



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**

PHILADELPHIA DISTRICT CORPS OF ENGINEERS  
WANAMAKER BUILDING, 100 PENN SQUARE EAST  
PHILADELPHIA, PENNSYLVANIA 19107-3390

**MAR 06 2009**

Regulatory Branch  
Application Section II

**RECEIVED**

SUBJECT: CENAP-OP-R 20050843 (NWP-13, 18 and 33)  
Project Name: Delaware Transit Corporation

**MAR 09 2009**

RUMMEL, KLEPPER & KAHL, LLP

Delaware Transit Corporation  
119 Lower Beech Street  
Suite 100  
Wilmington, Delaware 19801-5114  
ATTN: Ken Potts

Dear Mr. Potts:

This letter is written in regard to your proposal to fill wetlands and perform bank stabilization along the Northeast Corridor of AMTRAK, in the New Castle County, Delaware.

Under current Federal regulations, a Department of the Army permit is required for work or structures in navigable waters of the United States and/or the discharge of dredged or fill material into waters of the United States including adjacent and isolated wetlands. Based upon our review of the information you have provided, it has been determined that the proposed work and discharges of fill identified for the four sites are approved by the existing Department of the Army Nationwide Permit (NWP) as described below.

13. Bank Stabilization. Bank stabilization activities necessary for erosion prevention, provided the activity meets all of the following criteria:

- (a) No material is placed in excess of the minimum needed for erosion protection;
- (b) The activity is no more than 500 feet in length along the bank, unless this criterion is waived in writing by the district engineer;
- (c) The activity will not exceed an average of one cubic yard per running foot placed along the bank below the plane of the ordinary high water mark or the high tide line, unless this criterion is waived in writing by the district engineer;
- (d) The activity does not involve discharges of dredged or fill material into special aquatic sites, unless this criterion is waived in writing by the district engineer;
- (e) No material is of the type, or is placed in any location, or in any manner, to impair surface water flow into or out of any water of the United States;
- (f) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored trees and treetops may be used in low energy areas); and,
- (g) The activity is not a stream channelization activity.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the bank stabilization activity: (1) involves discharges into

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special aquatic sites; (2) is in excess of 500 feet in length; or (3) will involve the discharge of greater than an average of one cubic yard per running foot along the bank below the plane of the ordinary high water mark or the high tide line. (See general condition 27.)

18. Minor Discharges. Minor discharges of dredged or fill material into all waters of the United States, provided the activity meets all of the following criteria:

(a) The quantity of discharged material and the volume of area excavated do not exceed 25 cubic yards below the plane of the ordinary high water mark or the high tide line;

(b) The discharge will not cause the loss of more than 1/10 acre of waters of the United States; and

(c) The discharge is not placed for the purpose of a stream diversion.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The discharge or the volume of area excavated exceeds 10 cubic yards below the plane of the ordinary high water mark or the high tide line, or (2) the discharge is in a special aquatic site, including wetlands. (See general condition 27.)

33. Temporary Construction, Access, and Dewatering. Temporary structures, work, and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites, provided that the associated primary activity is authorized by the Corps of Engineers or the U.S. Coast Guard. This NWP also authorizes temporary structures, work, and discharges, including cofferdams, necessary for construction activities not otherwise subject to the Corps or U.S. Coast Guard permit requirements. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding. Fill must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. The use of dredged material may be allowed if the district engineer determines that it will not cause more than minimal adverse effects on aquatic resources. Following completion of construction, temporary fill must be entirely removed to upland areas, dredged material must be returned to its original location, and the affected areas must be restored to pre-construction elevations. The affected areas must also be revegetated, as appropriate. This permit does not authorize the use of cofferdams to dewater wetlands or other aquatic areas to change their use. Structures left in place after construction is completed require a section 10 permit if located in navigable waters of the United States. (See 33 CFR part 322.)

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 27). The pre-construction notification must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.

You are advised that this verification of NWP authorization is valid for two (2) years from the date of this letter, unless the NWP authorization is modified, suspended, or revoked. In the event that the NWP authorization is reissued and/or modified during that time period, this two-year expiration date will remain valid, provided the activity complies with any subsequent reissuance and/or modification of the NWP authorization.

The enclosed table (Enclosure 1) identifies those NWPs which require a preconstruction notification (PCN) to the Corps of Engineers, those which have been regionally conditioned by the Division Engineer, and those which have been denied 401 Water Quality Certification

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(WQC) and/or Coastal Zone Management (CZM) consistency by the State. It is noted that CZM consistency from the State is only required for those activities in or affecting a State's coastal zone. Additionally, some of the NWP's do not involve a discharge of dredged or fill material, and as such, do not require a 401 WQC. For those NWP's not requiring a 401 WQC, the appropriate rows and columns have been identified with the term "NA". If the State has denied the required WQC and/or not concurred with the Corps' CZM consistency determination, the NWP authorization is considered denied without prejudice until an individual project specific WQC and/or CZM approval is obtained. This approval must be obtained in order for the activity to be authorized under the NWP and a copy provided to this office before work begins. Any project specific conditions required by the State for the WQC and/or CZM approval will automatically become part of the NWP authorization.

You should carefully note that this NWP authorization is based upon your agreement to comply with the terms and conditions of these NWP's (Enclosure 2), including any and all attached project specific special conditions listed below. Initiation of any authorized work shall constitute your agreement to comply with all of the NWP's conditions. You should also note that the authorized work may be subject to periodic inspections by a representative of this office.

A preliminary jurisdictional determination (JD) has been conducted to identify the location(s) of wetlands and waters that may be waters of the United States for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are U.S. Department of Agriculture (USDA) program participants, or anticipate participating in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

This preliminary jurisdictional determination is non-binding and indicates that there may be waters of the United States, including wetlands on the parcel. Preliminary JDs are advisory in nature and may not be appealed (see attached Notification of Appeal Form, Enclosure 3). A copy of the preliminary JD form that was signed by you or your agent agreeing to have this office perform a preliminary JD is enclosed (Enclosure 4). Please be aware that for purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S.

This preliminary JD is issued in accordance with current Federal regulations and is based upon the existing site conditions and information provided by you in your application. This office reserves the right to reevaluate and modify the preliminary JD at any time should the existing site conditions or Federal regulations change, or should the information provided by you prove to be false, incomplete or inaccurate.

#### PROJECT SPECIFIC SPECIAL CONDITIONS :

1. All work performed in association with the above noted project shall be conducted in

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accordance with the project plans entitled "...Northeast Corridor Improvements...", prepared by Rummel, Klepper and Kahl, LLP, dated June 30, 2008, unrevised, sheets 1 through 14 of 14. The project plans provide the placement of fill associated with improvements along the train tracks of the Northeast Corridor. Bank stabilization will be performed along an existing bridge; additional fills will be placed along the existing tracks to allow for maintenance access to the tracks. The applicant's stated purpose make improvements to the train tracks along the Northeast Corridor.

2. Construction activities shall not result in the disturbance or alteration of greater than 0.624 (0.469 for NWP 13, 0.065 for NWP 18 and 0.091 for NWP 33) acres of waters of the United States including wetlands.

3. Any deviation in construction methodology or project design from that shown on the above noted drawings must be approved by this office, in writing, prior to performance of the work. All modifications to the above noted project plans shall be approved, in writing, by this office. No work shall be performed prior to written approval of this office.

4. This office shall be notified at least 10 days prior to the commencement of authorized work by completing and signing the attached *Notification/ Certification of Work Commencement Form* (Enclosure 5). This office shall also be notified within 10 days of the completion of the authorized work by completing and signing the attached *Notification/Certification of Work Completion/Compliance Form* (Enclosure 6). All notifications required by this condition shall be in writing and shall be transmitted to this office by registered mail. Oral notifications are not acceptable. Similar notification is required each time maintenance work is to be done under the terms of this Corps of Engineers permit.

5. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

6. Efforts shall be made to keep construction debris from entering the waterway or wetland. Debris in the waterway or wetland shall be removed immediately.

7. The fill material shall be free of oil and grease, debris, wood, general refuse, plaster, and other pollutants, and shall contain no broken asphalt.

8. The authorized excavation, filling and associated activities shall be performed in accordance with the State and/or County standards for Soil Erosion Sediment Control.

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9. All temporary fills authorized by this permit shall be removed in their entirety, and the area returned to its pre-construction condition.

Also enclosed is a pre-addressed postal card (Enclosure 7) soliciting your comments on the processing of your application. Any comments, positive or otherwise, on the procedures, timeliness, fairness, etc., may be made on this card. If you should have any questions regarding this matter, please contact Lawrence Slavitter at (215) 656-6734 or write to the above address.

