

**SPECIFICATIONS
FOR
EAST HAZELWOOD AVENUE BRIDGE (RA09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY
COUNTY OF UNION, NEW JERSEY
BA#5-2020; UNION COUNTY ENGINEERING PROJECT #2012-021**

March 2020

**UNION COUNTY OFFICIALS
BOARD OF CHOSEN FREEHOLDERS**

Alexander Mirabella, Chairman
Angel G. Estrada, Vice Chairman
Angela R. Garretson, Freeholder
Sergio Granados, Freeholder
Christopher Hudak, Freeholder
Bette Jane Kowalski
Kimberly Palmieri-Mouded, Freeholder
Andrea Staten, Freeholder
Rebecca Williams, Freeholder

CLERK OF THE BOARD
James E. Pellettiere, RMC

COUNTY MANAGER
Edward T. Oatman

**DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND
FACILITIES MANAGEMENT**

Joseph A. Graziano, Sr., CPWM
Director, Department of Engineering, Public Works and
Facilities Management

**COUNTY ENGINEER
DIVISION OF ENGINEERING**
Thomas O. Mineo, P.E.

Prepared by:

Dewberry Engineers Inc.

**COUNTY OF UNION
NOTICE TO BIDDERS**

Sealed bids will be received by the assistant director of the Division of Purchasing, or her designee, at the County of Union, New Jersey on March 26, 2020 at 10:30 a.m., prevailing time, in the 3rd Floor Conference Room, U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey for:

**East Hazelwood Avenue Bridge (Ra09) over South Branch Rahway River
Scour Countermeasures
City of Rahway, County of Union, New Jersey
BA#5-2020; UNION COUNTY ENGINEERING PROJECT #2012-021**

Bid Packages may be obtained at no charge by registering and downloading at <http://ucnj.org/bid-specs>. Bid Packages may also be obtained in person from the Division of Engineering at 2325 South Avenue, Scotch Plains, New Jersey 07076 between 8:30 a.m. and 4:00 p.m. weekdays upon payment of a non-refundable money order or bank check in the amount of \$275.00 made payable to the County of Union. No Personal / Company checks will be accepted. Requests for mailing of specifications will not be honored. For further information please call 908-789-3675.

The County reserves the right to reject any minor informality in the bid in accordance with the New Jersey Local Public Contracts Law.

Bids shall be submitted in a sealed envelope and clearly marked with the subject of the bid, name and address of the bidder, phone & fax number, and date of the bid opening. Each bid must be delivered to reach the Division of Purchasing prior to the stated time of the opening of the bids. The County will not be responsible for late delivery by the U.S. Mail or any other carrier. If hand delivered, please note that parking and security access at the County Complex may cause delays and bidders should take them into consideration in order to submit a timely bid. **No** late bids will be accepted.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27.

MICHELLE HAGOPIAN, ASSISTANT DIRECTOR OF PURCHASING

**UNION COUNTY BOARD
OF CHOSEN FREEHOLDERS**

We're Connected to You!

**East Hazelwood Avenue Bridge (Ra09) over South Branch Rahway River Scour Countermeasures
City of Rahway, County of Union, New Jersey
BA#5-2020; Union County Engineering Project #2012-021**

TABLE OF CONTENTS

Cover Sheet: County Officials
NB-1: Notice to Bidders

GENERAL SPECIFICATIONS

Definitions

Section 1: BID FORM
Section 2: WITHDRAWAL OF BID DUE TO MISTAKE
Section 3: QUALIFICATIONS OF BIDDERS AND REQUIRED SUBMISSIONS
Section 4: INTERPRETATIONS AND ADDENDA
Section 5: OBLIGATION OF BIDDER TO INSPECT SITE AND CONTRACT DOCUMENTS
Section 6: BID AND PERFORMANCE GUARANTEE
Section 7: COMMENCEMENT AND COMPLETION
Section 8: BIDDER AFFIDAVIT
Section 9: BID SECURITY
Section 10: LABOR AND MATERIALS
Section 11: INSURANCE REQUIREMENTS
Section 12: INDEMNIFICATION REQUIREMENTS
Section 13: ROYALTIES AND PATENTS
Section 14: PLANS AND SPECIFICATIONS
Section 15: GUARANTEE AGAINST DEFECTIVE WORK
Section 16: TRAFFIC AND STREET MAINTENANCE
Section 17: CONTRACTOR'S EMPLOYEES
Section 18: OWNERSHIP DISCLOSURES REQUIRED
Section 19: NON-COLLUSION AFFIDAVIT
Section 20: EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCES
Section 21: COMPLIANCE WITH NEW JERSEY PREVAILING WAGE ACT
Section 22: BRAND NAME OR EQUAL
Section 23: LINES AND GRADES
Section 24: NUMBER OF WORKING DAYS
Section 25: PROMPT PAYMENT OF CONSTRUCTION CONTRACTS (NJ Prompt Payment Act)
Section 26: STOPPING WORK ON ACCOUNT OF BAD WEATHER
Section 27: ACCESS FOR OTHER CONTRACTORS
Section 28: CONDEMNED MATERIALS AND WORK
Section 29: STORAGE
Section 30: FINAL CLEAN UP
Section 31: SUB-LETTING OF WORK
Section 32: SAFETY
Section 33: QUALITY, SAFETY AND PERFORMANCE STANDARDS
Section 34: MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS
Section 35: PERMITS
Section 36: CONTRACTOR TO PROVIDE PROOF OF PAYMENT
Section 37: CHANGE ORDERS
Section 38: SUPPLEMENTAL WORK
Section 39: FORM OF CONTRACT
Section 40: PROGRESS PAYMENTS
Section 41: INSPECTION
Section 42: DAMAGES
Section 43: LIQUIDATED DAMAGES
Section 44: AFFIRMATIVE ACTION REQUIREMENTS
Section 45: INVESTMENT ACTIVITIES WITH IRAN

GENERAL SPECIFICATIONS CONTINUED

- Section 46: COMPLIANCE WITH THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT
(N.J.S.A. 34:11-56.48 et. seq.)
- Section 47: UTILITIES
- Section 48: MATERIAL COMPLIANCE AND SHOP DRAWINGS
- Section 49: PRECONSTRUCTION
- Section 50: DISPUTES UNDER THE CONTRACT
- Section 51: CONTRACTOR BUSINESS REGISTRATION CERTIFICATE
(New Mandatory Requirement – Effective 1/18/2010)
- Section 52: BID PROTEST - LEGAL FEES AND COSTS
- Section 53: AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE
- Section 54: NEW JERSEY PAY-TO-PLAY REQUIREMENTS
- Section 55: STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION
- Section 56: NEW JERSEY SALES AND USE TAX REQUIREMENTS

BIDDING DOCUMENTS

- Bid Document Submission Checklist
- Bidding Documents
- Bid Form
- Consent of Surety
- Bidder Signature Page
- Bidder Disclosure Statement
- Subcontractor Identification Statement: List of Subcontractors
- Subcontractor Identification Certification
- Acknowledgement of Addendum
- Contractor Business Registration Certificate
- Affirmative Action Requirement
- Experience Statement
- Certificate of Bidder Showing Ability to Perform Contract
- Non-Collusion Affidavit
- Contractor Registration Advisement
- Americans with Disabilities Act
- Statement of Bidder's Qualifications
- Contractor Performance Record
- Affidavit Regarding List of Disbarred, Suspended or Disqualified Bidders
- Prior Negative Experience Questionnaire-Certification
- Contractor's Certification of Compliance - New Jersey Prevailing Wage Act
- Uncompleted Contracts Affidavit
- Certificate of Insurance Statement
- Collection of Use Tax on Sales to Local Governments Statement
- Time of Completion
- Disclosure of Investment Activities in Iran

STANDARD SPECIFICATION FORM - SS-1

NEW JERSEY PREVAILING WAGE DETERMINATION DOCUMENTS

PROJECT TECHNICAL SPECIFICATIONS

**UNION COUNTY BOARD OF CHOSEN FREEHOLDERS
INSTRUCTIONS TO BIDDERS AND FORMS**

DEFINITIONS

Wherever reference is made to the County, Title of Project, Bidder, or Vendor/Contractor they shall be as follows:

OWNER/COUNTY:

Union County Board of Chosen Freeholders
UC Administration Building, 6th Floor
10 Elizabethtown Plaza
Elizabeth, New Jersey 07207

ADDRESS INQUIRIES TO:

Union County Division of Purchasing
UC Administration Building, 3rd Floor
10 Elizabethtown Plaza
Elizabeth, NJ 07207
Attn: Michelle Hagopian, Assistant Director, Division of Purchasing
Telephone: 908-527-4130
Facsimile: 908-558-2548
ucbids@ucnj.org

ADDRESS BIDS AND SUBMIT TO:

Union County Division of Purchasing
UC Administration Building, 3rd Floor
10 Elizabethtown Plaza
Elizabeth, NJ 07207
Attn: Michelle Hagopian, Assistant Director, Division of Purchasing
Telephone: 908-527-4130
Facsimile: 908-558-2548
ucbids@ucnj.org

**TITLE OF PROJECT: East Hazelwood Avenue Bridge (Ra09) over South Branch Rahway River Scour Countermeasures, City of Rahway, County of Union, New Jersey
BA5-2020; UC ENGINEERING PROJECT #2012-021**

BIDDER: Bidder shall be a single overall contract bidder

ENGINEER: Dewberry

COUNTY ENGINEER AND/OR CONSTRUCTION MANAGER (as applicable):

COUNTY ENGINEER:

Thomas O. Mineo, P.E.
Union County
Division of Engineering

GENERAL SPECIFICATIONS

1. BID FORM

Bids for this Work will be enclosed in a sealed envelope addressed to the Purchasing Division, County of Union, New Jersey, Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207, with the full name of the Project clearly marked on the outside. Refer to the sheet marked "Notice of Bid (Advertisement)" for the correct name of the Project. Bidders must submit their bids on the attached pricing sheet (Bid Form), in a sealed envelope addressed to the County and bearing on the outside: the name of the Bidder, Bidder's business address, and the title of the Project.

The Division of Purchasing will receive the bids for this Work at the Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey on the date and time noted on the sheet marked "**Notice of Bid (Advertisement)**".

The County will not assume responsibility for bids forwarded by mail. It is the individual's responsibility to see that the bids are presented to the Purchasing Division at the time and at the place designated.

Bids will be accepted only on the Bid Form supplied. Bids on forms other than the original supplied herein will be rejected. The "complete" Bid Documents includes the Bid Bond, Bid Form, Bidder's Checklist, Consent of Surety, Ownership Disclosure Certification, Non-Collusion Affidavit, and any other documents noted in these Instructions to Bidders or Contract Document to be submitted with this Bid.

The bidder will state in the bidding sheet the price per unit of measure for each scheduled Item of Work for which he will agree to carry out the Work, and the Total Bid Price for the construction of the Project.

The prices in the Bid Form shall be typed or written in pen and ink. Erasures or alterations must be initialed by the bidder in ink.

The bidding sheet for this Project may include a fixed amount as a Bid Allowance. If applicable, all bidders are required to add this fixed amount to their base bid and to include this additional amount in their Bid Bond. This sum will be included in the Contract as well as the performance, labor and materials bond. Payment by the County will be made to the Contractor from these funds only upon the completion of extra Work pursuant to a written Change Order(s) signed by the County's Engineer or his designee and the Contractor, prior to the commencement of such Work. Work commenced prior to written approval by the County shall be done at Contactor's risk. Such payment will only be in the amount agreed to by the parties, in writing in the Change Order(s). See Section 37, Change Orders, of these general specifications for further details.

Refer to Bid Document Submission Checklist for all required documents.

In the event there is a discrepancy between the unit price given and the extended total, the unit price will govern. Any discrepancies will be mathematically adjusted.

Insert applicable alternates, if any have been specified, applicable to the Bidder's Work. All alternates MUST be bid upon. Any Bidder's failure to do so will be deemed a material, non-waivable defect and shall render the bid nonresponsive. The Bidder shall clearly designate whether the change in price is an addition or subtraction, by using either a "+" sign or the word "addition", or in the alternative, a "-" sign or the word "minus". If there is no other change in price, the Bidder shall insert "NC" or "No Charge".

When two or more low bids are equal in all respects, awards will be made according to the provisions of N.J.S.A. 40A:11-6.1(d).

Where unit prices have already been established by the Contract Documents, the Bidder agrees that such unit prices shall prevail. All unit prices, whether filled in by the Bidder or established by the Contract Documents, shall become part of the Contract. No bid will be considered or award made, unless applicable unit prices, as required, are filled in.

The County reserves the right to reject any or all bids and also reserves the right to waive any minor informalities or non-material exceptions in the bids.

The County of Union has the right to reject any and all bids from any bidder that is in, or contemplates bankruptcy of any chapter of nature. Said bidder shall notify the County, in writing, of any condition or knowledge of the same.

Conditional bids will not be accepted. Bids may be withdrawn prior to the advertised time for the opening of bids or authorized postponement thereof or in accordance with the provisions of N.J.S.A. 40A:11-23.3 discussed below. Bids received after the advertised time shall not be considered. Bidders shall be solely responsible for premature opening or late delivery of bids not properly marked, addressed, or directed.

2. WITHDRAWAL OF BID DUE TO MISTAKE

N.J.S.A. 40A:11-23.3 authorizes a bidder to request withdrawal of a public works bid due to a mistake on the part of the bidder. A mistake is defined by N.J.S.A. 40A:11-2(42) as a clerical error that is an **unintentional and substantial computational error or an unintentional omission of a substantial quantity of labor, material, or both, from the final bid computation.**

A bidder claiming a mistake under N.J.S.A. 40A:11-23.3 must submit a request for withdrawal, **in writing**, by certified or registered mail to Michele Hagopian, Assistant Director, Division of Purchasing, County of Union, New Jersey, Union County

Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207. The bidder must request withdrawal of a bid due to a mistake, as defined by the law, within five business days after the receipt and opening of the bids. Since the bid withdrawal request shall be effective as of the postmark of the certified or registered mailing, Michele Hagopian, Assistant Director of the Division of Purchasing or his designee may contact all bidders, after bids are opened, to ascertain if any bidders wish to, or already have exercised a request to withdraw their bid pursuant to N.J.S.A. 40A:11-23.3.

A bidder's request to withdraw the bid **shall** contain evidence, including any pertinent documents, demonstrating that a mistake was made. Such documents and relevant written information shall be reviewed and evaluated by the County's designated staff pursuant to the statutory criteria of N.J.S.A. 40A:11-23.3.

The County will not consider any written request for a bid withdrawal for a mistake, as defined by N.J.S.A. 40A:11-2(42), by a bidder in the preparation of a bid proposal unless the postmark of the certified or registered mailing is within the five business days following the opening of bids.

3. QUALIFICATIONS OF BIDDERS AND REQUIRED SUBMISSIONS

The County may make such investigation as it deems necessary to determine the ability of the Bidders to perform the Work, which includes investigation of any and all subcontractors listed with the bid. The Bidder shall furnish any information and data for this purpose as the County may request.

4. INTERPRETATIONS AND ADDENDA

Any explanation desired by a bidder regarding the meaning or interpretation of the Contract Documents must be requested in writing to the Assistant Director, Division of Purchasing at ucbids@ucnj.org with reasonable time allowed for a reply to reach bidders before submission of their bids. Any interpretation or instruction made by the County Engineer will be in the form of an addendum to the Contract Documents or clarification and will be furnished to all prospective bidders. Oral explanations or instructions given before the award of the Contract will not be binding. Bidders are required to bring to the attention of the Assistant Director, Division of Purchasing at ucbids@ucnj.org, the discovery of any apparent ambiguity, inconsistency, error, discrepancy, omission in the Contract Documents for interpretation and correction at least ten (10) working days before opening of bids with the exception of Saturdays, Sundays and holidays.

All Addenda issued through the Office of the Division of Purchasing are amendments to the Contract Documents and shall be considered in preparing bids. Same shall become part of the Contract Documents.

Addenda take precedence over all earlier documents and over each other according to the latest date. Addenda unless themselves interpretive remain subject to interpretation the same as any other document incorporated in the Contract.

Addenda may be issued by the Assistant Director, Division of Purchasing up to seven (7) working days prior to the opening of bids. Failure of any bidder to receive an addendum shall not relieve such bidder from the obligation imposed by such addendum. Bidders are to keep themselves currently acquainted with the Contract Documents during the entire bidding period and make inquiry on their own initiative as to issuance of any Addenda. Receipts of all Addenda shall be acknowledged on the "*Acknowledgement of Receipt of Changes*" included in the bid package and must be submitted with the bid.

5. OBLIGATION OF BIDDER TO INSPECT SITE AND CONTRACT DOCUMENTS

At the time of the opening of bids, each Bidder will be presumed to have inspected the site(s) and to have read, and be thoroughly familiar with the Contract Documents. The failure or neglect of any Bidder to receive or examine any form, instrument, or document shall in no way relieve any Bidder from any obligation in respect to its bid.

The Bidder shall examine the contents of the Project Manual and the set of Drawings and assure itself that all pages of the Specifications, Drawings, and other Contract Documents are included in the documents obtained for bidding purposes. Should the Specifications, Drawings, and other Contract Documents be incomplete, the Bidder shall notify the County Engineer in writing, who will supply the Bidder with any missing pages of Specifications, Drawings, or other Contract Documents. The lack of such written notification by the Bidder will be construed as evidence that the Specifications, Drawings, or other Contract Documents supplied it for bidding purposes are full and complete and as a waiver of any subsequent claim to the contrary.

6. BID AND PERFORMANCE GUARANTEE

Each bidder must furnish a Bid Bond, Certified Check or Bank Cashier's Check in the amount of ten percent (10%) of the Bid. Checks shall be drawn to the order of the County of Union, New Jersey, not to exceed \$20,000.

Each bidder must furnish with the bid a certificate from a Surety Company, i.e. Consent of Surety, stating that in the event of the contract being awarded to said bidder, such Surety Company will provide the Contractor with bonds guaranteeing the faithful performance of the Work in accordance with the plans and specifications, and the payment for labor, materials, and all other indebtedness which may accrue on the account of this Work. A Performance, Labor and Materials Bond will be furnished by the Contractor upon an award of Contract, and will be in the amount of 100% of the contract price.

A one-year Maintenance Bond will be required upon acceptance of the Project by the County in the amount as stated in Section 15 of the General Specifications. Bonds will be written by a firm authorized to issue the bonds under the laws of the State of New Jersey and be in a form acceptable to the County Counsel.

N.J.S.A. 40A:11-1 et seq. allows the prime Contractor to furnish the Performance Security for his Subcontractors. The County of Union requires Performance Security to be furnished by the prime contractor for the entire job in the total amount of the contract.

The County will return all certified checks or cashier's checks after the proposals have been opened, tabulated and reviewed except those of the three (3) bidders lowest responsible bidders. The County will return the checks of these bidders when a contract is awarded to the successful bidder within ten (10) days after the award of the contract.

If the successful bidder refuses or neglects to sign an agreement and furnish the required bonds, the Bid Bond will be held and used by the County to offset any damages for such refusal or neglect.

7. COMMENCEMENT AND COMPLETION

Work will not commence until a Notice to Proceed is received from the County Engineer.

Upon substantial completion of the Project, the Contractor must request a joint inspection with the County Engineer. Upon completion of this inspection, the County Engineer will prepare a list of incomplete or incorrect items (punch list) and have Contractor initial and date same. The Contractor shall rectify all deficiencies noted on the punch list within 30 calendar days of receipt of the list. The County Engineer may approve extensions for extenuating circumstances.

8. BIDDER AFFIDAVIT

All Bidders are required to complete, sign, and submit with their Bid, the attached "Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders". (See form enclosed)

9. LABOR AND MATERIALS

The prices will cover all costs of any nature incident to and growing out of the Work, including all labor, material, equipment, transportation, loss by damage or destruction of the Project, settlement of damages, and for replacement of defective work or materials. *N.J.S.A. 54:32B-1 et seq.* exempts all materials sold to the County of Union from sales or use taxes and should not be included in the prices provided on the Bidding Sheet.

11. INSURANCE REQUIREMENTS

The County of Union requires all contractors to be able to comply with the following insurance requirements. In the event a bid is accepted by the County, the contractor must accept the applicable insurance requirements, as set forth below, as part of any contract awarded to it by the County.

Contractor shall carry and maintain at all times while the contract is in full force and effect, the following insurance coverage with an insurance company or companies acceptable to the County, with limits not less than those shown below. A Certificate of Insurance shall be filed with the County prior to commencement of any Work indicating the following:

- a) Commercial General Liability (CGL): Coverage for all operations including, but not limited to, contractual, products and completed operations, and personal injury with limits no less than \$5,000,000 per occurrence/\$10,000,000 aggregate. The County of Union, its Board of Chosen Freeholders, officers, employees, agents and servants shall be included as an additional insured. Coverage is provided on a primary and non-contributory basis to the County of Union, et al.
- b) Automobile Liability: Coverage for all owned, non-owned and hired vehicles with limits not less than \$5,000,000 per occurrence, combined single limits (CSL) or its equivalent.
- c) Workers Compensation: As required by the State of New Jersey and Employers Liability with limits not less than \$1,000,000 per accident for bodily injury or disease.
- d) Professional Liability (if design/build): Coverage with limits not less than \$1,000,000 per occurrence or claim, \$2,000,000 aggregate
- e) Contractor's Pollution Legal Liability and/or Asbestos Legal Liability and/or Errors & Omissions (if project involves environmental hazards): Coverage with limits no less than \$1,000,000 per occurrence or claim/\$2,000,000 aggregate.
- f) Builders Risk (for major renovations): During the course of construction utilizing an "All Risk" coverage form with limits equal to the completed value of the project and no coinsurance penalty provisions.

Where applicable, a waiver of subrogation in favor of the County of Union, its Board of Chosen Freeholders, officers, employees, agents, servants and the State of New Jersey is to be included in those policies of insurance where permitted by law.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Entity.

Special Risks or Circumstances: The County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

12. INDEMNIFICATION REQUIREMENTS

The County of Union requires all bidders to accept the following indemnification requirements in the event the County accepts their bid. The Contract awarded by the County to the successful bidder will contain the following provision:

“To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the owner and the owner’s consultants, agents, representatives, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys’ fees, legal costs and legal expenses arising out of or resulting from the performance of the Contractor’s work under this contract, provided that such claim, damage, loss, cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the Contractor, anyone directly or indirectly employed or retained by the Contractor, or anyone for whose acts the Contractor may be liable regardless of whether caused in part by the negligent act or omission of a party indemnified hereunder provided it is not caused by the sole negligence of a party indemnified hereunder. Contractor shall further indemnify and hold harmless the County and the County’s consultants, agents, representative, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys’ fees, legal costs and legal expenses, arising out of or resulting from performance of the work, provided that such claim, damage, loss, cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the County or the County’s consultants, agents, representatives, or employees and arises out of this project and provided such claim, damage, loss, cost, or expense is not caused by the sole negligence of a party indemnified hereunder.”

13. ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall hold the County harmless from loss on account thereof.

14. PLANS AND SPECIFICATIONS

In carrying out the Work, the plan(s) and the specifications will be followed by the Contractor. Minor alterations in the plan may be made or permitted by the County Engineer from time to time and, if no additional Work is necessary, there will be no additional charge for carrying out such minor alterations.

The Contractor shall provide the County Engineer a set of reproducible as-built drawings upon completion of the Project. The Contractor shall maintain an updated construction progress plan in the Project field office at all times.

When applicable, The New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, as amended, and Supplemental Specifications for State Aid Projects, herein after referred to as the "Standard Specifications", are made a part of these specifications and contract for the improvements, and will govern the construction of this Project, the material used and the execution of this Project, except as revised and modified herein. The references to these specifications are given herein for the purpose of aiding in the rapid location of the description of the various items herein specified. The entire Work must be carried on and completed to the satisfaction of the County. The Standard Specifications are amended as follows:

"Any reference to the Commissioner, Department, Department Laboratory, Engineer or Inspector should be redefined to be the County of Union".

15. GUARANTEE AGAINST DEFECTIVE WORK

Prior to final payment being made or before the release of the performance security required by Section 3 above, the Contractor and Surety shall execute and deliver to the County an original Maintenance Bond with an original signature and seal having a penal sum equal to:

- A) One hundred percent (100%) of the final adjusted Contract amount, if such amount is \$50,000.00 or less;
- B) Fifty percent (50%) of the final adjusted Contract amount, if such amount be greater than \$50,000.00 but less than \$250,000.00; and,
- C) Twenty-five percent (25%) of the final adjusted contract amount, if such amount is \$250,000.00 or more.

The Bond and Surety shall be satisfactory to the Union County Counsel. The Surety shall hold a Certificate of Authorization to do business in the State of New Jersey and shall conform to P.L. 1995 c.384, codified as N.J.S.A. 2A:44-143, 144. The Surety Disclosure Statement and Certification required by N.J.S.A. 2A: 44-143, 144, shall be attached to the Bond. Such Maintenance Bond shall remain in full force and effect for a period of one (1) year from the date of Final Completion. Such Maintenance Bond shall also provide that the Contractor and the Surety guarantee to replace for the said period

of one (1) year from the date of Final Completion, all Work performed and/or all materials furnished that were not performed or were not furnished in accordance to the terms and performance requirements of the Contract Documents, and will make good any defects thereof which become apparent before the expiration of one (1) year. If, during that period, any part of the Project, in the judgment of the Engineer, is found defective, the Contractor will repair or replace same within five (5) days of receipt of notice from the County Engineer. If the Contractor refuses or neglects to do such Work in the time specified, the County Engineer may have the Work done by others and the Contractor or his Surety thereof will pay the cost.

The Contractor will furnish the County a Maintenance Bond for a percentage of the final adjusted contract price, as stated above. The one (1) year period will start the day of Final Completion of Project by the County. Final payment is conditional on the receipt of a maintenance bond in a form acceptable to County Counsel.

16. TRAFFIC AND STREET MAINTENANCE

The Work must be started and performed by the Contractor in such a manner as to minimize delays to the traveling public. It must be completed in a timely fashion, with little or no inconvenience to traffic and pedestrians, where such inconvenience may be avoided.

All municipal, county, and state roadways shall remain open to traffic unless otherwise provided for in the technical specifications.

If modified traffic patterns are authorized in order to provide a safe working or traveling environment, the Contractor is responsible for providing all equipment, barrels, cones, signs, and barricades to implement the work zone and detours, unless otherwise specified in the technical specifications. All work zones and detours shall be established in accordance with the technical plans and specifications if provided or in strict compliance with the current version of the Manual for Uniform Traffic Control Devices (MUTCD). The Contractor shall obtain approval for these work zones and detour plans from the Municipal Police or applicable police agency and the Union County Bureau of Traffic Maintenance prior to implementation.

All traffic control plans shall provide for safe movement of vehicular, bicycle, and pedestrian traffic. Particular attention shall be given to requirements of the Americans with Disabilities Act.

No portion of any street or alleyway may be used for the storage of any materials or equipment without the approval of the Municipal Police or other applicable police agency. Sidewalks, gutters, drains, fire hydrants and private drives shall be maintained for their intended use unless specifically approved by the County Engineer.

Upon suspension of Work, at the end of the day or for protracted periods, the Contractor shall remove all rubbish and materials from the Work site to the approved storage/staging location. All road cuts, saw cuts, and trenches that may pose hazard to vehicular, pedestrian, or bicycle traffic, to include handicapped users, shall be filled to the surface of the roadway or sidewalk. At no time will steel plates or settled trenches be allowed at the daily suspension of Work, unless specifically approved by the County Engineer.

Use of Traffic Control Officers shall be determined by the County in accordance with the provisions of N.J.S.A. 40A:11-23.1(c). If applicable to the Project, the County shall have provided an allowance for same as set forth in the Bid Form.

With respect to pedestrian traffic, the Contractor shall install signs restricting access of the general public and, as necessary, Union County employees to the area of construction. The Contractor shall provide safe access to required areas and place physical barriers to restricted areas. These barriers may range from caution tape to actual barriers, at the direction of the County Engineer.

17. CONTRACTOR'S EMPLOYEES

The Contractor must employ only suitable and competent labor in the Work, and must remove from the Work any incompetent, unsuitable, or disorderly person upon complaint from the County Engineer.

The parties to any contract resulting from this proposal do hereby agree that the provisions of N.J.S.A. 10:2-1 through 10:2-4 (discrimination in employment on public works contracts): 34:11-56.25 et seq. (payment of prevailing rate of wages determined pursuant to N.J.S.A. 34:11-56.30 by the Commissioner), and the Rules and Regulations promulgated pursuant thereto, are hereby made a part of any contract and are binding upon them.

There will be no discrimination against any employee who is employed in the Work to be covered by any contract resulting from this bid because of age, race, creed, color, national origin, ancestry, marital status or sex.

Any person, firm, or corporation violating the provisions of this Section will be deemed and judged a disorderly person.

18. OWNERSHIP DISCLOSURES REQUIRED

Pursuant to P.L. 2016, c. 43, codified as N.J.S.A. 52:25-24.2.no corporation, partnership, or limited liability company shall be awarded any contract nor shall any agreement be entered into for the performance of any work or the furnishing of any materials or supplies the County unless prior to the receipt of the bid or accompanying

the bid, of said corporation, said partnership, or said limited liability company there is submitted a statement setting forth the names and addresses of all stockholders in the corporation who own ten percent (10%) or more of its stock, of any class, or of all individual partners in the partnership who own a ten percent (10%) or greater interest therein, or of all members in the limited liability company who own a ten percent (10%) or greater interest therein, as the case may be. If one or more such stockholder or partner or member is itself a corporation or partnership or limited liability company, the stockholders holding ten percent (10%) or more of that corporation's stock, or the individual partners owning ten percent (10%) or greater interest in that partnership, or the members owning ten percent (10%) or greater interest in that limited liability company, as the case may be, shall also be listed. The disclosure shall be continued until names and addresses of every non corporate stockholder, and individual partner, and member, exceeding the ten percent (10%) ownership criteria has been listed.

To comply with this section, a bidder with any direct or indirect parent entity which is publicly traded may submit the name and address of each publicly traded entity and the name and address of each person that holds a ten percent (10%) or greater beneficial interest in the publicly traded entity as of the last annual filing with the federal Securities and Exchange Commission ("SEC") or the foreign equivalent, and, if there is any person that holds a ten percent (10%) or greater beneficial interest, also shall submit links to the websites containing the last annual filings with the federal SEC or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a ten percent (10%) or greater beneficial interest.

(See forms attached)

19. NON-COLLUSION AFFIDAVIT

The Bidder shall submit with its bid either the attached completed "Non-Collusion Affidavit" or a statement of non-collusion with verbiage similar to same.

20. EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCES

The successful bidder shall be required to complete and submit an Initial Project Workforce Report, New Jersey Department of Treasury Form AA-201, upon notification of award. Failure to submit this completed form may result in the Contract being terminated.

The successful bidder shall also be required to submit a copy of its Monthly Project Workforce Report, New Jersey Department of Treasury Form AA-202, to the New Jersey Department of Treasury's Division of Public Contracts Equal Employment Opportunity Compliance and to the Board.

21. COMPLIANCE WITH NEW JERSEY PREVAILING WAGE ACT

The County of Union, in order to fulfill the requirements of N.J.S.A. 34:11-56.25 et seq, requires that the following additional conditions be strictly followed. The bidders represent that he is not listed or is not on record in the Office of the Commissioner or the Department of Labor and Workforce Development as one who failed to pay prevailing wages in accordance with the provisions of this Act. The bidder agrees to the inclusion of a contract provision upon award which specifically requires said Contractor to fully comply with each and all of the requirements of the aforesaid Act as it relates to prevailing rates of wages on public contracts as set forth in the New Jersey Prevailing Wage Act, P.L. 1963, Chapter 150 and P.L. 1974, Chapter 64.

A Copy of the Prevailing Wage Rates is attached for your reference. Applicable rates are those wages and fringe benefit rates in effect on the date the contract is awarded. All predetermined rate increases listed at the time the contract award must also be paid, beginning on the dates specified. Rates may change between the time of issuance of this determination and the award of the public works contract. Therefore, prior to the award of the contract, verification must be made with the Public Contracts section, to insure that the rates contained in this determination are still prevailing.

The Contractor agrees to abide and be bound by each and all of the said statutory provisions with respect to the payment of prevailing rates of wages, and acknowledges that the County reserves the right to terminate the Contractor's (or his subcontractors') right to proceed with the scope of Work, or such portion thereof that relates to the failure to pay prevailing rates of wages. In such event or under the terms of N.J.S.A. 34:11-56.27, the Contractor and his surety will be liable to the County of Union for any excess costs occasioned by such a violation.

The Contractor or subcontractors for this Project will post the Prevailing Wage Rates for each craft and classification involved as determined by the Commissioner of Labor and Industry, including the effective date of any changes thereof, in prominent and easily accessible places at the site of the Work or at such place or places as are used by them to pay workmen their wages.

The County of Union requires a copy of payroll records from the Contractor and subcontractors. Payroll records shall be submitted with each voucher request for payment. Prevailing wage rates may be obtained from the New Jersey Labor, Division of Workplace Standards, Public Contracts Section, (609-292-2259).

In addition to compliance with the New Jersey Prevailing Wage Act, the County requires compliance with procedures established by Resolution No. 2014-0408 adopted by the Union County Board of Chosen Freeholders on May 8, 2014. The resolution is furnished in Section 51 of these General Specifications.

UNION LABOR IS PREFERRED ON ALL COUNTY WORK

The foregoing reference to specific laws will not be deemed to be a limitation of obligation of the Contractor to perform his obligations in full compliance with the provisions and requirements of all federal and state statutes and local ordinances applicable to the Work to be done under the contract.

It is agreed and understood that any contracts and/or orders placed as a result of this proposal will be governed and construed and the rights and obligations of the parties hereto will be determined in accordance with the laws of the State of New Jersey.

Upon completion of the Work, the Contractor will furnish a Certification of Compliance with the New Jersey Prevailing Wage Act. The certificate in a form acceptable to County Counsel is a condition of the final payment. (See form attached)

22. BRAND NAME OR EQUAL

When the Specifications, Forms, and other Contract Documents use “brand name or equivalent” or similar language, the listed brand name shall serve as a reference or point of comparison for the functional or operational characteristic desired for the goods or services being requested. Where a bidder attempts to submit an equivalent product for a brand name, it shall be the responsibility of the bidder to fully describe and document the product to be provided with the bid in order to establish the equivalence claim.

- A. If the Bidder proposes to offer substitute goods as an equal to those specified herein, the bidder shall so indicate with the Bid Proposal. For the purposes of this paragraph, a proposed item shall be considered equal to goods specified herein if:
 - 1. The County, in its sole discretion, determines that: (i) the goods conform substantially, even with deviations, to the brand name goods specified herein; (ii) the goods are equal to or greater than the brand name goods specified herein in terms of quality, durability, functionality, appearance, strength and design; (iii) the goods are capable, at least as well as the brand name goods specified herein, or performing with existing equipment; and (iv) the goods do not cost the County more than the brand name goods specified herein costs the County.

- B. To offer substitute goods as an equal to those specified herein, it is necessary that:
1. The Bidder submits sufficient information with its bid to permit the County to determine that the goods are equivalent to the brand name goods specified herein, including, but not necessarily limited to the brand, catalog number and specifications/data sheets;
 2. The Bidder fully identifies and describes the variations of the goods from the brand name goods specified herein on a separate sheet that is to be submitted with the bid proposal. Bidder's literature WILL NOT suffice in explaining exceptions to these specifications.
 3. The Bidder certifies that the goods (i) are similar in substance to the brand name goods specified, and (ii) are suited to the same use as the item specified;
- C. The County shall be allowed a reasonable time within which to evaluate the Bidder's proposal to offer substitute goods as an equal to those specified herein. The County shall be the sole judge of acceptability. No "or-equal" goods shall be ordered, delivered, assembled, set-up or utilized until the County's evaluation is complete. The County's determination as to equivalency shall be deemed final and absolute.

In the event the Bidder does not provide sufficient supporting documentation with the bid, it will be presumed and required that the brand name goods and services as described in the specifications will be provided.

23. LINES AND GRADES

Normally, horizontal and vertical control points will be provided in the technical specifications. All other surveying will be the responsibility of the Contractor unless otherwise noted.

24. NUMBER OF WORKING DAYS

In accordance with N.J.S.A. 40A:11-17, the Work for the within Project shall be completed as specified on the Time of Completion Form. See form attached

There shall be taken a deduction from the contract price, or any wages paid by the County, to any inspector(s) necessarily employed by it on the Work, for any number of days in excess of the number allowed in the specifications.

