No Side Slopes)

OLD ESTIMATES

	Values From Table H-1				Volume
	Length (ft)	Depth (ft)	Width (ft)	Volume (cu -ft)	(cy)
HDD Exit Pits - Raritan River	30	8	15	3600	133
1st Raritan Crossing	410	11	16	72160	2673
2nd Raritan Crossing	650	12	16	124800	4622
3rd Raritan Crossing	835	12	16	160320	5938
Raritan Bay East Reach	725	10	16	116000	4296
Chapel Hill South Channel	1125	9	16	162000	6000
					23662

REVISED ESTIMATES

Modified Plan with Side Slopes and End Transitions and Ambrose Channel

Sides Cut at 1:3 Slope
End Transitions Cut at 1:3 Slope

	Main Cut				Transition Length	Main Cut	Start+End Transition	Total	Total
	Length	Depth	Bottom Width	Top Width 1:3	1:3	Volume	Volume	Volume	Volume
	(ft)	(ft)	(ft)	(ft)	(ft)	(cu-ft)	(cu-ft)	(cu-ft)	(cy)
HDD Exit Pits - Raritan River	30	8	20	68	24.0	10560	9984	20544	761
1st Raritan Crossing	410	11	20	86	33.0	239030	23232	262262	9713
2nd Raritan Crossing	650	12	20	92	36.0	436800	29376	466176	17266
3rd Raritan Crossing	835	12	20	92	36.0	561120	29376	590496	21870
Raritan Bay East Reach	725	10	20	80	30.0	362500	18000	380500	14093
Chapel Hill South Channel	1125	9	20	74	27.0	475875	13608	489483	18129
Ambrose channel	2000	25	20	170	75.0	4750000	35000	4785000	177222
									259054

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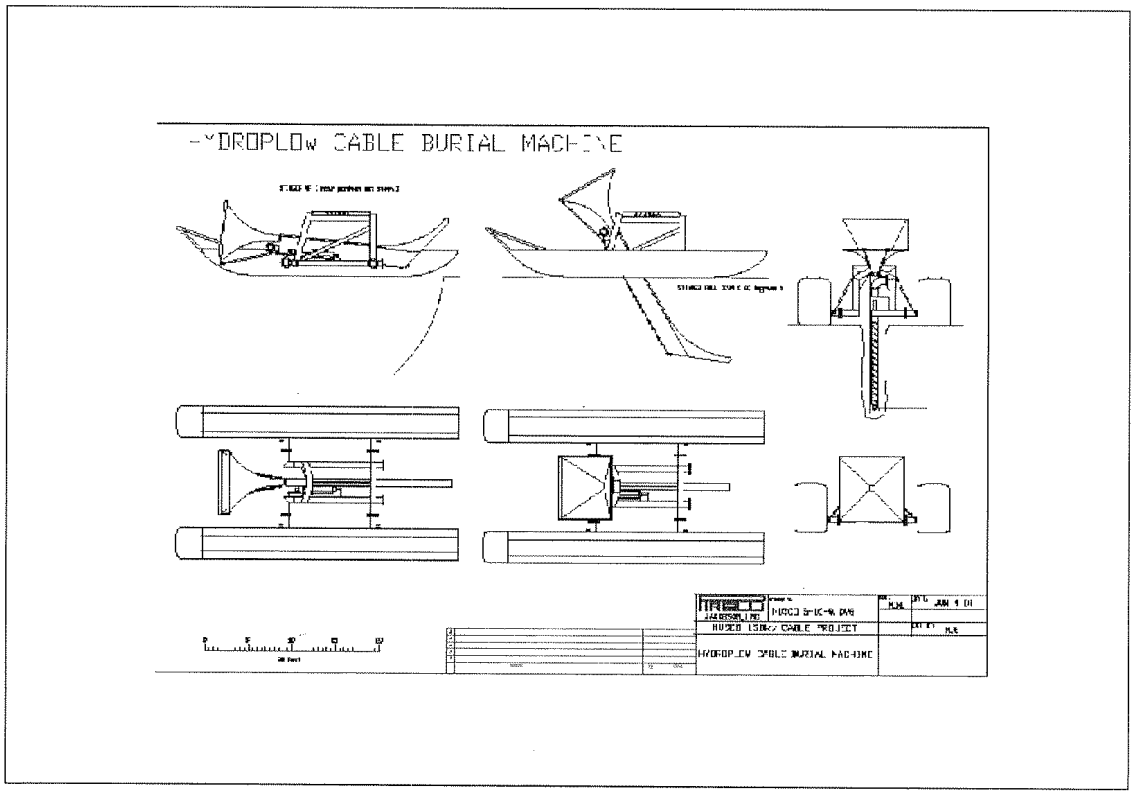