Sincerely,

  
for Frank J. Cianfrani  
Chief, Regulatory Branch

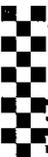
Enclosures

Copies Furnished:

DDNREC, Laura Herr  
DDNREC, Sarah Cooksey

AGENT: Jennifer A. Ottenberg  
Rummel Klepper and Kahl  
81 Mosher Street  
Baltimore, Maryland 21217-4250

27-512-01



Christopher A. Coons  
County Executive



Charles L. Baker  
General Manager

Department of Land Use

October 5, 2006

Eugene Bosley, P.E.  
RK&K Engineers  
By fax

Dear Mr. Bosley:

RE: **Application No. 20050989 -- Floodplain Application for NEC Commuter Rail Improvements -- Application Last Revised on 08/17/06**

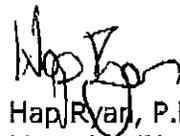
The application has been reviewed according to the NCC Code, specifically sections 40.10.313 (Regulations Pertaining to Activities in the Floodplain), 40.10.314 (Filling in the Floodplain) and 40.08.130 (Alteration/Enlargement/Extension of Nonconforming Uses). The following circumstances apply to this application:

1. The scope of work consists of filling to establish a platform for an addition rail line on an existing railroad embankment that spans the floodplain of Little Mill Creek.
2. Little Mill Creek has a mapped flood fringe and floodway at this location. The proposed filling is within the horizontal and vertical limits of the floodway as defined by mapped elevations. New Castle County Code Section 40.10.314.A prohibits placement of fill within the floodway. Since the presence of the existing embankment precedes the adoption of the New Castle County Code the embankment is a nonconforming use in the floodplain.
3. The application was processed as in conformance with Paragraph 40.08.130.B.2. of New Castle County Code which allows the expansion of a nonconforming use if the degree of nonconformity is not increased. The applicant has provided hydraulic flood calculations to demonstrate no statistically significant increase in the flood elevation as a result of this filling proposal as evidence that the degree of nonconformity will not be increased.

The Licensing Division agrees with the applicant that, as presented, the proposed fill will have no adverse impact on flood characteristics (flood height or extent of inundation) during the 100 year storm event and hereby approves this application.

Contact me at 302.395.5472 with any questions.

Respectfully,



Hap Ryan, P.E.  
Licensing Division

Christopher A. Coons  
County Executive



David M. Culver  
General Manager

Department of Land Use

March 3, 2009

Mark Tudor  
Group Engineer  
Project Development, North II  
State of Delaware  
Department of Transportation  
800 Bay Road  
P O Box 778  
Dover DE 19903



RE: Noise Waiver for Construction Improvements  
YARD to RAGAN – Civil, Structural – Contract No. 27-512-01

Dear Mr. Tudor,

Your request for a noise waiver under the provisions of Section 22.02.007 of the New Castle County Code is granted. Our letter shall constitute an agreement that the special waiver shall apply only to the following dates and times:

Dates  
June 20, 2009 – September 22, 2010

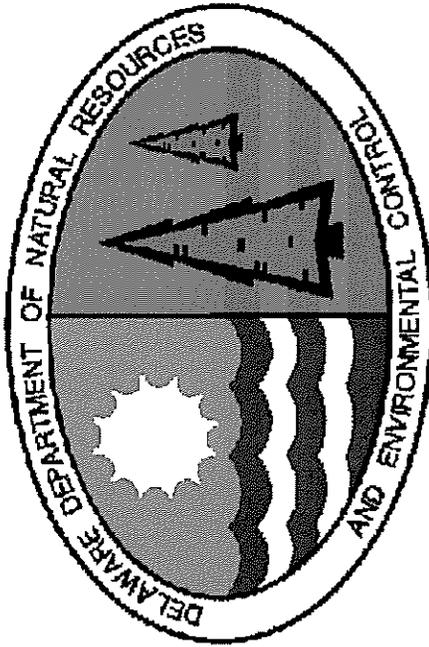
Time Period  
9:00 pm - 7:00 am Monday – Friday  
10:00pm – 9:00am Saturday – Sunday

Location  
Little Mill Creek

Sincerely,

Joseph F. Day, III  
Land Use Administrator

cc: Dennis Quinn, Public Safety  
Amy Kevis, Public Safety



**DEPARTMENT OF NATURAL RESOURCES  
AND  
ENVIRONMENTAL CONTROL**

**NOTICE OF AUTHORIZATION**

**Permit/Lease No. and Description SP-411/08, WE-412/08 TO PERFORM THE FOLLOWING WORK IN LITTLE MILL CREEK AND STATE REGULATED TIDAL WETLANDS ADJACENT TO LITTLE MILL CREEK AT THE RAILROAD BRIDGE LOCATED WEST OF INTERSTATE 95 IN WILMINGTON, NEW CASTLE COUNTY, DELAWARE:**

- To repair by replacing the 15 foot long by approximately 57.5 foot wide bridge located on the northernmost section of the railroad bridge;
- To hydraulically dredge to a depth of 6.3 feet below mean low water (-8.95 feet NAVD) in subaqueous lands, dredging approximately 1,200 cubic yards of material;
- To place a total of 5,235 square feet of stone riprap in the stream channel and on the banks of 260 linear feet of the right bank of the stream and 193 linear feet of the left bank of the stream in subaqueous lands and tidal wetlands;
- To install 2,792 square feet of Armorflex erosion control matting in subaqueous lands at a depth of -2.97 feet NAVD beneath the railroad bridges and approximately 20 feet upstream and downstream of the bridges;
- To place grout bags in subaqueous lands to fill scour holes, and along the abutments of the bridge and at the termini of the Armorflex mat;
- To backfill subaqueous lands with approximately 590 cubic yards of clean sand;
- To temporarily place 2 construction platforms and geotextile drainage bags in tidal wetlands;
- To place turbidity curtains and sediment and erosion control materials in subaqueous lands and tidal wetlands; and
- To compensate for all impacts to wetlands and subaqueous lands in accordance with an approved mitigation plan.

**Issued to: DELAWARE TRANSIT CORPORATION**

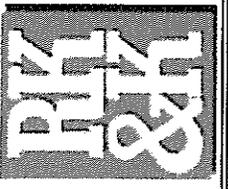
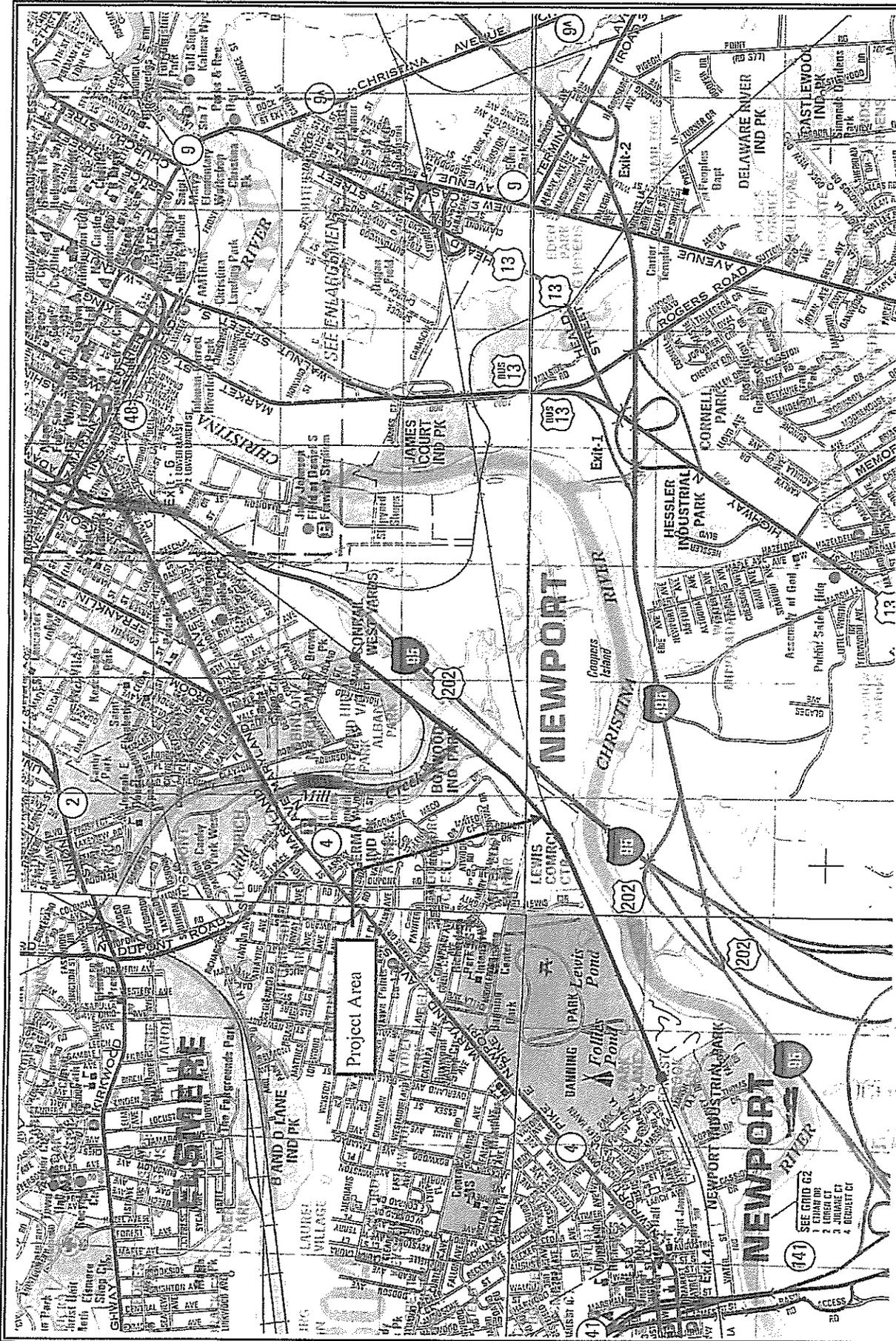
**Location of Work: Same as above**