25. PROMPT PAYMENT OF CONSTRUCTION CONTRACTS (NJ Prompt Payment Act)

Pursuant to N.J.S.A. 2A:30A-1 et seq., payment to the Contractor, other than for Work done pursuant to a contact allowance, where applicable, shall be processed and paid as follows:

1. All contractor bills shall be either approved for payment, or notice provided as to why the bill or any portion of it will not be approved by the representative(s) of the governing body no later than the public meeting following 20 calendar days of the billing date as defined in the statute.
2. If the billing is approved, said bill shall be paid in the payment cycle following the meeting.

26. STOPPING WORK ON ACCOUNT OF BAD WEATHER

Work must only be performed in weather suitable for the type of construction planned or underway. Extremes in temperature, humidity, precipitation, evaporation, etc. can detrimentally affect the constructed product. Refer to the Standard and Technical Specifications for specific items.

27. ACCESS FOR OTHER CONTRACTORS

The Contractor for this Work will give proper access to other contractors who may be employed upon the Project and must not hinder or delay unnecessarily any Work that may be progressing under other contracts.

28. CONDEMNED MATERIALS AND WORK

Any materials and or part of the Work that may be condemned by the County Engineer will be removed and replaced by the Contractor or otherwise rectified, as may be directed by the County Engineer. No payment will be made upon the Work until such faulty work has been made good as may be directed. In the event the Contractor refuses or neglects to make good such faulty work, he will be deemed to have abandoned the contract and proceedings may be taken against him as provided herein.

29. STORAGE

In the event that it is necessary for the Contractor to stockpile or store materials or equipment on the job site, the Contractor shall inform the County of such necessity and the County may offer available space, if any, for storage of such materials or

equipment. The Contractor shall use said space only for such purpose. Any and all materials which may be stored in such space or which may be brought onto the job site at any time by the Contractor will be at the Contractor's sole risk. The County will not be responsible for loss of or damage to said materials or equipment for any cause whatsoever. The Contractor shall take necessary measures to protect any such storage area and shall be responsible for any and all damages.

30. FINAL CLEAN UP

Upon completion of the Work, the Contractor will remove all equipment, unused materials, rubbish, etc., and will repair, or replace in an a manner acceptable to the County Engineer, all areas that may have been damaged in the prosecution of the Work. Same shall be a condition precedent to final payment. Should said Contractor fail to comply with this requirement, the County shall undertake the clean-up with its own forces and charge the cost of same against the Contractor's contract balance.

31. SUB-LETTING OF WORK

Except for the List of Subcontractors, pursuant to N.J.S.A. 40A:11-16 (See form attached), no portion of the Work will be sublet by the Contractor to any other entities, except with the consent of the County Engineer. A complete list of subcontractors must be submitted to the County Engineer at the preconstruction meeting. If the job does not warrant a preconstruction meeting, the Contractor must submit such list prior to the start of Work.

All Subcontractors will be subject to N.J.S.A. 34:11-56 et al.

N.J.S.A. 40A:11-16 requires the bidder to list in the bid sheets the name or names of all subcontractors involved in the following types of Work: plumbing and gas fitting and all kindred work, steam and hot water heating, ventilating apparatus, steam power plants and kindred work, electrical work, ornamental iron work, and structural steel. In addition, the County may require the identification of specific additional subcontractors. If these trades are expected to be part of the contract, such subcontractors should be listed on the "Subcontractor Identification Statement List of Subcontractors" and Bidder shall certify same on the accompanying sheet titled "Subcontractor Identification Certification". (See forms attached) **Bidder's failure to submit these two forms shall be considered a material defect and result in rejection of Bidder's bid.** Substitutions of any listed subcontractors pursuant to N.J.S.A. 40A:11-16 will not be permitted except with the consent of the County Engineer.

32. SAFETY

The Contractor shall observe all rules and regulations of the Federal, State, and local health officials. Attention is directed to Federal, State, and local laws, rules, and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to the worker's health or safety.

The Contractor shall admit to the site, without delay and without the presentation of an inspection warrant, any inspector of OSHA or other legally responsible agency involved in safety and health administration upon presentation of proper credentials.

The Contractor shall make available to the Contractor's employees, subcontractors, the County Engineer, and the public, all information pursuant to OSHA 29 CFR Part 1926.59 of The Hazard Communication Standard 29 CFR 1910.1200, and shall also maintain a file on each job site containing all Material Safety Data Sheets (MSDS) for products in use at the Project. These Material Safety Data Sheets shall be made available to the Engineer upon request.

The Contractor shall at all times conduct the Work to provide for the safety and convenience of the general public and protection of persons and property. The safety provisions of applicable laws, OSHA regulations, building and construction codes, and the rules and regulations of the New Jersey Department of Labor and Workforce Development shall be observed.

33. QUALITY, SAFETY AND PERFORMANCE STANDARDS

All goods and services must be constructed and provided with the highest quality materials and workmanship. It is the intent of these specifications that only equipment equal to, or exceeding, the standard specified will be acceptable in order to protect the safety of the occupants of the Building.

34. MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS

Any Work, material, or method, not specifically described in these specifications, but shown upon the plans of the Work, will be carried out as shown on said plan.

35. PERMITS

The Contractor will obtain all necessary permits required by law and provide the County with necessary approvals prior to commencement of permitted Work.

36. CONTRACTOR TO PROVIDE PROOF OF PAYMENT

Upon the completion of the Work, the Contractor will furnish a General Release as proof that all claims for labor, materials, etc., have been settled by the Contractor. The General Release, in a form acceptable to County Counsel, is a condition of final payment.

37. CHANGE ORDERS

The applicability of change orders and change order procedures shall comply with *N.J.S.A. 40A:11-16.7* and *N.J.A.C. 5:30-11.1 et seq.*, "Change Orders and Open End Contracts".

38. SUPPLEMENTAL WORK

In case any supplemental work is necessary, it will be performed by the Contractor at a price fixed by agreement between the Contractor and the County Engineer and approved by the County as specified in Section 36. The Contractor will do no supplemental work on any character, for which the Contractor will demand pay, except upon the written order of the County.

39. FORM OF CONTRACT

The Contract will be subject to all statutory provisions on the matter of Public Works, Public Contracts, The Law Against Discrimination, the Laws Governing Affirmative Action and Prevailing Rates of Wages under the laws of New Jersey.

The Agreements shall be executed by both parties not later than twenty-one (21) days from the date of the award by the County (Sundays and holidays excluded); however, such time frame may be extended by agreement of the parties.

40. PROGRESS PAYMENTS

Monthly progress payments will be made based on the value of labor and materials incorporated in the Work and of materials suitably stored at the site. An itemized schedule of values shall be submitted with each Application for Payment.

(Refer to the Owner/Contractor Agreement for Retainage and other conditions pertaining to payment and the application of *N.J.S.A. 2A:30A-1 et seq.*)

All Applications for Payment shall be accompanied by paid invoices for materials incorporated in the Work and for materials suitably stored at the site, and affidavit(s) by Subcontractors whose Work was included in the next to the last application to the effect such Work and such materials have been paid for.

No payment shall be made without Contractor having provided all submittals set forth in this Section, and the approval of same by the County.

For contracts exceeding \$100,000.00, monthly payments will be made on the Work to the extent of 98% of the value of the Work done which is considered to be retainage.

For contracts less than \$100,000.00, monthly payments will be on the Work to the extent of 90% of the value of the Work done. In lieu of the retainage, the Contractor will, at his option, deposit with the County Counsel negotiable bearer bonds of the State of New Jersey or any political subdivision thereof, equal to the amount otherwise withheld as retainage.

When the Project is completed, the final cost of the Project will be based on actual quantities of authorized Work done under each item scheduled in the bidding sheet and approved Change Orders, if any. The money due to the Contractor as determined by said final certificate after deduction of previous monthly payments on account, will be paid to the Contractor in accordance with the terms of the contract dealing with Prompt Payment, providing, however that before such final payment is made, all outstanding claims against the Contractor must be satisfied. Before final payment is released, the Contractor must furnish: **a)** Maintenance Bond (see Section 6 of these general specifications); **b)** Certification of Compliance, New Jersey Prevailing Wage Act (see Sections 21 and 51); and **c)** General Release (see Section 36) in a form satisfactory to County Counsel; **d)** complete set of as-built plans in the latest AutoCad on compact disc; and **e)** a complete set of in-progress photos in jpg, jpeg, or bmp digital format on a compact disc.

41. INSPECTION

The Work must be done in accordance with the plans and specifications, and will be inspected by the County Engineer. An inspector may be placed upon the Work at any time by the County Engineer to see that the plans, specifications, and instructions of the County Engineer are carried out. In connection herewith, bidders are referred to N.J.S.A. 40A:11-17.

42. DAMAGES

The Contractor will be held responsible for all damages that may occur to Work, or to persons or property by reason of the nature of the Work or from the elements, or by reason of inadequate protection of the Work, or from any carelessness or negligence on his part or on the part of his employees. The County will withhold payments on the Work until all suits or claims for damages sustained on, or by reason of, this Work will have been settled by the Contractor.

The construction and final completion of this Work will be guaranteed by the Contractor. Any damages that may be done to the Work or any part thereof, by the elements or otherwise, during its construction, will be made good by the Contractor.

43. LIQUIDATED DAMAGES

If the Project is not completed within the time specified herein or within such further time as may have been granted by the County Engineer, then the Contractor hereby agrees to pay to the County as liquidated damages, but not as a penalty, \$1,000.00 per day for each and every calendar day that he is in default on time to complete the Work. The said sum will be deducted from moneys due the Contractor and if the damages exceed this amount, then the Contractor or his Surety Company will pay the excess. These damages may be waived at the option of the County.

44. AFFIRMATIVE ACTION REQUIREMENTS

EXHIBIT B (Revised 4/10)

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127) N.J.A.C. 17:27

CONSTRUCTION CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, up-grading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Division may, in its discretion, exempt a contractor or subcontractor from

compliance with the good faith procedures prescribed by the following provisions, A, B and C, as long as the Division is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

(B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:

(1) To notify the public agency compliance officer, the Division, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) The contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Division, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Division.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Division upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall

not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Division an initial project workforce report (Form AA 201) electronically provided to the public agency by the Division, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

45. INVESTMENT ACTIVITIES IN IRAN

Pursuant to *N.J.S.A. 52:32-55 et seq.*, prohibits State and local public contracts with persons or entities engaging in certain investment activities in energy or finance sectors of Iran.

46. COMPLIANCE WITH THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT - (N.J.S.A. 34:11-56.48 et. seq.)

Pursuant to the above-referenced law, Bidders are required to be registered with the New Jersey Department of Labor and Workforce Development and to possess a current certificate by said Department indicating compliance with the Act prior to the time and date that bids are received. Bidders are notified of this requirement of their compliance. Such certificates or applications shall also be provided for each Subcontractor furnishing plumbing and gas fitting, steam and hot water heating and ventilating apparatus, and all kindred work, steam power plants and kindred work, electrical work, structural steel and ornamental iron work, and such other subcontractors as the specifications require relative to prior identification.

47. UTILITIES

Attention of the bidder is directed to the fact that the approximate locations of known utility structures and facilities that may be encountered within and adjacent to the limits of the Work are shown on the plans and described herein. The accuracy and completeness of this information is not guaranteed by the County Engineer and the bidder is advised to ascertain for himself all the facts concerning the location of these and other utilities.

The Contractor will not proceed with his Work until he has made diligent inquiries of all public utility and municipal officials to determine the exact location of all underground structures and pipes within the site of the Project. The Contractor will notify utility owners not less than ten (10) days in advance of the time he proposes to perform any Work that will endanger or affect their facilities in compliance with **New Jersey One-Call**. In excavating in any part of the Work, care must be taken not to remove or damage any gas, water, sewer, or other pipe, conduit, or structure, - public or private - without the concurrence of the owner and the County Engineer. The Contractor will, at his own expense, shore up, secure and maintain a continuous flow in such structures, and will keep them in repair until final acceptance of the Work.

When pipes or other structures are encountered or when the removal, relocation or protection of these utilities are necessary in carrying out the Project as planned, the Contractor will cooperate with the owner of said utilities and will permit the owners or their agents access to the site of the Work in order to relocate or protect their facilities and not hinder or delay unnecessarily the Work of the owners in moving same. No extra

allowance of payment will be made to the Contractor for the use of any materials, equipment, etc., or for the performance of any Work in connection with the moving of said structures unless the Contractor is specifically ordered by the County Engineer to furnish such materials, equipment, or services. If directed by the County Engineer to do any Work or furnish any materials or equipment, payment will be allowed the Contractor in accordance with the unit prices bid for such Work, or, if such items are not scheduled in the proposal, such Work shall be allowed "Supplemental Work" as provided in Section 39 of these general specifications. The corporations, companies, agencies or municipalities owning or controlling the utilities, and the name, and telephone numbers are listed in the beginning of the Technical Specifications.

48. MATERIAL COMPLIANCE AND SHOP DRAWINGS

The Contractor will require the manufacturer or supplier to furnish three (3) copies of Certification of Compliance with each delivery of materials, components and manufactured items for the Project. Two (2) copies will be furnished to the County Engineer; one copy will be retained by the Contractor. Certificates of Compliance will contain the following information:

1. Project to which material is consigned;
2. Name of the Contractor to which the material is supplied;
3. Kind of material supplied;
4. Quantity of material represented by the Certificate;
5. Means of identifying the consignment, such as label marking, seal number, etc.;
6. Date and method of shipment;
7. That the material is in conformity with the pertinent specifications stated in the certificate; and
8. Signature of a person having legal authority to bind the supplier.

The Contractor will submit to the County Engineer for his approval five (5) copies of complete and fully detailed shop or working drawings for those items listed in the beginning of the technical specifications.

Each drawing will identify the name of the job, location and Contractor.

All drawings will be approved in accordance with the standard specifications. Refer to the Technical Specifications for specific items.

All materials or articles used in the Work will be of American manufacture, insofar as same are available, in conformance with N.J.S.A. 40A:11-18.

49. PRECONSTRUCTION

In order to provide full coordination of this Project among the parties concerned, the County Engineer will arrange for a preconstruction meeting between the Contractor, County Engineer and other interested parties as soon as possible after the contract is executed. At this meeting the Contractor will present his proposed schedule of Work which shall be subject to review and approval of the County through its designated representatives.

50. DISPUTES UNDER THE CONTRACT

A dispute arising under the Contract shall be submitted in writing to the County Engineer with all facts and supporting data. The County Engineer will review the dispute and issue his decision or request additional facts or documentation after which he will render his decision.

In the event the dispute is not then resolved, the matter shall, pursuant to law, be submitted to mediation before being submitted to a court of competent jurisdiction venued in Union County.

The County Engineer will notify the County Counsel when a matter is to be submitted to mediation. The County Counsel will communicate with the parties and inform them of the procedures to be followed in making such a submission.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

51. CONTRACTOR BUSINESS REGISTRATION CERTIFICATE

Pursuant to N.J.S.A. 52:32-44, the County of Union is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the County of Union with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the County of Union prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

During the course of contract performance:

- 1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
- 2) the contractor shall maintain and submit to the County of Union a list of subcontractors and their addresses that may be updated from time to time.
- 3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at <http://www.state.nj.us/treasury/revenue/busregcert.shtml>.

Before final payment is made under the contract, the contractor shall submit to the County of Union a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

52. BID PROTEST – LEGAL FEES AND COSTS

In the event a Bidder unsuccessfully challenges a Bid Submission by filing an action in a court of law concerning same, said Bidder shall be responsible for payment of reasonable legal costs and fees incurred by the County relating to said protest.

53. AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE

Bidder shall comply with the requirements of N.J.S.A. 40A:11-18 and use only manufactured and farm products of the United States, wherever available, for the Project.

54. NEW JERSEY PAY-TO-PLAY REQUIREMENTS

This Contract is required by law to be publicly advertised for bids. As such, lists of political contributions pursuant to N.J.S.A. 19:44A-1 et seq. are NOT REQUIRED to be provided with the bids.

55. STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION

Pursuant to N.J.S.A. 40A:11-20 entitled Certificate of Bidder Showing Ability to Perform Contract, the County requires a Certification from all bidders submitting a bid showing that the Bidder owns, leases, or controls all necessary equipment required by the Project Plans and Specifications. All bidders shall provide this information at the time of the bid opening using the attached form entitled, "CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT".

If the Bidder is not the actual owner of the equipment, it shall state the source from which the equipment will be obtained and shall attach a certificate from the owner or person in control of the equipment demonstrating that the equipment owner has granted the Bidder control of the requisite equipment during such time as may be necessary for completion of the portion of the contract for which the equipment is necessary.

56. NEW JERSEY SALES AND USE TAX REQUIREMENTS,

Contractors are required to comply with the following:

New Jersey Sales and Use Tax Requirements: All contractors with subcontractors, or any of their affiliates, who enter into contracts for the provision of goods or services with or for New Jersey local government entities, are required to collect and remit to the New Jersey Director of Taxation in the Department of the Treasury the use tax due on all of their sales of tangible personal property delivered into the State of New Jersey pursuant to the "Sales and Use Tax Act," (N.J.S.A. 54:32B-1 et seq.),

regardless of whether the tangible personal property is intended for a contract with the contracting agency. This tax shall be remitted for the term of the Contract.

For purposes herein "affiliate" shall mean any entity that: (a) directly, indirectly, or constructively controls another entity, (b) is directly, indirectly, or constructively controlled by another entity, or (c) is subject to the control of a common entity. For purposes of the immediately preceding sentence, an entity controls another entity if it owns, directly or indirectly, more than fifty percent (50%) of the ownership interest in that entity. NJSA 52:32-44(g)(3).

Bidder's Name _____

EDWARD T. OATMAN
COUNTY MANAGER

MICHELLE HAGOPIAN, ASSISTANT DIRECTOR
DIRECTOR / DIVISION OF PURCHASING

BID DOCUMENT SUBMISSION CHECKLIST

**ALL SIGNATURES AND SEALS SHALL BE ORIGINALS UNLESS OTHERWISE SPECIFIED
BID SHEETS SHOULD NOT BE SUBMITTED DOUBLE SIDED PAGES, (SINGLE SIDE ONLY)**

EACH BIDDER SHOULD COMPLETE THIS FORM AND INITIAL EACH ENTRY.

DATE COMPLETED: _____

**PLEASE SUBMIT BID DOCUMENTS ON SINGLE SIDED PAPER ONLY, WITH THE EXCEPTION OF
THE SURETY AND BID BOND DOCUMENTS.**

**IN ACCORDANCE WITH THE BID SPECIFICATIONS I HAVE REVIEWED, COMPLETED / EXECUTED
AND INCLUDED THE FOLLOWING FORMS:**

_____ Bid Form Page (**Signed, Dated and Bid on all alternatives applicable to the Work**).

_____ Security in the form of:

- _____ Bid bond in an amount equal to 10% of the total amount of this bid not to exceed \$20,000.00; or
- _____ Certified check or cashier's check in the amount of 10% of this bid not to exceed \$20,000.00

_____ Consent of Surety form signed by a Surety Company if the total amount of your Bid is over \$36,000.00. If your bid is accepted, the Surety Company that provided the Consent shall be required to furnish a Performance, Labor and Materials Bond in the amount of 100% of the award of the contract. The County of Union has provided its Consent of Surety form for your use. The use of this form by your Surety Company will expedite the bid review process and eliminate the possibility of having your bid rejected. If, however, you should need to use another form, please use language similar to that used on the Union County form and avoid making any additions or deletions to the Union County form language. In lieu of the Consent of Surety you may submit a Certified Check in the full amount of the bid.

_____ STATEMENT OF BIDDER OWNERSHIP. Pursuant to N.J.S.A. 52:25-24.2, which includes **BOTH** of the following documents:

- Bidder Signature Page
- Bidder Disclosure Statement (**Fill out 2 pages completely**)

_____ SUBCONTRACTOR IDENTIFICATION. Pursuant to N.J.S.A. 40A:11-16, which includes **BOTH** of the following documents:

- Subcontractor Identification Statement: List of Subcontractors (**only for certain types of work**)
- Subcontractor Identification Certification

_____ Acknowledgement of Addendum form: (**This form is to be used only when an addendum has been added to the specifications**).

_____ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** may be included with the bids to expedite the contract process because the bidder is required to provide the County of Union with its proof of business registration and that of any named subcontractor(s) prior to contract award or authorization.

Bidder's Name _____

_____ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** of all named or listed subcontractors (List of Subcontractors) in a Construction bid may be included with the bid as the BRC(s) for each named or listed subcontractors in order to expedite the contract process. Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the County of Union prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

_____ Affirmative Action Requirement

_____ Experience Statement

_____ Certificate of Bidder showing ability to perform Contract

_____ Non-Collusion Affidavit – Fill out completely and notarize

_____ Certificates from New Jersey Department of Labor and Workforce Development – Public Works Contractor Registration Act. **(Only for certain types of work)**

_____ Federal Attachments **(If applicable)**

_____ NJDPMC Certificate / Notice of Classification **(If applicable)**

_____ Americans with Disabilities Act

_____ Statement of Bidder's Qualifications

_____ Contractor Performance Record

_____ Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders

_____ Prior Negative Experience Questionnaire

_____ Contractor's Certification of Compliance – New Jersey Prevailing Wage Act

_____ Uncompleted Contracts Affidavit **(For Bidder, if applicable) MUST ALSO PROVIDE DPMC FORM 701**

_____ Certificate of Insurance Statement

_____ Collection of Use Tax on Sales to Local Government Statement

_____ Time of Completion

_____ Disclosure of Investment Activities in Iran Certification Form

I HAVE TAKEN THE FOLLOWING ACTIONS:

_____ Visited the site and attended the Pre-Bid Meeting **(Where applicable)**

_____ Reviewed the Contract Documents (including any permits the County or its professionals may have obtained), Work, Site, Locality, and Local Conditions and Laws and Regulations that in any manner may affect Cost, Progress, Performance or Furnishing of Work.

_____ Reviewed Bond Requirements

_____ Provided Proof of Compliance with New Jersey Prevailing Wage Act

_____ Reviewed Form of Owner/Contractor Agreement and General Conditions to the Contract

NOTE: QUESTIONS PERTAINING TO THIS BID ARE TO BE DIRECTED TO THE DIVISION OF PURCHASING AT ucbids@ucnj.org.

BIDDING DOCUMENTS

The Bidding Documents consist of the following items:

- **ADDENDA, if issued**
- **CLARIFICATIONS, if issued**
- **INSTRUCTION TO BIDDERS**
- **BID FORM**
- **SPECIFICATIONS:** **As outlined in the Table of Contents and included in the Project Manual.**
- **DRAWINGS:** **As per List of Drawings, indicated on the Project Title Sheet.**

Bidder's Name _____

BID FORM

I/We have carefully examined the plans, specifications, and advertisement for bid for the

**East Hazelwood Avenue Bridge (Ra09) over South Branch Rahway River Scour Countermeasures
City of Rahway
County of Union, New Jersey
BA#5-2020; Union County Engineering Project #2012-021**

that is on file in the Union County Division of Engineering. I/We have inspected the site of the work and will contract to do all the work and furnish all materials mentioned in said plans and specifications. Work will be accomplished in the manner prescribed therein.

BASE BID ITEMS:

ITEM NO	DESCRIPTION	UNIT	CONTRACT QUANTITY	UNIT PRICE	AMOUNT
1	MOBILIZATION	LS	LS		
2	FIELD OFFICE TYPE A SET UP	UNIT	1		
3	FIELD OFFICE TYPE A MAINTENANCE	MONTH	7		
4	CONSTRUCTION LAYOUT	DOLL	DOLL		
5	HEAVY DUTY SILT FENCE, ORANGE	LF	107		
6	FLOATING TURBIDITY BARRIER, TYPE 2	LF	260		
7	DEWATERING BASIN	UNIT	9		
8	SEDIMENT CONTROL BAG	UNIT	9		
9	CONSTRUCTION DRIVEWAY, WOOD MATS	SY	80		
10	CONCRETE WASHOUT SYSTEM	LS	LS		
11	OIL ONLY EMERGENCY SPILL KIT, TYPE 1	UNIT	1		
12	BREAKAWAY BARRICADE	UNIT	15		
13	DRUM	UNIT	15		
14	TRAFFIC CONE	UNIT	15		
15	CONSTRUCTION SIGNS	SF	160		

Bidder's Name _____

ITEM NO	DESCRIPTION	UNIT	CONTRACT QUANTITY	UNIT PRICE	AMOUNT
16	CONSTRUCTION IDENTIFICATION SIGNS, 4' X 8'	UNIT	2		
17	FLASHING ARROW BOARD, 4'X8'	UNIT	2		
18	PORTABLE VARIABLE MESSAGE SIGN	UNIT	2		
19	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	UNIT	2		
20	POLICE TRAFFIC DIRECTOR	ALLOW	ALLOW	\$50,000.00	\$50,000.00
21	FINAL CLEANUP	LS	LS		
22	CLEARING SITE	LS	LS		
23	EXCAVATION, UNCLASSIFIED	CY	175		
24	TEMPORARY COFFERDAM	LS	LS		
25	EARTH ANCHOR FOR ARTICULATED CONCRETE BLOCK MATTING	UNIT	100		
26	ARTICULATED CONCRETE BLOCK MATTING, 6", OPEN CELL	SY	860		
27	RIPRAP STONE SCOUR PROTECTION (D50 = 12")	CY	112		
28	TOPSOILING, 4" THICK	SY	116		
29	BORROW TOPSOIL	CY	20		
30	FERTILIZING AND SEEDING, TYPE A	SY	116		
31	FERTILIZING AND SEEDING, TYPE F	SY	20		
32	STRAW MULCHING	SY	136		

Written

Figures

Bidder's Name _____

BID CONTINGENCY: (To be used if and when directed by the County)

Sixty Five Thousand Dollars and No Cents
Written

\$65,000.00
Figures

TOTAL BASE BID ITEMS PLUS BID CONTINGENCY AMOUNT:

Written

Figures

NOTE: Bid Contingency may include one-half of one percent of contract amount set aside for local training if and when directed by the County.

Bidder's Name _____

CONSENT OF SURETY
TO ACCOMPANY PROPOSAL (BID)

_____ (hereinafter called Surety), organized and existing under the laws of the State of _____ duly authorized and qualified to transact business in the State of New Jersey, in consideration of the sum of One Dollar (\$1.00), lawful money of the United States of America, to it in hand paid, receipt whereof is hereby acknowledged, and in consideration, hereby certifies and agrees that if the contract for which the attached proposal is made be awarded to _____ (hereinafter called Contractor) for the performance of certain work and labor or the supplying of certain materials, or both, as more particularly set forth in said proposal and described for purposes of this instrument as a proposal for _____ to the COUNTY OF UNION and if Contractor shall enter into the contract, Surety will become bound as surety for its faithful performance, labor and material payment and will provide the Contractor with a performance, labor and material payment bond in the full amount of the contract price.

NOTE:
Expiration date
Needed if Annual
Surety

NAME OF INSURANCE COMPANY

ADDRESS: _____

ORIGINAL SIGNATURE
ATTORNEY-IN-FACT FOR INSURANCE CO.

NOTE: PROOF OF AUTHORITY OF OFFICERS OF SURETY COMPANY TO EXECUTE THIS DOCUMENT MUST BE SUBMITTED.

Bidder's Name _____

BIDDER SIGNATURE PAGE

THE BIDDER MUST READ THE FOLLOWING INSTRUCTIONS TO COMPLETE THIS PAGE:

1. If doing business under a **trade name, partnership or a sole proprietorship**, you must submit the bid under exact title of the trade name, partnership, or proprietorship, and the bid must be signed by either the **owner**, or a **partner** and **witnessed** by a **notary public**.
2. If a **Corporation**, the bid must be signed by the **President** or **Vice President** and **witnessed** by a **Corporate Secretary** (corporate title must be exact) and **affix corporate seal**. If a Corporate Secretary does not exist, President or Vice President's signature shall be witnessed by a Notary Public.
3. Other persons **authorized** by **corporate resolution** to execute agreements in its behalf may also sign the bid documents (pages). **Copy of a resolution must accompany the bid**.
4. The person who signs this bid form **must also** sign the **Non-Collusion Affidavit**.
5. You **cannot** witness your own signature.

NAME OF BIDDER

ADDRESS OF BIDDER

**ORIGINAL SIGNATURE
CORPORATE SECRETARY**

**PRINT NAME AND TITLE
CORPORATE SECRETARY**

TEL: _____
FAX: _____
E-Mail: _____

BY: _____
ORIGINAL SIGNATURE

Corporate Seal

PRINT OR TYPE NAME AND TITLE

WARNING: IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY SUPPLY THE INFORMATION REQUESTED ON THIS PAGE, YOUR BID MAY BE REJECTED.

STATEMENT OF OWNERSHIP DISCLOSURE

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.

Name of Organization: _____

Organization Address: _____

Part I Check the box that represents the type of business organization:

- Sole Proprietorship (skip Parts II and III, execute certification in Part IV)
- Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)
- For-Profit Corporation (any type) Limited Liability Company (LLC)
- Partnership Limited Partnership Limited Liability Partnership (LLP)
- Other (be specific): _____

Part II

The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. **(COMPLETE THE LIST BELOW IN THIS SECTION)**

OR

No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. **(SKIP TO PART IV)**

(Please attach additional sheets if more space is needed):

Bidder's Name _____

Name of Individual or Business Entity	Home Address (for Individuals) or Business Address

Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed.**

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II **other than for any publicly traded parent entities referenced above.** The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. **Attach additional sheets if more space is needed.**

Bidder's Name _____

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Home Address (for Individuals) or Business Address

Part IV Certification

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the **County of Union** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with **County of Union** to notify the **County of Union** in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the **County of Union** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):		Title:	
Signature:		Date:	

SUBCONTRACTOR IDENTIFICATION STATEMENT

LIST OF SUBCONTRACTORS

This form is ONLY required for plumbing and gas fitting, steam and hot water heating and ventilating apparatus, steam power plants, electrical work, structural steel, ornamental iron work, and any other trades required to be identified by the specifications (including, but not limited, to satisfying any DPMC Classification requirements).

CHECK THIS BOX IF NONE OF THE ABOVE LISTED TRADES OR THOSE REQUIRED TO BE IDENTIFIED IN THE SPECIFICATIONS ARE TO BE USED TO PERFORM THE WORK

In compliance with N.J.S.A. 40A:11-16 and the bid specifications, the undersigned hereby lists the name or names of the following subcontractors:

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

IF MORE THAN THREE SUBCONTRACTORS, PLEASE COPY THIS SHEET AS NECESSARY AND ATTACH TO THE BID PACKAGE.

(Continued on following page)

Bidder's Name _____

SUBCONTRACTOR IDENTIFICATION CERTIFICATION

Note the law does not permit the listing of alternate subcontractors. However, multiple subcontractors for the same trade are permitted to be named provided the bidder meets the following requirements:

- Bidder identifies each subcontractor named for that category;
- Bidder states the scope of work, goods and services (the portion of the work) to be performed by each subcontractor; and
- Bidder provides the price quote provided by each subcontractor.

The bidder is advised that any change of subcontractor(s) from ones listed herein is subject to the County's approval. Change of subcontractor(s) will be approved only if made for good cause and not as a result of an arbitrary purpose.

The undersigned Bidder certifies and declares that the subcontractors listed above shall be used as subcontractors to complete certain portions of the work in this project as set forth in N.J.S.A. 40A: 11-16.

Witness

Date _____

NAME OF BIDDER

ADDRESS

By: _____
ORIGINAL SIGNATURE ONLY

PRINT NAME AND TITLE

Bidder's Name _____

ACKNOWLEDGMENT OF ADDENDUM

COUNTY OF UNION

(Name of Construction /Public Works Project)

(Project or Bid Number)

Pursuant to N.J.S.A. 40A:11-23.1a., the undersigned bidder, hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the County of Union's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick- up, etc.)	Date Received

ACKNOWLEDGMENT BY BIDDER:

NAME OF BIDDER: _____

ORIGINAL SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

CONTRACTOR BUSINESS REGISTRATION CERTIFICATE

New Mandatory Requirement - Effective 1/18/2010

The recently enacted **P.L. 2009, c.315**, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

If subcontractors are named on the bid, proof of the business registration for each subcontractor must be provided prior to the award of bid. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

Proof of business registration shall be

- A copy of a Business Registration Certificate issued by the Department of the Treasury, Division of Revenue; or
- A copy of the web version provided by the NJ Division of Revenue, or

Register online at www.nj.gov/treasury/revenue/taxreg.htm. Click the "online" link and then select "Register for Tax and Employer Purposes or call the Division at 609-292-1730.

Note: A NJ Certificate of Authority is not acceptable.

FAILURE to submit proof of registration of the bidder or any subcontractor named on the bid prior to the award of a contract shall be cause to reject the bids.

FAILURE of the bidder or any subcontractor named on the bid to be registered prior to the receipt of bids is cause for a **MANDATORY REJECTION** of bids. (A NON-WAIVABLE DEFECT). This covers construction work as well as non-construction bids.

IN ADDITION:

The contractor shall provide written notice to all **subcontractors and suppliers** not specifically named on the bid of the responsibility to register and submit proof of business registration to the contractor. The requirement of proof of business registration extends down through all levels (tiers) of the project.

Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

For the term of the contract, the contractor and each of its affiliates and a subcontractor and each of its affiliates [N.J.S.A. 52:32-44(g)(3)] shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

A business organization that fails to provide a copy of a business registration as required pursuant to section 1 of P.L.2001,c.134 (C.52:32-44 et al.) or subsection e. or f. of section 92 of P.L.1977,c.110 (C.5:12-92), or that provides false business registration information under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency.

BUSINESS REGISTRATION

•
Pursuant to N.J.S.A. 52:32-44, the County of Union is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the County of Union with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the County of Union prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

During the course of contract performance:

- (1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
- (2) the contractor shall maintain and submit to the County of Union a list of subcontractors and their addresses that may be updated from time to time.
- (3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at <http://www.state.nj.us/treasury/revenue/busregcert.shtml>.

Before final payment is made under the contract, the contractor shall submit to the County of Union a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

Bidder's Name _____

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE
FOR STATE AGENCY AND CASINO SERVICE CONTRACTORS

DEPARTMENT OF TREASURY
DIVISION OF REVENUE
PO BOX 282
TRENTON, NJ 08646-0282

TAXPAYER NAME: TAX REGISTRATION TEST ACCOUNT
TRADE NAME: CLIENT REGISTRATION
TAXPAYER IDENTIFICATION #: 970-097-382/000
SEQUENCE NUMBER: 0107230
ADDRESS: 847 ROEBLING AVE
TRENTON NJ 08611
ISSUANCE DATE: 07/14/04
EFFECTIVE DATE: 01/01/01

FORM BRC(06-01)

John S. Easley
Authorized

This Certificate is NOT assignable or transferable. It must be temporarily displayed at above address.

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name: TAX REG TEST ACCOUNT
Trade Name:
Address: 847 ROEBLING AVE
TRENTON, NJ 08611
Certificate Number: 1093907
Date of Issuance: October 14, 2004

For Office Use Only:
20041014112813533

ATTACH BRC HERE

Bidder's Name _____

AFFIRMATIVE ACTION REQUIREMENT

REQUIRED AFFIRMATIVE ACTION EVIDENCE

General Requirements of P.L. 1975, c. 127: You are hereby put on notice that:

CONSTRUCTION CONTRACTS: The successful contractor must submit within three (3) days of the notice of intent to award or the signing of the contract the initial project manning report (A.A.201). This report should be submitted at the time the signed contract is returned to the County of Union. Attention: *Affirmative Action Officer*.

If the successful contract does not submit the initial project manning report (A.A.201) within the three (3) days from the time the signed contract is returned to the County of Union, the County of Union WILL declare the contractor non-responsive and award the contract to the next lowest responsible bidder.

NAME OF BIDDER

ORIGINAL SIGNATURE

PRINT OR TYPE NAME AND TITLE

DATE THIS FORM IS COMPLETED

Bidder's Name _____

EXPERIENCE STATEMENT

I hereby certify that my company has performed the following private or public work, which is relevant to this bid. I further certify that my company has never defaulted under any contract. Should you not sign this form due to prior defaults, please provide details on an attached sheet.

Witness

Date

NAME OF BIDDER

ADDRESS

By: _____
ORIGINAL SIGNATURE ONLY

PRINT NAME AND TITLE

YOU MAY ATTACH ADDITIONAL SHEETS, BUT YOU MUST SIGN AND WITNESS THIS SHEET.

Bidder's Name _____

NON-COLLUSION AFFIDAVIT

(N.J.S.A. 52:34-15)

STATE OF _____)
) SS: _____)
COUNTY OF _____)

I _____, of the City of _____, in the County of _____, and the State of _____, of full age, being duly sworn according to law, on my oath depose and say that: I am _____ of the firm of _____, the bidder making the proposal for the above named project, and that I executed the said proposal for the above named project, and that I executed the said proposal with full authority to do so; that said bidder has not, directly or indirectly, entered into any agreement, participation in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this Affidavit are true and correct, and made with full knowledge that the COUNTY OF UNION, NEW JERSEY relies upon the truth of the statements contained in said proposal and in the statements contained in the affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bonafide established commercial or selling agencies maintained by _____ (N.J.S.A. 52:34-15).