Figure 1

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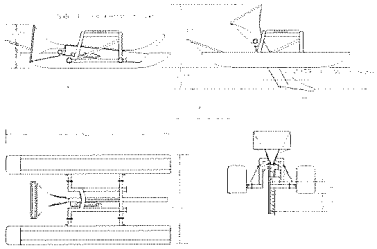
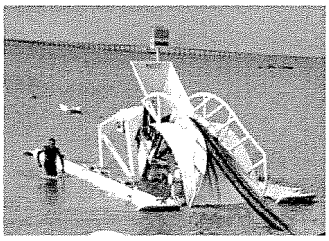
PIRELLI

Neptune HVDC Cable Project

HP-III, Hydro Plow 3 Cable Burial Machine w/pontoons





General
Manufacturer: Pirelli HVS, Submarine Group
Type : Towed Breadth: 5.30m expandable
Work Capabilities: Fiber optic, and power cable embedment

Operating Depth
To –40meters water depth

HP and Propulsion
Jetting system: 750 to 900 hp
Variable to 4000gpm @ 275psi
Plow is pulled by cable laying vessel, or barge

Buoyancy and Ballast
Equipped with skid pontoons that allow flotation to shorline

Instrumentation
Cameras / Video / Lighting: Low light video monitoring
Navigation/Tracking: Heading sensor, water depth sensor, ground speed, sonar cable tracking
monitoring optional
Navigation / Tracking: Heading sensor, water
depth sensor, ground speed indicator, cable tracking

Cable Burial Depth Optional stinger attachments
1.2m (4') to 2m (6'6") of cover

Dimensions / Structure
Length w/pontoons: 9.60m
Depth: 2.43m – 3.50m
Weight in air: approx. 13,000Kg
Structure: Welded tubular steel
Frame: A36 steel
Fittings: 304 stainless steel

Speed up to 900m/hr
Number of Units Built: 1

Shipboard Support
DP cable laying vessel, or anchor spread barge, spud barge, or vessel equipped with 6 pt mooring

Deployment system: Barge or ships crane / A-frame

Support ship deck requirements: Deck area 2mx6mx6m
120vac, 60hz, 20A electrical
Vehicle power requirements: 10gpm hydraulic, low voltage electricity for video and telemetry
Operating/maintenance: 3 persons

Additional Data

The working principle for the Hydroplow III is to fluidize the seabed materials in a narrow path and to a predetermined depth without displacing the majority of the material or turbidizing the surrounding waters beyond 5m. The fluidizing effect provides relatively low and controlled towing forces. The method has been positively proven to place fiber optic cables and power cables at a consistent required depth of embedment in all jettable bottom conditions. The HydroPlow III is towed by a support Vessel propelled with dynamic positioning or kedging on anchors. Optional wheel carriage is available.

Figure 1a

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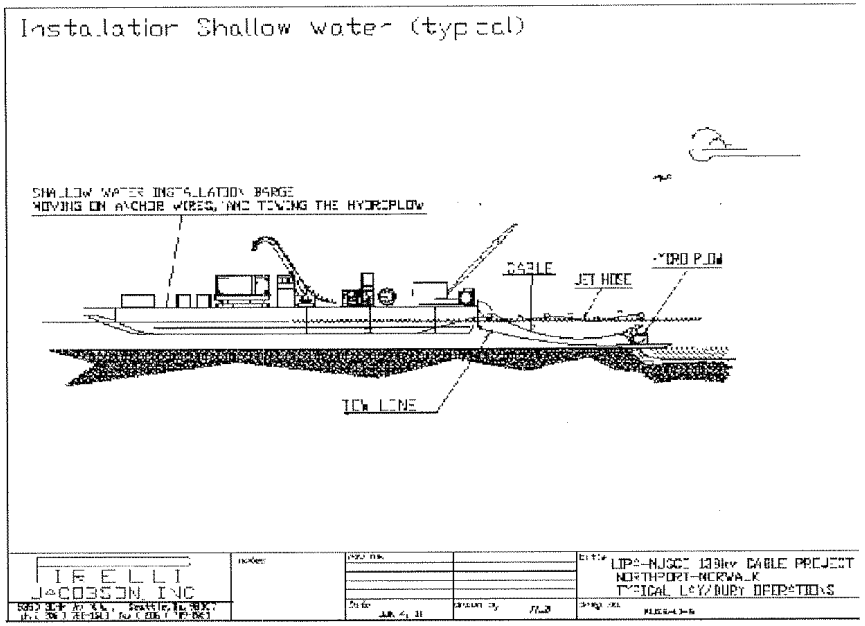

Figure 2

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