**Date of Expiration: 10/15/2012**

**DISPLAY THIS CERTIFICATE IN A  
HIGHLY VISIBLE LOCATION ON THE JOB SITE.**



**Laura M. Herr, Program Manager  
Wetlands & Subaqueous Lands Section**



W.S.L.S.  
**APPROVED PLAN**  
 NEC Commuter Rail Improvements- Little Mill Creek Bridge  
 PERMIT 15-41/16  
 DATE 10/12/09



Figure 1. ADC Vicinity Map  
 NEC Commuter Rail Improvements- Little Mill Creek Bridge  
 Wilmington, Delaware

Source: ADC The Map People Permitted Use NO. 20703119 Exp. 03/31/08



STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES &  
ENVIRONMENTAL CONTROL  
DIVISION OF WATER RESOURCES

89 KINGS HIGHWAY  
DOVER, DELAWARE 19901

WETLANDS & SUBAQUEOUS  
LANDS SECTION

TELEPHONE (302) 739-9943  
FACSIMILE (302) 739-6304

OCT 15 1993

Mr. Kennard Potts  
Delaware Transit Corporation  
New Castle County Administration Office  
119 Lower Beech Street, Suite 100  
Wilmington, Delaware 19805-4440

Dear Mr. Potts:

Enclosed is the Subaqueous Lands and Wetlands Permit granted by the State of Delaware. Please read carefully all the Special and General Conditions contained within this Permit. **Please note Special Conditions 3, 12 and 16, which require submittals to the Wetlands and Subaqueous Lands Section. Special Condition 3 addresses the sampling of the dredged material and location of the final dredged material disposal site. Special Condition 12 requires notification of the source of clean sand for backfilling of Little Mill Creek and Special Condition 16 requires submission of a mitigation plan for impacts to subaqueous lands and tidal wetlands.** The permittee and contractor are responsible to ensure that all conditions of the Permit/Certification are strictly observed.

If you have any questions, please feel free to contact this office at (302) 739-9943.

Sincerely,

Laura M. Herr  
Section Manager  
Wetlands & Subaqueous  
Lands Section

Enclosures



STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES &  
ENVIRONMENTAL CONTROL  
DIVISION OF WATER RESOURCES  
89 KINGS HIGHWAY  
DOVER, DELAWARE 19901

WETLANDS & SUBAQUEOUS  
LANDS SECTION

TELEPHONE (302) 739-9943  
FACSIMILE (302) 739-6304

Mr. Kennard Potts  
Delaware Transit Corporation  
New Castle County Administration Office  
119 Lower Beech Street, Suite 100  
Wilmington, Delaware 19805-4440

Subaqueous Lands Permit No: SP-411/08  
Wetlands Permit No.: WE-412/08  
Date of Issuance: 10/15/2009  
Construction Expiration Date:  
Amended Date:  
Tax Parcel No.: N/A

**SUBAQUEOUS LANDS PERMIT AND WETLANDS PERMIT  
GRANTED TO THE DELAWARE TRANSIT CORPORATION  
TO PERFORM THE FOLLOWING WORK IN LITTLE MILL CREEK AND  
STATE REGULATED TIDAL WETLANDS ADJACENT TO LITTLE MILL CREEK  
AT THE RAILROAD BRIDGE LOCATED WEST OF INTERSTATE 95  
IN WILMINGTON, NEW CASTLE COUNTY, DELAWARE:**

- To repair by replacing the 15 foot long by approximately 57.5 foot wide bridge located on the northernmost section of the railroad bridge;
- To hydraulically dredge to a depth of 6.3 feet below mean low water (-8.95 feet NAVD) in subaqueous lands, dredging approximately 1,200 cubic yards of material;
- To place a total of 5,235 square feet of stone riprap in the stream channel and on the banks of 260 linear feet of the right bank of the stream and 193 linear feet of the left bank of the stream in subaqueous lands and tidal wetlands;
- To install 2,792 square feet of Armorflex erosion control matting in subaqueous lands at a depth of -2.97 feet NAVD beneath the railroad bridges and approximately 20 feet upstream and downstream of the bridges;
- To place grout bags in subaqueous lands to fill scour holes, and along the abutments of the bridge and at the termini of the Armorflex mat;
- To backfill subaqueous lands with approximately 590 cubic yards of clean sand;
- To temporarily place 2 construction platforms and geotextile drainage bags in tidal wetlands;
- To place turbidity curtains and sediment and erosion control materials in subaqueous lands and tidal wetlands; and
- To compensate for all impacts to wetlands and subaqueous lands in accordance with an approved mitigation plan.

*Delaware's good nature depends on you!*

**THE IMPACTS ASSOCIATED WITH THESE ACTIVITIES INCLUDE:**

- **The permanent fill of 7,344 square feet of subaqueous lands with scour protection material including the stone rip-rap, grout bags and Armorflex mat;**
- **The permanent fill of 706 square feet tidal wetlands with stone riprap;**
- **The temporary impact of 1,137 square feet of subaqueous lands due to the placement of erosion and sediment control materials; and**
- **The temporary impact of 16,301 square feet of tidal wetlands due to the placement of erosion and sediment control materials, geotextile drainage bags and construction platforms.**

Pursuant to the provisions of 7 Del. C., Chapter 72, §7203, the Department's "Regulations Governing the Use of Subaqueous Lands," and 7 Del. C., Chapter 66, §6604, the "Department's Wetlands Regulations," permission is hereby granted on this 15<sup>th</sup> day of October A.D. 2009 to construct the above-referenced project in accordance with the approved plans for this Permit (11 Sheets), as approved on October 12, 2009; the application dated September 26, 2009 and received by this Division on October 2, 2009, with additional information received on May 20, 2009, September 30, 2009 and October 12, 2009.

Whereas, pursuant to the provisions of 7 Del. C. 7203, the Secretary of the Department of Natural Resources and Environmental Control through his duly authorized representative finds that it is not contrary to the public interest if this project is approved subject to the terms and conditions herein set forth.

This Permit is issued subject to the following conditions:

**SPECIAL CONDITIONS**

1. In order to prevent disturbance to migratory birds, bird exclusion netting shall be placed in the bridge before April 15 of the construction year to prevent the nesting of migratory birds. The netting shall be maintained through August 1 or until the start of construction.
2. In order to protect anadromous fish, no in-stream work shall be conducted in Little Mill Creek and no pile driving shall be conducted on the bank from March 15 through May 31 of any given year.
3. All dredging shall be completed using a hydraulic dredge. The dredged materials shall be temporarily contained in geotextile fabric bags on the Amtrak property. Prior to disposal of the sediments, sediment analysis shall be conducted to determine the presence of contaminants in the materials and determine the correct disposal of the material. A copy of the laboratory analytical results and the proposed disposal location shall be submitted to the Wetlands and Subaqueous Lands Section within six months of the completion of dredging. No materials shall be disposed until the disposal site has been approved by the Wetlands and Subaqueous Lands Section.

4. None of the construction work shall diminish the cross-sectional area or the hydraulic capacity of the bridge opening.
5. No dredged material shall be placed in wetlands or subaqueous lands, other than as described in Special Condition #3.
6. Turbidity curtains shall be installed around the in-stream construction area and maintained during all construction activities.
7. If any oily sheen is observed associated with the construction activities or sediments, oil absorbent materials shall be used to collect and absorb the oils. These materials shall be properly disposed.
8. The Armorflex mats shall be floated into place during installation. All banks and wetlands disturbed during the installation of the Armorflex shall be re-stabilized. The wetland areas shall be re-vegetated.
9. The Armorflex matting shall be secured to prevent movement in the stream. Maintenance inspections shall be performed routinely and appropriate action taken to secure the matting whenever necessary.
10. The stone rip-rap and the Armorflex matting shall be placed at a depth of -2.97 NAVD, approximately 1 foot below the existing stream channel depth.
11. The channel shall be backfilled with clean sands to the approximate current stream bed elevations. The backfilled stream channel shall be restored to contain a channel and allow for the passage of fish.
12. The permittee shall submit to the Wetlands and Subaqueous Lands Section the source of the clean sand to be used as backfill in Little Mill Creek prior to its use. All fill material, including the sands, shall be clean and free from oils, grease, asphalt and other contaminants.
13. All temporary fill materials placed in tidal wetlands shall be placed on geo-textile fabric.
14. All tidal wetlands temporarily impacted during construction activities shall be returned to pre-existing grades, or appropriate grades that would promote the growth of native wetland species, and shall be replanted with native wetland species. Structures or fill material temporarily placed on tidal wetlands shall be removed within one month of the completion of the construction.
- 15. Because the railroad bridge is recognized to contribute to upstream flooding during storm events, future work on this bridge should include improving the outdated, undersized hydraulic capacity of the bridge.**

**16. Compensation shall be completed for all impacts to State-regulated wetlands and subaqueous lands. A mitigation plan for these impacts, to include post-construction monitoring, shall be submitted to the Wetlands and Subaqueous Lands Section for review and approval within 6 months of the issuance of this Permit. All work associated with the approved mitigation plan, except for the follow-up monitoring, shall be completed prior to the construction expiration date identified on page one of this Permit.**

17. Erosion and sediment control measures shall be implemented in accordance with the specifications and criteria in the current Delaware Erosion and Sediment Control Handbook so as to minimize entry and dispersal of sediment and other contaminants in surface waters.