NAME OF BIDDER

ORIGINAL SIGNATURE ONLY

NOTE: The person who signed the bidder signature page for the bidder should sign this form also.

Subscribed and sworn to before me

this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/

Specify Other State

My Commission Expires _____, 20__.

WARNING: IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY FILL OUT THIS AFFIDAVIT OF NON-COLLUSION, YOUR BID MAY BE REJECTED.

Bidder's Name _____

Contractor Registration Advisement
For Public Works Projects

A new law, known as "The Public Works Contractor Registration Act" (P.L. 1999, c.238), became effective April 11, 2000. Under the Act, no contractor/subcontractor will be permitted to bid on or engage in any contract for public work, as defined in Section 2 of P.L. 1963, c.150 (C:34:11-56.26), unless that contractor/subcontractor is registered with the New Jersey Department of Labor and Workforce Development. The Act provides that upon registration with the Department, a public works contractor/subcontractor will be issued a certificate by the Department indicating compliance with the Act's requirements. The registration fee has been set at \$300.00 per year. Upon the effective date of the Act, public bodies will be expected to request production of such a certificate from those bidding on or engaging in public works projects.

It is important to note that the term "contractor," is defined in the, Act as, "a person, partnership, association, joint stock company, trust, corporation or other legal business entity or successor thereof who enters into a contract which is subject to the provision of the "New Jersey Prevailing Wage Act," P.L. 1963, c.150 (C.34:11-56.25, et seq.) for the construction, reconstruction, demolition, alteration, repair or maintenance of a public building regularly open to and used by the general public or a public institution, and includes any subcontractor or lower tier subcontractor as defined herein: except that, for the purposes of the act, no pumping station, treatment plant or other facility associated with utility and environmental construction, reconstruction, demolition, alteration, repair or maintenance shall be regarded as a public building regularly open to and used by the general public or a public institution."

Registration forms, copies of the Act, and other relevant information can be obtained by contacting:

Contractor Registration Unit
New Jersey Department of Labor and Workforce Development
Division of Wage & Hour Compliance
PO Box 389
Trenton, New Jersey 08625-0389
Telephone: 609-292-9464
Fax: 609-633-8591
E-mail: contreg@dol.state.nj.us

AMERICANS WITH DISABILITIES ACT
EQUAL OPPORTUNITY FOR INDIVIDUALS WITH DISABILITIES

The contractor and the County of Union (hereafter "Owner") do hereby agree that the provisions of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. S12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the Owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the Owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the Owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the Owner's grievance procedure, the contractor agrees to abide by any decision of the Owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the Owner, or if the Owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

The Owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the Owner or any of its agents, servants, and employees, the Owner shall expeditiously forward or have forwarded to the contractor every demand, complaint, notice, summons, pleading, or process received by the Owner or its representatives.

It is expressly agreed and understood that any approval by the Owner of the services provided by the contractor pursuant to this contract will not relieve the contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the Owner pursuant to this paragraph.

It is further agreed and understood that the Owner assumes no obligation to indemnify or save harmless the contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the Owner from taking any other actions available to it under any other provisions of this Agreement or otherwise at law.

Name _____ (Please print or type)

Signature _____ Date _____

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. Questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

1. _____
(Name of Bidder)

2. _____
(Permanent Main Office Address)

3. _____
(When Organized)

4. _____
(If a Corporation, where incorporated)

5. Number of years your organization has been engaged in construction or contracting business under present firm or trade name? _____

6. How many years of experience in construction work has your organization had (a) as a general contractor? And/or (b) As a subcontractor? _____

7. Contracts on hand: (Attach a list or table showing gross amounts of each Contract and the appropriate dates of completion) _____

8. General character of work performed by you. _____

9. Have you ever failed to complete any work awarded to you? _____

10. Have you ever defaulted on a Contract? _____ If so, complete details, including where and why?

STATEMENT OF BIDDER'S QUALIFICATIONS - (continued)

11. Has any officer or partner of your organization ever failed to complete a construction contract handled in its own name? If so, state name of individual, name of owner, location and type of project, and reason for the failure to complete. _____

12. List your major equipment available for this Contract.

13. Experience in the construction work similar in importance to this Project.

14. Have you had any material adverse changes from the trades as listed in NJ Notice of Classification within last five (5) years? _____. If so, list prior classification.

15. Background and experience of the principal members of your organization, including the officers.

Individual's Name	Present Position or Office	Yrs. of Construction Experience	Magnitude & Type of Work	In What Capacity

Bidder's Name _____

16. Bank Reference. (Name, Address, Phone, Representative) _____

17. Will you, upon request, fill out a detailed financial statement? _____

18. The undersigned, hereby authorizes and requests any person, firm or corporation to furnish any information requested by the proper agency in verification of the responses comprising this Statement of Bidder's Qualifications.

19. Bidder's telephone number, fax number and e-mail address (if applicable).

Phone _____

Fax _____

E-mail _____

Mobile _____

Dated at _____ this _____ day of __, 20__.

BIDDER (Signature)

BIDDER (Print Name)

Subscribed and sworn to before me

this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/_____
Specify Other State

My Commission Expires _____, 20__.

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

CONTRACTOR PERFORMANCE RECORD

List all contracts completed by you below or provide separate form.

Name of Owner	Name & Location of Project: Type Of Work	Prime or Sub-Cont.	Engineer or Architect in Charge for Owner	Contract Price (Omit Cost)	Date Completed	Was Time* Extension Necessary	Were Any Penalties Imposed	Were Liens* Claims or Stop Notice Filed

* If answer is YES, provide explanation of details in connection with non-completion of contracts, time extensions, penalties imposed, labor troubles, liens, claims and notices filed against contracts listed in preceding item "Performance Record" on an attached sheet.

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

CONTRACTOR PERFORMANCE RECORD
CERTIFICATION

The information above is true and complete to the best of my knowledge and belief.

(Name of Organization)

(Signature)

(Title)

Subscribed and sworn to before me

this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/ _____
Specify Other State

My Commission Expires _____, 20__.

PRIOR NEGATIVE EXPERIENCE QUESTIONNAIRE

(N.J.S.A. 40A:11-4)

1. Within the past ten (10) years, have you been found, through either court adjudication, arbitration, mediation, or other contractually stipulated alternate dispute resolution mechanism, to have: failed to provide or perform goods or services; or failed to complete a contract in a timely manner; or otherwise performed unsatisfactorily under a prior contract with a public entity?

_____ yes _____ no If yes, please provide full, detailed explanation.

2. Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to utilize the services of another contractor to provide the goods or perform the services or to correct or complete the contract?

_____ yes _____ no If yes, please provide full, detailed explanation.

3. Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to look to your surety for completion of the contract or tender of the costs of completion?

_____ yes _____ no If yes, please provide full, detailed explanation.

4. Within the past ten (10) years, have you been debarred or suspended from contracting with any of the agencies or department of the executive branch of the State of New Jersey at the time of the contract award, where the action was based on failure to perform a contact for goods or services with a public entity?

_____ yes _____ no If yes, please provide full, detailed explanation.

Bidder's Name _____

PRIOR NEGATIVE EXPERIENCE CERTIFICATION

I hereby certify that the above statements are true and accurate as of this _____
day of _____, 20__.

Name of Contractor

By _____
(Signature of Authorized Representative)

Subscribed and sworn to before me

this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/ _____
Specify Other State

My Commission Expires _____, 20__.

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

TO BE COMPLETED ONLY WHEN FINAL PAYMENT IS REQUESTED

CONTRACTOR'S CERTIFICATION OF COMPLIANCE - NEW JERSEY PREVAILING WAGE ACT

TO: County of Union
Division of Engineering
2325 South Avenue
Scotch Plains, New Jersey 07076

CONTRACT:

PROJECT:

In accordance with the requirements of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56 et al *, the undersigned contractor on the public work being performed for:

COUNTY OF UNION

hereby certifies that he/she has complied with the contract requirements regarding the payment of the minimum prevailing wages established under "The New Jersey Prevailing Wage Act" N.J.S.A. 34:11-56 et al.

CONTRACTOR: _____
ADDRESS: _____

BY: _____

ORIGINAL SIGNATURE ONLY

STATE OF NEW JERSEY
COUNTY OF _____

Being by me duly sworn according to law, on his oath deposes and says that _____ is _____ of _____ the above named contractor, and that the facts set forth in the above statement are true.

Subscribed and sworn to before me

this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/ _____
Specify Other State

My Commission Expires _____, 20__.

* N.J.S.A. 34:11-56.33 requires the contractor and subcontractor to file written statements with the public body in form satisfactory to the Commissioner certifying to the amounts then due and owing from such contractor and subcontractor filing such statement to any and all workmen for wages due on account of the public work, setting forth therein the names of the persons whose wages are unpaid and the amount due to each respectively. Union County will withhold the amount so deducted for the benefit of the workmen whose wages are unpaid as shown by the verified statement filed, and will pay directly to any workman the amount shown by such statement to be due to him for such wages. Such payment shall thereby discharge the obligation of the contractor to the person receiving such payment to the extent of the amount thereof.

Bidder's Name _____

UNCOMPLETED CONTRACTS AFFIDAVIT
(To be Submitted with DPMC Form 701)

PURSUANT TO N.J.A.C. 17:19-2.13, BIDDER DECLARES THE FOLLOWING WITH RESPECT TO ITS UNCOMPLETED CONTRACTS, ON ALL WORK, FROM WHATEVER SOURCE (PUBLIC AND PRIVATE), BOTH IN NEW JERSEY AND FROM OTHER GOVERNMENTAL JURISDICTIONS

ENTITY	PROJECT TITLE	ORIGINAL CONTRACT AMOUNT	UNCOMPLETED AMOUNT AS OF BID OPENING DATE	NAME AND TELEPHONE NUMBER OF PARTY TO BE CONTACTED FROM ENTITY FOR VERIFICATION

TOTAL AMOUNT OF UNCOMPLETED CONTRACTS \$ _____

BIDDER:

(Signature)

(Print Name)

Subscribed and sworn to before me

this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/ _____
Specify Other State

My Commission Expires _____, 20__.

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

CERTIFICATE OF INSURANCE STATEMENT

The Bidder fully understands the County of Union insurance requirements as stated in the Instructions to Bidders as well as the Owner/Contractor Agreement and agrees to provide all insurance required by these documents prior to the issuance of the Notice to Proceed.

BIDDER (Signature)

BIDDER (Print Name)

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

COLLECTION OF USE TAX ON SALES TO LOCAL GOVERNMENTS STATEMENT

The Bidder fully understands the requirements of the use tax on sales to local governments as stated in the General Conditions to the Contract for Construction and the Instructions to Bidders, and agrees at all times to comply with the "Contractor Use Tax Collection Legislation", as defined therein, and the terms relating thereto contained in the Contract Documents.

BIDDER (Signature)

BIDDER (Print Name)

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

TIME OF COMPLETION

The undersigned proposed that if awarded the Contract, the scope of work will be started within ten (10) calendar days and will be substantially completed within **180 (One Hundred Eighty) calendar days** from the date of the notice to proceed.

I, _____ of _____
NAME (Print or type) COMPANY

Agree to complete work in the time frame specified _____
SIGNATURE

SITE VISIT – GENERAL CONTRACTOR

I, _____ of _____
NAME (Print or type) COMPANY

Visited the site of the work on _____
SIGNATURE

Bidder's Name _____

**COUNTY OF UNION NEW JERSEY
Division of Purchasing
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN FORM**

Solicitation Number: _____

Vendor/Bidder: _____

PART 1

CERTIFICATION

VENDOR/BIDDER MUST COMPLETE PART 1 BY CHECKING ONE OF THE BOXES
FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person nor entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of the Treasury's Chapter 25 list as a person or entity engaged in investment activities in Iran. The Chapter 25 list is found on the Department's website at <http://www.state.nj.us/treasury/pdf/Chapter25List.pdf>. Vendors/Bidders **must** review this list prior to completing the below certification. **Failure to complete the certification will render a Vendor's/Bidder's proposal non-responsive.** If the Director of the Division of Purchase and Property finds a person or entity to be in violation of the law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

CHECK THE APPROPRIATE BOX

A. I certify, pursuant to Public Law 2012, c.25, that neither the Vendor/Bidder listed above nor any of its parents, subsidiaries, or affiliates is listed on the N.J. Department of Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). Disregard Part 2 and complete and sign the Certification below.

OR

B. I am unable to certify as above because the Vendor/Bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such information will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2

PLEASE PROVIDE ADDITIONAL INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

If you checked Box "B" above, provide a detailed, accurate and precise description of the activities of the Vendor/Bidder, or one of its parents, subsidiaries or affiliates, engaged in investment activities in Iran by completing the information below.

ENTITY NAME: _____
RELATIONSHIP TO VENDOR/BIDDER: _____
DESCRIPTION OF ACTIVITIES: _____
DURATION OF ENGAGEMENT: _____
ANTICIPATED CESSATION DATE: _____
VENDOR/BIDDER CONTACT NAME: _____
VENDOR/BIDDER CONTACT PHONE#: _____

Attach Additional Sheets If Necessary

CERTIFICATION

I, the undersigned, certify that I am authorized to execute this certification on behalf of the Vendor/Bidder, that the foregoing information and any attachments hereto, to the best of my knowledge are true and complete. I acknowledge that the County of Union, New Jersey is relying on the information contained herein, and that the Vendor/Bidder is under a continuing obligation from the date of this certification through the completion of any contract(s) with the County of Union to notify the County of Union in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification. If I do so, I will be subject to criminal prosecution under the law, and it will constitute a material breach of my agreement(s) with the County of Union, permitting the County of Union to declare any contract(s) resulting from this certification void and unenforceable.

Signature _____

Date _____

Print Name and Title _____

Revised 10/19/17

Bidder's Name _____

STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of New Jersey Department of Transportation, 2007 Edition; is added to and/or amended elsewhere herein by the Notice to Contractors (Advertisement), Proposal, Information for Bidders, General Conditions, Supplemental Conditions, Project Plans, and Supplementary Specifications; shall, insofar as technical requirements are involved, govern in the execution of this project.

Such Standard Specifications are made a part of these Specifications by this reference and will not be repeated herein. It is the responsibility of prospective bidders to familiarize themselves with these Standard Specifications, copies of which may be examined at the office of the Engineer and may be obtained, upon payment of the cost thereof, from:

Department of Transportation
State of New Jersey
1035 Parkway Avenue
Trenton, New Jersey 08625

The Notice to Contractors (Advertisement), Proposal, General Conditions, Special Provisions, Project Plans and/or Supplementary Specifications shall govern and prevail in the case of conflict between them and the Standard Specifications.

In these Standard Specifications the words "COMMISSIONER" or "DEPARTMENT" shall refer to and mean the person, persons, body, board or agent legally empowered to enter into contracts and otherwise legally act for the Owner. The word "STATE" shall refer to and mean the professional engineering representative of the Owner as hereinbefore defined and the word "ENGINEER" shall refer to and mean the professional engineering representative of the Owner as hereinbefore defined and the word "INSPECTOR" shall mean the authorized project representative of the Engineer with the authority as hereinbefore defined. The word "LABORATORY" shall mean and refer to the Engineer who may, at his discretion, and with the consent of the Owner, employ qualified technical personnel or testing laboratories to assist him in fulfilling the duties normally assigned to the "LABORATORY" in these Standard Specifications.

When reference is made herein to the bulletins, standards, specifications, publications or requirements of the American Association of State Highway Official (AASHO), the American Concrete Institute (ACI), the American Society of Civil Engineers (ASCE) or similar national or regional societies, associations, institutes or organizations; the requirements of the bulletins, specifications, publications or requirements referred to shall be considered a part of these Specifications by such reference and shall not be repeated herein but shall have the same import and be as binding as if herein set forth in full.

OPERATING ENGINEERS **Rates Expiration Date :**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift rate.

OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veteran's Day.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
51.53	33.85	85.38

CLASSIFICATIONS:

A-Frame

Backhoe (combination)

Boom Attachment on loaders (Except pipehook)

Boring & Drilling Machine

Brush Chopper, Brush Shredder, Tree Shredder, Tree Shearer

Bulldozer, finish grade

Cableway

Carryall

Concrete Pump

Concrete Pumping System (Pumpcrete & similar types)

Conveyor, 125 feet or longer

Drill Doctor (Duties include dust collector and maintenance)

Front End Loader (2 cu. yds. but less than 5 cu. yds.)

Grader, finish

Groove Cutting Machine (ride-on type)

Heater Planer

Hoist: Outside Material Tower Hoist (all types including steam, gas, diesel, electric, air hydraulic, single and double drum, concrete, brick shaft caisson, snorkle roof, and other similar types, Except Chicago-boom type) * receives an additional \$1.00 per hour on 100 ft. up to 199 ft. total height, and an additional \$2.00 per hour on 200 ft. and over total height.

Hydraulic Crane (10 tons & under)

Hydraulic Dredge

Hydro-Axe

Hydro-Blaster

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
51.53	33.85	85.38

CLASSIFICATIONS:

Jack (screw, air hydraulic, power-operated unit, or console type, Except hand jack or pile load test type)

Log Skidder

Pan

Paver, concrete

Plate & Frame Filter Press

Pumpcrete (unit type)

Pumpcrete, Squeezecrete, or Concrete Pumping machine (regardless of size)

Scraper

Side Boom

Straddle Carrier (Ross and similar types)

Whiphammer

Winch Truck (hoisting)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
49.62	33.85	83.47

CLASSIFICATIONS:

- Asphalt Curbing Machine
- Asphalt Plant Engineer
- Asphalt Spreader
- Autograde Curb Trimmer & Sidewalk Shoulder Slipform (CMI & similar types)
- Autograde Curecrete Machine (CMI & similar types)
- Autograde Tube Finisher & Texturing Machine (CMI & similar types)
- Bar Bending Machines (Power)
- Batcher, Batching Plant, & Crusher [On Site]
- Belt Conveyor System
- Boom-Type Skimmer Machine
- Bridge Deck Finisher
- Bulldozer (all sizes)
- Captain (Power Boats)
- Car Dumper (railroad)
- Compressor & Blower unit for loading/unloading of concrete, cement, fly ash, or similar type materials (used independently or truck-mounted)
- Compressor (2 or 3 battery)
- Concrete Breaking Machine
- Concrete Cleaning/Decontamination Machine
- Concrete Finishing Machine
- Concrete Saw or Cutter (ride-on type)
- Concrete Spreader (Hetzl, Rexomatic & similar types)
- Concrete Vibrator

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
49.62	33.85	83.47

CLASSIFICATIONS:

- Conveyors - under 125 feet
- Crane Signalman
- Crushing Machine
- Directional Boring Machine
- Ditching Machine - Small (Ditchwitch, Vermeer or similar types)
- Dope Pot - Mechanical (with or without pump)
- Dumpster
- Elevator
- Fireman
- Fork Lift (Economobile, Lull & similar types)
- Front End Loader (1 cu. yd. and over but less than 2 cu. yds.)
- Generator (2 or 3 battery)
- Giraffe Grinder
- Goldhofer/Hydraulic Jacking Trailer
- Grader & Motor Patrols
- Grout Pump
- Gunnite Machine (Excluding nozzle)
- Hammer - Vibratory (in conjunction with generator)
- Heavy Equipment Robotics - Operator/Technician
- Hoist (roof, tigger, aerial platform hoist, house car)
- Hopper
- Hopper Doors (power operated)
- Ladder (motorized)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
49.62	33.85	83.47

CLASSIFICATIONS:

Laddervator

Locomotive (Dinky-type)

Maintenance Utility Man

Master Environmental Maintenance Technician

Mechanic

Mixer (Except paving mixers)

Pavement Breaker (truck-mounted or small self-propelled
ride-on type)

Pavement Breaker - maintenance of compressor or hydraulic unit

Pipe Bending Machine (power)

Pitch Pump

Plaster Pump (regardless of size)

Post Hole Digger (post pounder, auger)

Rod Bending Machines

Roller (black top)

Scale (power)

Seamen Pulverizing Mixer

Shoulder Widener

Silo

Skimmer Machine (boom type)

Steel Cutting Machine (service & maintenance)

Tamrock Drill

Tractor

Transfer Machines

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
49.62	33.85	83.47

CLASSIFICATIONS:

Tug Captains

Tug Master (Power Boats)

Ultra High Pressure Waterjet Cutting Tool System -
Operator/Maintenance Technician

Vacuum Blasting Machine - Operator/Maintenance Technician

Vibrating Plant (used with unloading)

Welder & Repair Mechanic

Effective Dates:

07/01/2019

Rate	Fringe	Total
46.28	33.85	80.13

CLASSIFICATIONS:

Assistant Engineer/Oiler

Driller's Helper

Field Engineer - Transit man or Instrument man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Mechanic's Helper

Off Road Back Dump

Tire Repair & Maintenance

Effective Dates:

07/01/2019

Rate	Fringe	Total
43.70	33.85	77.55

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

07/01/2019

Rate	Fringe	Total
53.86	33.85	87.71

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
53.12	33.85	86.97

CLASSIFICATIONS:

- Autograde Pavement Profiler (CMI & similar types)
- Autograde Pavement Profiler - Recycle Type (CMI & similar types)
- Autograde Placer/Trimmer/Spreader Combination (CMI & similar types)
- Autograde Slipform Paver (CMI & similar types)
- Backhoe (Excavator)
- Central Power Plant
- Concrete Paving Machine
- Cranes, Derricks, Pile Drivers (all types), under 100 tons with a boom (including jib and/or leads) under 100 ft.
- Draglines
- Drill, Bauer, AMI and similar types
- Drillmaster, Quarrymaster
- Drillmaster/Quarrymaster (down-the-hole drill), rotary drill, self-propelled hydraulic drill, self-powered drill
- Elevator Grader
- Field Engineer-Chief of Party
- Front End Loader (5 cu. yards or larger)
- Gradall
- Grader, Rago
- Helicopter Co-Pilot
- Helicopter Communications Engineer
- Juntann Pile Driver
- Locomotive (large)
- Mucking Machine

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
53.12	33.85	86.97

CLASSIFICATIONS:

Pavement & Concrete Breaker (Superhammer & Hoe Ram)

Pile Driver

Prentice Truck

Roadway Surface Grinder

Scooper (loader & shovel)

Shovel (Excavator)

Trackhoe (Excavator)

Tree Chopper with boom

Trenching Machine (cable plow)

Tunnel Boring Machine

Vacuum Truck

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
47.99	33.85	81.84

CLASSIFICATIONS:

- Chipper
- Compressor (single)
- Concrete Spreader (small type)
- Conveyor Loader (Except elevator graders)
- Engines, Large Diesel (1620 HP) & Staging Pump
- Farm Tractor
- Fertilizing Equipment (operation & maintenance)
- Fine Grade Machine (small type)
- Form Line Grader (small type)
- Front End Loader (under 1 cubic yard)
- Generator (single)
- Grease, Gas, Fuel, & Oil Supply Trucks
- Heaters (Nelson or other type)
- Lights - portable generating light plant
- Mixer, Concrete (small)
- Mulching Equipment (operation & maintenance)
- Power Broom or Sweeper
- Pump (diesel engine & hydraulic - regardless of power)
- Pump (larger than 2 inch suction, including submersible pumps)
- Road Finishing Machine (small type)
- Roller - grade, fill, or stone base
- Seeding Equipment (operation & maintenance)
- Sprinkler & Water Pump Trucks

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
47.99	33.85	81.84

CLASSIFICATIONS:

Steam Generator or Boiler

Stone Spreader

Tamping Machine (vibrating ride-on type)

Temporary Heating Plant (Nelson or other type, including
proprane, natural gas, and flow-type units)

Water or Sprinkler Truck

Welding Machine (gas, diesel, or electric convertor, of any type)

Welding System - Multiple (rectifier transformer type)

Wellpoint Systems (including installation by bull gang and
maintenance)

Effective Dates:

07/01/2019

Rate	Fringe	Total
54.94	33.85	88.79

CLASSIFICATIONS:

Helicopter Pilot/Engineer

Effective Dates:

07/01/2019

Rate	Fringe	Total
59.62	33.85	93.47

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) 140 ft. and over

Effective Dates:

07/01/2019

Rate	Fringe	Total
58.62	33.85	92.47

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) from 100 ft. to 139 ft.

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
55.12	33.85	88.97

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types) , under 100 tons with a boom (including jib and/or leads) 140 ft. and over

Effective Dates:

07/01/2019

Rate	Fringe	Total
57.62	33.85	91.47

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with a boom (including jib and/or leads) under 100 ft.

Effective Dates:

07/01/2019

Rate	Fringe	Total
54.12	33.85	87.97

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) from 100 ft. to 139 ft.

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift rate.

OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veteran's Day.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

Effective Dates:

07/01/2019

Rate	Fringe	Total
56.75	33.85	90.60

CLASSIFICATIONS:

Helicopter Co-Pilot & Communications Engineer

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2019

Rate	Fringe	Total
52.69	33.85	86.54

CLASSIFICATIONS:

A-Frame

Cherry Picker -10 tons or less (Over 10 tons use crane rate)

Hoist (all types Except Chicago-boom)

Jack (screw, air hydraulic, power-operated unit or console type, Except hand jack or pile load test type)

Side Boom

Straddle Carrier

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
50.03	33.85	83.88

CLASSIFICATIONS:

- Aerial Platform Used On Hoists
- Apprentice Engineer/Oiler with Compressor or Welding Machine
- Captain (Power Boats)
- Compressor (2 or 3 in battery)
- Concrete Cleaning/Decontamination Machine Operator
- Conveyor or Tugger Hoist
- Directional Boring Machine
- Elevator or House Car
- Fireman
- Forklift
- Generator (2 or 3)
- Heavy Equipment Robotics, Operator/Technician
- Maintenance Utility Man
- Master Environmental Maintenance Technician
- Tug Master (Power Boats)
- Ultra High Pressure Waterjet Cutting Tool System Operator/Maintenance Technician
- Vacuum Blasting Machine Operator/Maintenance Technician
- Welding Machines, Gas or Electric Converters on any type-2 or 3 in battery including diesels

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
48.50	33.85	82.35

CLASSIFICATIONS:

Compressor (Single)

Generators

Welding Machines, Gas, Diesel, Or Electric Converters of any type-single

Welding System, Multiple (Rectifier Transformer Type)

Effective Dates:

07/01/2019

Rate	Fringe	Total
46.74	33.85	80.59

CLASSIFICATIONS:

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Off Road Back Dump

Effective Dates:

07/01/2019

Rate	Fringe	Total
54.31	33.85	88.16

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

Effective Dates:

07/01/2019

Rate	Fringe	Total
43.70	33.85	77.55

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2019

Rate	Fringe	Total
53.45	33.85	87.30

CLASSIFICATIONS:

Field Engineer-Chief of Party

Vacuum Truck

Effective Dates:

07/01/2019

Rate	Fringe	Total
61.64	33.85	95.49

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms, including jib, 140 ft. and over, above ground). Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), and Pile Drivers (all types) 100 tons and over and Tower Cranes.

Effective Dates:

07/01/2019

Rate	Fringe	Total
59.98	33.85	93.83

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), 100 tons and over and Tower Crane.

Effective Dates:

07/01/2019

Rate	Fringe	Total
57.14	33.85	90.99

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, 140 ft. and over, above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), Pile Drivers (all types), under 100 tons.

Effective Dates:

07/01/2019

Rate	Fringe	Total
55.48	33.85	89.33

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), under 100 tons.

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2019

Rate	Fringe	Total
57.14	33.85	90.99

CLASSIFICATIONS:

Helicopter Pilot & Engineer

TEST BORING PRELIMINARY TO CONSTRUCTION-SOUTH/WEST **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Monmouth, Ocean, Salem, Sussex, Warren

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift rate.

OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veteran's Day.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

Effective Dates:

07/01/2019

Rate	Fringe	Total
53.12	33.85	86.97

CLASSIFICATIONS:

Driller

Effective Dates:

07/01/2019

Rate	Fringe	Total
46.28	33.85	80.13

CLASSIFICATIONS:

Driller's Helper

FREE AIR TUNNEL JOBS **Rates Expiration Date :**

{For apprentice rates refer to "Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	03/01/2019		03/01/2020
Rate	Fringe	Total	Total
44.25	31.53	75.78	78.28

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

	03/01/2019		03/01/2020
Rate	Fringe	Total	Total
43.95	31.53	75.48	77.98

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrician Foreman, Rigging Foreman

FREE AIR TUNNEL JOBS **Rates Expiration Date :**

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
43.45	31.53	74.98	77.48

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Cleanup Foreman, Grout Foreman

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
45.95	31.53	77.48	79.98

CLASSIFICATIONS:

Blaster

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.90	31.53	74.43	76.93

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.55	31.53	74.08	76.58

CLASSIFICATIONS:

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Manitenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Tod Man)

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.40	31.53	73.93	76.43

CLASSIFICATIONS:

Semi-Skilled Men (including Bell or Signal Man Top or Bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

FREE AIR TUNNEL JOBS Rates Expiration Date :

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.00	31.53	73.53	76.03

CLASSIFICATIONS:

All Others (including Powder Watchman, Change House Attendant, Top Laborer)

DRILL FOR GROUND WATER SUPPLY **Rates Expiration Date :**

The well driller and/or helper may perform all work relative to the construction, finishing, and servicing of wells, pumps and borings for ground water supply. The present methods of well drilling entailing as they do, many diverse job operations calling for drilling, pump discharge, piping, and the operation of various types of related power equipment, shall all be within the job duties and functions of the well driller and/or helper. In the event that an extension of work should occur beyond water well drilling functions, into the field of general construction work, such extension of work would come under the appropriate rates listed elsewhere in this wage determination.

- For Work Hours, Shift Differentials, Overtime Rates, and Recognized Holidays see the "Operating Engineers" section of this wage determination.

Effective Dates:

07/01/2019

Rate	Fringe	Total
51.87	33.85	85.72

CLASSIFICATIONS:

Driller

Effective Dates:

07/01/2019

Rate	Fringe	Total
45.03	33.85	78.88

CLASSIFICATIONS:

Driller's Helper

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date :**

NOTE: These wage rates only apply to dredging and other marine construction activities occurring in navigable waters and their tributaries.

Boat crews carrying explosive material (dynamite, pourfex, and other similar materials) shall be paid at 120% of the hourly wage rate for hours engaged in handling of said materials. Employees required to possess a Hazardous Material Certification as a condition of employment shall be compensated at 120% of the hourly wage rate.

OVERTIME:

Hours in excess of 40 per week, and all hours on Saturdays and Sundays, shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Martin Luther King Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

10/01/2019			10/01/2020
Rate	Fringe	Total	Total
40.31	14.60	54.91	56.71

CLASSIFICATIONS:

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator (over 1000 HP)

Effective Dates:

10/01/2019			10/01/2020
Rate	Fringe	Total	Total
34.86	14.19	49.05	50.66

CLASSIFICATIONS:

Derrick Operator, Spider/Spill Barge Operator

Engineer, Electrician, Chief Welder, Chief Mate

Fill Placer, Operator II

Licensed Boat Operator

Maintenance Engineer

Effective Dates:

10/01/2019			10/01/2020
Rate	Fringe	Total	Total
32.82	14.04	46.86	48.39

CLASSIFICATIONS:

Certified Welder

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date :**

Effective Dates:

10/01/2019			10/01/2020
Rate	Fringe	Total	Total
31.92	13.67	45.59	47.10

CLASSIFICATIONS:

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

Effective Dates:

10/01/2019			10/01/2020
Rate	Fringe	Total	Total
30.89	13.59	44.48	45.95

CLASSIFICATIONS:

Boat Operator

Effective Dates:

10/01/2019			10/01/2020
Rate	Fringe	Total	Total
25.66	12.90	38.56	39.85

CLASSIFICATIONS:

Shoreman, Deckhand, Rodman, Scowman

Effective Dates:

10/01/2019			10/01/2020
Rate	Fringe	Total	Total
35.92	14.27	50.19	51.84

CLASSIFICATIONS:

Crane Operator

MICROSURFACING/SLURRY SEAL Rates Expiration Date :

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

IN ALL OTHER COUNTIES use the Heavy and General Laborers - North "Slurry Seal Laborer" rates.

SHIFT DIFFERENTIALS:

Any shift starting at 3:30 PM or later shall receive an additional \$0.35/hr

OVERTIME:

Hours in excess of 8 per day or 40 per week shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

Effective Dates:

03/01/2017

Rate	Fringe	Total
36.50	21.27	57.77

CLASSIFICATIONS:

Foreman

Effective Dates:

03/01/2017

Rate	Fringe	Total
33.80	21.27	55.07

CLASSIFICATIONS:

Box man

Effective Dates:

03/01/2017

Rate	Fringe	Total
31.75	21.27	53.02

CLASSIFICATIONS:

Microsurface/Slurry Preparation

Effective Dates:

03/01/2017

Rate	Fringe	Total
31.75	21.27	53.02

CLASSIFICATIONS:

Squeegee man

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

MICROSURFACING/SLURRY SEAL Rates Expiration Date :

Effective Dates:

03/01/2017

Rate	Fringe	Total
30.30	21.27	51.57

CLASSIFICATIONS:

Cleaner, Taper

ASPHALT LABORERS - SOUTH Rates Expiration Date :

"THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
43.75	31.53	75.28	77.78

CLASSIFICATIONS:

Paving Foreman

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.30	31.53	73.83	76.33

CLASSIFICATIONS:

Head Raker

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.15	31.53	73.68	76.18

CLASSIFICATIONS:

Raker, Screedman, Luteman

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

ASPHALT LABORERS - SOUTH Rates Expiration Date :

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
41.90	31.53	73.43	75.93

CLASSIFICATIONS:

Tampers, Smoothers, Kettlemen,
Painters, Shovelers, Roller Boys

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.00	31.53	73.53	76.03

CLASSIFICATIONS:

Milling Controller

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.20	31.53	73.73	76.23

CLASSIFICATIONS:

Traffic Control Coordinator

TEST BORING PRELIMINARY TO CONSTRUCTION-NORTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:
Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, Union

SHIFT DIFFERENTIAL:

Employees on a shift other than between the hours of 8:00 AM and 5:00 PM shall receive an additional \$2.00 per hour.

OVERTIME:

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Hazardous Waste Pay (for Levels A, B, and C): an additional 15% of the hourly rate, per hour.

A newly hired Helper with no experience in the industry shall be paid as follows:

- 1st year on the job - 70% of Helper wage rate
- 2nd year on the job - 80% of Helper wage rate
- 3rd year on the job - 90% of Helper wage rate
- All helpers receive full fringe benefit rate.

Effective Dates:

	10/18/2019		10/18/2020	10/18/2021	10/18/2022
Rate	Fringe	Total	Total	Total	Total
32.62	28.05	60.67	62.42	64.17	65.92

CLASSIFICATIONS:

Helper (4th year helper)

Effective Dates:

	10/18/2019		10/18/2020	10/18/2021	10/18/2022
Rate	Fringe	Total	Total	Total	Total
41.19	28.05	69.24	71.24	73.24	75.24

CLASSIFICATIONS:

Driller

Effective Dates:

	10/18/2019		10/18/2020	10/18/2021	10/18/2022
Rate	Fringe	Total	Total	Total	Total
47.23	28.05	75.28	77.28	79.28	81.28

CLASSIFICATIONS:

Foreman

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	03/01/2019		03/01/2020
Rate	Fringe	Total	Total
41.50	31.53	73.03	75.53

CLASSIFICATIONS:

"D" Rate:

basic, landscape, asphalt, slurry seal, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofer; timberman; wagon drill or drill master helper; powder carrier; magazine tender; signal man; power buggy operator; tree cutter; operator of basic power tools

Effective Dates:

	03/01/2019		03/01/2020
Rate	Fringe	Total	Total
42.20	31.53	73.73	76.23

CLASSIFICATIONS:

"C" Rate:

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning; wagon drill, directional drill, or hydraulic drill operator; drill master; core driller; traffic control coordinator; asphalt raker or lute man

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date :**

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.45	31.53	73.98	76.48

CLASSIFICATIONS:

"B" Rate:

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; asphalt screedman; rammer; hardscaping; gunite nozzle man

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
46.00	31.53	77.53	80.03

CLASSIFICATIONS:

"A" Rate:

blaster

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
43.75	31.53	75.28	77.78

CLASSIFICATIONS:

"FOREMAN" Rate:

labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
44.75	31.53	76.28	78.78

CLASSIFICATIONS:

"GENERAL FOREMAN" Rate

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	03/01/2019		03/01/2020
Rate	Fringe	Total	Total
41.50	31.53	73.03	75.53

CLASSIFICATIONS:

basic, landscape, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofers; tree cutter, timberman

Effective Dates:

	03/01/2019		03/01/2020
Rate	Fringe	Total	Total
41.50	31.53	73.03	75.53

CLASSIFICATIONS:

wagon drill or drill master helper; powder carrier; magazine tender; signal man

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date :**

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.20	31.53	73.73	76.23

CLASSIFICATIONS:

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.20	31.53	73.73	76.23

CLASSIFICATIONS:

wagon or directional drill operator; drill master

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
46.00	31.53	77.53	80.03

CLASSIFICATIONS:

blaster

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
43.75	31.53	75.28	77.78

CLASSIFICATIONS:

labor foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
44.75	31.53	76.28	78.78

CLASSIFICATIONS:

general foreman

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

HEAVY & GENERAL LABORERS - SOUTH Rates Expiration Date :

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
42.45	31.53	73.98	76.48

CLASSIFICATIONS:

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; rammer; gunite nozzle man

PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date :

These rates apply to the following: welding on Transportation Mainline pipe lines (cross-country pipe lines, or any segments thereof, transporting coal, gas, oil, water or other transportable materials, vapors or liquids, including portions of such pipe lines within private property boundaries up to the final metering station or connection - the point where a valve, consumer connection, or town border station divides mainline transmission lines or higher pressure lateral and branch lines from lower pressure distribution systems).