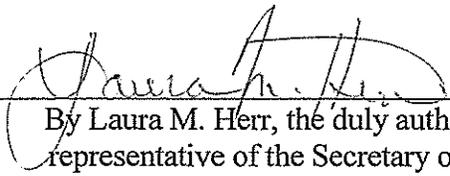
#### **GENERAL CONDITIONS**

1. The work authorized herein shall be completed in accordance with the terms and conditions of the Army Corps of Engineers Nationwide Permit 23.
2. This Permit is granted for the purpose of repairing a railroad bridge, providing scour protection and preventing erosion as stated in the Permit application. Any other use without prior written approval shall constitute reason for this Permit being revoked.
3. The permittee and contractor shall at all times comply with all applicable laws and regulations of the Department of Natural Resources and Environmental Control.
4. The activities authorized herein shall be undertaken in accordance with the permit conditions, the final stamped and approved plans, and with the information provided in the permit application.
5. A copy of this Permit and the stamped approved plans shall be available on-site during all phases of construction activity.
6. The conditions contained herein shall be incorporated into any and all construction contracts associated with the construction authorized herein. The permittee and contractor are responsible to ensure that the workers executing the activities authorized by this Permit have full knowledge of, and abide by, the terms and conditions of this Permit.
7. The permittee shall protect and save the State of Delaware harmless from any loss, cost or damage resulting from the activities authorized herein.
8. The issuance of this Permit does not constitute approval for any activities that may be required by any other local, state or federal government agency.

9. The issuance of this Permit does not imply approval of any other part, phase, or portion of any overall project the permittee may be contemplating.
10. This Permit authorizes only the activities described herein. Modifications to the project may require a supplemental approval from this office prior to the initiation of construction. A determination of the need for a supplemental approval will be made by this office pursuant to the permittee submitting written notification and revised plans indicating project changes. Failure to contact the Department prior to executing changes to the project shall constitute reason for this Permit being revoked.
11. Representatives of the Department of Natural Resources and Environmental Control shall be allowed to access the property to inspect all work during any phase of the construction and may conduct pre and post-construction inspections, collect any samples or conduct any tests that are deemed necessary.
12. The activities authorized herein shall be conducted so as not to violate the State of Delaware's Surface Water Quality Standards, as amended July 11, 2004.
13. All construction materials, waste, or debris associated with this activity shall be properly disposed of and contained at all times to prevent its entry into waters or wetlands. Construction materials shall not be stockpiled in subaqueous lands or wetlands.
14. Disturbance of subaqueous lands or wetlands adjacent to the authorized structures or activities is prohibited. Disturbance of subaqueous lands or wetlands in the path of construction activity shall be minimized. Any temporarily impacted subaqueous lands or wetlands shall be returned to pre-disturbance elevations and conditions.
15. The permittee and contractor shall employ measures during construction to prevent spills of fuels, lubricants or other hazardous substances. In the event of a spill, the permittee and contractor shall make every effort to stop the leak and contain the spill, and shall immediately contact the Hazardous Spill Response Team (HAZMAT) at 1-800-662-8802 and this office at (302) 739-9943. The permittee and contractor are responsible to comply with all directives to contain and clean up the spilled material(s) as stipulated by the HAZMAT team, and to restore the site as may be required by this office.
16. None of the construction activities authorized herein shall occur after the construction expiration date identified on Page 1 of this Permit. The permittee may file one construction expiration date extension request of up to one (1) year if necessary to complete the authorized work. Such requests must be received by the Department at least thirty (30) days prior to the construction expiration date.
17. The permittee shall notify the Wetlands and Subaqueous Lands Section prior to the commencement of the work authorized by this Permit.

18. The permittee shall maintain all authorized structures and activities in a good and safe condition.
19. Any actions, operations or installations which are found by the Department to be contrary to the public interest may constitute reason for the discontinuance and/or removal of said action, operation or installation. Removal and restoration shall be at the expense of the permittee and/or upland property owner within thirty (30) days of receipt of written notice of revocation and demand for removal.
20. This Permit is personal but may be transferred provided the permittee provides prior notice to the Department of the intent to transfer and the new property owner provides appropriate documentation to substantiate ownership of the adjacent upland property and/or the structures authorized herein. Failure to transfer this Permit to a new owner may result in the revocation of the Permit and the removal of all structures authorized by this Permit at the expense of the permittee.
21. Failure to comply with any of the terms or conditions of this Permit may result in enforcement action, which could include the revocation of this Permit, and subsequent restoration of the site to preconstruction conditions.

IN WITNESS WHEREOF, I, Laura M. Herr, the duly authorized representative of Collin P. O'Mara, Secretary of the Department of Natural Resources and Environmental Control, have hereunto set my hand this 15<sup>th</sup> day of October, 2009.

  
By Laura M. Herr, the duly authorized  
representative of the Secretary of the  
Department of Natural Resources and  
Environmental Control



CONTRACT NO.	27-512-01	COUNTY	NEW CASTLE	DATE	JANUARY 20, 2009
SHEET NO. OF TOTAL SHEETS	31	PROJECT NO.	HPP-2005 (02B)	DATE	JANUARY 20, 2009
NEC COMMUTER RAIL IMPROVE - DELAWARE YARD TO RAGAN - Civil, Structural REVISIONS					

DRAWING NO. MT-21  
 STAGE 2  
 SCOUR PROTECTION INSTALLATION  
 THIRD TRACK

SCALE  
 1" = 30'

**STAGE 2: SEQUENCE OF CONSTRUCTION**

- INSTALL PILES TO ASSIST IN GUIDING ARMORFLEX PANELS INTO POSITION.
- USING FRONTONS OR OTHER FLOATING DEVICES, LAUNCH ARMORFLEX PANELS AND PLACE INTO POSITION.

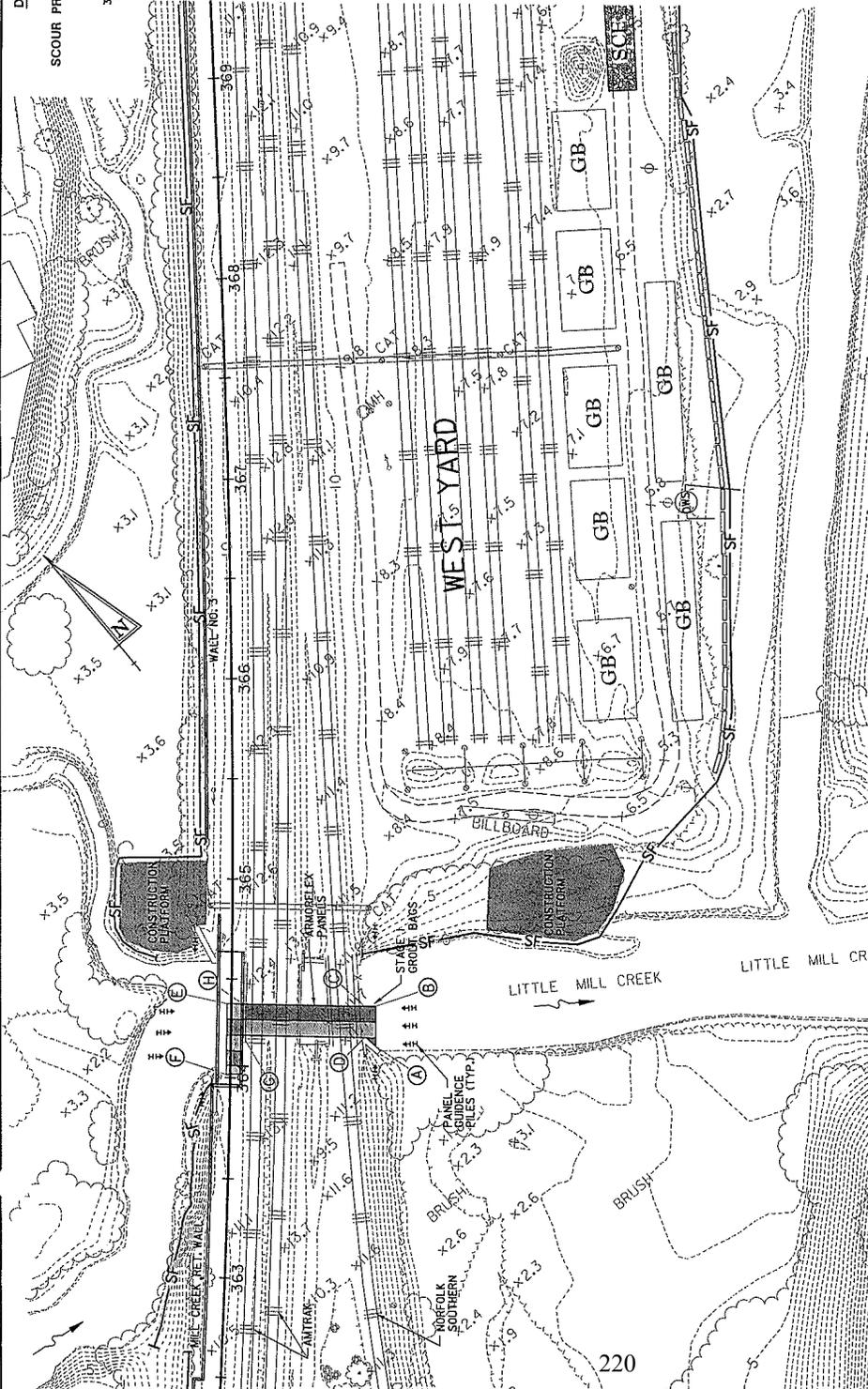
27-512-01

POINT	STATION	OFFSET	FINISHED GRADE ELEVATION
A	364+14	80' LT.	-8.65
B	364+14	80' LT.	-4.75
C	364+38	80' LT.	-4.75
D	364+22	68' LT.	-4.75
E	364+30	19' RT.	-8.65
F	364+01	19' LT.	-8.65
G	364+22	4' RT.	-4.75
H	364+38	4' RT.	-4.75