PER DIEM PAYMENT:

In addition to the total wage rate paid for each craft, the following per diem (per day) amounts must also be paid - Pipeline Journeyman: \$42.50; Pipeline Journeyman Welder: \$102.50; and Pipeline Helper: \$42.50. Note: in order to receive the per diem payment an employee must work a minimum of 8 hours in a 24 hour period.

NOTES:

- Journeymen employed as "stringer bead" welders and journeymen who are regularly employed as "hot-pass" welders shall receive \$1.00 per hour more than other journeymen.
- Welders running "stringer bead" or "hot-pass" on "cutouts" or "tie-ins" on a production basis shall be paid \$1.00 per hour above the journeymen rate.
- Whenever a welder helper is employed using a power buffer or power grinder immediately behind the stringer bead and/or hot-pass welders, and the pipe gang is set on a production basis, the helper shall be paid \$2.00 per hour above the helper rate.
- If back welding is performed inside a pipe under either or both of the following conditions, the welder engaged in the welding will receive \$3.00 per hour above the regular rate for the job only for the days on which such back welding is performed:
 - The employer elects, as a regular procedure, to back weld each line-up. This condition is not intended to apply to occasional back welding performed by the pipe gang to repair a bead, to rectify a "high-lo" condition or wall thickness, etc.
 - A welder is required to back weld a completed weld behind the firing line.
- If the welder helper is required to go inside the pipe for the purpose of brushing, buffing and grinding the weld, they shall receive a wage rate \$1.00 per hour above the regular helper rate for the days involved.
- Welders working on "hot work" shall be paid \$2.00 per hour above the regular rate for each day engaged in such work. "Hot work" is defined as work on lines in service where there is the danger of fire or explosion.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

OVERTIME:

Hours in excess of 8 per day, and all hours on Sundays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

06/03/2019

Rate	Fringe	Total
54.64	32.30	86.94

CLASSIFICATIONS:

Pipeline Journeyman Welder

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date :

Effective Dates:

06/03/2019

Rate	Fringe	Total
54.64	32.30	86.94

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

06/03/2019

Rate	Fringe	Total
33.84	21.92	55.76

CLASSIFICATIONS:

Pipeline Helper

PIPELINE - GAS DISTRIBUTION **Rates Expiration Date :**

These rates apply to the following: welding on gas line distribution systems (that portion of the gas distribution system placed in streets, roads, subways, tunnels, viaducts, highways and easements which serves the users of gas).

SHIFT DIFFERENTIALS:

An "irregular" shift may start any time from 5:00 PM to 12:00 AM, Monday through Friday, and shall receive an additional 15% of the regular rate per hour, inclusive of benefits.

OVERTIME:

Hours in excess of forty per week, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

11/08/2019

Rate	Fringe	Total
60.00	26.23	86.23

CLASSIFICATIONS:

Pipeline Journeyman Welder

Effective Dates:

11/08/2019

Rate	Fringe	Total
60.00	26.23	86.23

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

11/08/2019

Rate	Fringe	Total
38.46	19.21	57.67

CLASSIFICATIONS:

Pipeline Helper

ASPHALT LABORERS- NORTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	03/01/2019		03/01/2020
Rate	Fringe	Total	Total
43.75	31.53	75.28	77.78

CLASSIFICATIONS:

Asphalt Foreman

Effective Dates:

	03/01/2019		03/01/2020
Rate	Fringe	Total	Total
42.45	31.53	73.98	76.48

CLASSIFICATIONS:

Asphalt Screedman

Effective Dates:

	03/01/2019		03/01/2020
Rate	Fringe	Total	Total
42.20	31.53	73.73	76.23

CLASSIFICATIONS:

Asphalt Raker or Lute Man

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

ASPHALT LABORERS- NORTH Rates Expiration Date :

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
41.50	31.53	73.03	75.53

CLASSIFICATIONS:

Asphalt Laborer

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Electrician-Utility Work (North)

(For apprentice rates refer to Electrician-Utility Work (North) in any county rate package).

These rates apply to work contracted for by the following utility companies:

Public Service Electric & Gas Co. of NJ, GPU Energy, Borough of Madison Electric Department, Sussex Rural Electric Cooperative, Rockland Utilities, and Butler Municipal Electric Co.

These rates do not apply to work on substations or switching stations.

For Utility work contracted for by a utility company other than those listed above or those listed under "Electrician-Utility Work (South), see the "Outside Commercial Rates" for the county in which the jobsite is located.

* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 6:00 AM and 6:00 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)-all hours of work shall be paid at double the hourly rate.

SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

2nd shift (between the hours of 4:30 PM and 1:00 AM): 8 hours of work + 17.3% of the regular rate, inclusive of benefits.

3rd shift (between the hours of 12:30 AM and 9:00 AM): 8 hours of work + 31.4% of the regular rate per hour, inclusive of benefits.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.

Four 10-hour days may worked, at straight time, between 7:00 AM and 6:30 PM, Monday through Thursday.

RECOGNIZED HOLIDAYS:

New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day and Christmas Day, or day on which they are legally observed.

Effective Dates:

	12/30/2019		11/29/2020
Rate	Fringe	Total	Total
55.89	38.56	94.45	96.84

CLASSIFICATIONS:

Chief Lineman

Effective Dates:

	12/30/2019		11/29/2020
Rate	Fringe	Total	Total
52.73	36.38	89.11	91.36

CLASSIFICATIONS:

Journeyman Lineman

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
52.73	36.38	89.11	91.36

CLASSIFICATIONS:

Special License Operator

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
52.20	36.02	88.22	90.44

CLASSIFICATIONS:

Transit Man

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
50.62	34.91	85.53	87.70

CLASSIFICATIONS:

Line Equipment Operator

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
44.29	30.55	74.84	76.73

CLASSIFICATIONS:

Dynamite Man

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
65.91	45.47	111.38	114.19

CLASSIFICATIONS:

General Foreman

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
60.64	41.83	102.47	105.05

CLASSIFICATIONS:

Assistant General Foreman

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
59.06	40.73	99.79	102.32

CLASSIFICATIONS:

Line Foreman

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
42.71	29.46	72.17	73.99

CLASSIFICATIONS:

Street Light Mechanical Leader

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
40.60	28.02	68.62	70.34

CLASSIFICATIONS:

Groundman Winch Operator

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
40.60	28.02	68.62	70.34

CLASSIFICATIONS:

Groundman Truck Operator

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
40.07	27.64	67.71	69.43

CLASSIFICATIONS:

Street Light Mechanic

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
40.07	27.64	67.71	69.43

CLASSIFICATIONS:

Line Equipment Mechanic

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
34.27	23.64	57.91	59.38

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
31.64	21.83	53.47	54.80

CLASSIFICATIONS:

Groundman 1st Year

Effective Dates:

12/30/2019			11/29/2020
Rate	Fringe	Total	Total
52.20	36.02	88.22	90.44

CLASSIFICATIONS:

Line Equipment Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Electrician-Utility Work (South)

(For apprentice rates refer to Electrician-Utility Work (South) in any county rate package).

These rates apply to work contracted for by the following utility company:

Atlantic City Electric.

These rates do not apply to work on substations or switching stations.

For utility work contracted for by a utility company other than the one listed above or those listed under "Electrician-Utility Work (North), see the "Outside Commercial Rates" for the county in which the jobsite is located.

* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 7:00 AM and 4:30 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)- all hours of work shall be paid at double the hourly rate.

SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

When two (2) or three (3) shifts are worked the following shall apply:

1st shift (between the hours of 8:00 AM and 4:30 PM)

2nd shift (between the hours of 4:30 PM and 12:30 AM): 8 hours of work + 10% of the regular rate of pay for 7.5 hours worked.

3rd shift (between the hours of 12:30 AM and 8:00 AM): 8 hours of work + 15% of the regular rate of pay for 7 hours worked.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and Holidays shall be paid double the hourly rate.

Four 10-hour days may be worked, at straight time, between 6:00 AM and 6:00 PM, Monday through Thursday with Friday used as a make-up day.

RECOGNIZED HOLIDAYS:

New Year's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day or on days celebrated.

WORKING RULES:

There shall be a Foreman in charge of each work crew. No crews are to exceed twelve (12) men, including Foremen.

There shall be a General Foreman designated for transmission work when three (3) or more crews are on the same job and for distribution work where there are more than twenty (20) employees on site.

A small job crew shall consist of five (5) or less employees, one (1) of the Journeyman Linemen in the crew shall be designated as a Small Job Foreman.

Work performed from ladders and/or mechanical lift equipment shall be the work of Linemen and/or Apprentices.

On new construction, fitting and framing poles, towers or structures may be done by Journeymen and/or Apprentices. Groundmen may assist, but may not perform any work which would be performed by Linemen if assembled in the air.

There shall be a Journeyman Lineman in each pole setting, erection, grounding, wire and cable-pulling crew of more than three (3) men.

Effective Dates:

12/01/2019

Rate	Fringe	Total
62.11	49.53	111.64

CLASSIFICATIONS:

General Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Effective Dates:

12/01/2019

Rate	Fringe	Total
55.31	45.49	100.80

CLASSIFICATIONS:

Foreman

Effective Dates:

12/01/2019

Rate	Fringe	Total
52.40	43.78	96.18

CLASSIFICATIONS:

Small Job Foreman

Effective Dates:

12/01/2019

Rate	Fringe	Total
48.52	41.48	90.00

CLASSIFICATIONS:

Heavy Equipment Operator

Effective Dates:

12/01/2019

Rate	Fringe	Total
48.52	41.48	90.00

CLASSIFICATIONS:

Cable Splicer

Effective Dates:

12/01/2019

Rate	Fringe	Total
48.52	41.48	90.00

CLASSIFICATIONS:

Journeyman Lineman

Effective Dates:

12/01/2019

Rate	Fringe	Total
48.52	41.48	90.00

CLASSIFICATIONS:

Journeyman Welder

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date :

Effective Dates:

12/01/2019

Rate	Fringe	Total
48.52	41.48	90.00

CLASSIFICATIONS:

Journeyman Painter

Effective Dates:

12/01/2019

Rate	Fringe	Total
38.82	35.73	74.55

CLASSIFICATIONS:

Light Equipment Operator

Effective Dates:

12/01/2019

Rate	Fringe	Total
33.96	32.86	66.82

CLASSIFICATIONS:

Groundman Truck Driver

Effective Dates:

12/01/2019

Rate	Fringe	Total
31.54	31.44	62.98

CLASSIFICATIONS:

Groundman 3rd Year

Effective Dates:

12/01/2019

Rate	Fringe	Total
29.11	30.01	59.12

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/01/2019

Rate	Fringe	Total
26.69	28.57	55.26

CLASSIFICATIONS:

Groundman 1st Year

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date :

Effective Dates:

12/01/2019

Rate	Fringe	Total
21.35	25.41	46.76

CLASSIFICATIONS:

Flagman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date :

****THESE RATES APPLY TO CONSTRUCTION ON NEW TRANS HUDSON TUNNELS ONLY****

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	03/01/2019		03/01/2020
	Rate	Fringe	Total
	66.38	31.53	97.91
			101.16

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

	03/01/2019		03/01/2020
	Rate	Fringe	Total
	65.93	31.53	97.46
			100.71

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrical Foreman, Rigging Foreman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS **Rates Expiration Date :**

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
65.18	31.53	96.71	99.96

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Clean-up Foreman, Grout Foreman

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
68.93	31.53	100.46	103.71

CLASSIFICATIONS:

Blaster

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
64.35	31.53	95.88	99.13

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
63.83	31.53	95.36	98.61

CLASSIFICATIONS:

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Maintenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Rod Man)

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
63.60	31.53	95.13	98.38

CLASSIFICATIONS:

Semi-Skilled Men (including Bell or Signal Man top or bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date :

Effective Dates:

03/01/2019			03/01/2020
Rate	Fringe	Total	Total
63.00	31.53	94.53	97.78

CLASSIFICATIONS:

All others (including Powder Watchman, Change House Attendant, Top Laborer, Job Steward)

**TECHNICAL
SPECIFICATIONS**

FOR THE

EAST HAZELWOOD AVENUE BRIDGE (Ra09)

OVER SOUTH BRANCH RAHWAY RIVER

SCOUR COUNTERMEASURES

CITY OF RAHWAY

COUNTY OF UNION, NEW JERSEY

March 2020

Prepared by
Dewberry Engineers Inc.
200 Broadacres Drive, Suite 410
Bloomfield, New Jersey 07003-3154
Jacob Polan, P.E.
New Jersey License No. 24GE03070200

TABLE OF CONTENTS

	<u>Page</u>
TECHNICAL SPECIFICATIONS.....	T-1 TO T-3
SUPPLEMENTARY SPECIFICATIONS FOR ROADWAY WORK.....	RS -1 TO RS-20
 APPENDIX A – NJDEP WATERFRONT DEVELOPMENT PERMIT	
 APPENDIX B – US ARMY CORPS OF ENGINEERS PERMIT	
 APPENDIX C – US COAST GUARD PERMIT	
 APPENDIX D – SOMERSET-UNION SOIL CONSERVATION CERTIFICATION	

TECHNICAL SPECIFICATIONS

ITEM 0. CONDITIONS SPECIFIC TO THIS PROJECT

Union County Bridge Ra09 carries East Hazelwood Avenue over the South Branch of the Rahway River in the City of Rahway, Union County New Jersey. Constructed in 1921, the existing bridge is a two-span structure with 35'-6" clear spans and 85'-0" overall length. The bridge provides an out-to-out width of 60'-0" with 8'-10 1/2" wide sidewalks along each side. The superstructure framing consists of simply-supported, concrete encased steel stringers supporting a reinforced concrete deck with a bituminous concrete wearing surface. The bridge railing consists of 1'-4" wide by 3'-6" high reinforced concrete parapets. The substructure consists of nominally reinforced concrete abutments, wingwalls, and pier founded on spread footings.

Earthen levees are located parallel to the South Branch of the Rahway River at the northwest, southwest and southeast corners of the bridge. A concrete wall 3'± high is located on top of the southwest levee wall.

The Stage II In-Depth Scour Evaluation prepared by Chas. H. Sells, Inc. for the NJDOT in July 2005 indicates the total scour for the 500-year discharge event at the bridge would undermine the abutment and pier footings, with recommendation that scour countermeasures be installed in conjunction with monitoring at the structure. Further scour analysis conducted by Dewberry Engineers Inc. in 2017 in conjunction with the revised guidelines set forth by the Federal Highway Administration (FHWA) in *Hydraulic Engineering Circular 18 (HEC-18), Evaluating Scour at Bridges, Fifth Edition (HEC-18), April 2012* confirms the extent of potential undermining of the abutment and pier footings at the structure.

The 500-year flood event is recommended as the design event for scour countermeasures at this structure in accordance with guidelines provided by the FHWA *Bridge Scour and Stream Instability Countermeasures: Experience, Selection, and Design Guidance-Third Edition, September 2009*. Based on HEC-23 guidelines and the extent of potential undermining of the bridge abutment and pier footings, articulated concrete block matting (ACBM) is proposed at the structure.

Shop drawings and/or cut sheets are required for the following items:

- Item 6. Floating Turbidity Barrier, Type 2
- Item 8. Sediment Control Bag
- Item 9. Construction Driveway, Wood Mats
- Item 18. Traffic Control Truck with Mounted Crash Cushion
- Item 23. Temporary Cofferdam
- Item 24. Earth Anchor for Articulated Concrete Block Matting
- Item 25. Articulated Concrete Block Matting, 6", Open Cell

Utilities at this site are as follows:

<u>Utility</u>	<u>Name, Address, Contact Person</u>	<u>Phone No.</u>
Gas	Elizabethtown Gas Company 520 Green Lane Union, NJ 07083 Attn: John Egolt	908-662-8319
Electric (Aerial)	Public Service Electric & Gas 472 Weston Canal Road Somerset, NJ 08873 Attn: Joe Mootz	732-764-3107
Telephone (Underground)	Verizon – New Jersey, Inc. 175 West Main St. Freehold, NJ 07728 Attn: Bill Schneider	908-412-6161
Water	Suez – Rahway Water 1045 Westfield Avenue Rahway, NJ 07065 Attn: Ron Wund	732-827-2070
Sanitary	Rahway Valley Sewerage Authority 1050 E. Hazelwood Ave. Rahway, N.J. 07065 Attn: John Buonocore, PE	732-388-0868 (Ext. 231)

Gas:

There is one (1) underground 6” gas main located below the eastbound shoulder of the East Hazelwood Avenue Bridge. Between the bridge abutments, the gas main is suspended between two (2) girders and lined with an 8” steel casing. There is no work associated with this utility.

Overhead:

The overhead lines, electric, cable and telephone, along East Hazelwood Avenue are located over the south curblineline. Since no work is proposed on the bridge or its approaches, no overhead lines are affected. However, the Contractor shall familiarize himself with the NJ High Voltage Proximity Act and utilize means and methods of construction to comply with these requirements. The Contractor shall also be familiar with the Occupational Safety and Health Act of 1970 (OSHA) and the Underground Facility Protection Act.

Telephone:

There are twelve (12) 3 ½” galvanized steel pipes supported by the existing bridge superstructure. All twelve (12) conduits are bound together between two (2) girders below the eastbound lane of East Hazelwood Avenue. There is no work associated with this utility.

Water:

There is one (1) underground 12” water main located below the westbound sidewalk of the East Hazelwood Avenue Bridge. The water main is insulated, suspended between two (2) girders and can be accessed by three (3) manholes on the bridge. There is no work associated with this utility.

Sanitary Sewer:

There is one (1) underground 8” sanitary sewer located below the westbound shoulder of the East Hazelwood Avenue Bridge. The sanitary sewer is suspended between two (2) girders and passes through both abutments. There is no work associated with this utility.

The Contractor will supply the County the following in writing at or prior to the preconstruction meeting:

1. Proposed work schedule
2. List of subcontractors
3. List of material suppliers
4. Breakdown of lump sum items

SUPPLEMENTARY SPECIFICATIONS FOR ROADWAY WORK

INDEX

<u>Contents</u>	<u>Page No.</u>
DIVISION 100 – GENERAL PROVISIONS	2
SECTION 105 – CONTROL OF WORK.....	2
SECTION 108 – PROSECUTION AND COMPLETION	2
DIVISION 150 – CONTRACT REQUIREMENTS	4
SECTION 154 – MOBILIZATION	4
SECTION 155 – CONSTRUCTION FIELD OFFICE	4
SECTION 157 – CONSTRUCTION LAYOUT AND MONUMENTS	4
SECTION 158 – SOIL EROSION AND SEDIMENT CONTROL AND WATER QUALITY CONTROL.....	5
SECTION 159 – TRAFFIC CONTROL	6
SECTION 161 – FINAL CLEANUP	7
DIVISION 200 – EARTHWORK	8
SECTION 201 – CLEARING SITE	8
SECTION 202 – EXCAVATION.....	8
DIVISION 500 – BRIDGES AND STRUCTURES	10
SECTION 501 – SHEETING AND COFFERDAMS.....	10
DIVISION 600 – MISCELLANEOUS CONSTRUCTION	11
SECTION 603 – SLOPE AND CHANNEL PROTECTION.....	11
DIVISION 800 – LANDSCAPING.....	15
SECTION 804 – TOPSOILING	15
SECTION 806 – FERTILIZING AND SEEDING.....	15
SECTION 809 – MULCHING.....	15
DIVISION 900 – MATERIALS.....	16
SECTION 908 – BOLTS AND BOLTING MATERIAL	16
SECTION 910 – MASONRY UNITS	16
SECTION 915 – TIMBER AND TIMBER TREATMENT	18

THE FOLLOWING SECTIONS OF THE STANDARD SPECIFICATIONS ARE DELETED:

SECTION 101 – GENERAL PROVISIONS
SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS
SECTION 103 – AWARD AND EXECUTION OF CONTRACT
SECTION 104 – SCOPE OF WORK
SECTION 105 – CONTROL OF WORK
SECTION 106 – CONTROL OF MATERIAL
SECTION 107 – LEGAL RELATIONS
SECTION 108 – PROSECUTION AND COMPLETION
SECTION 109 – MEASUREMENT AND PAYMENT

THESE SECTIONS OF THE STANDARD SPECIFICATIONS ARE CHANGED TO THE REQUIREMENTS OF THE COUNTY OF UNION, EXCEPT FOR CONDITIONS SPECIFIC FOR THIS PROJECT IN SECTIONS 105 AND 108.

DIVISION 100 – GENERAL PROVISIONS

SECTION 105 – CONTROL OF WORK

THIS SECTION OF THE STANDARD SPECIFICATIONS IS CHANGED TO THE REQUIREMENTS OF THE COUNTY OF UNION AS STATED IN THE GENERAL SPECIFICATIONS “G” SHEETS INCLUDED IN THESE SUPPLEMENTARY SPECIFICATIONS, ALONG WITH THE FOLLOWING ADDITIONS:

105.07 COOPERATION WITH UTILITIES

Coordination of the work with the various utilities is an intrinsic part of this project and the level of cooperation and coordination necessary is dependent upon the means and methods selected by the Contractor to complete the project. The Contractor shall be responsible to coordinate all utility relocations.

It is understood and agreed that the Contractor is cognizant of the limited ability of the County to control the actions of the Utility Companies and in his bid has made allowance for the fact that additional compensation will not be granted for any delays, inconvenience or damage sustained by him due to any interference from the said utility facilities or the operation of moving them. The Contractor shall cooperate fully with the utility companies and render any assistance, within its means, necessary to facilitate the temporary and final relocation of utilities. Construction layout with respect to the locations of any proposed temporary or permanent utility relocations shall be provided for by the Contractor and paid for under the pay item “Construction Layout.”

SECTION 108 – PROSECUTION AND COMPLETION

THIS SECTION OF THE STANDARD SPECIFICATIONS IS CHANGED TO THE REQUIREMENTS OF THE COUNTY OF UNION AS STATED IN THE GENERAL SPECIFICATIONS “G” SHEETS INCLUDED IN THESE SUPPLEMENTARY SPECIFICATIONS, ALONG WITH THE FOLLOWING ADDITIONS:

108.10 CONTRACT TIME

The Contractor shall prepare his bid and construction schedule in accordance with the project construction as shown on the project plans and as specified herein. It shall include the time required by the various Utility Companies to relocate their facilities during construction of the project as well as the required advanced written notices that each utility company requires and is to be provided prior to performing their work. No additional payments will be made for coordinating the Contractor’s work with that of the various Utility Companies.

The Contractor shall anticipate working during adverse weather conditions to complete construction by the deadlines. No additional payments will be made for cost associated with working during adverse weather conditions.

The Contractor shall prepare his bid and construction schedule based on the construction of ALL items listed in the Proposal including the construction of any and all "If and Where Directed" items and quantities. Extensions of time will not be granted due to construction of "If and Where Directed" quantities.

108.12 RIGHT-OF-WAY RESTRICTIONS

The Contractor shall obtain from the Engineer all information regarding Easements acquired for the Project as well as the nature and type of title acquired. The Contractor shall make periodic requests for updates to this information during the course of the Contract.

The Contractor shall make no claim for delays by reason that entry upon an Easement or right which is lesser than a fee interest is limited in duration; the Contractor is required to schedule accordingly and take such limitations into account when planning performance of the Work.

Temporary Easements and/or temporary construction rights will in most cases contain a limitation as to the length of time that they are extant. The Contractor shall schedule the Work so as to accommodate the particular time limitations of an Easement or right which is lesser than a fee interest. The Contractor shall provide a written request to the Engineer that the County procure an extension from the owner of a particular temporary easement or right, which is lesser than a fee simple interest, so as to enable the Contractor to continue occupancy of or re-enter same in the future, beyond the initial time period set forth in the respective property description prior to the expiration thereof.

Where the Contractor fails to complete the work within an area of a temporary easement or right lesser than a fee interest during the time allowed under the property description, by reason of the Contractor's own fault; the Contractor shall reimburse the County for the sum payable to the owner of the underlying fee interest for the extended period of occupancy use. The Resident Engineer may deduct an amount equal to such payments from the monthly estimate of the Work performed after providing 30 day written notice to the Contractor of such action, including a breakdown of the costs sought or to be sought by reason of the delay in timely vacating a temporary easement or right lesser than a fee interest.

DIVISION 150 – CONTRACT REQUIREMENTS

ITEM 1. MOBILIZATION

SECTION 154 – MOBILIZATION

NO REVISIONS TO THIS SECTION

ITEM 2. FIELD OFFICE TYPE A SETUP

ITEM 3. FIELD OFFICE TYPE A MAINTENANCE

SECTION 155 – CONSTRUCTION FIELD OFFICE

155.03.01 Field Office

4. Communication Equipment.

THE CONTENT OF THIS SUBPART IS DELETED

6. Office Equipment. Provide the following:

THE ENTIRE TEXT IS CHANGED TO:

1. An HP LaserJet Pro M277dw Wireless All-In-One color printer or approved equal.

7. Inspection Equipment.

THE CONTENT OF THIS SUBPART IS DELETED

155.03.03 Telephone Service

THE CONTENT OF THIS SUBPART IS DELETED

155.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS DELETED:

<i>Item</i>	<i>Pay Unit</i>
TELEPHONE SERVICE	LUMP SUM

THE THIRD PARAGRAPH IS DELETED.

ITEM 4. CONSTRUCTION LAYOUT

SECTION 157 – CONSTRUCTION LAYOUT AND MONUMENTS

157.03.01 Construction Layout

THE SEVENTH PARAGRAPH IS CHANGED TO:

Ensure that any work is not in conflict with the High Voltage Proximity Act.

157.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM'S PAY UNIT IS REVISED TO:

Item
CONSTRUCTION LAYOUT

Pay Unit
DOLLAR

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will adjust payment for CONSTRUCTION LAYOUT based on the final contract amount and will calculate as follows:

$$CL = \frac{CL_B \times (C_F - E_F)}{C_O - E_O}$$

Where:

CL = Adjusted payment for CONSTRUCTION LAYOUT.

CL_B = Bid price for CONSTRUCTION LAYOUT.

C_O = Original Contract Price.

C_F = Final Contract Price.

E_F = Total of CL_B and the final cost for PERFORMANCE BOND AND PAYMENT BOND, Incentive/Disincentives for completion/interim completion, and claim settlements.

E_O = Total of CL_B, and PERFORMANCE AND PAYMENT BOND.

- ITEM 5. HEAVY DUTY SILT FENCE, ORANGE**
- ITEM 6. FLOATING TURBIDITY BARRIER, TYPE 2**
- ITEM 7. DEWATERING BASIN**
- ITEM 8. SEDIMENT CONTROL BAG**
- ITEM 9. CONSTRUCTION DRIVEWAY, WOOD MATS**
- ITEM 10. CONCRETE WASHOUT SYSTEM**
- ITEM 11. OIL-ONLY EMERGENCY SPILL KIT, TYPE 1**

**SECTION 158 – SOIL EROSION AND SEDIMENT CONTROL
AND WATER QUALITY CONTROL**

158.02 MATERIALS

THE FOLLOWING MATERIAL IS ADDED:

Timber for wood mats 915.01

158.03.02 SESC Measures

19. Oil-Only Emergency Spill Kit.

THE SECOND SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Include Oil-only Emergency Spill Kit, Type 1 consisting of the following:

THE FOLLOWING ITEM IS ADDED:

20. Construction Driveway, Wood Mats.

Construct Construction Driveway, Wood Mats using squared timbers cabled close together and placed on top of coarse aggregate and stabilization geotextile. The timbers shall be a minimum of 4 inches by 6 inches. Drill a 1/4 inch diameter hole from approximately 12 to 24 inches from each end of each timber. Connect the timbers together by threading a 3/16-inch galvanized steel cable through the holes and loop the cable at each end for ease of transport. Connect mats, if needed, to reduce movement. Size the wood mats for construction loads and soil strength. Minimize disturbance of root mats of the vegetation during installation or removal. Commercially built wood pallets may be used, if approved by RE, and sized for construction loads and soil strength. Maintain the wood

mats by replacing damaged timbers or by replacing entire mat. All wood mats or pallets must be removed upon completion of the project and properly disposed of in a lawfully approved manner.

158.04 MEASUREMENT AND PAYMENT
THE FOLLOWING ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
SEDIMENT CONTROL BAG	UNIT
CONSTRUCTION DRIVEWAY, WOOD MATS	SQUARE YARD

ITEM 12. BREAKAWAY BARRICADE

ITEM 13. DRUM

ITEM 14. TRAFFIC CONE

ITEM 15. CONSTRUCTION SIGNS

ITEM 16. CONSTRUCTION IDENTIFICATIONS SIGNS, 4' X 8'

ITEM 17. FLASHING ARROW BOARD, 4' X 8'

ITEM 18. PORTABLE VARIABLE MESSAGE SIGN

ITEM 19. TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION

ITEM 20. POLICE TRAFFIC DIRECTOR

SECTION 159 – TRAFFIC CONTROL

159.03.02 Traffic Control Devices

6. Traffic Control Truck with Mounted Crash Cushions.

THE LAST SENTENCE IS CHANGED TO:

Submit drawings to the RE detailing the manner of securing the ballast, signed and sealed by a Professional Engineer, certifying that it is capable of withstanding the impact forces for which the impact attenuator is rated.

159.03.08 Traffic Direction

A. Flagger.

THE LAST SENTENCE IS CHANGED TO:

Ensure that the flagger is equipped with a STOP/SLOW paddle and follows MUTCD flagging procedures.

B. Police.

THE ENTIRE TEXT IS CHANGED TO:

Police Traffic Directors shall be off-duty police officers from within the City of Rahway where the work is being performed. Police Traffic Directors shall be located where shown on the plans or at specific locations designated by the Engineer during construction hours. City of Rahway to be contacted in order to obtain the services of Police Traffic Directors. The name, address and telephone number of their local representative is listed below:

City of Rahway
Police Headquarters
Capt. Andrew Tkach
1 City Hall Plaza
Rahway, NJ 07065
732-827-2026

An allowance for Police Traffic Directors has been fixed at \$12,000.00 in the Bidding Sheet for all bidders. The Contractor will keep records of the actual amount spent for Police Traffic Directors and shall submit proof, in the

form of receipts for such Police Traffic Directors. The County will adjust the final cost based on the actual cost of the Police Traffic Directors.

The Contractor shall obtain the rate from the respective Police Department.

No payment will be made for hours of Police Traffic Directors which are not approved by the County. No specific payment will be made for any costs of the Police Traffic Directors in excess of actual costs incurred by the contractor and supported by municipal receipts.

The Contractor shall be responsible for paying the prevailing wage rate for the Police Traffic Directors. Payment for the Police Traffic Directors by the Contractor shall be reimbursed under this contract, in accordance with the requirements stated hereon and those of the respective municipality. The Contractor shall be required to produce proof of both payment and hours worked for each officer at each post for each assignment. Should the Contractor fail to produce said proof, the County will withhold payment on this item until such time that adequate and satisfactory proof can be provided.

159.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
POLICE TRAFFIC DIRECTOR	ALLOWANCE

THE SECOND PARAGRAPH IS CHANGED TO:

For traffic control devices measured by the linear foot or unit basis that are specified in 159.03.02, the Department will make payment for the maximum quantity in service at one time as required by the Contract. For CONSTRUCTION SIGNS, the Department will make payment for the maximum quantity of specific sign types in service at one time as required by the Contract. If a particular sign type has more than one unique text, each sign with a unique text will be considered to be a specific sign type. The Department will make payment for 50 percent of the Contract bid price for traffic control devices specified in 159.03.02 that are measured on a linear foot, square foot or unit basis upon approved placement. The Department will prorate the balance of payment over the duration of the Contract.

ITEM 21. FINAL CLEANUP

SECTION 161 – FINAL CLEANUP

NO REVISIONS TO THIS SECTION

DIVISION 200 – EARTHWORK

ITEM 22. CLEARING SITE

SECTION 201 – CLEARING SITE

201.03.01 Clearing Site

B. Clearing and Grubbing.

THE FOLLOWING IS ADDED:

Dispose of material and debris as specified in 201.03.09.

201.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will not make payment for the Item CLEARING SITE in excess of 80% until Completion.

ITEM 23. EXCAVATION, UNCLASSIFIED

SECTION 202 – EXCAVATION

202.02 MATERIALS

THE FIRST IN THE LIST IS CHANGED TO:

Coarse Aggregate (No. 57, or 67)..... 901.03

202.03.03 Excavating Unclassified Material

A. Excavating.

THE FIRST PARAGRAPH IS CHANGED TO:

The Department, as the generator, is solely responsible for the designation of excavated material. Unclassified excavation consists of excavation and management of material of whatever nature encountered, except for regulated material, pavement removal and acid producing soil.

B. Temporarily Storing.

THE FOLLOWING SENTENCE IS ADDED AFTER THE SECOND SENTENCE OF THE FIRST PARAGRAPH:

Do not commingle different types or classifications of material.

202.03.07 Reuse or Disposal of Excess Material

A. Reuse.

THE THIRD PARAGRAPH IS CHANGED TO:

Upon RE's approval, reuse excavated soil to widen or flatten slopes of embankment, to fade embankments into cuts, or as approved at other locations. Ensure that the excess material is not reused within a wetland, a transition area, a riparian zone, a flood hazard area or other regulated area without obtaining an appropriate NJDEP permit.

B. Disposal.

PARTS 1 AND 2 UNDER THE FIRST PARAGRAPH ARE CHANGED AND PART 3 IS ADDED:

1. At least 10 days before disposing, submit the disposal procedure and location to the RE for approval. Do not dispose of excavation on property proposed to be or used for parks, playgrounds, and other recreational purposes; residential facilities; educational facilities; environmentally sensitive areas such as wetlands; historic sites; or within sight of a State highway during all seasons.

2. Obtain the potential owner's notarized authorization of the acceptance of the excess material. If the potential owner requires environmental material sampling, obtain RE's approval at least 7 days before sampling for oversight only. Approval of the sampling does not imply agreement with the sampling results and the Department reserves the right to sample the material for classification. Provide the RE all testing results and documentation associated with the sampling.
3. Load and transport excess material that the RE determines to be excess, unusable or unsuitable for the project according to Federal, State, and local law, rules and regulations.

DIVISION 500 – BRIDGES AND STRUCTURES

ITEM 24. TEMPORARY COFFERDAM

SECTION 501 – SHEETING AND COFFERDAMS

501.03.03 Temporary Cofferdams

B. Construction.

THIS SUBPART IS REPLACED BY THE FOLLOWING:

Construct cofferdams to ensure the stability of the excavation and to keep the excavation and work area free of water. The top of cofferdam shall not be higher than the cofferdam elevation shown on Plans. Cofferdams which become tilted or displaced prior to the completion of all work to be done within them, shall be righted or reset, as directed by the RE to provide the clearance for the unobstructed performance of all necessary work. Ensure that the cofferdam is completely dewatered, as required to complete the work entirely in the dry, or as directed by the RE.

501.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

Location of cofferdam shown on Plans is conceptual. The contractor shall locate the cofferdam as required to perform the work.

DIVISION 600 – MISCELLANEOUS CONSTRUCTION

ITEM 25. EARTH ANCHOR FOR ARTICULATED CONCRETE BLOCK MATTING ITEM 26. ARTICULATED CONCRETE BLOCK MATTING, 6", OPEN CELL ITEM 27. RIPRAP STONE SCOUR PROTECTION (D50 = 12")

SECTION 603 – SLOPE AND CHANNEL PROTECTION

603.01 DESCRIPTION

THE FOLLOWING IS ADDED:

This Section also describes the requirements to construct articulated concrete block system consisting of both prefabricated assembly mats laced with revetment cables and hand-placed, earth anchors for the articulated concrete block mats, and appurtenances.

603.02 MATERIALS

603.02.01 Materials

THE FOLLOWING MATERIALS ARE ADDED:

Earth Anchor for Articulated Concrete Block Matting.....	908.01.06
Articulated Concrete Block Matting, Open Cell	910.07
Geotextile for Articulated Concrete Block Matting	919.01.01
Concrete	903.03

603.03 CONSTRUCTION

603.03.03 Riprap Stone Slope or Channel Protection

THE SUBPART HEADING IS CHANGED TO:

603.03.03 Riprap Stone Slope, Channel or Scour Protection

THE FOLLOWING SUBPARTS ARE ADDED:

603.03.05 Articulated Concrete Block

At least 60 days before beginning the work, submit working drawings for approval that include, at a minimum, the following:

Product Data: Manufacturer's data sheets on each product to be used, including:

1. Certification of successful completion of full-scale laboratory testing in accordance with the current version of ASTM D 7277, Standard Test Method for Performance Testing of Articulating Concrete Block (ACB) Revetment Systems for Hydraulic Stability in Open Channel Flow. This certification shall comprise a final test report from the testing facility, or a summary test report from the testing facility providing the test procedure and the obtained Critical Shear Stress parameters of the tested block. Third-party testimonies of compliance shall not be sufficient to satisfy this requirement.
2. Certified analysis and interpretation of the test data shall conform to the guidance contained in the current version of ASTM D 7276, Standard Guide for Analysis and Interpretation of Test Data for Articulating Concrete Block (ACB) Revetment Systems in Open Channel Flow.
3. The following information obtained from the above testing, analysis, and interpretation:
 - a. Tested bed slope

- b. Maximum discharge attained prior to failure
- c. Measured water surface elevation
- d. Calculated energy grade line (EGL)
- e. Plot of the applied shear and velocity by station
- f. An illustration of the selected control volume on a profile of the test slope
- g. Calculated design Manning's n
- h. Calculated block system coefficient of Lift
- i. Characteristic block properties including weight and moment arms
- j. Extrapolation of tested values to thicker block (if required)

Factor of Safety (FoS) calculations in support of the proposed ACB system

1. In accordance with the Factor-of-Safety design methodology as described in “Moment Stability Analysis Method for Determining Safety Factors for Articulated Concrete Blocks”, by Amanda L. Cox, 2010.
2. Stamped and signed by a Professional Engineer licensed to practice in the state where the project is located.
3. The following project specific hydraulic requirements are to be utilized:

Property	Value
Channel Bottom Width (ft)	35.5 per span at bridge
Channel Side Slopes (H:1V)	2H:1V
Channel Bed Slope (ft/ft)	0.0017
Design Volumetric Flow Rate (cfs)	4,400

4. The analysis shall be performed based upon the stability of the ACBs due to gravity alone, conservatively neglecting any stabilizing forces potentially provided by cabling, mechanical anchorage, contact with adjacent blocks, or other restraints not attributable to gravity alone.
5. The analysis must account for a 0.5-inch block projection, in accordance with ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems, Section 6.3.3. Site grading requirements may not be used to omit this requirement for standard (non-tapered) block. For block that is tapered (i.e., the block thickness is greater on the downstream edge than on the upstream edge, by at least 0.5”), this block projection value may be 0 inches for analysis purposes.
6. An appropriate geotextile, selected for the site being protected on the basis of the gradation and permeability of the surface soils.
7. Manufacturer's certificates of compliance for ACB/mats, revetment cable, geotextile, and any revetment cable fittings and connectors in accordance with the current version of ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems.
8. Shop Drawings for the layout of the mats, installation, and safety instructions, and any recommendations, if applicable, that are specifically related to the project.

Quality Assurance

1. The following information obtained from the above testing, analysis, and interpretation:
 - a. Suppliers must own and operate their own manufacturing facility.
 - b. Suppliers shall directly employ a minimum of five (5) registered Professional Engineers.
 - c. A list of five (5) comparable projects, in terms of size and applications, in the United States, where the satisfactory performance of the specific ACB system can be verified after a minimum of five (5) years of service life.
 - d. The names and contact information (phone numbers and e-mail addresses, at a minimum) for the suppliers’ representatives, for technical, production or logistics questions, at least one of whom must reside in the state where the project is located.
 - e. Installer Qualifications: Minimum 2 year experience installing similar products.

Pre-Installation Meetings

Supplier’s representative shall be available for pre-installation meeting a minimum two weeks prior to starting

work of this section.

Delivery Storage and Handling

1. Materials delivered to the site shall be inspected for damage, unloaded and stored with the minimum of handling. Material shall be kept free of dirt and debris.
2. Storage shall be in accordance with manufacturer's requirements.

A. Subgrade Preparation

1. All subgrade preparation shall be performed in accordance with the current version of ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems and Section 202.03.03 of the specifications.
2. The surface shall be graded to a smooth plane surface to ensure that intimate contact is achieved between the surface and the geotextile (filter fabric), and between the geotextile and the entire bottom surface of the individual ACBs. All deformities, roots, grade stakes, and stones which project normal to the local slope face must be re-graded or removed. No holes, "pockmarks", slope board teeth marks, footprints, or other voids greater than 0.5 inch in depth normal to the local slope face shall be permitted. No grooves or depressions greater than 0.5 inches in depth normal to the local slope face with a dimension exceeding 1.0 foot in any direction shall be permitted. Backfill with coarse aggregate stone size 57 at locations where a smooth bottom surface can't be achieved, as directed by the Engineer.
3. Excavation and preparation for all termination trenches or aprons shall be done in accordance to the lines, grades and dimensions shown in the Contract Drawings. The termination trench hinge-point at the top of the slope shall be uniformly graded so that no dips or bumps greater than 0.5 inches over or under the local grade occur. The width of the termination trench hinge-point shall also be graded uniformly to assure intimate contact between all ACBs and the underlying grade at the hinge-point.
4. Immediately prior to placing the filter fabric and ACB mats, the prepared subgrade shall be inspected by the Engineer. No fabric or blocks shall be placed thereon until that area has been approved by each of these parties.

B. Placement of Geotextile Filter Fabric

1. All placement and preparation should be performed in accordance with the current version of ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems. Filter Fabric, or filtration geotextile, as specified elsewhere, will be placed within the limits of ACBs shown on the Contract Drawings.
2. The filtration geotextile will be placed directly on the prepared area, in intimate contact with the subgrade, and free of folds or wrinkles. The geotextile will not be walked on or disturbed when the result is a loss of intimate contact between the ACB and the geotextile or between the geotextile and the subgrade. The geotextile filter fabric will be placed so that the upstream strip of fabric overlaps the downstream strip. The longitudinal and transverse joints will be overlapped at least one and a half (1.5) feet for dry installations and at least three (3) feet for below-water installations. The geotextile will extend at least one (1) foot beyond the top and bottom revetment termination points, or as required by the Engineer. If ACBs are assembled and placed as large mattresses, the top lap edge of the geotextile should not occur in the same location as a space between ACB mats unless the space is concrete filled.

C. Placement of the ACBs / Mats

1. ACB placement and preparation should be performed in accordance with the current version of ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems. ACB block/mats, as specified in 910.07.01, will be constructed within the specified lines and grades shown on the Contract Drawings.
2. Field installation shall be consistent with the way the system was installed in preparation for hydraulic testing pursuant to the current version of ASTM D 7277, Standard Test Method for Performance Testing of Articulating Concrete Block (ACB) Revetment Systems for Hydraulic Stability in Open Channel Flow. Any external restraints, anchors, or other ancillary components (such as synthetic drainage mediums) shall be

employed as they were during testing; e.g., if the hydraulic testing installation utilized a drainage layer, then the field installation must also utilize a drainage layer. This does not preclude the use of other section components for other purposes, e.g., a geogrid for strengthening the subgrade for vehicular loading, or an intermediate filter layer of sand to protect very fine-grained native soils.

3. The subgrade shall be prepared in such a manner as to produce a smooth plane surface prior to placement of the ACBs or mats. No individual block within the plane of placed ACBs will protrude more than 0.5 inches or as otherwise specified by the Engineer. ACBs should be flush and develop intimate contact with the subgrade section, as approved by the Engineer. Proposed hand placing is only to be used in limited areas, specifically identified by the Engineer or manufacturers' mat layout drawings, as approved by the Engineer.
4. If assembled and placed as large mattresses, the ACB mats will be attached to a spreader bar or other approved device to aid in the lifting and placing of the mats in their proper position by the use of a crane or other approved equipment. The equipment used should have adequate capacity to place the mats without bumping, dragging, tearing or otherwise damaging the underlying fabric. The mats will be placed side-by-side, so that the mats abut each other, and/or end-to-end. Mat seams or openings between mats greater than two (2) inches will be backfilled with Class B concrete. Whether placed by hand or in large mattresses, distinct changes in grade that results in a discontinuous revetment surface in the direction of flow will require backfill at the grade change location so as to produce a continuous surface.
5. Toe trenches will be backfilled and compacted flush with the top of the blocks. The integrity of the trench backfill must be maintained so as to ensure a surface that is flush with the top surface of the ACBs for its entire service life. Toe trenches will be backfilled as shown on the Contract Drawings. Backfilling and compaction of trenches will be completed in a timely fashion. No more than 500 linear feet of placed ACBs with non-completed toe trenches will be permitted at any time.
6. The cells or openings in the ACBs will be backfilled with native streambed material, as specified by the Engineer. Backfilling and compaction will be completed in a timely manner so that no more than 500 feet of exposed mats exist at any time. Finishing requirements are explicitly at the discretion of the Engineer.
7. The manufacturer of the ACBs/mats shall provide design and construction advice during the design and initial installation phases of the project when required or as necessary, at the discretion of the Engineer. The ACB supplier shall provide, at a minimum, one full day or two half-days of on-site project support upon request.

613.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
EARTH ANCHOR FOR ARTICULATED CONCRETE BLOCK MATTING	UNIT
ARTICULATED CONCRETE BLOCK MATTING, 6", OPEN CELL	SQUARE YARD
RIPRAP STONE SCOUR PROTECTION (D50 = 12")	CUBIC YARD

The quantity for ARTICULATED CONCRETE BLOCK MATTING, 6" OPEN CELL is based on the plan area to be armored and is not measured along the length of the sloping surface that the mats will be placed on. The bid price shall account for the actual quantity of the mats that must be installed to cover the plan area indicated. The bid price shall include the items incidental to the construction of the mats and hand-placed blocks, including but not limited to concrete, coarse aggregate, geotextile, native streambed material, the removal of obstructions, and subgrade preparation.

The bid price for EARTH ANCHOR FOR ARTICULATED CONCRETE BLOCK MATTING shall include anchors and all fittings and/or appurtenances required for installation.

DIVISION 800 – LANDSCAPING

ITEM 28. TOPSOILING, 4" THICK
ITEM 29. BORROW TOPSOIL

SECTION 804 – TOPSOILING

NO REVISIONS TO THIS SECTION

ITEM 30. FERTILIZING AND SEEDING, TYPE A
ITEM 31. FERTILIZING AND SEEDING, TYPE F

SECTION 806 – FERTILIZING AND SEEDING

NO REVISIONS TO THIS SECTION

ITEM 32. STRAW MULCHING

SECTION 809 – MULCHING

NO REVISIONS TO THIS SECTION

DIVISION 900 – MATERIALS

SECTION 908 – BOLTS AND BOLTING MATERIAL

908.01 STEEL BOLTING MATERIALS

THE FOLLOWING SUBPART IS ADDED:

908.01.06 Earth Anchors for Articulated Concrete Block Matting

Use helical, duckbill, or equal. All material shall be Grade 304 stainless steel. Specifications and layout of anchors shall be submitted for approval and shall be coordinated with layout of articulated concrete block matting.

SECTION 910 – MASONRY UNITS

THE FOLLOWING SUBSECTIONS ARE ADDED:

910.07 ARTICULATED CONCRETE BLOCK

910.07.01 Component Materials

Provide Materials as specified:

Articulated Concrete Blocks.....	910.07.03
Geotextile	919.01.01

Articulated concrete blocks shall be ArmorFlex® Class 50 as manufactured and sold by ARMORTEC, a Contech Company, or an approved equal.

910.07.02 Fabrication

- A. Articulating Concrete Blocks
1. Manufacturing shall conform to the current version of ASTM D-6684, *Standard Specification for Materials and Manufacture of Articulating Concrete Block (ACB) Revetment Systems*.
 2. Cementitious Materials - Materials shall conform to the following applicable ASTM specifications:
 - a. Portland Cements - Specification C 150, for Portland Cement.
 - b. Blended Cements - Specification C 595, for Blended Hydraulic Cements.
 - c. Hydrated Lime Types - Specification C 207, for Hydrated Lime Types.
 - d. Pozzolans - Specification C 618, for Fly Ash and Raw or Calcined Natural Pozzolans for use in Portland Cement Concrete.
 - e. Aggregates – Specification C 33, for Concrete Aggregates, except that grading requirements shall not necessarily apply.
 3. Casting: The ACB units shall be produced using a dry cast method. Dry cast units obtain strength more quickly than wet cast blocks, and will also achieve a greater uniformity of quality and greater durability.
 4. Physical Requirements: At the time of delivery to the work site, the ACB units shall conform to the physical requirements prescribed in Table listed below.

PHYSICAL REQUIREMENTS

Compressive Strength Net Area Min. p.s.i (mPa)		Water Absorption Max. lb/ft ³ (kg/m ³)	
Avg. of 3 units	Individual Unit	Avg. of 3 units	Individual Unit
4,000 (27.6)	3,500 (24.1)	9.1 (160)	11.7 (192)

5. Visual Inspection

- a. All units shall be sound and free of defects which would interfere with the proper placement of the unit, or which would impair the performance of the system. Surface cracks incidental to the usual methods of manufacture, or surface chipping resulting from customary methods of handling in shipment and delivery, shall not be deemed grounds for rejection.
- b. Cracks exceeding 0.25 inches (.635 cm) in width and/or 1.0 inch (2.54 cm) in depth shall be deemed grounds for rejection. Chipping resulting in a weight loss exceeding 10% of the average weight of a concrete unit shall be deemed grounds for rejection.
- c. Blocks rejected prior to delivery from the point of manufacture shall be replaced at the manufacturer's expense. Blocks rejected at the job site shall be repaired with structural grout or replaced upon request at the expense of the contractor.

6. Sampling and Testing

- a. The purchaser (or their authorized representative) shall be afforded access to the relevant manufacturing facility or facilities, if desired, in order to inspect and/or sample the ACB units from lots ready for delivery prior to release for delivery to the job site. Such inspections are at the sole expense of the requesting entity.
- b. Purchaser may request additional testing other than that provided by the manufacturer as needed. Such requested testing will extend any stated lead times for manufacturing and delivery, if the results of such testing are a prerequisite to approval (i.e., approval for release to manufacturing). Costs associated with such testing shall be borne by the purchaser.

B. Revetment Cables and Fittings

1. Option 1. Polyester Revetment Cable and Fittings

- a. Revetment cable shall be constructed of high tenacity, low elongating, and continuous filament polyester fibers. Cable shall consist of a core construction comprised of parallel fibers contained within an outer jacket or cover.
- b. The size of the revetment cable shall be selected such that the minimum acceptable strength is at least five (5) times that required for lifting of the mats, in accordance with ASTM D-6684 paragraph 5.5.2. This design shall include a reduction factor for splicing of 60%, unless a larger factor can be substantiated by laboratory testing.
- c. The revetment cable shall exhibit resistance to most concentrated acids, alkalis and solvents. Cable shall be impervious to rot, mildew and degradation associated with marine organisms. The materials used in the construction of the cable shall not be affected by continuous immersion in fresh or salt water.
- d. Selection of cable and fittings shall be made in a manner that ensures a safe design factor for mats being lifted from both ends, thereby forming a catenary. Consideration shall be taken for the bending of the cables around hooks or pins during lifting. Fittings such as sleeves and stops shall be aluminum and washers shall be plastic unless otherwise shown on the Contract Drawings.

2. Option 2. Galvanized Steel Revetment Cable and Fittings

- a. Revetment cable shall be constructed of preformed galvanized aircraft cable (GAC). The cables shall be made from individual wires and strands that have been formed during the manufacture into the shape they have in finished cable.
- b. Cable shall consist of a core construction comprised of seven (7) wires wrapped within seven (7) or nineteen (19) wire strands.

- c. The size of the revetment cable shall be selected such that the minimum acceptable strength is at least five (5) times that required for lifting of the mats, in accordance with ASTM D-6684 paragraph 5.5.2. This design shall include a reduction factor for splicing of 75%, unless a larger factor can be substantiated by laboratory testing.
- d. The revetment cable shall exhibit resistance to mild concentrations of acids, alkalis, and solvents. Fittings such as sleeves and stops shall be aluminum, and the washers shall be galvanized steel or plastic. Furthermore, depending on material availability, the cable type (7x7 or 7x19) can be interchanged while always ensuring the required factor of safety for the cable.
- e. Selection of cable and fittings shall be made in a manner that insures a safe design factor for mats being lifted from both ends, thereby forming a catenary. Consideration shall be taken for the bending of the cables around hooks or pins during lifting. Fittings such as sleeves and stops shall be aluminum and washers shall be plastic unless otherwise shown on the Contract Drawings.

C. Filter Fabric

1. The standard for sizing geotextile for these applications is AASHTO M-288, Permanent Erosion Control, Class 2. Either woven monofilament or non-woven geotextile are acceptable; woven slit-film geotextiles are not acceptable.
2. Under no circumstances shall the filter fabric be permanently affixed or otherwise adhered to the blocks or mats; i.e., the filter fabric shall be independent of the block system.
3. During all periods of shipment and storage, the filter fabric shall be protected from direct sunlight, UV radiation, and temperatures greater than 140°F. To the extent possible, the fabric shall be maintained wrapped in its protective covering. Geotextile exposure to sunlight or UV radiation shall be minimized to the greatest extent possible until the installation process begins.

SECTION 915 – TIMBER AND TIMBER TREATMENT

915.01 SAWN TIMBER POSTS, TIMBER SPACERS, AND ROUTED TIMBER SPACERS

THE FOLLOWING IS ADDED:

Do not treat timber for CONSTRUCTION DRIVEWAY, WOOD MATS.

APPENDIX A

NJDEP Waterfront Development Permit



STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF LAND USE REGULATION
 Mail Code 501-02A, P.O. Box 420, Trenton, New Jersey 08625-0420
 Telephone: (609) 777-0454 or Fax: (609) 777-3656
 www.nj.gov/dep/landuse



PERMIT

<p>In accordance with the laws and regulations of the State of New Jersey, the Department of Environmental Protection hereby grants this permit to perform the activities described below. This permit is revocable with due cause and is subject to the limitations, terms and conditions listed below and on the attached pages. For the purpose of this document, "permit" means "approval, certification, registration, authorization, waiver, etc." Violation of any term, condition or limitation of this permit is a violation of the implementing rules and may subject the permittee to enforcement action.</p>		<p>Approval Date March 11, 2019</p>
		<p>Expiration Date March 10, 2024</p>
<p>Permit Number(s):</p> <p>2013-18-0004.1; WFD 180001 WFD 180002</p>	<p>Type of Approval(s):</p> <p>Waterfront Development IP Upland, Waterfront Development IP In-water and Water Quality Certificate</p>	<p>Enabling Statute(s):</p> <p>N.J.S.A. 12:5-3 et seq.</p>
<p>Permittee:</p> <p>County of Union c/o Mr. Thomas O. Mineo 2325 South Avenue Scotch Plains, NJ 07076</p>	<p>Site Location:</p> <p>Block & Lot: N/A Municipality: City of Rahway County: Union County</p>	
<p>Description of Authorized Activities:</p> <p>This permit authorizes the placement of articulated concrete block matting (ACBM) beneath the East Hazelwood Avenue Bridge, over the South Branch Rahway River, in the City of Rahway, Union County. The authorized scour countermeasure activities are shown on the plans referenced at the end of this permit.</p> <p>This permit is authorized under and in compliance with the Rules on Coastal Zone Management, N.J.A.C. 7:7-1.1 et seq., as amended through September 5, 2018.</p>		
<p>Prepared by:</p> <p><i>Natalie Young</i> Natalie Young</p>	<p>Received and/or Recorded by County Clerk:</p>	
<p>If the permittee undertakes any regulated activity authorized under a permit, such action shall constitute the permittee's acceptance of the permit in its entirety as well as the permittee's agreement to abide by the permit and all conditions therein.</p>		
<p align="center">This permit is not valid unless authorizing signature appears on the last page.</p>		

SPECIAL CONDITIONS:

1. The permittee shall obtain Department of the Army authorization prior to commencement of any regulated activities within federally regulated areas.
2. In order to protect general game fish within the South Branch Rahway River and tributaries, no grading, excavation, or construction activities is permitted within the river between May 1 thru June 30 of each year. In addition, any activity within the 100-year floodplain or flood hazard area of this river or tributaries which would introduce sediment into said river or which could cause more than a minimum increase in the natural level of turbidity is also prohibited anytime, but especially during this period. The Department reserves the right to require additional soil conservation measures if it becomes evident that additional soil conservation measures are required to protect State regulated resources or to suspend all regulated activities on-site should it be determined that the permittee has not taken proper precautions to ensure continuous compliance with this condition.
3. NGS Monuments (map no. 30) fall within the project area. The permittee shall contact NJDOT Geodetic Survey at least 60 days prior to disturbance at 609-530-5642 if a geodetic control reference mark must be moved, raised, or lowered to accommodate construction.
4. The total amount of disturbance associated with this authorization shall not exceed 526 s.f. (0.012 acre) of temporary riparian zone vegetation disturbance and 361 s.f. (0.008 acre) of permanent riparian zone vegetation disturbance for the installation of the authorized project.
5. All temporary riparian zone vegetation disturbance shall be restored to pre-construction condition.
6. Vegetation within 50 feet of the top of the bank shall only be disturbed in the areas specifically shown on the approved drawing(s). No other vegetation within 50 feet top of the river's bank onsite shall be disturbed for any reason. This condition applies to all channels onsite regardless of the contributory drainage area.
7. A Tidelands Grant (LUR file no.: 2013-18-0004.1; TDG 180001) and a Tidelands License (LUR file no.: 2013-18-0004.1; TDI 180001) are currently pending review with the Bureau of Tidelands. The permittee shall obtain all necessary Tidelands approval prior to the start of any regulated activities within currently and formerly flowed tidal areas.
8. Construction equipment shall not be stored, staged or driven within any channel, freshwater wetland or transition area, unless expressly approved by this permit and/or described on the approved plans.
9. Construction may only be performed in dry or de-watered conditions. No work may be performed in wet conditions.
10. All excavated material shall be disposed of in a lawful manner. The material shall be placed outside of any flood hazard area, riparian zone, regulated water, freshwater/coastal wetlands and adjacent transition area, and in such a way as to not interfere with the positive drainage of the receiving area.
11. All sediment barriers and other soil erosion control measures shall be installed prior to commencing any clearing, grading or construction onsite, and shall be maintained in proper working condition throughout the entire duration of the project.

12. The regulated activity shall not expose unset or raw cement to flowing water within any channel or regulated water during construction.

STANDARD CONDITIONS:

1. The issuance of a permit shall in no way expose the State of New Jersey or the Department to liability for the sufficiency or correctness of the design of any construction or structure(s). Neither the State nor the Department shall, in any way, be liable for any loss of life or property that may occur by virtue of the activity or project conducted as authorized under a permit.
2. The issuance of a permit does not convey any property rights or any exclusive privilege.
3. The permittee shall obtain all applicable Federal, State, and local approvals prior to commencement of regulated activities authorized under a permit.
4. A permittee conducting an activity involving soil disturbance, the creation of drainage structures, or changes in natural contours shall obtain any required approvals from the Soil Conservation District having jurisdiction over the site.
5. The permittee shall take all reasonable steps to prevent, minimize, or correct any adverse impact on the environment resulting from activities conducted pursuant to the permit, or from noncompliance with the permit.
6. The permittee shall immediately inform the Department by telephone at (877) 927-6337 (Warn DEP Hotline) of any noncompliance that may endanger the public health, safety, and welfare, or the environment. In addition, the permittee shall inform the Division of Land Use Regulation by telephone at (609) 777-0454 of any other noncompliance within two working days of the time the permittee becomes aware of the noncompliance, and in writing within five working days of the time the permittee becomes aware of the noncompliance. Such notice shall not, however, serve as a defense to enforcement action if the project is found to be in violation of this chapter. The written notice shall include:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. If the noncompliance has not been corrected, the anticipated length of time it is expected to continue; and
 - d. The steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
7. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the authorized activity in order to maintain compliance with the conditions of the permit.
8. The permittee shall employ appropriate measures to minimize noise where necessary during construction, as specified in N.J.S.A. 13:1G-1 et seq. and N.J.A.C. 7:29.
9. The issuance of a permit does not relinquish the State's tidelands ownership or claim to any portion of the subject property or adjacent properties.
10. The issuance of a permit does not relinquish public rights to access and use tidal waterways and their shores.

11. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:
 - a. Enter upon the permittee's premises where a regulated activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit; and
 - c. Inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. Failure to allow reasonable access under this paragraph shall be considered a violation of this chapter and subject the permittee to enforcement action.
12. The permittee and its contractors and subcontractors shall comply with all conditions, site plans, and supporting documents approved by the permit. Any noncompliance with a permit constitutes a violation of this chapter and is grounds for enforcement action under, as well as, in the appropriate case, suspension and/or termination of the permit.
13. All conditions, site plans, and supporting documents approved by a permit shall remain in full force and effect so long as the regulated activity or project, or any portion thereof, is in existence, unless the permit is modified.
14. For Coastal Permits, Flood Hazard Permits and Flood Hazard Verifications, the permittee shall record the permit, including all conditions listed therein, with the Office of the County Clerk (the Registrar of Deeds and Mortgages, if applicable) of each county in which the site is located. The permit shall be recorded within 30 calendar days of receipt by the permittee, unless the permit authorizes activities within two or more counties, in which case the permit shall be recorded within 90 calendar days of receipt. Upon completion of all recording, a copy of the recorded permit shall be forwarded to the Division of Land Use Regulation at the address set forth in the rules.
15. If any condition or permit is determined to be legally unenforceable, modifications and additional conditions may be imposed by the Department as necessary to protect public health, safety, and welfare, or the environment.
16. A copy of the permit and all approved site plans and supporting documents shall be maintained at the site at all times and made available to Department representatives or their designated agents immediately upon request.
17. A permit shall be transferred to another person only in accordance with the regulations.
18. A permit can be suspended or terminated by the Department for cause.
19. The submittal of a request to modify a permit by the permittee, or a notification of planned changes or anticipated noncompliance, does not stay any condition of a permit.
20. Where the permittee becomes aware that it failed to submit any relevant facts in an application, or submitted incorrect information in an application or in any report to the Department, it shall promptly submit such facts or information.
21. The permittee shall submit written notification to the Bureau of Coastal and Land Use Compliance and Enforcement, 401 East State Street, 4th Floor, P.O. Box 420, Mail Code 401-

04C, Trenton, NJ 08625, at least three working days prior to the commencement of regulated activities.

22. The permittee shall not cause or allow any unreasonable interference with the free flow of a regulated water by placing or dumping any materials, equipment, debris, or structures within or adjacent to the channel while the regulated activity(ies) is being undertaken. Upon completion of the regulated activity(ies), the permittee shall remove and dispose of in a lawful manner, all excess materials, debris, equipment, and silt fences and other temporary soil erosion and sediment control devices from all regulated areas.
23. The regulated activity shall not destroy, jeopardize, or adversely modify a present or documented habitat for threatened or endangered species, and shall not jeopardize the continued existence of any local population of a threatened or endangered species.

APPROVED PLANS:

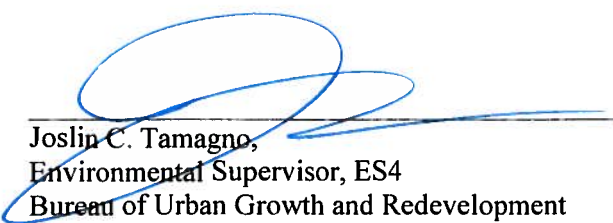
The drawings hereby approved are five (5) sheets prepared by Dewberry Engineers Inc., dated October 5, 2018, unrevised, unless otherwise noted, entitled: "UNION COUNTY ENGINEERING, EAST HAZELWOOD AVENUE BRIDGE (Ra09) OVER SOUTH BRANCH RAHWAY RIVER, SCOUR COUNTERMEASURES, CITY OF RAHWAY"

1. "CONSTRUCTION PLAN" (Sheet 2 of 6), last revised January 28, 2019;
2. "WATERFRONT DEVELOPMENT INDIVIDUAL PERMIT PLAN" (Sheet 3 of 6), last revised January 28, 2019;
3. "ELEVATIONS AND SECTIONS" (Sheet 4 of 6), last revised January 28, 2019; and
4. "CONSTRUCTION DETAILS" (Sheets 5 and 6 of 6).

In accordance with the applicable regulations, any person who is aggrieved by this decision or any of the conditions of this permit may request an adjudicatory hearing within 30 calendar days after public notice of the decision is published in the DEP Bulletin. This request must include a completed copy of the Adjudicatory Hearing Request form. The DEP Bulletin is available through the Department's website at <http://www.nj.gov/dep/bulletin> and the form is available through the Division's website at http://www.nj.gov/dep/landuse/download/lur_024.pdf. In addition to requesting a hearing, a request may be filed with the Department's Office of Dispute Resolution to determine whether the matter is suitable for mediation. Information concerning the dispute resolution process is available at www.nj.gov/dep/odr.

If you need clarification on any section of this permit or conditions, please contact the Division of Land Use Regulation's Technical Support Call Center at (609) 777-0454.

Approved By:



Joslin C. Tamagno,
Environmental Supervisor, ES4
Bureau of Urban Growth and Redevelopment

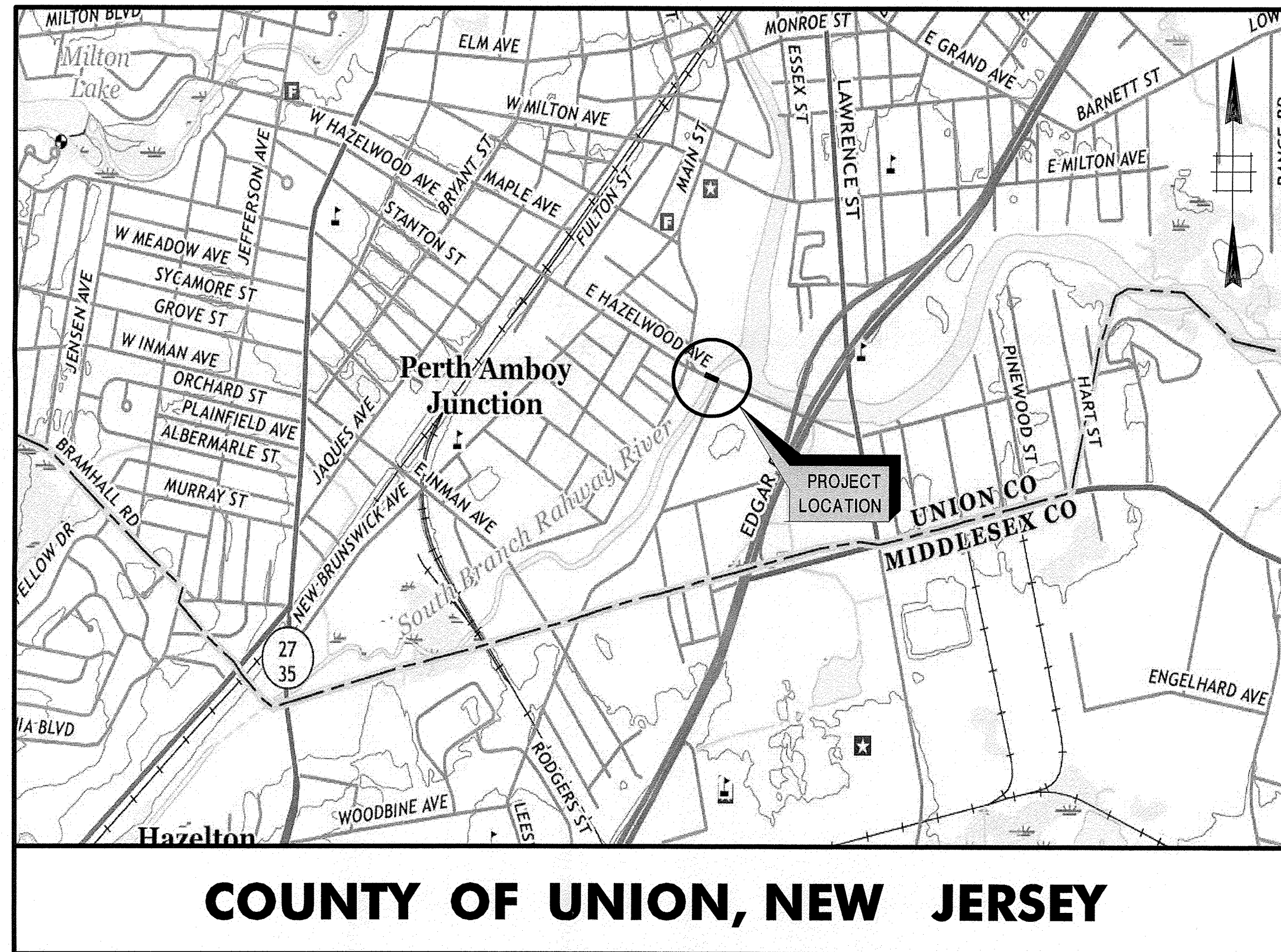
3-11-19

Date

Original sent to Agent to record

c: Mr. Thomas Mineo, Union County, Permittee
City of Rahway Construction Official
Mr. Eric Boschen, Dewberry Eng., Agent

**COUNTY OF UNION
BOARD OF CHOSEN FREEHOLDERS
APPLICATION FOR NJDEP
WATERFRONT DEVELOPMENT INDIVIDUAL PERMIT
FOR
EAST HAZELWOOD AVENUE BRIDGE (Ra09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY
AUGUST 2018**



KEY MAP
NTS

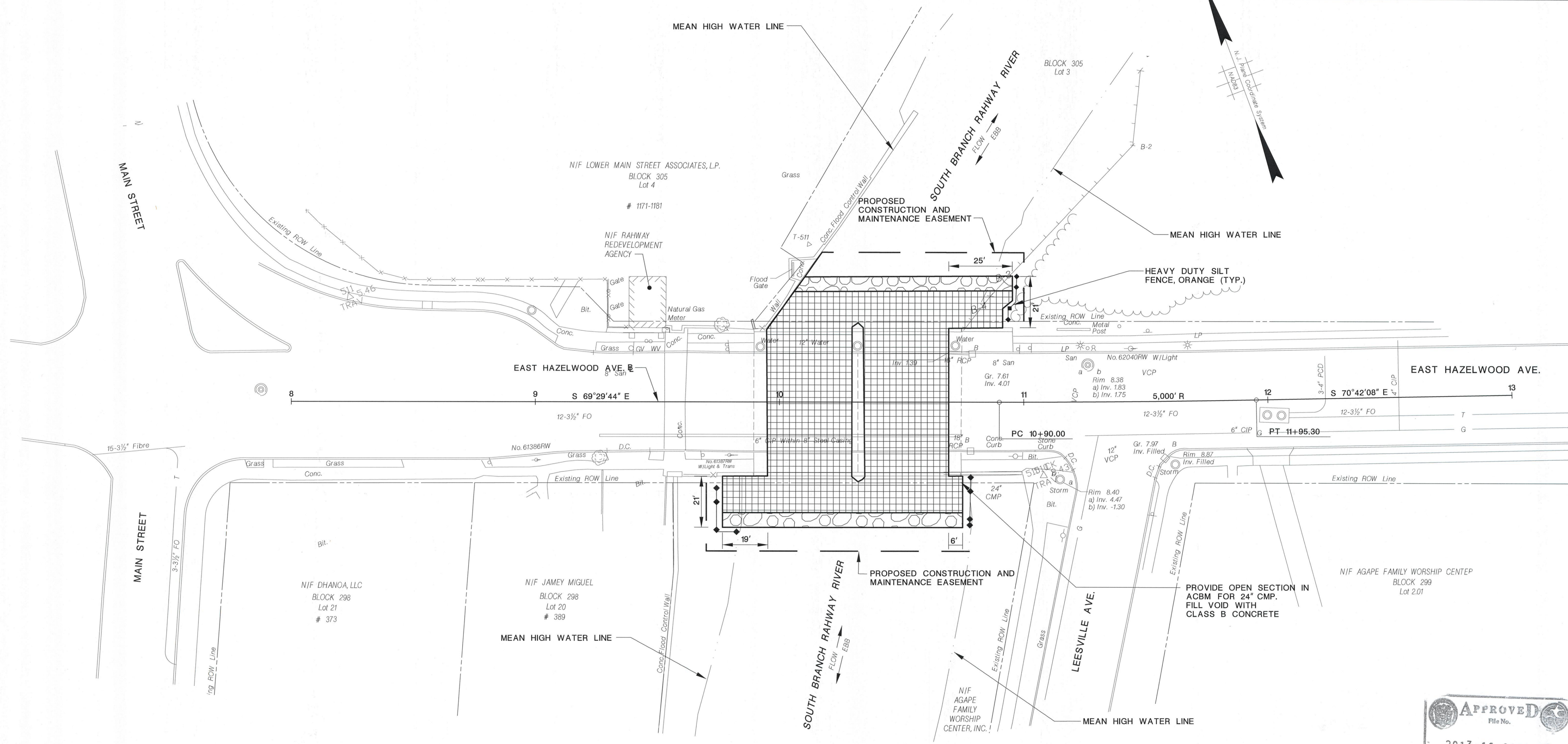
INDEX OF DRAWINGS	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	CONSTRUCTION PLAN
3	WATERFRONT DEVELOPMENT INDIVIDUAL PERMIT PLAN
4	ELEVATIONS AND SECTIONS
5-6	CONSTRUCTION DETAILS