DATUM CONVERSION

MS

NAVD 1988 0.00	-0.85
-0.85	0.00 NAVD 1929
-3.85	-3.00
-4.85	-4.00



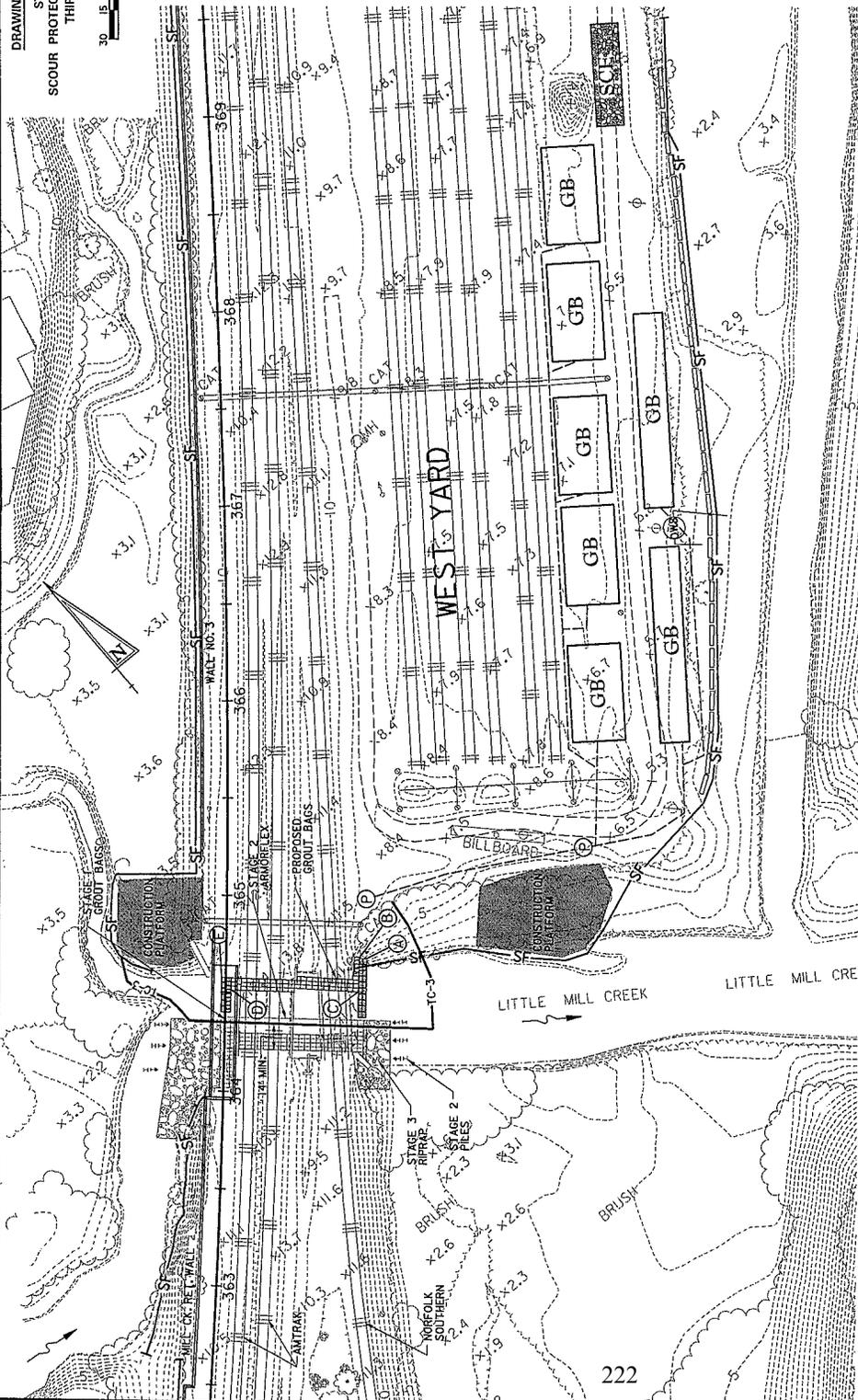
W.S.L.S.  
**APPROVED PLANS**  
 PERMIT # SP-4118  
 DATE 10/12/09  
 (SEE PERMIT CONDITIONS)



CONTRACT	COUNTY	C.A. NO.	SHEET NO. OF TOTAL SHEETS
27-512-01	NEW CASTLE	HP-2005 (02B)	33
NEC COMMUTER RAIL IMPROVE - DELAWARE YARD TO RAGAN - Civil, Structural			
DATE: JANUARY 20, 2009			
REVISIONS			

DRAWING NO. MT-23  
 STAGE 4  
 SCOUR PROTECTION INSTALLATION  
 THIRD TRACK

SCALE  
 30 15 0 30  
 1" = 30'



**STAGE 4: SEQUENCE OF CONSTRUCTION**

1. INSTALL TURBIDITY CURTAIN AS SHOWN, ALLOW TIDAL FLUCTUATIONS TO EQUALIZE AT UPSTREAM CONSTRUCTION PLATFORM.
2. HYDRAULICALLY EXCAVATE FOR INSTALLATION OF PROPOSED GROUT BAGS. LAYBACK SLOPES AT 2:1.
3. INSTALL GEOTEXTILE AND GROUT BAGS AS EXCAVATION PROGRESSES. SECURE GEOTEXTILE NOT COVERED BY GROUT BAGS.
4. WHEN A GEOTEXTILE REACHES CAPACITY, ALLOW SOLIDS CONTAINED TO SETTLE AND PROCEED WITH USE OF GROUT BAGS. ASSEMBLE NEW GEOTEXTILE AT THIS LOCATION, IF REQUIRED.
5. REMOVE TURBIDITY CURTAIN WHEN GROUT BAG AND GEOTEXTILE INSTALLATION IS COMPLETE.

27-51

POINT	STATION	OFFSET	FINISHED GRADE ELEVATION
A	364+70	7' RT.	-3.72
B	364+70	7' RT.	-3.72
C	364+50	10' LT.	-3.72
D	364+50	10' LT.	-3.72
E	364+50	16' LT.	-8.05