TEMPORARY CHANNEL IMPACTS BELOW MEAN HIGH WATER		
TYPE ACTIVITY	AREA	
	SF	ACRE
ARTICULATED CONCRETE BLOCK	8,630	0.198
ACCESS DISTURBANCE	2,050	0.047
TOTAL IMPACTS	10,680	0.245

SUMMARY OF IMPACTS FLOOD HAZARD AREA - RIPARIAN ZONE				
TYPE ACTIVITY	PERMANENT IMPACT GRASS (SF)	TEMPORARY IMPACT GRASS (SF)	PERMANENT IMPACT (SF)	TOTAL RIPARIAN ZONE IMPACTS (SF)
SCOUR COUNTERMEASURES	360	820	960	2,140

ERIC J. BOSCHEN, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0385200
Eric J. Bosch
DATE 10/5/18

Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047800 Bloomfield, N.J.	SCALE: NONE	DATE: OCTOBER 2018 SHEET NO. 1 OF 6
--	----------------	--



LEGEND:

 ARTICULATED CONCRETE BLOCK MAT (ACBM)

REVISION	
DATE	DESCRIPTION
1/28/2019	REVISED TO ADDRESS NJDEP PERMIT COMMENTS

UNION COUNTY ENGINEERING
 EAST HAZELWOOD AVENUE BRIDGE (Ra09)
 OVER SOUTH BRANCH RAHWAY RIVER
 SCOUR COUNTERMEASURES
 CITY OF RAHWAY

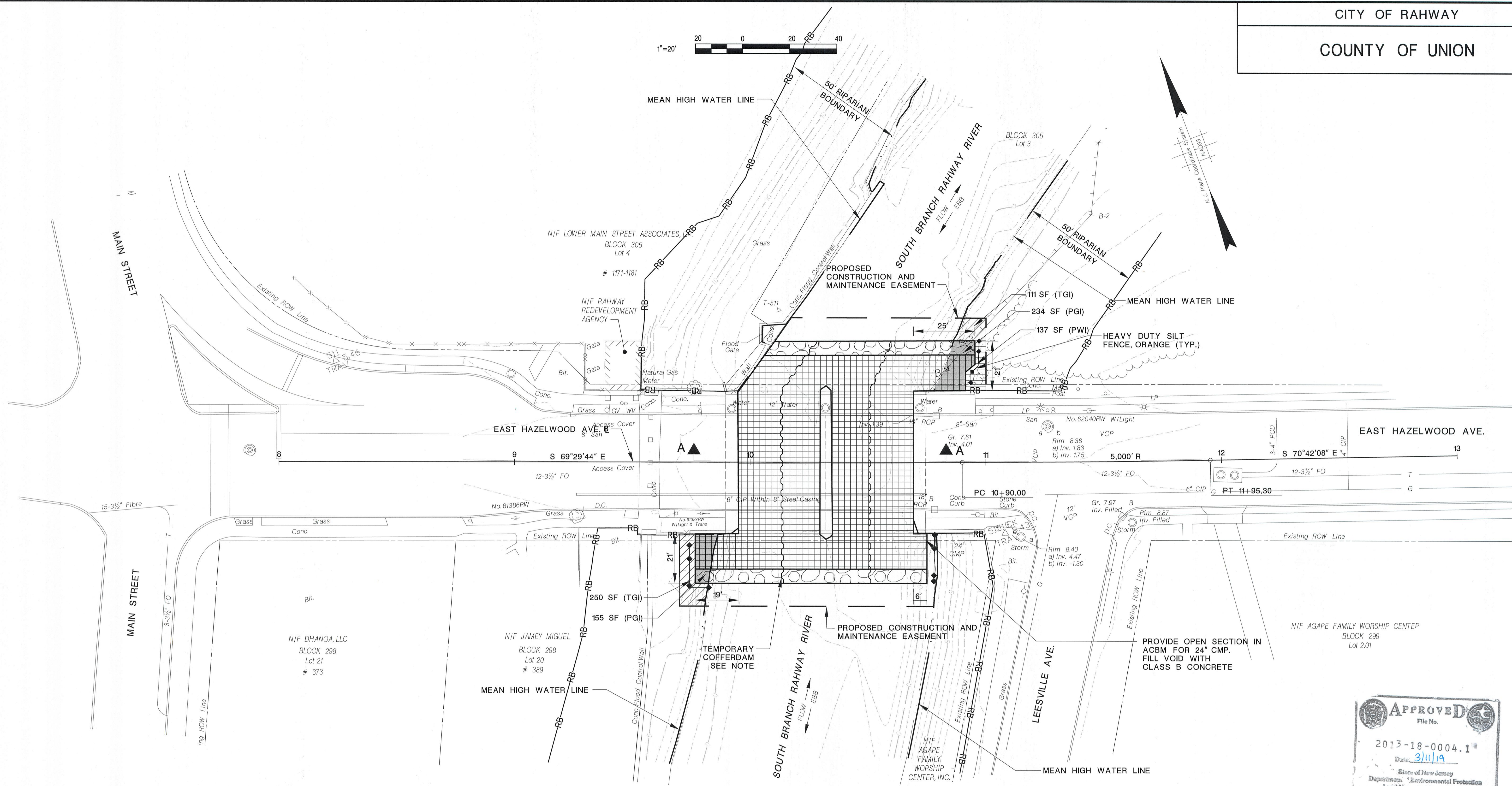
CONSTRUCTION PLAN

ERIC J. BOSCHEN, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0385200

Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J.

SCALE: 1"=20'
 DATE: OCTOBER 2018
 SHEET NO. 2 OF 6





NOTE:
SEE PLAN SHEET 4 FOR ELEVATIONS, SECTIONS,
COFFERDAM INSTALLATION AND CONSTRUCTION
STAGING.

**TEMPORARY CHANNEL IMPACTS
BELOW MEAN HIGH WATER**

TYPE ACTIVITY	AREA	
	SF	ACRE
ARTICULATED CONCRETE BLOCK	8,082	0.185
ACCESS DISTURBANCE	1,761	0.040
TOTAL IMPACTS	9,843	0.225

**SUMMARY OF IMPACTS
FLOOD HAZARD AREA - RIPARIAN ZONE**

TYPE ACTIVITY	PERMANENT IMPACTS		TEMPORARY IMPACTS	TOTAL RIPARIAN ZONE IMPACTS (SF)
	GRASS (SF)	WOODS (SF)	GRASS (SF)	
SCOUR COUNTERMEASURES	389	137	361	887

- LEGEND:**
- 2.3 MEAN HIGH WATER LINE
 - ARTICULATED CONCRETE BLOCK MAT (ACBM)
 - PERMANENT RIPARIAN ZONE IMPACTS GRASS (PGI)
 - PERMANENT RIPARIAN ZONE IMPACTS WOODS (PWI)
 - TEMPORARY RIPARIAN ZONE IMPACTS - GRASS (TGI)

REVISION	
DATE	DESCRIPTION
1/28/2019	ADDRESSED NJDEP PERMIT COMMENTS RECEIVED 1/16/2019

UNION COUNTY ENGINEERING
EAST HAZELWOOD AVENUE BRIDGE (Ra09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY

**WATERFRONT DEVELOPMENT
INDIVIDUAL PERMIT PLAN**

ERIC J. BOSCHEN, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0385200

DATE: 1/28/2019

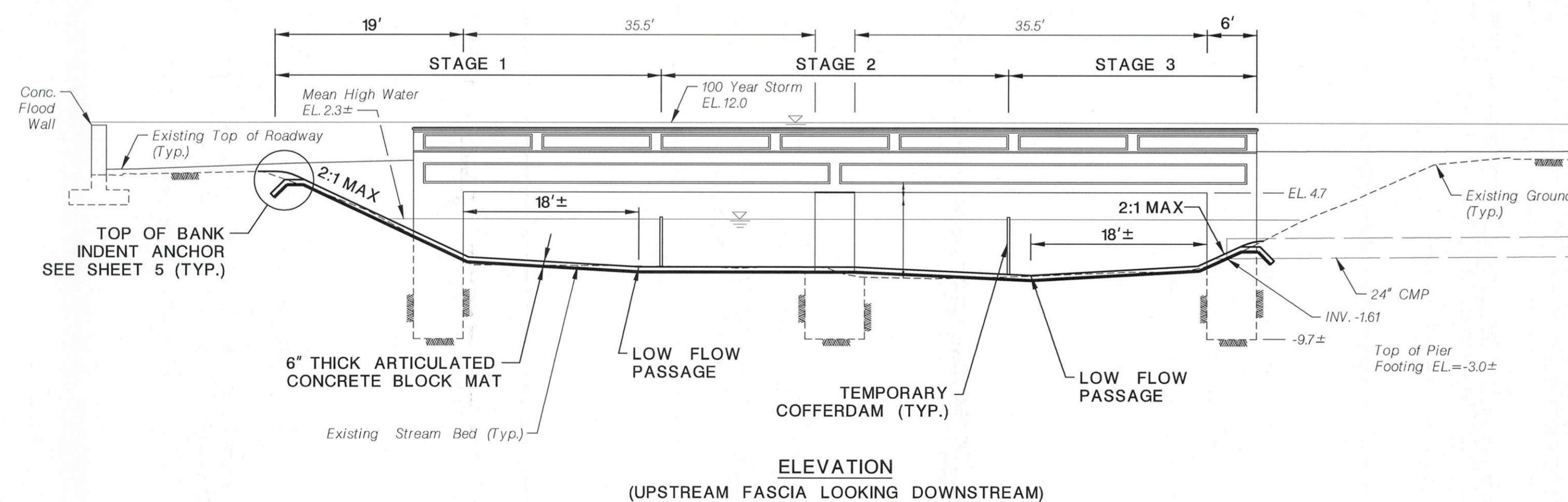
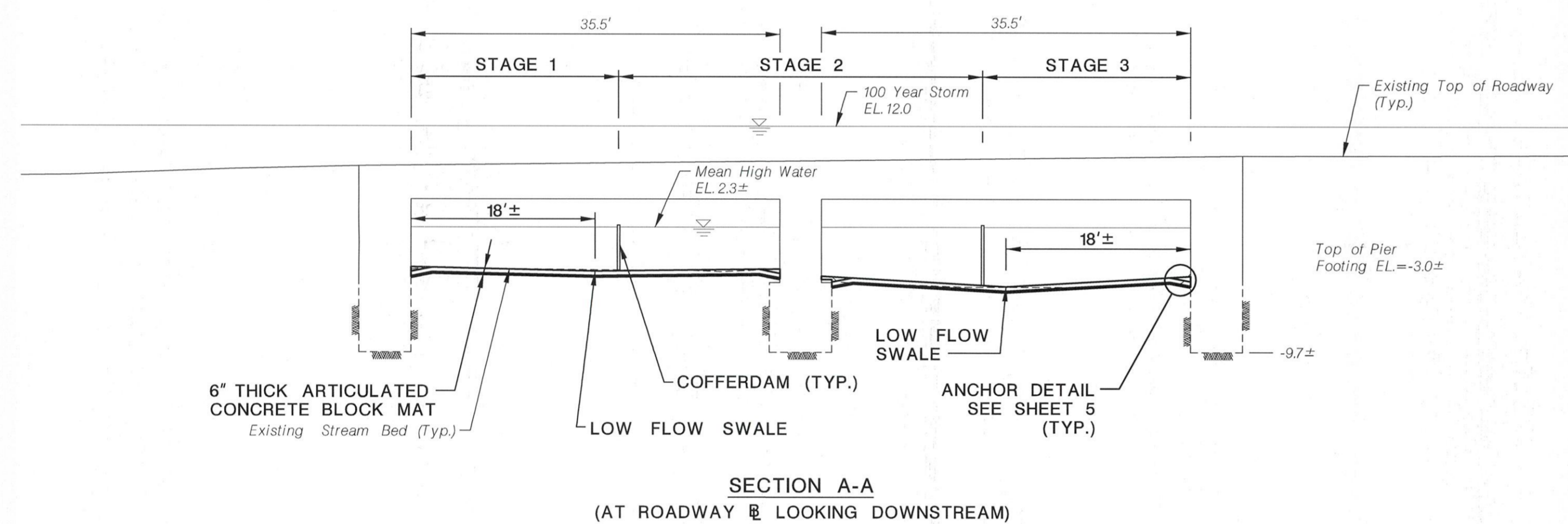
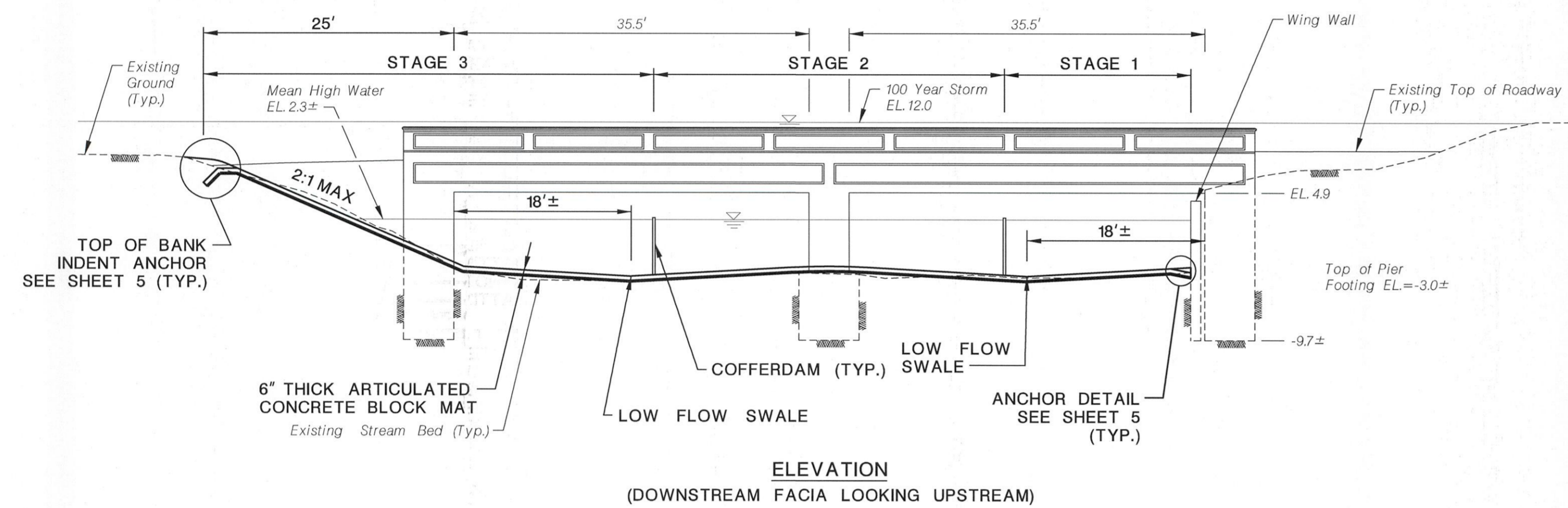
Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

SCALE: 1"=20'

DATE: OCTOBER 2018

SHEET NO. 3 OF 6





GENERAL NOTES:

1. MAINTAIN SOUTH BRANCH RAHWAY RIVER FLOW AT ALL TIMES REGARDLESS OF HOW THE SCOUR COUNTERMEASURES CONSTRUCTION IS STAGED. FLOATING TURBIDITY BARRIER MUST BE USED.
2. PUMPAGE OF SEDIMENT-LADEN WATER FROM DEWATERING ACTIVITIES DIRECTLY INTO THE RIVER IS PROHIBITED.
3. DO NOT USE EARTHEN DAMS AS COFFERDAMS.
4. USE NATURAL SUBSTRATE FROM THE AREA OF DISTURBANCE TO FILL VOIDS WITHIN THE ARTICULATED CONCRETE BLOCK MATTING. USE COARSE AGGREGATE IF SUFFICIENT MATERIAL IS NOT AVAILABLE. FILL VOIDS FLUSH WITH THE TOP OF MATTING.
5. THE FOLLOWING TIMING RESTRICTIONS APPLY: IN ORDER TO PROTECT THE GENERAL GAME AND ANADROMOUS FISHERY RESOURCES IN THE SOUTH BRANCH RAHWAY RIVER FROM SEDIMENTATION, PROPOSED CONSTRUCTION ACTIVITIES ARE PROHIBITED BETWEEN APRIL 1 AND JULY 31 EACH YEAR. IN ADDITION, ANY ACTIVITY WITHIN THIS WATERCOURSE WHICH COULD INTRODUCE SEDIMENT INTO SAID RIVER OR WHICH COULD CAUSE AN INCREASE IN THE NATURAL LEVEL OF TURBIDITY IS ALSO PROHIBITED DURING THIS PERIOD. THE NJDEP RESERVES THE RIGHT TO SUSPEND ALL REGULATED ACTIVITIES ONSITE SHOULD IT BE DETERMINED THAT PROPER PRECAUTIONS HAVE NOT BEEN TAKEN TO ENSURE CONTINUOUS COMPLIANCE WITH THIS CONDITION.
6. UPSTREAM AND DOWNSTREAM SECTIONS DEPICT THE FINAL CONSTRUCTED ACBM AND WORK ZONES FOR 3 STAGES OF CONSTRUCTION.
7. BRIDGE FOOTING INFORMATION AS SHOWN IS TAKEN FROM 1921 BRIDGE PLAN.

WATERWAY STAGING AND DIVERSION NOTES:

1. STREAM DIVERSION STAGES 1, 2 AND 3 CAN BE DONE IN ANY ORDER. EACH STAGE MUST BE DONE AT A SEPARATE TIME FROM OTHER STAGES.
2. THE MAXIMUM ELEVATION OF THE COFFERDAM IS BASED ON THE APPROXIMATE MEAN HIGH WATER ELEVATION.



UNION COUNTY ENGINEERING
 EAST HAZELWOOD AVENUE BRIDGE (Ra09)
 OVER SOUTH BRANCH RAHWAY RIVER
 SCOUR COUNTERMEASURES
 CITY OF RAHWAY

ELEVATIONS AND SECTIONS

ERIC J. BOSCHEN, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0385200

DATE: 1/28/2019

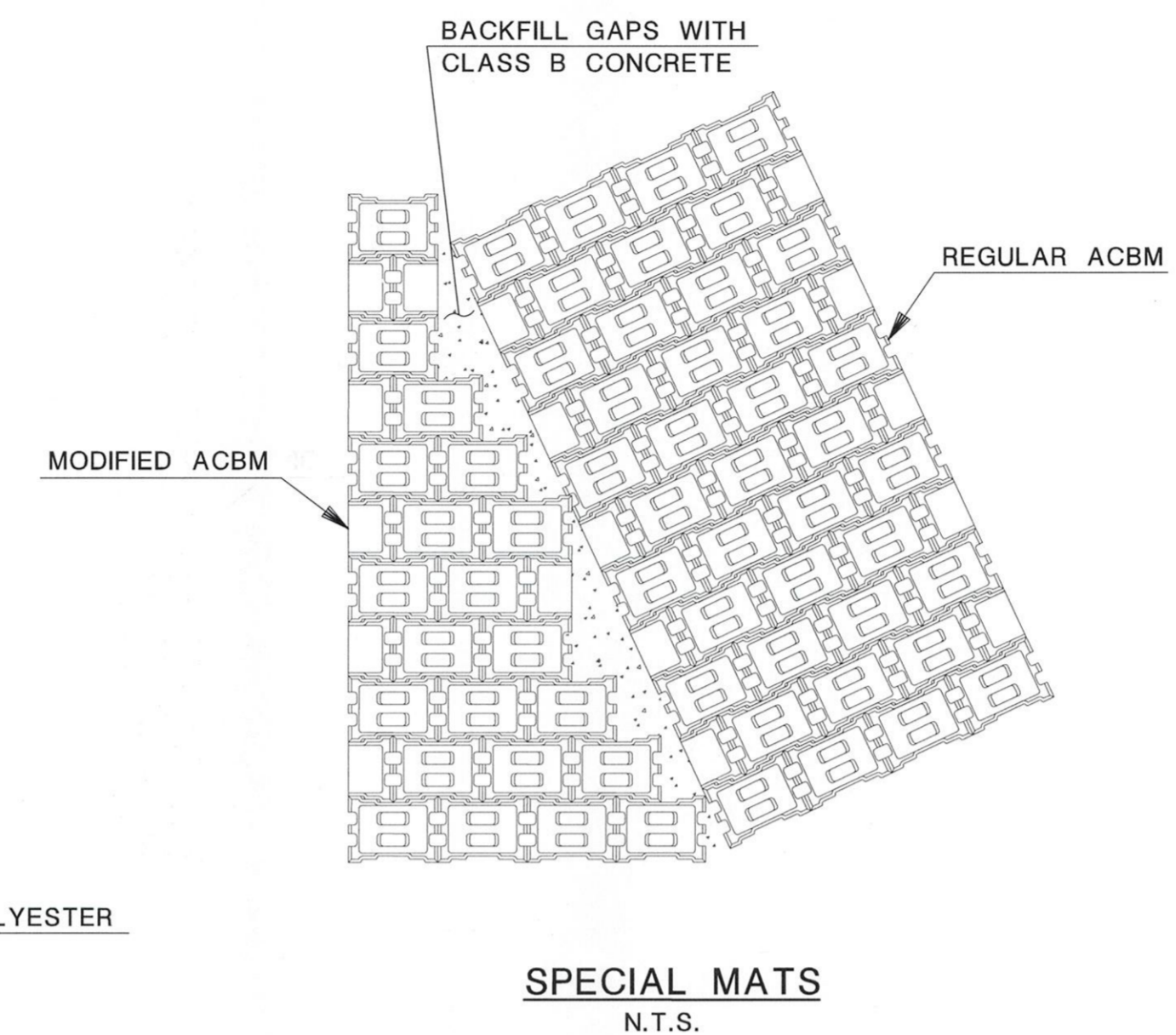
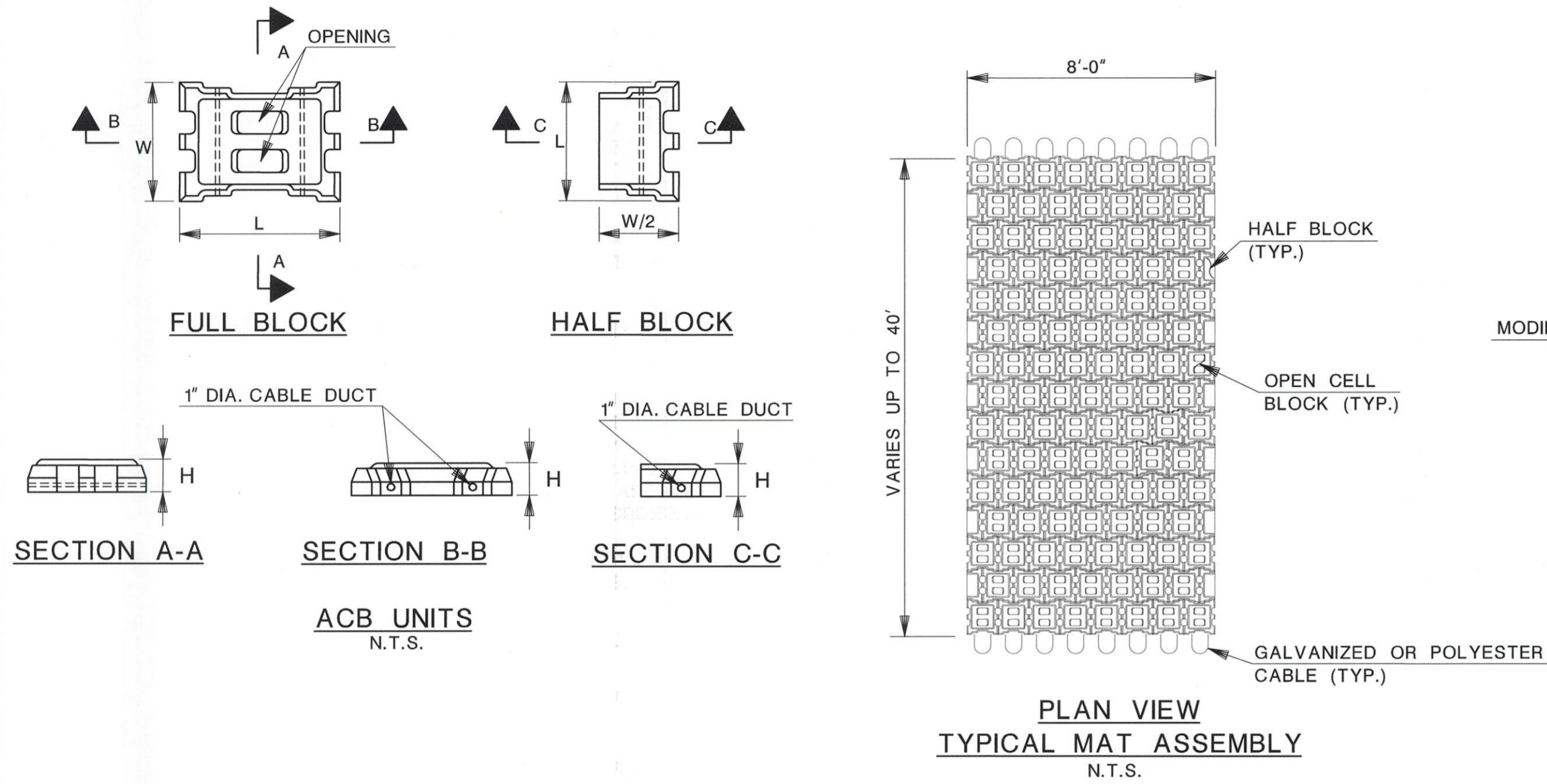
Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047800
 Bloomfield, N.J.