**DATUM CONVERSION**

NAVD 1988 0.00 ± 0.85  
 MGS 0.00 ± 0.00 NGVD 1929

0.85 ± 0.00  
 -0.85 ± 0.00

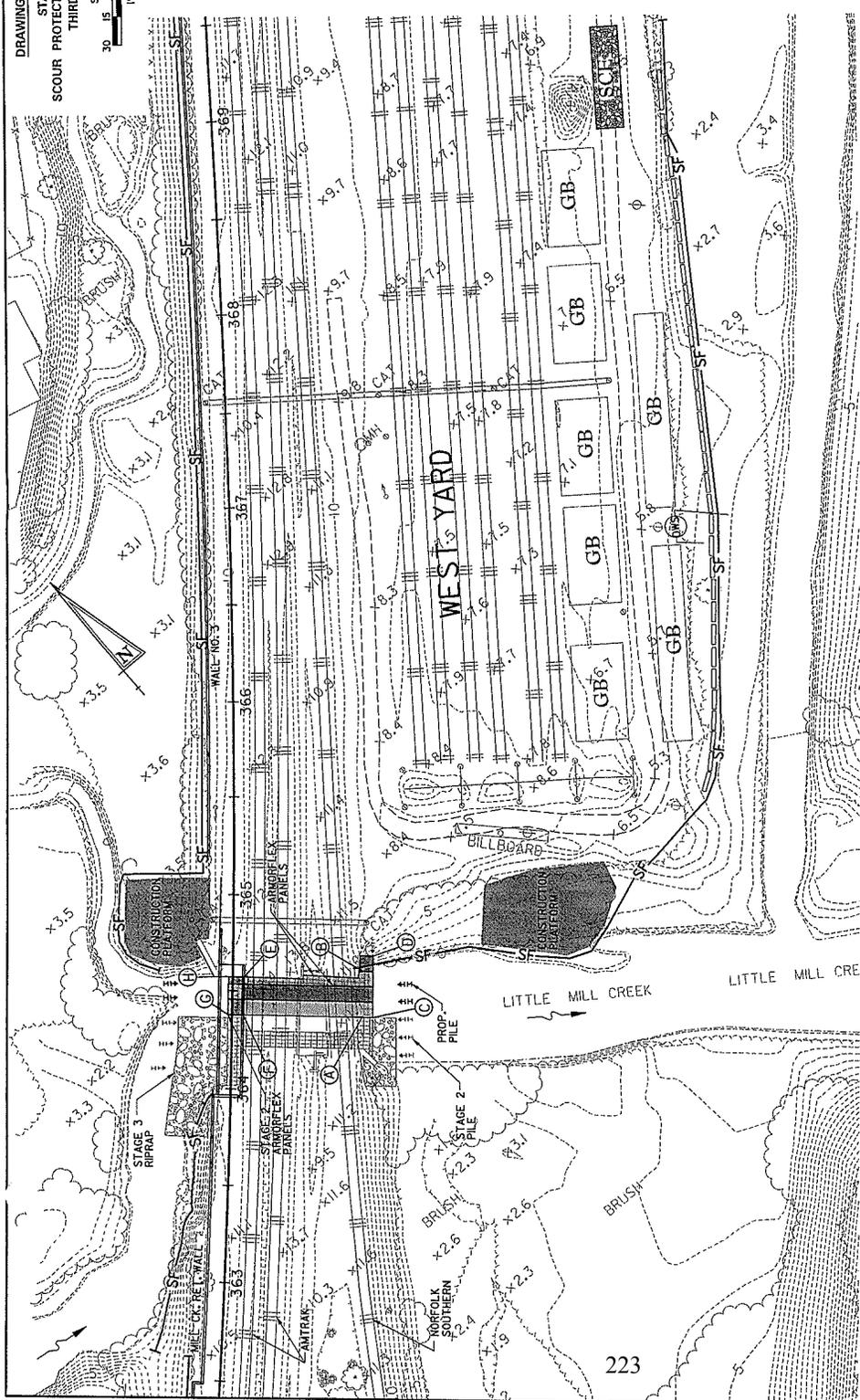
3.65 ± 3.00  
 -3.65 ± 3.00

4.85 ± 4.00  
 -4.85 ± 4.00

**W.S.L.S.**  
**APPROVED PLANS**  
 PERMIT # SP-41108  
 DATE 10/24/09  
 (SEE PERMIT CONDITIONS)

CONTRACT	COUNTY	F.P.A. NO.	SHEET NO. OF TOTAL SHEETS
27-512-01	NEW CASTLE	HPP-2005 (028)	34 / 140
NEC COMMUTER RAIL IMPROVE - DELAWARE YARD TO BAGAN - Civil Structural			
DATE: JANUARY 20, 2009			
REVISIONS			

DRAWING NO. MT-24  
 STAGE 5  
 SCOUR PROTECTION INSTALLATION  
 THIRD TRACK



**STAGE 5: SEQUENCE OF CONSTRUCTION**

1. INSTALL ADDITIONAL PILES TO ASSIST IN GUIDING ARMORFLEX PANELS INTO POSITION.
2. USING PONTOONS OR OTHER FLOATING DEVICES, LAUNCH ARMORFLEX PANELS AND PLACE INTO POSITION.
3. ENSURE THAT GEOTEXTILE IS PROVIDED BENEATH ALL ARMORFLEX PANELS.
4. REMOVE ALL PILES.

27-512-01

POINT	STATION	OFFSET	FINISHED GRADE ELEVATION
A	364+28	6' RT.	-2.97
B	364+67	6' RT.	-2.97
C	364+38	80' RT.	-8.03
D	364+70	80' RT.	-2.97
E	364+37	7' LL.	-2.97
F	364+37	9' LL.	-8.03
G	364+37	9' LL.	-8.03
H	364+57	9' LL.	-8.03

DATUM CONVERSION

NAVD 1988	0.00	0.85
	-0.65	0.00
	-3.85	-3.00
	-4.85	-4.00

W.S.L.S.  
**APPROVED PLANS**  
 PERMIT # 50-41108  
 DATE 11/14/08  
 (SEE PERMIT CONDITIONS)

CONTRACT	COUNTY	T.S. No.	SHEET NO.
27-512-01	NEW CASTLE	HP-2005 (02B)	35
NEC COMMUTER RAIL IMPROVE.- DELAWARE YARD TO RAGAN - Civil, Structural			
DATE: JANUARY 20, 2009			
REVISIONS			

DRAWING NO. MT-25  
 STAGE 6  
 SCOUR PROTECTION INSTALLATION  
 THIRD TRACK

SCALE  
 30 15 0 30  
 1" = 30'

27-512-01

**STAGE 6: SEQUENCE OF CONSTRUCTION**

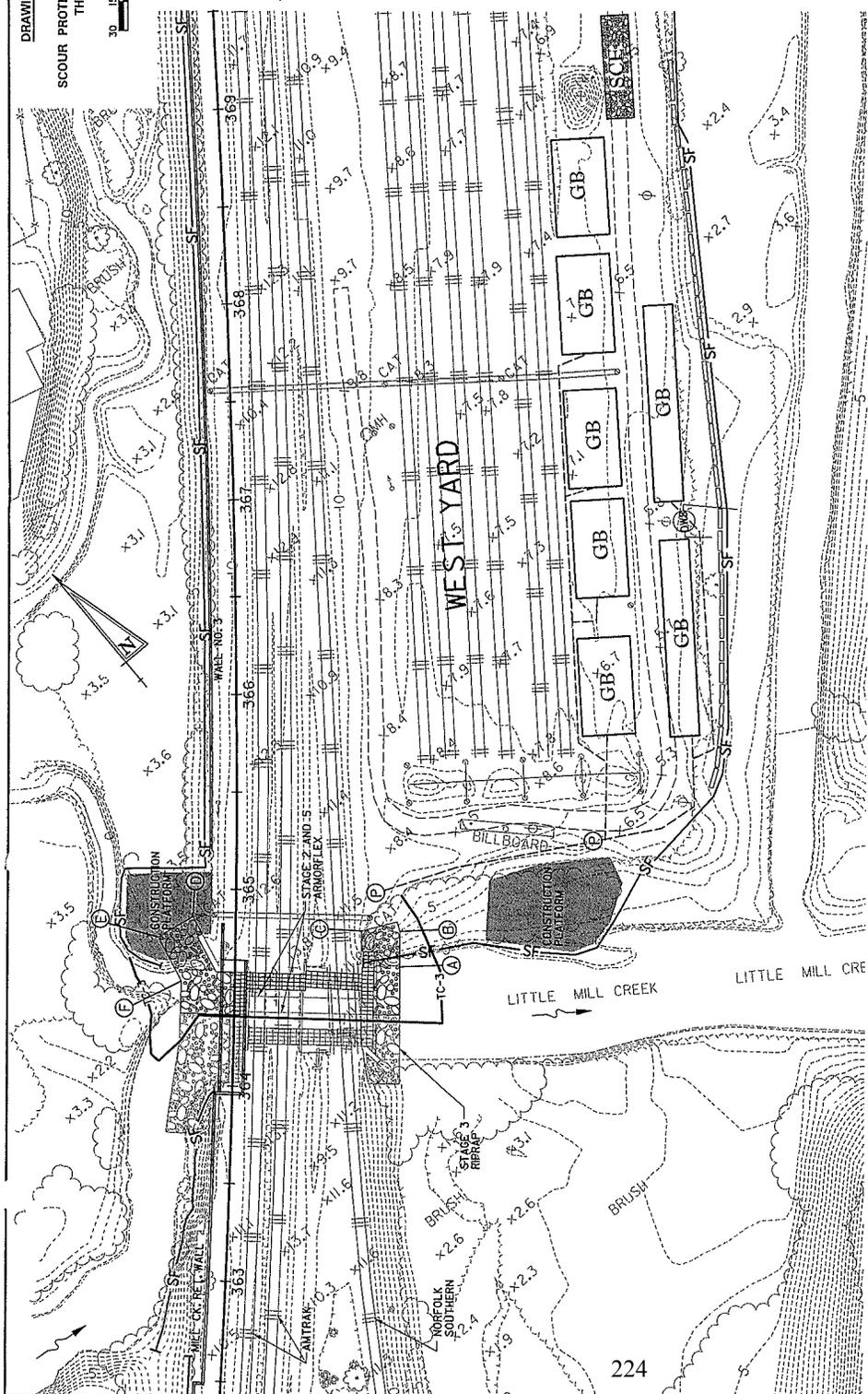
1. COMPLETE NORTH ABUTMENT.
2. RE-ESTABLISH TURBIDITY CURTAIN.
3. HYDRAULICALLY EXCAVATE FOR RIPRAP BEYOND ARMORFLEX.
4. INSTALL GEOTEXTILE, GROUT BAGS, AND RIPRAP AS EXCAVATION PROGRESSES.
5. WHEN A GEOTUBE REACHES CAPACITY, ALLOW SOLIDS CONTAINED TO DEWATER AND PROPERLY DISPOSE OF SOLIDS AND GEOTUBE. ASSEMBLE NEW GEOTUBE AT THIS LOCATION IF REQUIRED.
6. REMOVE TURBIDITY CURTAIN WHEN GEOTEXTILE, GROUT BAG AND RIPRAP INSTALLATION IS COMPLETE.
7. REMOVE CONSTRUCTION PLATFORMS AND GEOTEXTILE, STABILIZE DISTURBED AREA IMMEDIATELY.

POINT	STATION	OFFSET	FINISHED GRADE ELEVATION
A	364+62	84" RT.	MATCH EXISTING
B	364+60	64" RT.	MATCH EXISTING
C	364+60	64" RT.	MATCH EXISTING
D	364+85	27" L.I.	MATCH EXISTING
E	364+75	39" L.I.	MATCH EXISTING
F	364+53	27" L.I.	-2.97

**DATUM CONVERSION**

NAVD 1988 0.00 = 0.85  
 -0.85 = 0.00 NSVD 1929  
 -3.85 = -3.00  
 -4.85 = -4.00

W.S.L.S.  
**APPROVED PLANS**  
 PERMIT # WE-41108  
 DATE 10/12/09  
 (SEE PLANS FOR SIGNATURES)



DRAWING NO. MT-26  
 STAGE 7  
 SCOUR PROTECTION INSTALLATION  
 THIRD TRACK

CONTRACT 27-512-01  
 COUNTY NEW CASTLE  
 P.L.P. NO. HPP-2005 (02B)  
 SHEET NO. TOTAL SHEETS 36 140

NEC COMPUTER RAIL IMPROVE- DELAWARE  
 YARD TO RAGAN - Civil, Structural

DATE: JANUARY 29, 2009  
 REVISIONS

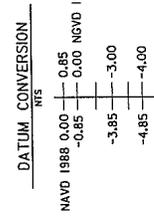


**STAGE 7: SEQUENCE OF CONSTRUCTION**

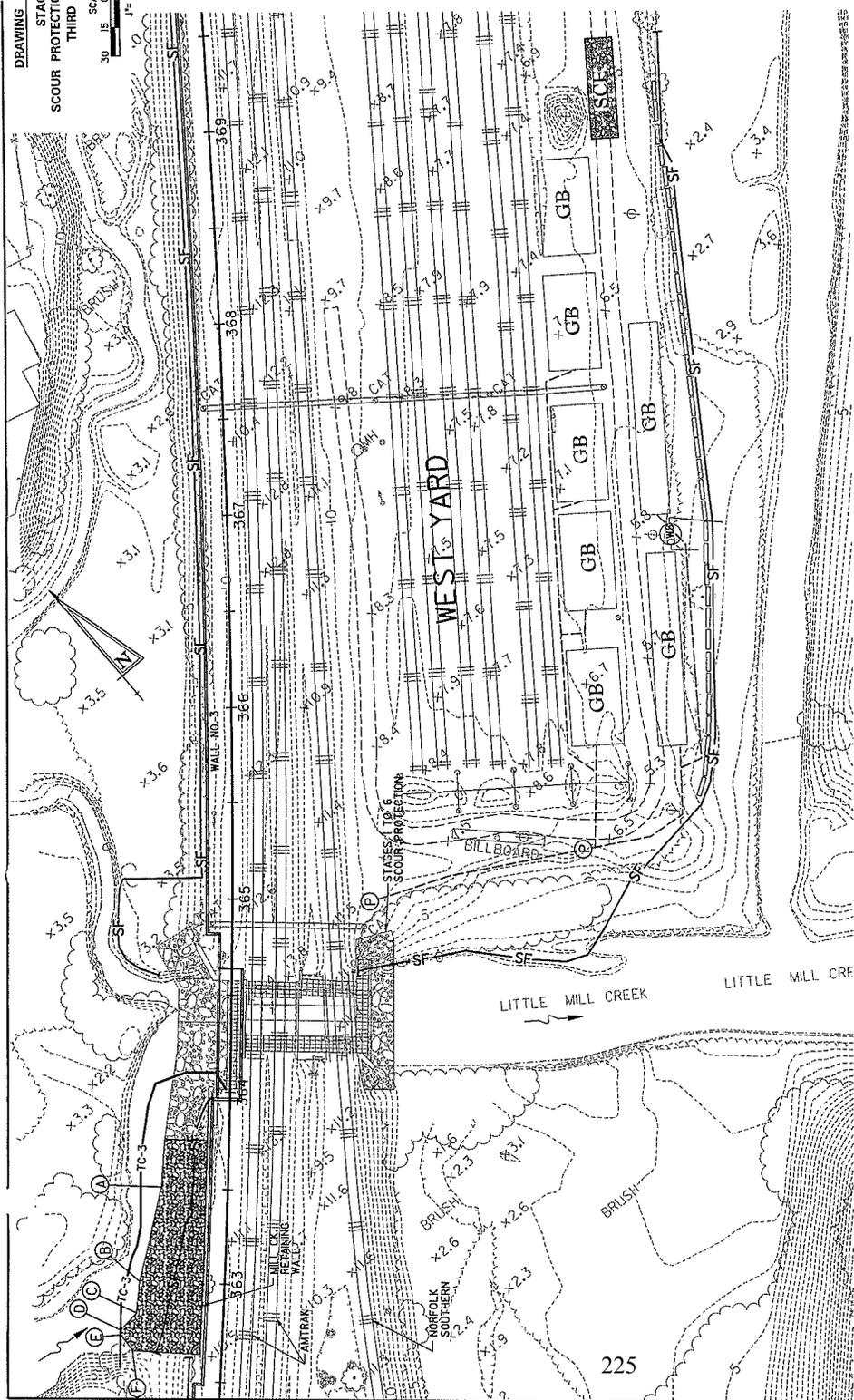
1. INSTALL TURBIDITY CURTAIN AS SHOWN, ALLOW TIDAL FLUCTUATIONS TO EQUALIZE AT UPSTREAM END OF CONSTRUCTION.
2. EXCAVATE AND INSTALL GEOTEXTILE AND R-5 RIPRAP. SEE DWG. DR-5 FOR DETAILS.
3. STABILIZE DISTURBED SOILS AND REMOVE TURBIDITY CURTAIN.
4. BACKFILL STREAMBED TO ORIGINAL ELEVATIONS WITH SAND. SUBMIT AS-BUILT SURVEY OF STREAMBED.
5. REMOVE PUMPING SYSTEM, GEOTUBES, DRAINAGE NET, AND IMPERVIOUS MEMBRANE FROM DEWATERING AREA. GRADED AGGREGATE BASE SHALL REMAIN.
6. COMPLETE WALL NO. 3.

27-512-01

POINT	STATION	OFFSET	FINISHED GRADE ELEVATION
A	363+50	34' L.I.	-2.97
B	363+00	44' L.I.	-2.97
C	362+84	45' L.I.	-2.97
D	362+74	52' L.I.	-2.97
E	362+71	52' L.I.	-2.97
F	362+64	45' L.I.	MATCH EXISTING



W.S.L.S.  
**APPROVED PLANS**  
 PERMIT SP-41108  
 DATE 10/12/09  
 (SEE PERMITS FOR CONDITIONS)



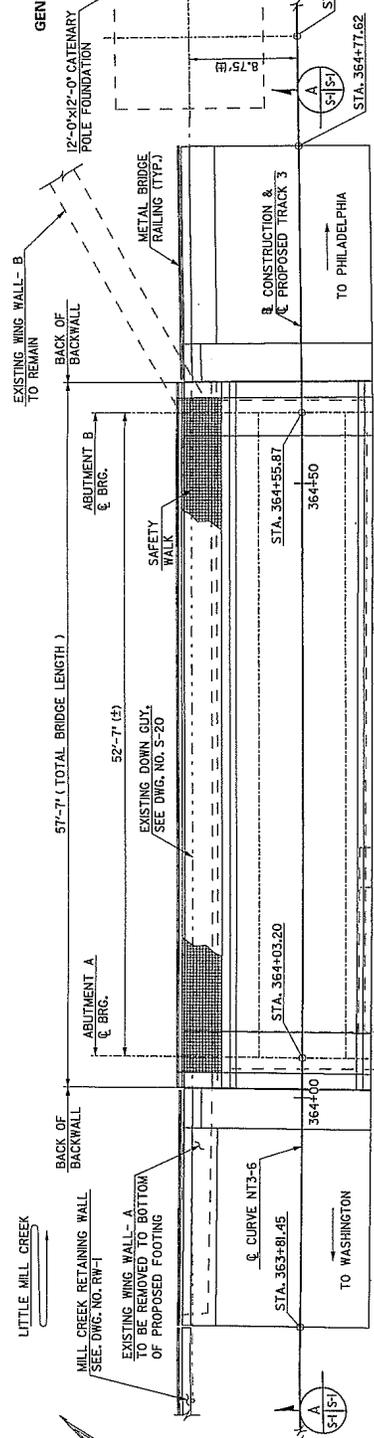
225



NEW CASTLE	1/4	37	140
<b>NEC COMMUTER RAIL IMPROVEMENTS</b> <b>WILMINGTON TO NEWARK, DE</b>			
DATE: JANUARY 20, 2009 <b>REVISIONS</b>			

27-512-01

DRAWING NO. S-1  
 GENERAL PLAN AND ELEVATION  
 THIRD TRACK -  
 MILL CREEK BRIDGE



**STRUCTURE GENERAL NOTES**

ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA), DATED 2005.

LOADING: LIVE LOAD-COOPER E80 FOR ABUTMENT AND RETAINING WALL DESIGNS. DESIGN IMPACT AS SPECIFIED IN AN AREMA MANUAL USING DIESEL LOCOMOTIVE.

DESIGN: ABUTMENT AND RETAINING WALL ELEMENTS WERE DESIGNED BY THE LOAD FACTOR METHOD.

ABUTMENT AND RETAINING WALL STABILITY ANALYSIS WITH SERVICE LOADS.

ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATIONS AND INCLUDE THE ADDITIONAL REQUIREMENTS FOR CHARPY V-NOTCH TESTING OF PRIMARY LOAD CARRYING MEMBERS. ALL BOLTS TO BE 7/8" DIAMETER HIGH STRENGTH ASTM DESIGNATION A325.

PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS SHALL BE AS FOLLOWS: 128 DAY COMPRESSIVE STRENGTH BRIDGE DECK -  $f'_c = 4500$  PSI (CLASS D). ALL OTHER CONCRETE -  $f'_c = 4500$  PSI (CLASS A).