SCALE: NONE

DATE: OCTOBER 2018

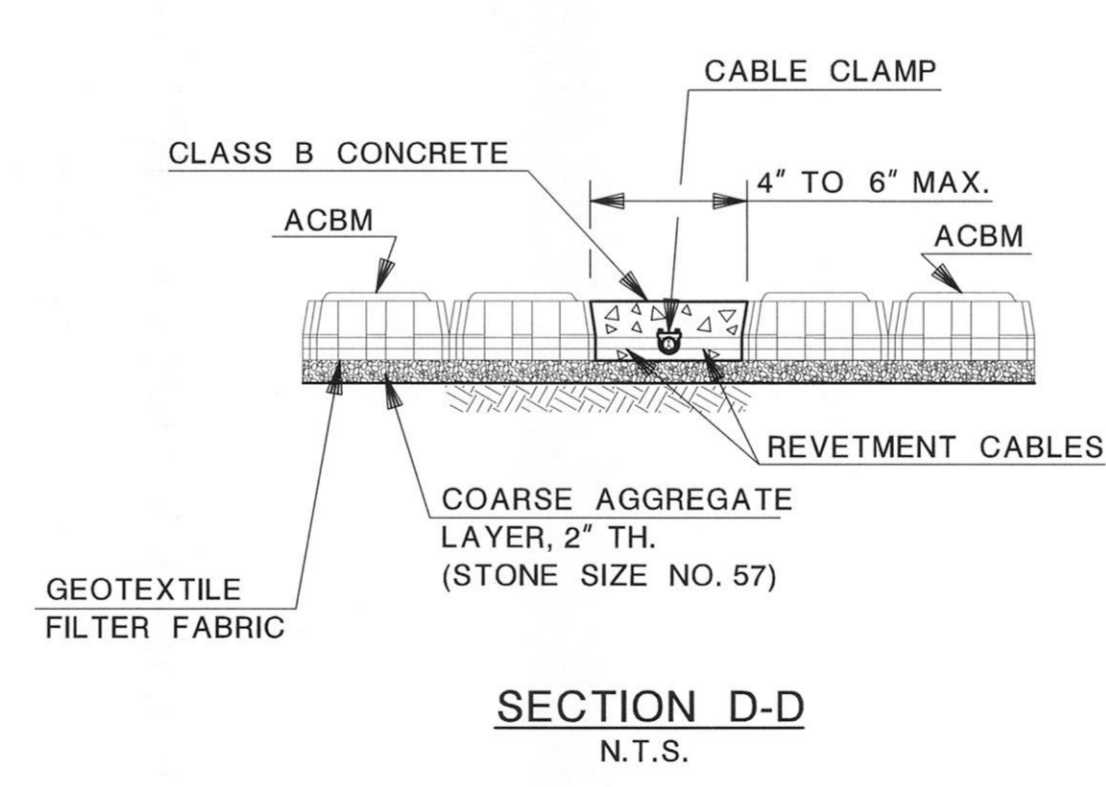
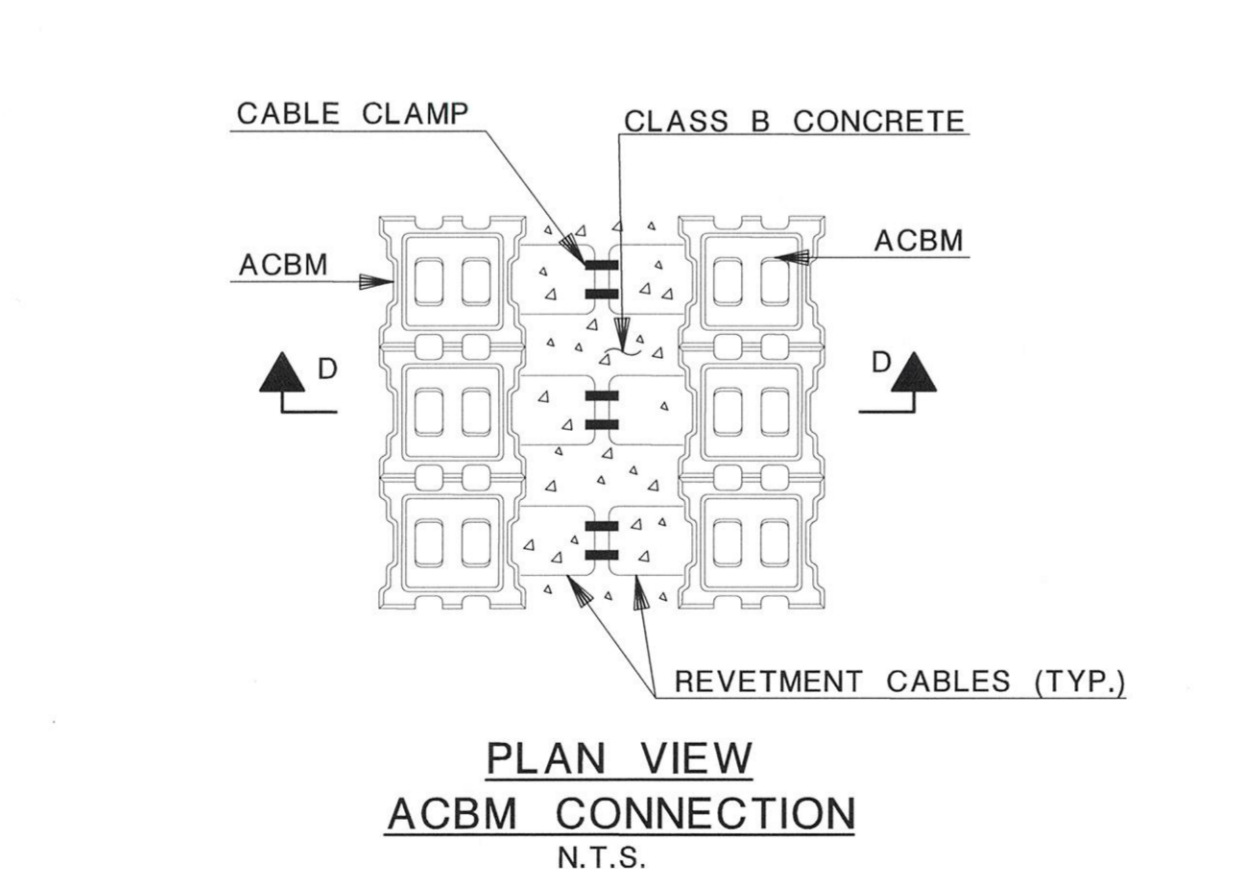
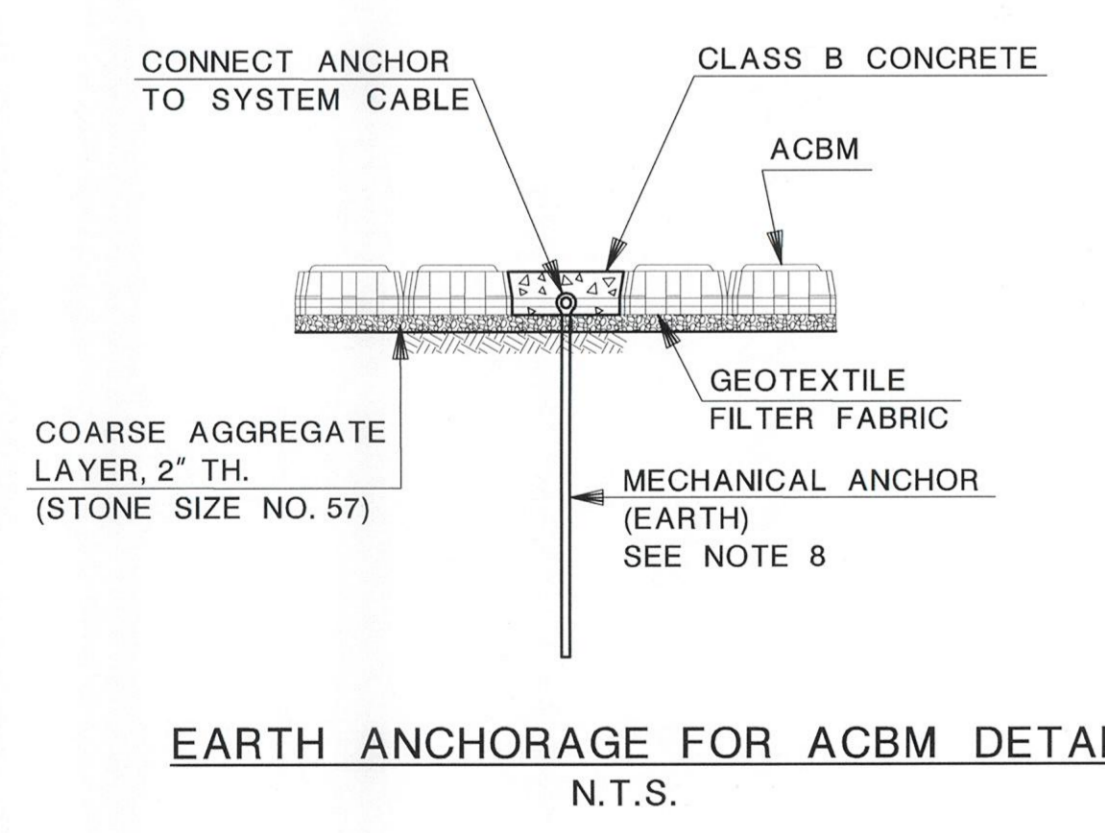
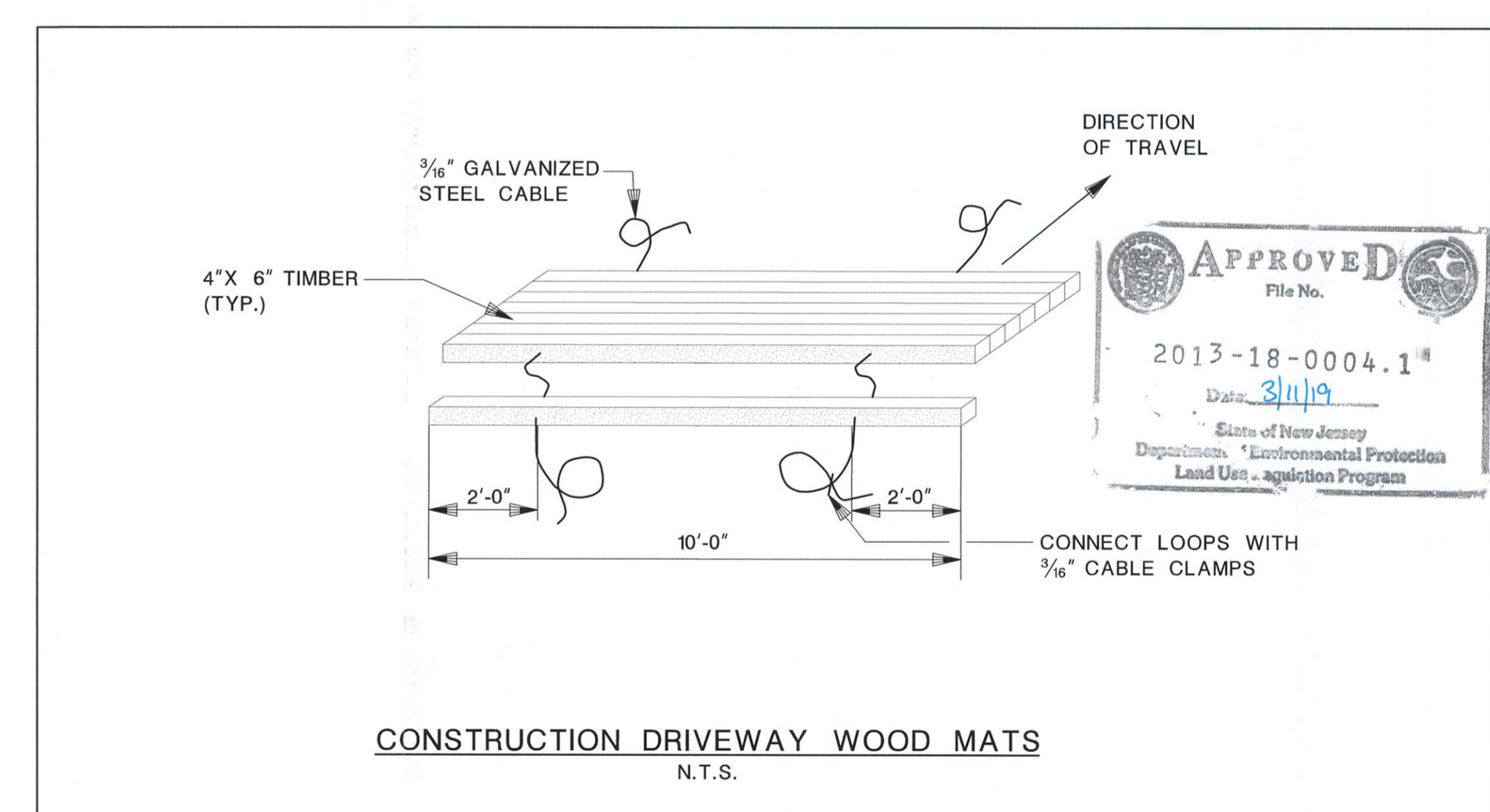
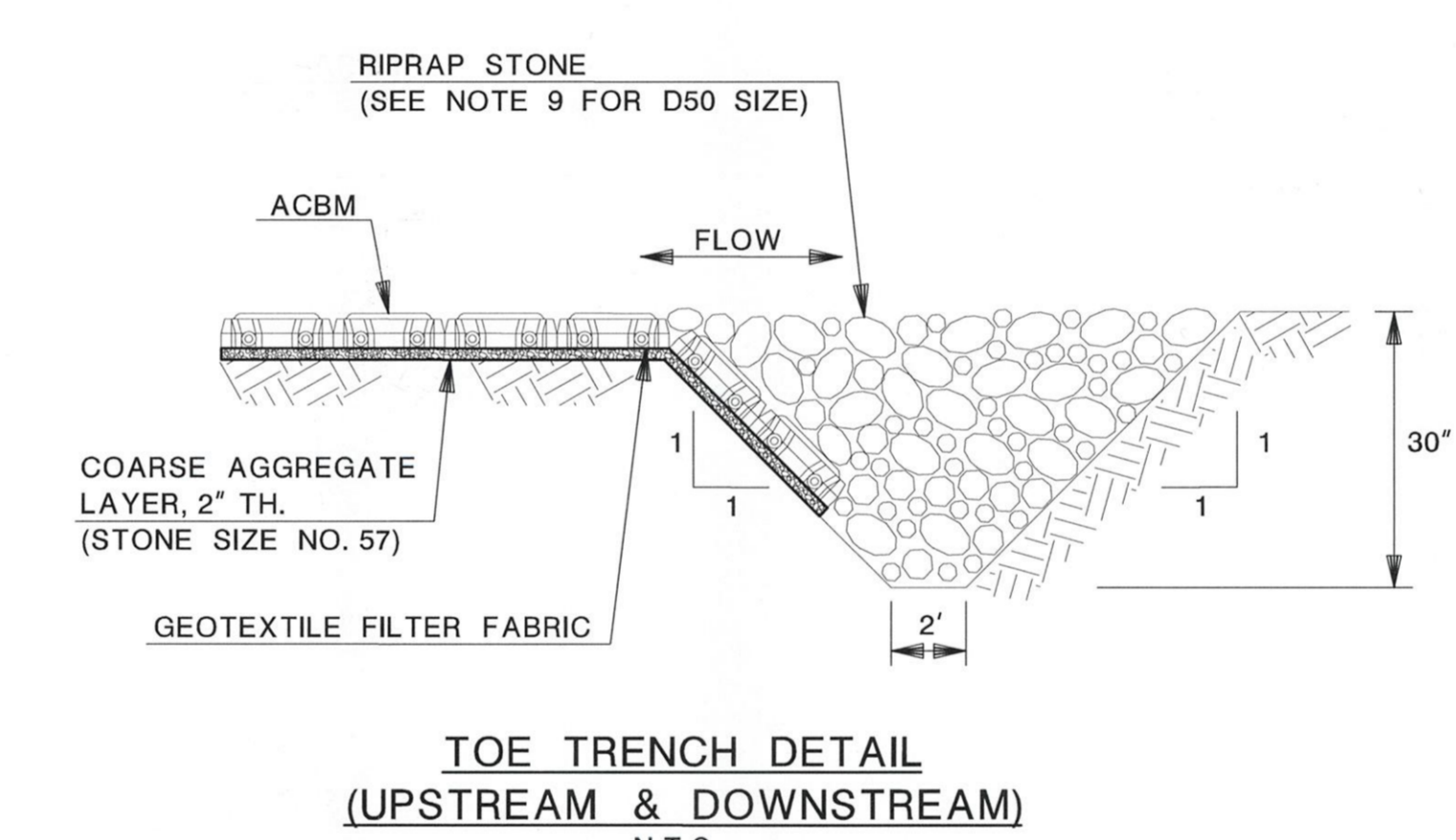
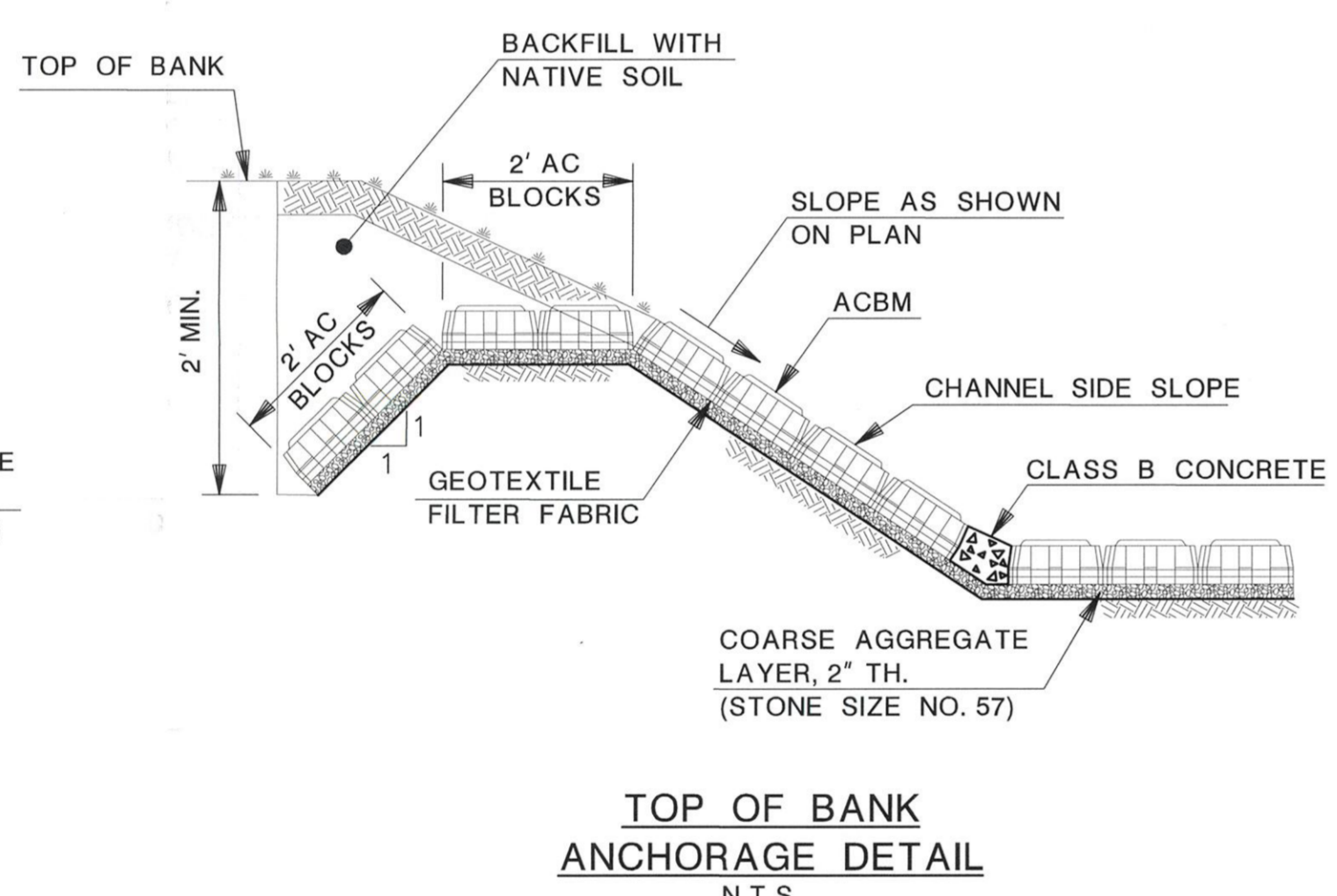
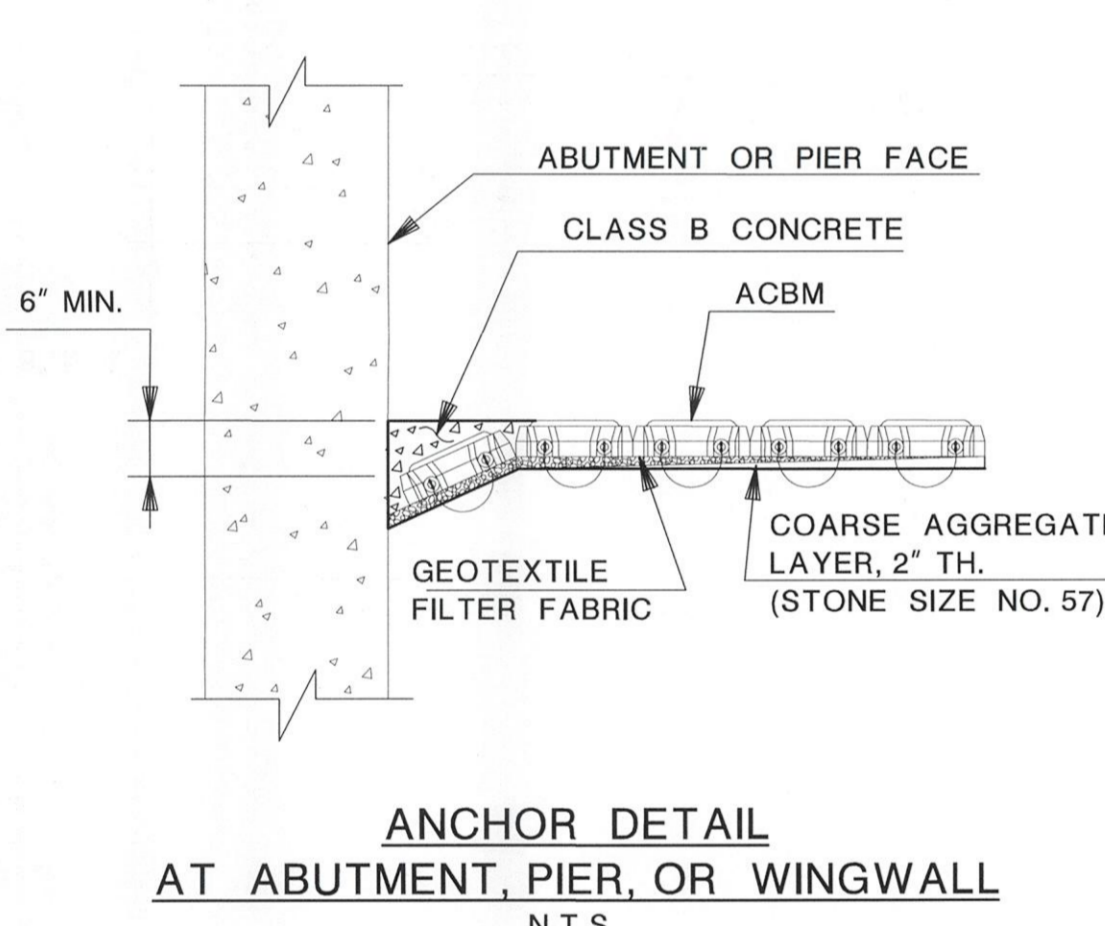
SHEET NO. 4 OF 6

REVISION	
DATE	DESCRIPTION
1/28/2019	REVISED TO ADDRESS NJDEP PERMIT COMMENTS



NOTE:
 MODIFY ACBM'S TO ACCOMMODATE MAT ANGLES BY OMITTING UNITS.

- NOTES:**
1. THE ARTICULATED CONCRETE BLOCK SHALL BE 6 IN. THICK (MINIMUM).
 2. THE CONTRACTOR MAY, AT HIS OPTION, AND AT NO EXTRA COST TO THE COUNTY, PROPOSE OTHER COMPARABLE ACBM'S FOR THE ENGINEER'S APPROVAL. DETAILED DESIGN CALCULATIONS MEETING THE STABILITY, CONSTRUCTION, AND INSTALLATION CRITERIA THAT SATISFY ALL PERMITTING AGENCY REQUIREMENTS, SHALL BE SUBMITTED WITH ANY PROPOSED CHANGE TO ACB MATTRESS TYPE. SUCH DESIGN SHALL BE SIGNED AND SEALED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.
 3. CONTRACTOR MAY, DEPENDING UPON METHOD OF INSTALLATION, PROPOSE DIFFERENT WIDTHS OF ACB MATS CONSISTENT WITH EQUIPMENT AND/OR METHOD OF INSTALLATION.
 4. MODIFIED MATS SHALL BE CONSTRUCTED BY REMOVING THE REQUIRED BLOCKS SO THE REQUIRED MAT SHAPE CAN BE OBTAINED.
 5. CONTRACTOR SHALL SUBMIT HIS DETAILS FOR METHOD OF INSTALLATION OF PROPOSED ACB MATS INCLUDING EQUIPMENT, METHOD OF ACCESS TO THE SITE, INSTALLATION OF GEOTEXTILE AND METHOD OF VERIFYING FINAL ACB MAT LAYOUT THAT INCLUDES THE EARTH AND ROCK ANCHORS. THE VERTICAL OFFSET BETWEEN ADJACENT BLOCKS IN THEIR FINAL POSITION SHALL NOT BE MORE THAN 1/2 INCH. THE CONTRACTOR SHALL SUBMIT DETAILED "SHOP DRAWINGS", SPECIFICATIONS AND METHOD OF INSTALLATION FOR THE RESPECTIVE ANCHORS FOR APPROVAL.
 6. THE ACTUAL PLACEMENT OF ACB MAT, ALONG AND ACROSS THE RIVER BED, MAY VARY DEPENDING UPON THE EXISTING SITE CONDITION.
 7. THE ACB MAT SHALL BE PLACED BUTTING SUCH THAT THE GAP BETWEEN SIDE-BY-SIDE MATS IS NOT MORE THAN 1/2 INCH.
 8. EARTH MECHANICAL ANCHORS SHALL BE PROVIDED WITHIN EACH ACB MAT SUBJECT TO THE FOLLOWING CRITERIA:
 EARTH MECHANICAL ANCHOR: MINIMUM LENGTH = 3 FEET.
 IF THE LENGTH OF THE ACB MAT IS LONGER THAN 8 FEET, ANCHORS SHALL BE PROVIDED AT 8 FOOT CENTER TO CENTER DISTANCE WITHIN THE MAT. THE CONTRACTOR MUST ENSURE THAT THE ANCHORS ARE ATTACHED TO THE CABLES FORMING THE ACB MAT AND FILLED WITH CONCRETE AS SHOWN.
 9. THE ACB MAT SHALL BE ANCHORED UPSTREAM AND DOWNSTREAM BY LOWERING TWO BLOCKS INTO A TRENCH, AS SHOWN. THE TRENCH SHALL BE FILLED WITH MEDIUM STONE DIAMETER (D50) OF 12 INCH.
 10. NO SEPARATE PAYMENT WILL BE FOR GEOTEXTILE, CONCRETE CLASS B, AND COARSE AGGREGATE STONE, SIZE NO. 57. COST FOR THESE ITEMS SHALL BE INCLUDED IN THE PAY ITEM "ARTICULATED CONCRETE BLOCK MATTING, 6", OPEN CELL".
 11. COST OF EXCAVATION FOR TOE-IN TRENCH AND TOP OF SLOPE ANCHORAGE TO BE INCLUDED IN THE PAY ITEM "EXCAVATION, UNCLASSIFIED".
 12. FILL THE AC BLOCK OPEN CELLS WITH NATIVE SOIL.



ARTICULATED CONCRETE BLOCK MAT (ACBM)
 N.T.S.

UNION COUNTY ENGINEERING
 EAST HAZELWOOD AVENUE BRIDGE (Ra09)
 OVER SOUTH BRANCH RAHWAY RIVER
 SCOUR COUNTERMEASURES
 CITY OF RAHWAY

CONSTRUCTION DETAILS

ERIC J. BOSCHEN, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0385200

DATE: 10/5/18

Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J.

SCALE: NONE

DATE: OCTOBER 2018

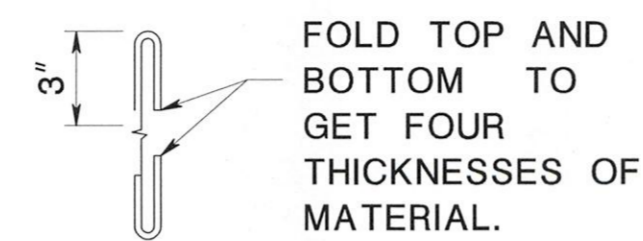
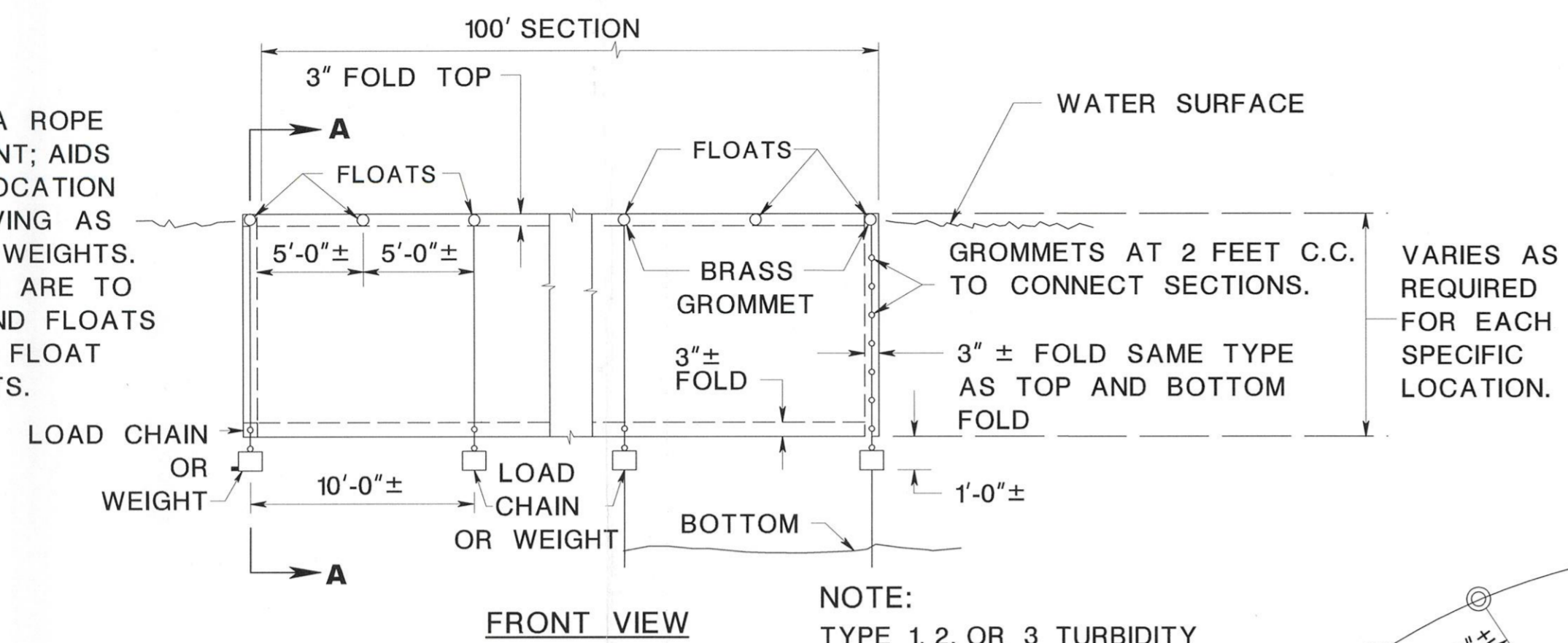
SHEET NO. 5 OF 6

REVISION	
DATE	DESCRIPTION



NOTE:

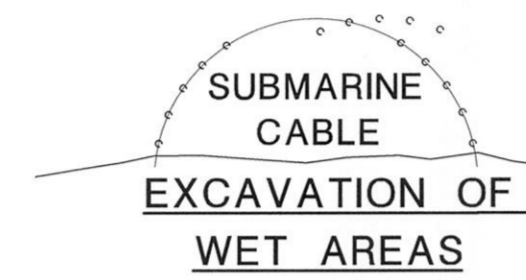
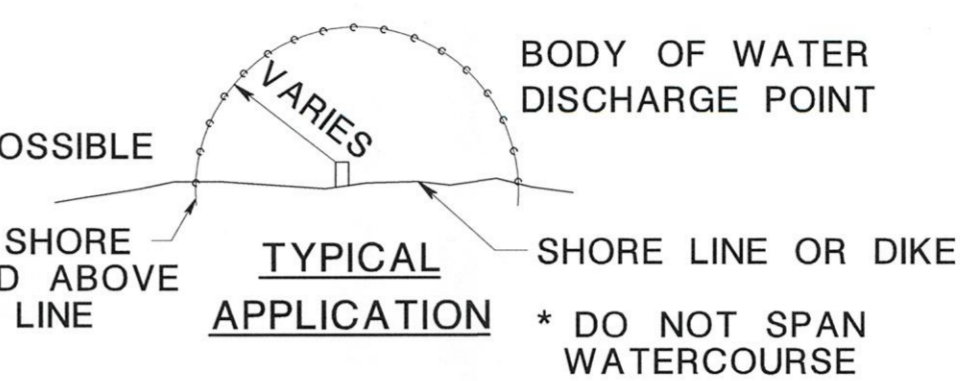
1/4" NYLON OR MANILA ROPE FORMS REINFORCEMENT; AIDS IN REMOVAL OR RELOCATION OF BARRIER BY SERVING AS A PICK-UP LINE FOR WEIGHTS. ROPES AND WEIGHTS ARE TO BE ATTACHED TO END FLOATS AND EVERY SECOND FLOAT BETWEEN END FLOATS.



SIDE VIEW
FOLDING DETAIL

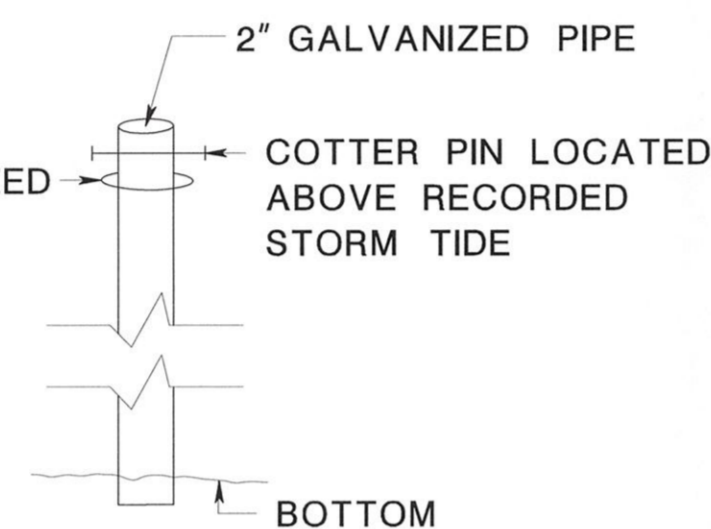
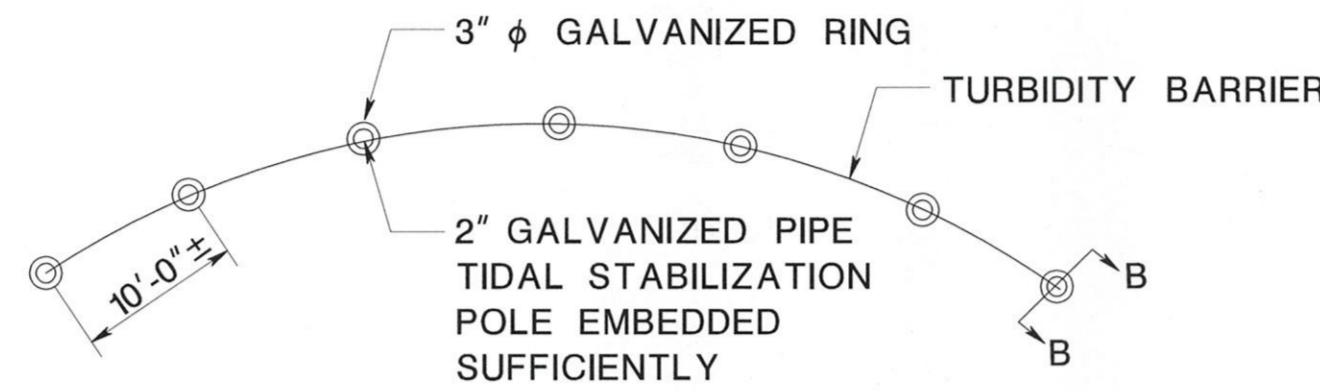
NOTE:

KEEP AS CLOSE TO SHORE, AS POSSIBLE
ANCHOR ON SHORE AT EACH END ABOVE HIGH WATER LINE



NOTE:

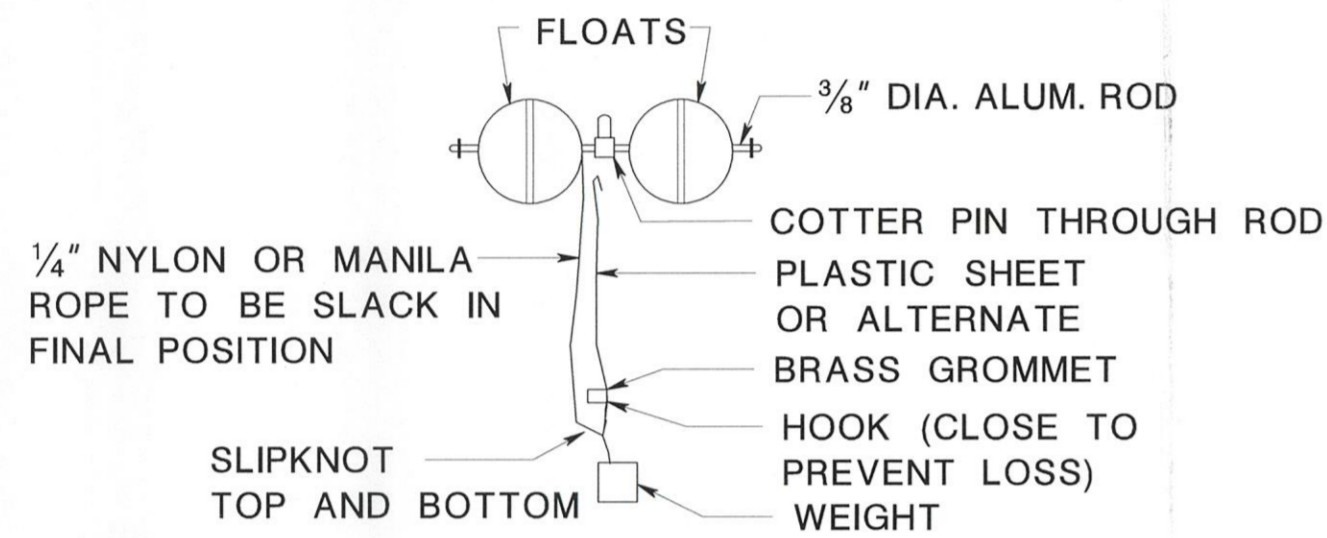
TYPE 1, 2, OR 3 TURBIDITY BARRIER TO FIT EXISTING CONDITION AS APPROVED BY THE RE.



FLOATING TURBIDITY BARRIER

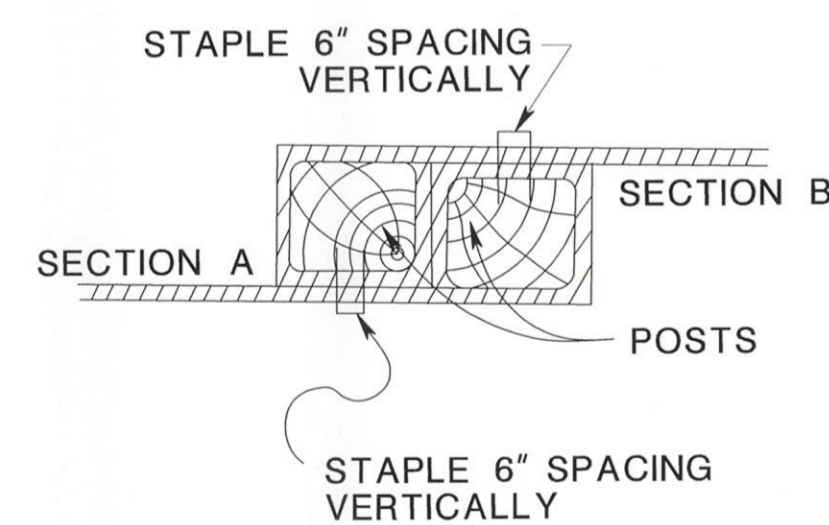
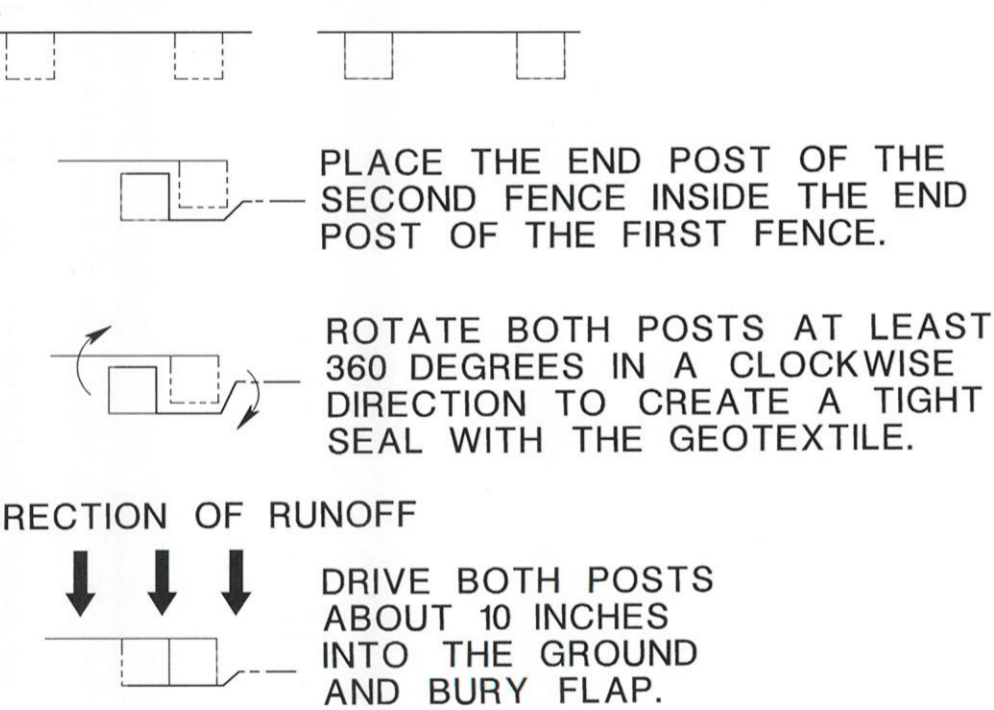
NOTES:

1. PLACE TURBIDITY BARRIER AS TO EFFECTIVELY CONTROL SILT DISPERSION UNDER THE CONDITIONS PRESENT ON A PARTICULAR PROJECT.
2. USE APPROPRIATE NAVIGATIONAL WARNING LIGHTS WHEN USED NEXT TO NAVIGATIONAL CHANNEL.
3. FASTEN TURBIDITY BARRIER TO EMBEDDED GALVANIZED PIPE IN TIDAL OR FLOWING CONDITIONS TO KEEP BARRIER IN PLACE.

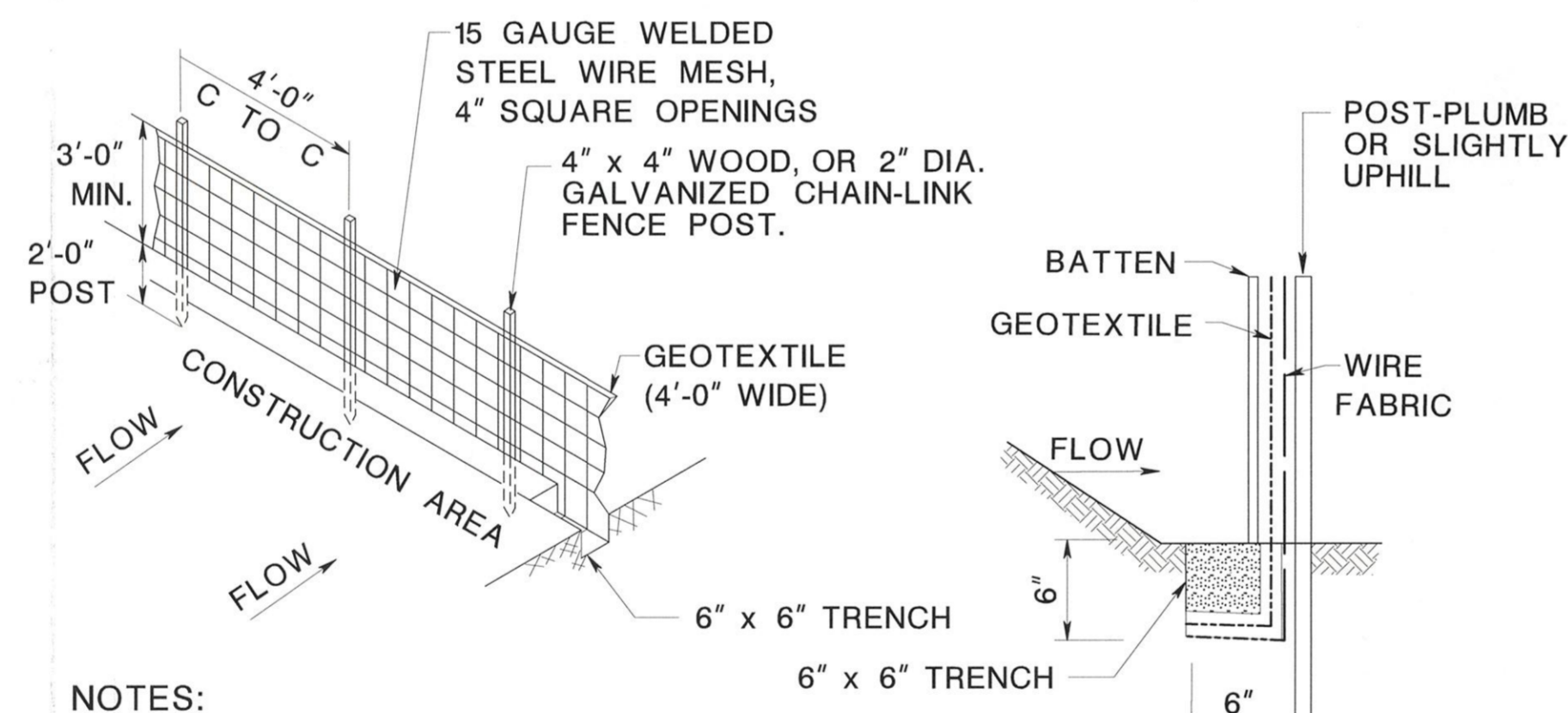


NOTE: SUITABLE ALTERNATE MAY BE FASTENED TO STAKES DRIVEN INTO THE BOTTOM IN LIEU OF FLOATS AND WEIGHTS.