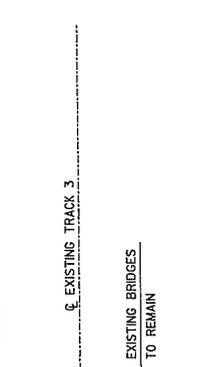
MAX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. ALL EXPOSED CORNERS OF CONCRETE SHALL BE CHAMFERED WITH  $\frac{1}{4} \times \frac{3}{4}$ " MILLED CHAMFERED STRIPS.

ALL REINFORCING BARS SHALL CONFORM TO ASTM SPECIFICATION A615 GRADE 60, EPOXY COATED REINFORCING STEEL SHALL CONFORM TO ASTM D3953. ALL BARS SHALL BE 2" UNLESS NOTED OTHERWISE. ALL REINFORCING BAR TIES AND STANDARD HOOKS SHALL CONFORM TO ACI STANDARDS. FOR TIES AND STIRRUPS: STANDARD ACI BENDING TOLERANCES ARE MODIFIED TO PLUS (+) ZERO INCHES, MINUS (-) NORMAL ACI BENDING TOLERANCES.

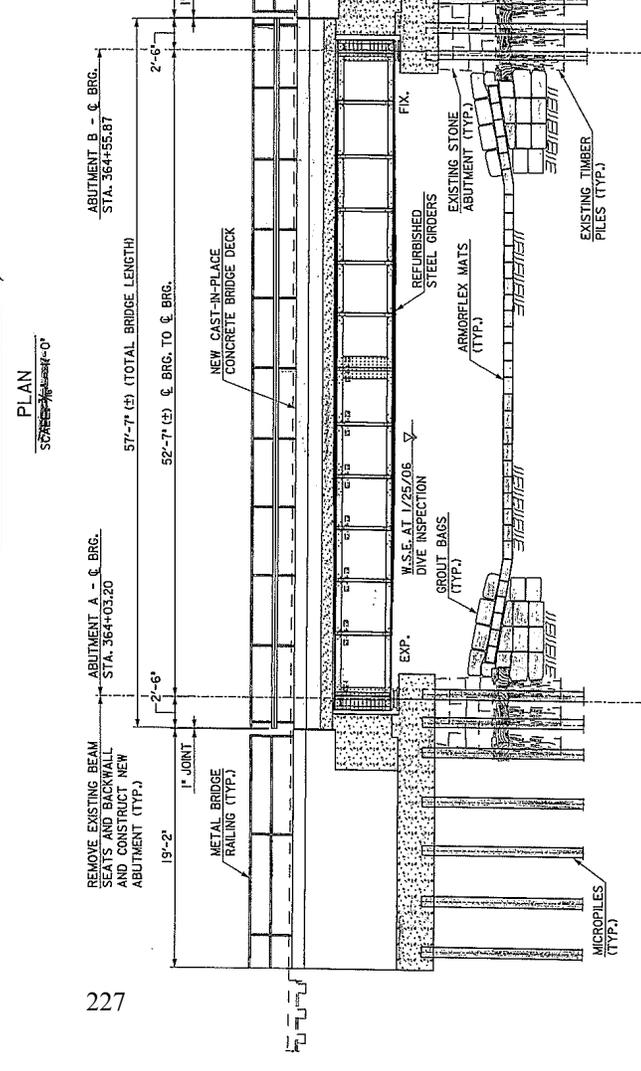
ALL WELDING SHALL CONFORM TO STRUCTURAL WELDING CODE AWS D1.5, LATEST EDITION. ALL WELDS SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED. ALL WELDERS SHALL BE QUALIFIED IN ACCORDANCE WITH AWS STRUCTURAL WELDING CODE.

EXISTING STRUCTURE: ALL DIMENSIONS AFFECTED BY THE GEOMETRICS, AND/OR LOCATION OF THE EXISTING STRUCTURES AND UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE FIELD VERIFICATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY THE ENGINEER WITH ALL FIELD DIMENSIONS TO CHECK DETAIL DRAWINGS. THE (+/-) MARKS SHOWN WITH DIMENSIONS DO NOT INDICATE ANY DEGREE OF PRECISION. THESE MARKS (+/-) INDICATE AN EXISTING DIMENSION THAT MAY VARY AND REQUIRE FIELD VERIFICATION BY THE CONTRACTOR. IF DRAWINGS AND SPECIFICATIONS CONFLICT, THE DRAWINGS SHALL GOVERN.

THE EXISTING TIMBER PILES AND TIMBER DECKING ARE TO REMAIN IN PLACE. IN THE EVENT THE EXISTING TIMBER IS IN CONFLICT WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL BE PERMITTED TO REMOVE THE EXISTING TIMBER TO AN ELEVATION ONE FOOT BELOW THE PROPOSED BOTTOM OF FOOTING ELEVATION.



**PLAN**



**SECTION A**

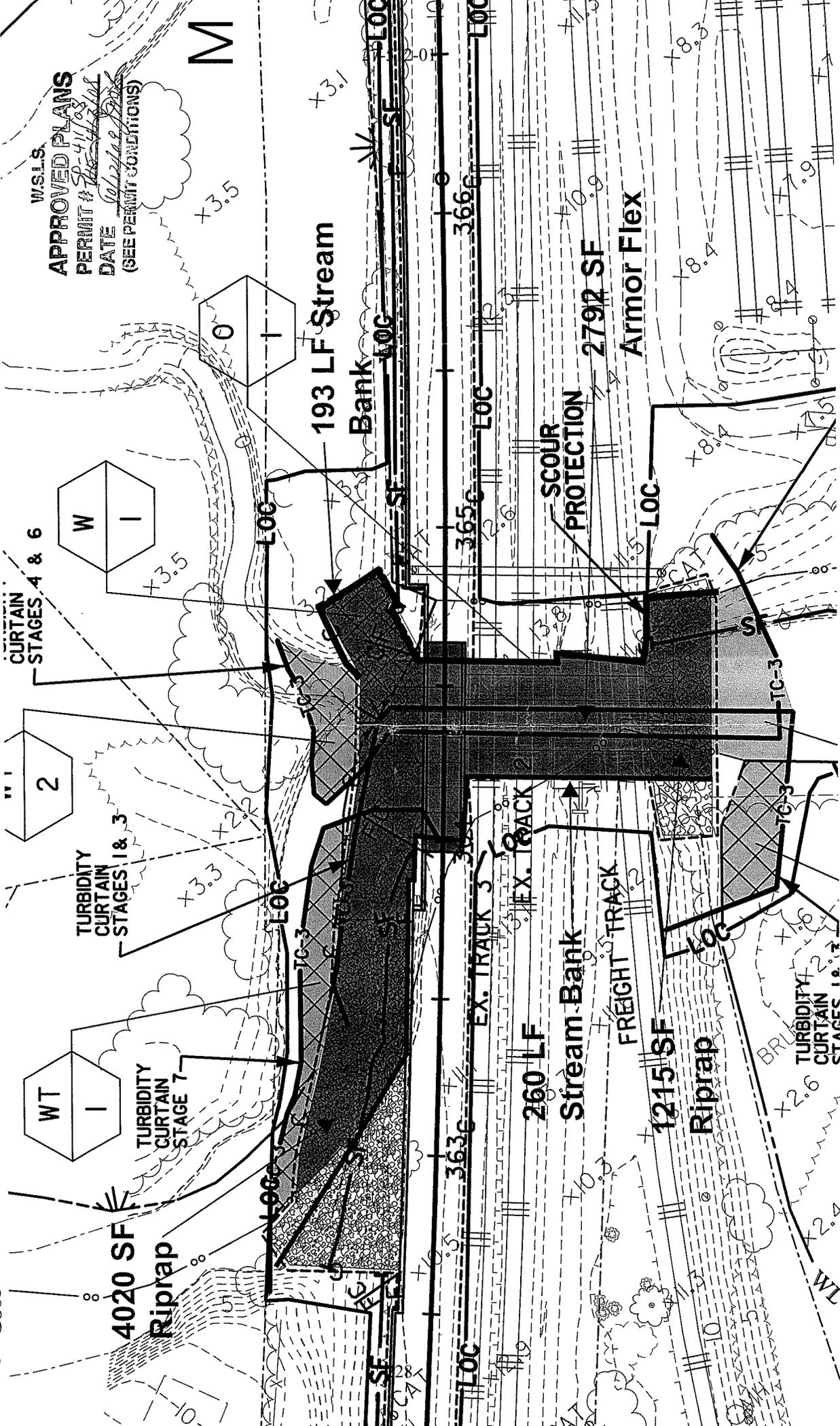


Restoration/repair/rehab  
 New Construction/  
 replacement

- NOTES:
1. FOR ABUTMENT SECTIONS AND DETAILS, SEE DWG. NOS. S-2 THRU S-6.
  2. FOR CURVE DATA, SEE DWG. NO. C-3
  3. FOR STREAM MODIFICATIONS, SEE DWG. NOS. S-8 AND RW-3.
  4. FOR RAILING DETAILS, SEE DWG. NOS. S-8 AND RW-3.

PERMIT # SP-411/08  
 DATE 10/12/09 GML  
 (SEE PERMIT SECTIONS)

dot to Scale



W.S.L.S.  
**APPROVED PLANS**  
 PERMIT # SP-411/08  
 DATE 10/22/08  
 (SEE PERMIT CONDITIONS)

3761 612 2