SECTION A-A



ATTACHING TWO SILT FENCES



NOTES:

1. SECURELY FASTEN GEOTEXTILE TO WIRE FABRIC BY USE OF WIRE TIES OR HOG RINGS, THEN SANDWICH BETWEEN A 1" x 3" x 3' BATTEN AND THE POSTS PLACING SCREWS, OR APPROVED FASTENERS, AT 6 INCH INTERVALS STARTING 3 INCHES FROM TOP.
2. BURY FENCE POST 2'-0" BELOW GROUND.
3. BURY BOTTOM 1 FOOT OF GEOTEXTILE AS PER SILT FENCE AND TAMP IN PLACE.
4. SECURELY FASTEN ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE TO A COMMON POST BY WRAPPING EACH END OF THE GEOTEXTILE AROUND A BATTEN TWICE AND ATTACHING THE BATTEN TO POST WITH SCREWS AT 6 INCH INTERVALS STARTING 3 INCHES FROM THE TOP. DO NOT SPLICE INDIVIDUAL ROLLS AT LOW POINTS.
5. BURY 6" OF WIRE FABRIC IN TIDAL AREAS.

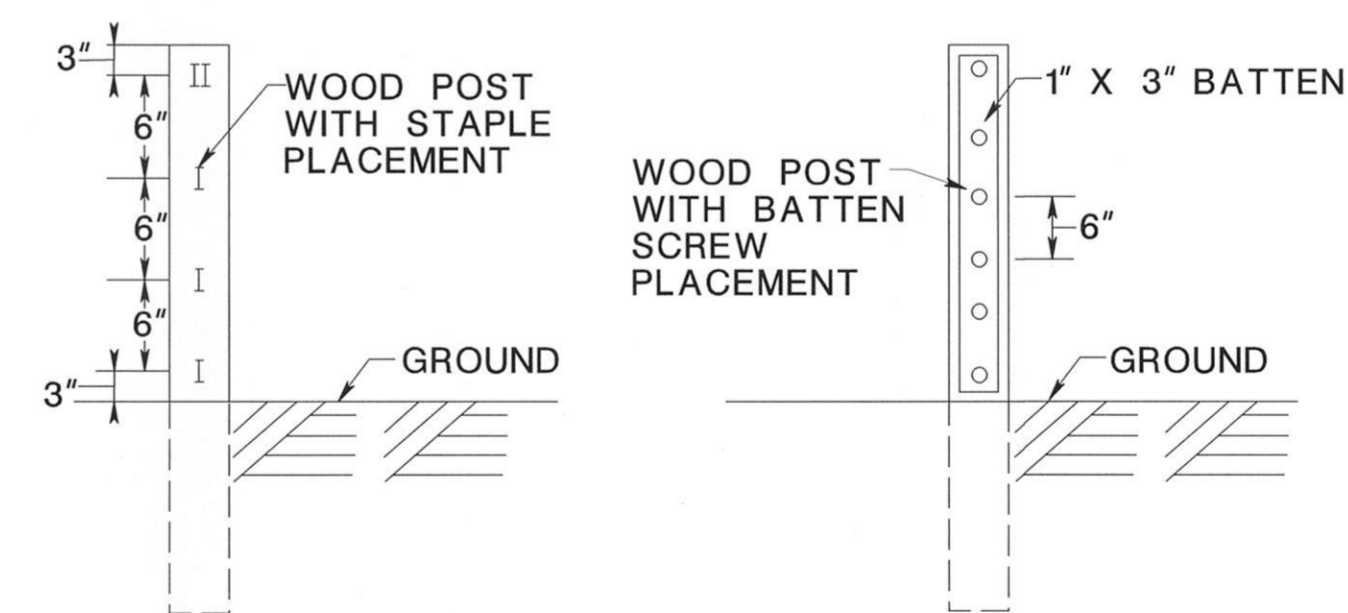
HEAVY DUTY SILT FENCE

FASTENERS FOR WOOD POSTS

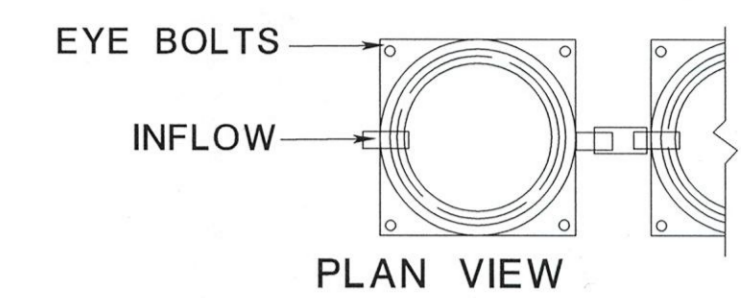
	GAUGE	CROWN	LEGS	STAPLES / POST
WIRE STAPLES	17 MIN.	3/4" WIDE	1/2" LONG	5 MIN.
SCREWS		LENGTH 2"	PHILLIPS HEADS 2"	SCREW / POST 6 MIN.

SOURCE: GA SWCC

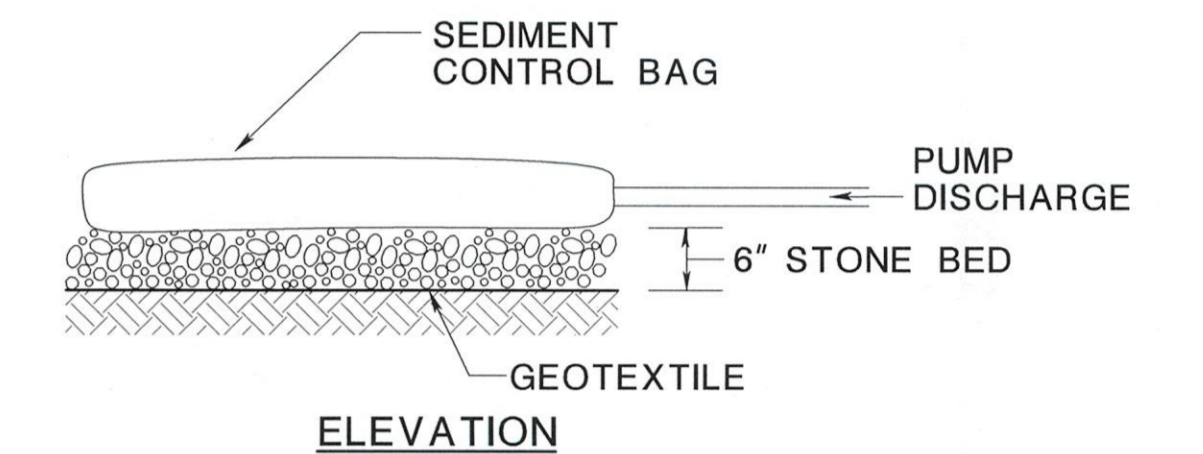
FASTENER PLACEMENT



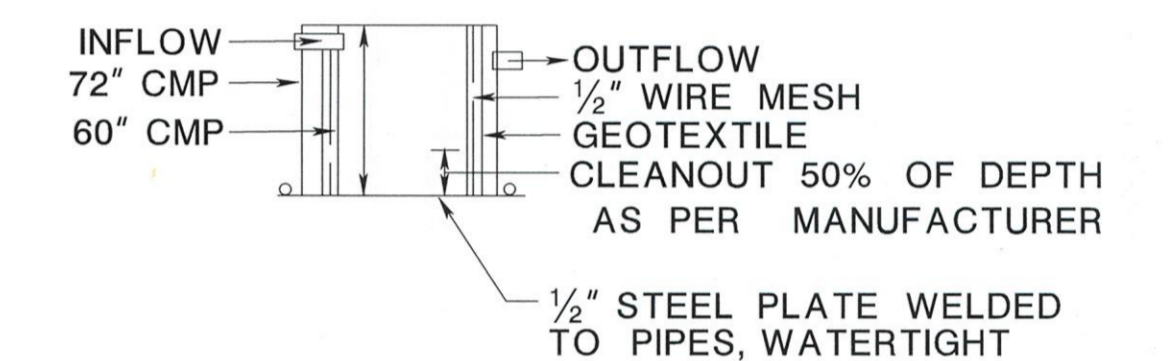
SILT FENCE FASTENER REQUIREMENTS



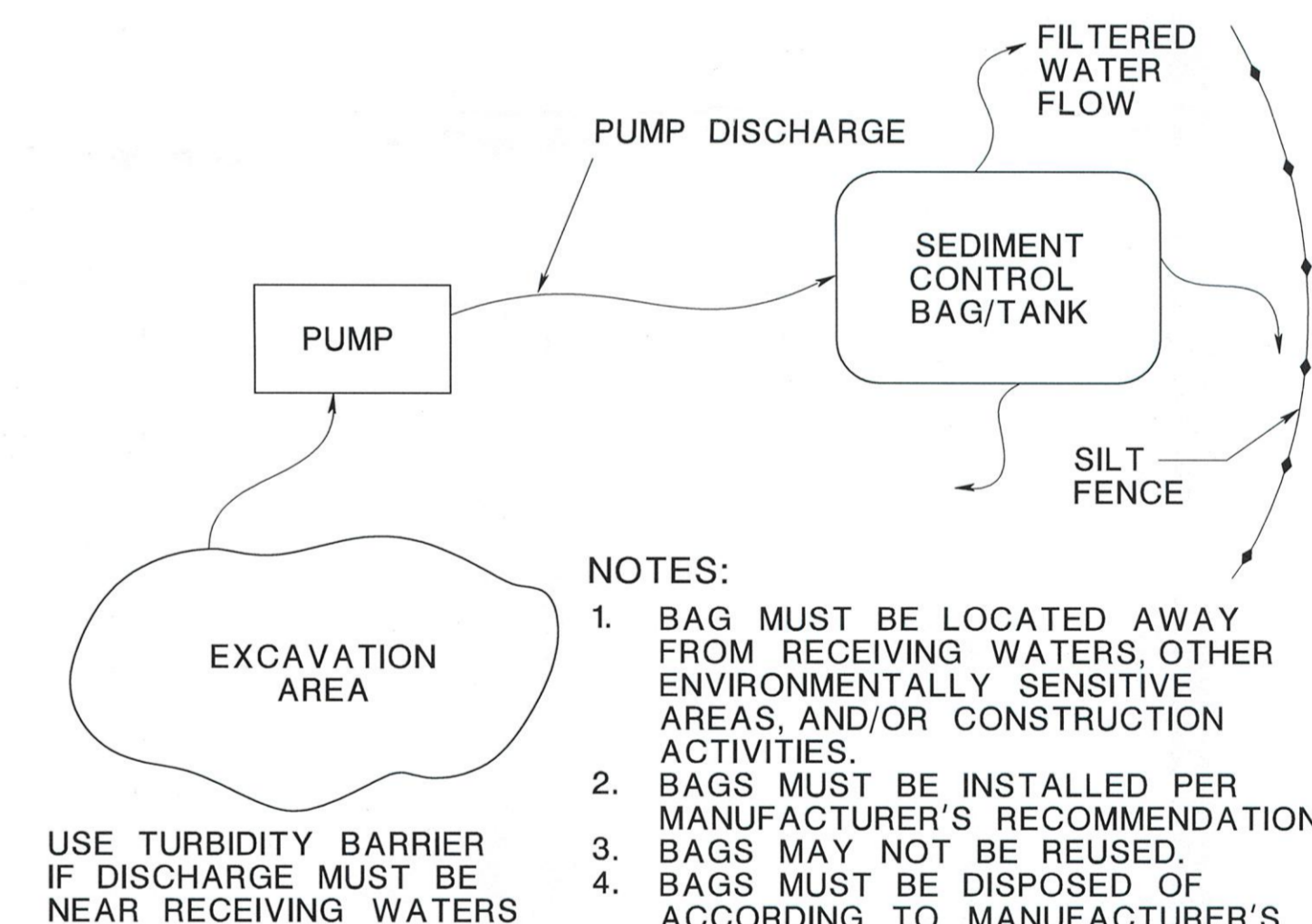
EXAMPLE OF PORTABLE SEDIMENT TANK



SEDIMENT CONTROL BAG



ELEVATION



NOTES:

1. BAG MUST BE LOCATED AWAY FROM RECEIVING WATERS OTHER ENVIRONMENTALLY SENSITIVE AREAS, AND/OR CONSTRUCTION ACTIVITIES.
2. BAGS MUST BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
3. BAGS MAY NOT BE REUSED.
4. BAGS MUST BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

PLAN VIEW

SEDIMENT CONTROL TANK OR BAG



UNION COUNTY ENGINEERING
EAST HAZELWOOD AVENUE BRIDGE (Ra09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY

CONSTRUCTION DETAILS

ERIC J. BOSCHEN, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0385200

DATE	REVISION DESCRIPTION	DATE
		10/5/18

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

SCALE: NONE
DATE: OCTOBER 2018
SHEET NO. 6 OF 6

APPENDIX B

US Army Corps of Engineers Permit



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

JUL 19 2019

REGULATORY BRANCH

SUBJECT: Department of the Army Permit Application File Number NAN-2019-00570-EMI by Union County Division of Engineering for Bridge Scour Reconstruction at the East Hazelwood Avenue Bridge over the South Branch of the Rahway River in the City of Rahway, Union County, New Jersey

1. PERMITTEE:

Union County Division of Engineering
Attn: Thomas O. Mineo
2325 South Avenue
Scotch Plains, New Jersey 07076

2. On April 19, 2019 the New York District of the U.S. Army Corps of Engineers received a request for Department of the Army authorization to replace deteriorated scour protection along the East Hazelwood Avenue Bridge (Ra-09). To replace the scour, approximately 218 cubic yards of Articulated Concrete Block Matting (ACBM) and riprap will be placed over an area of approximately 8,160-square feet of which, approximately 208-cubic yards will be placed below the plane of Spring High Water. A temporary cofferdam will be installed to reduce impacts to the channel and water quality. The project is located at the East Hazelwood Avenue Bridge (Ra-09) over the South Branch of the Rahway River in the City of Rahway, Union County, New Jersey.

3. The specific applicant-provided details are as shown on the attached permit drawings titled "East Hazelwood Avenue Bridge (Ra-09) Over South Branch of the Rahway River, Scour Protection" dated March 2019, prepared by Dewberry Engineers, Inc.

4. This determination covers only the work described in the submitted material. Any major changes in the project may require additional authorizations from the New York District of the U.S. Army Corps of Engineers.

5. Based on the information submitted to this office and accomplishment of any required notification in accordance with the applicable federal requirements, our review of the subject work indicates that an individual Department of the Army permit is not required. It appears that the activities within the jurisdiction of this office could be accomplished under Department of the Army Nationwide General Permit Number 3 MAINTENANCE, Number 15 U.S. COAST GUARD APPROVED BRIDGES, Number 33 TEMPORARY CONSTRUCTION, ACCESS, AND DEWATERING and in accordance with Section 404 of the Clean Water Act (33 U.S.C. 1344). The nationwide permits are prescribed at Reissuance of Nationwide Permits in the Federal Register dated January 6, 2017 (82 FR 1860). The subject work may be performed without further authorization from this office provided it complies with Sections A through D, Number 3 MAINTENANCE, Number 15 U.S. COAST GUARD APPROVED BRIDGES, and Number 33 TEMPORARY CONSTRUCTION, ACCESS, AND DEWATERING; New York District regional conditions;

SUBJECT: Department of the Army Permit Application File Number NAN-2019-00570-EMI by Union County Division of Engineering for Bridge Scour Reconstruction at the East Hazelwood Avenue Bridge over the South Branch of the Rahway River in the City of Rahway, Union County, New Jersey

- 2 -

the following work-specific Special Conditions listed below; and any applicable regional conditions added by the State of New York.

6. Other than the work-specific Special Conditions listed below, the 2017 nationwide general permits in the State of New York, including their final regional conditions, water quality certifications, and coastal zone concurrence statements are available at:

www.nan.usace.army.mil/Portals/37/docs/regulatory/publicnotices/Regional%20Gen%20Permit/PN-RB%20NAN%20FinalRegionalConditionsWQC%20CZMforNYdated%2021-MAR-2017.pdf

If you require a specific paper copy, please contact our Regulator-of-the-Day at 917-790-8511 to request one be mailed to you. Please be sure to have the above eighteen-character file number readily available when you call.

7. Work-specific Special Conditions:

(A) 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.

(B) The permittee shall sign and submit the attached compliance certification form to this office **within 30 days of COMPLETION** of the regulated activity authorized by this permit and any mitigation work required by Special Condition.

(C) The permittee, and their agents, shall take actions to prevent construction materials, including debris, from entering any waterway to become drift or pollution hazards.

(D) The permittee, and their agents, shall comply with the attached U.S. Coast Guard Bridge Administration General Construction Requirements, Conditions 1 through 22, which are hereby incorporated into the permit authorization by reference, including any other relevant U.S. Coast Guard requirements as per letter #16594, dated July 15, 2019.

8. Please note that this nationwide general permit (NWGP) verification is based on a preliminary jurisdictional determination (JD). A preliminary jurisdictional determination (JD) is not appealable. If you wish, prior to commencement of the authorized work you may request an approved jurisdictional determination (JD), which may be appealed, by

JUL 19 2019

SUBJECT: Department of the Army Permit Application File Number NAN-2019-00570-EMI by Union County Division of Engineering for Bridge Scour Reconstruction at the East Hazelwood Avenue Bridge over the South Branch of the Rahway River in the City of Rahway, Union County, New Jersey

- 3 -

contacting the New York District, US Army Corps of Engineers for further instructions. To assist you in this decision and address any questions you may have on the differences between preliminary and approved jurisdictional determinations, please review US Army Corps of Engineers Regulatory Guidance Letter Number 16-01, which can be found at:

<https://usace.contentdm.oclc.org/utis/getfile/collection/p16021coll9/id/1256>

9. This verification is valid until March 18, 2022, unless the nationwide general permits are modified, reissued, or revoked before then. This verification will remain valid until March 18, 2022, if the subject work activity complies with the terms of any subsequent modifications of the nationwide general permits. If the nationwide general permits are suspended, revoked, or modified in such a way that the subject activity would no longer comply with the terms and conditions of a nationwide general permit, and the proposed work activity has commenced, or is under contract to commence, the permittee will have twelve (12) months from the date of such permit action to complete the regulated work.

10. In order for us to better serve you and others, please complete our Customer Service Survey located at:

<http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx>

11. Any inquiries should be directed to our Regulator-of-the-Day at 917-790-8511. Please be sure to have the above eighteen-character file number readily available when you call.



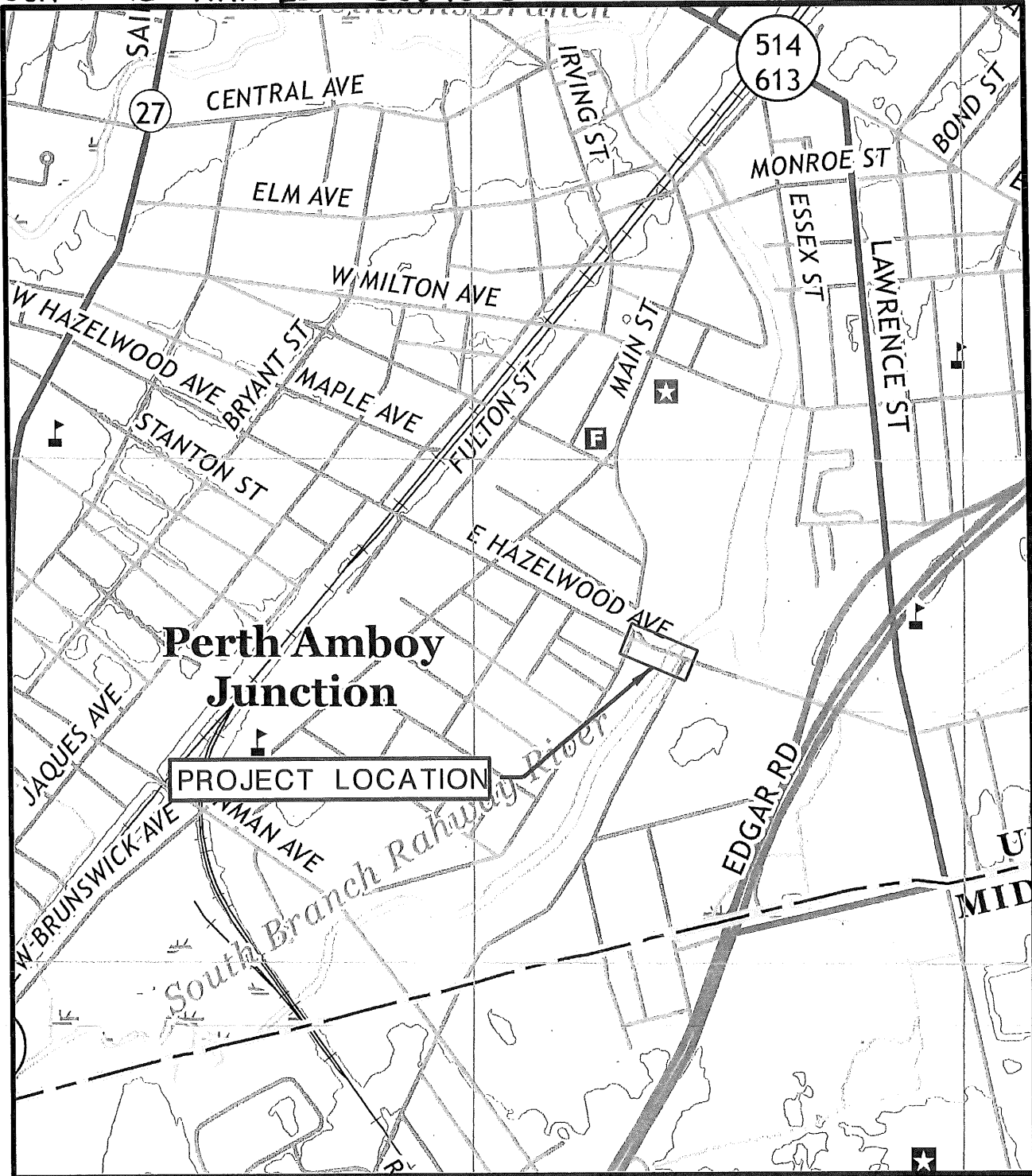
Ronald R. Pinzon
Chief, Eastern Section

Enclosures (3)

1. Dated Permit Drawings
2. Completion Form
3. USCG General Construction Requirements Conditions (1-22)

Copies Furnished:

Dewberry Engineers, Inc.
Attn: Eric J. Boschen
2200 Broadacres Drive, Suite #410
Bloomfield, New Jersey 07003



**Perth Amboy
Junction**

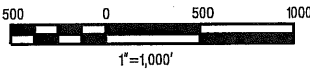
PROJECT LOCATION

PROJECT STATE PLANE COORDINATES:
E(X):554,818 N(Y): 643,579

UNION COUNTY ENGINEERING
SCOUR COUNTER MEASURES
EAST HAZLEWOOD AVENUE
CITY OF RAHWAY, UNION COUNTY, NEW JERSEY

USGS LOCATION MAP

10F5



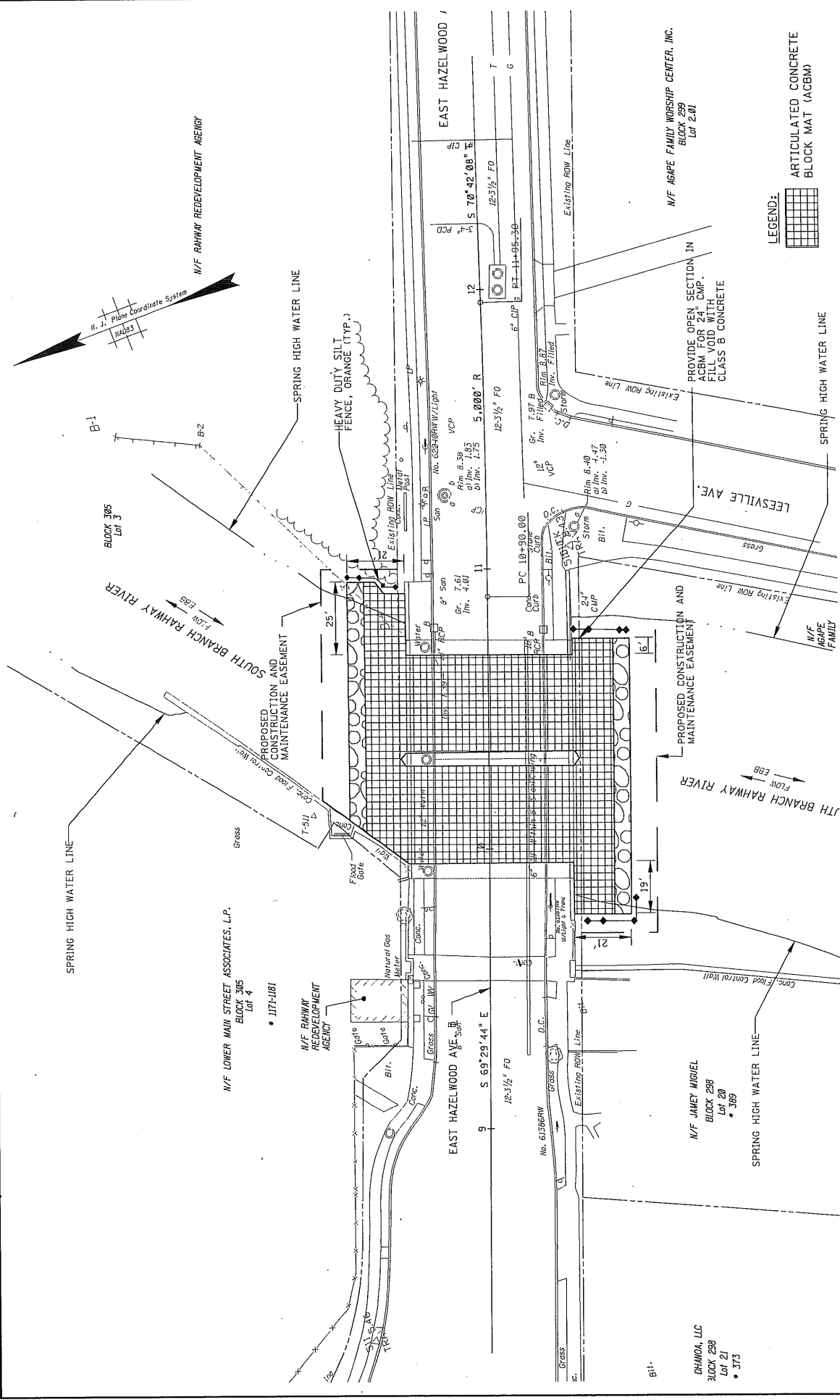
JUL 19 2019

SOURCE:
USGS RARITAN, NJ QUADRANGLE, DATED 2016

Dewberry Engineers Inc.
Bloomfield, N.J.
CERTIFICATE OF AUTHORIZATION
NO. 24GA28047600

SCALE:
1"=1,000'

DATE: APRIL 2018
Attachment



CONSTRUCTION PLAN

**EAST HAZELWOOD AVENUE BRIDGE (R009)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES**
CITY OF RAHWAY, UNION COUNTY, NJ

APPLICANT:
COUNTY OF UNION

DATE: AUGUST 2018
SCALE: 1" = 50'
2 OF 5

Dewberry

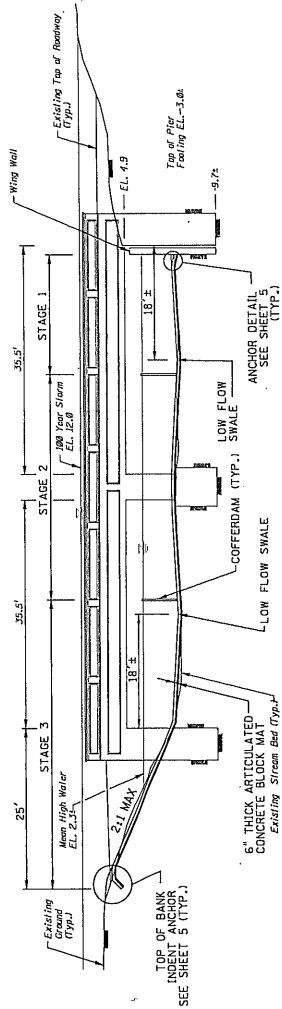
DEWBERRY ENGINEERS INC.
200 BROADACRES DRIVE
BLOOMFIELD, NJ 07003

CERTIFICATE OF AUTHORIZATION NO. 24GA2B047600

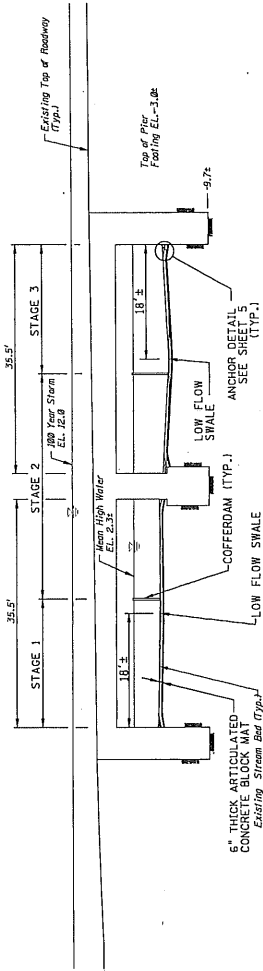
3/25/2019 1:22:10 PM pdfplotjg Model default

abrahamson

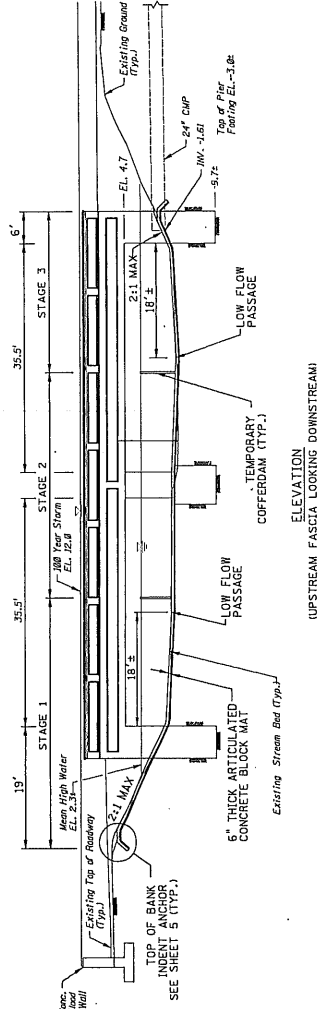
- GENERAL NOTES:**
1. MAINTAIN SOUTH BRANCH RAILWAY RIVER FLOW AT ALL TIMES REGARDLESS OF WHICH SCOUR CONTROL MEASURE IS INSTALLED. FLOODING TURBIDITY BARRIER MUST BE USED.
 2. FLUMPAGE OF SEDIMENT-LOADED WATER FROM DEWATERING ACTIVITIES DIRECTLY INTO THE RIVER IS PROHIBITED.
 3. DO NOT USE EARTHEN DAMS AS COFFERDAMS.
 4. USE NATURAL SUBSTRATE FROM THE AREA OF DISTURBANCE TO FILL VOIDS WITHIN THE ARTICULATED CONCRETE BLOCK MAT. FILLING MATERIAL SHOULD BE COMPACTED TO A MINIMUM DENSITY OF 95%. FILLING MATERIAL IS NOT AVAILABLE. FILL VOIDS FLUSH WITH THE TOP OF MATTING.
 5. THE FOLLOWING TIMING RESTRICTIONS APPLY: IN ORDER TO PROTECT THE GENERAL GAME AND ANADROMOUS FISHERY RESOURCES IN THE SOUTH BRANCH RIVER, ALL CONSTRUCTION ACTIVITIES ARE PROHIBITED BETWEEN APRIL 1 AND JULY 31 EACH YEAR. IN ADDITION, ANY ACTIVITY WITHIN THIS SCHEDULED PERIOD WHICH COULD CAUSE AN INCREASE IN THE NATURAL LEVEL OF TURBIDITY IS ALSO PROHIBITED DURING THIS PERIOD. THE SCHEDULED PERIODS SHOULD BE DETERMINED THAT PROPER PRECAUTIONS HAVE NOT BEEN TAKEN TO ENSURE CONTINUOUS COMPLIANCE WITH THIS CONDITION.
 6. UPSTREAM AND DOWNSTREAM SECTIONS DEPICT THE FINAL CONSTRUCTION AND WORK ZONES FOR 3 STAGES OF CONSTRUCTION.
 7. BRIDGE FOOTING INFORMATION AS SHOWN IS TAKEN FROM 1921 BRIDGE PLAN.
- WATERWAY STAGING AND DIVERSION NOTES:**
1. STREAM DIVERSION STAGES 1, 2 AND 3 CAN BE DONE IN ANY ORDER. EACH STAGE MUST BE DONE AT A SEPARATE TIME FROM OTHER STAGES.
 2. THE MAXIMUM ELEVATION OF THE COFFERDAM IS BASED ON THE APPROXIMATE MEAN HIGH WATER ELEVATION.



ELEVATION
DOWNSTREAM FASCIA LOOKING UPSTREAM



SECTION A-A
(AT ROADWAY & LOOKING DOWNSTREAM)



ELEVATION
UPSTREAM FASCIA LOOKING DOWNSTREAM



DEWBERRY ENGINEERS INC.
200 BROADACRES DRIVE
BLOOMFIELD, NJ 07003

CERTIFICATE OF AUTHORIZATION NO. 24GA28047600

ELEVATIONS AND SECTIONS

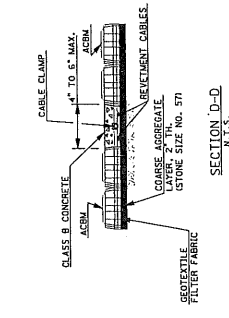
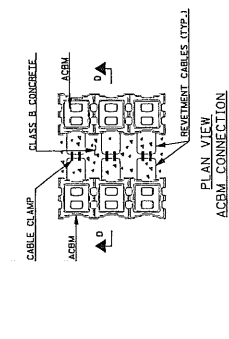
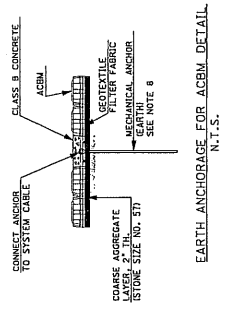
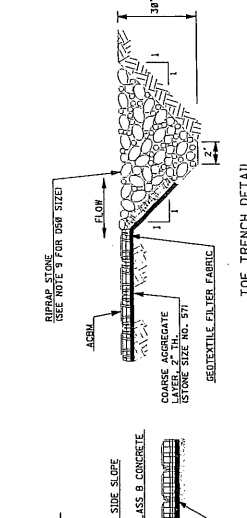
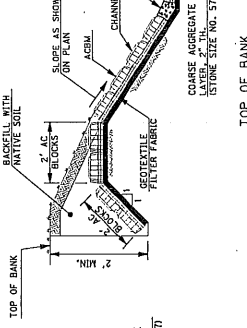
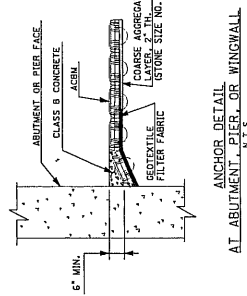
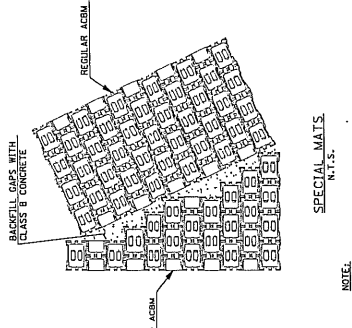
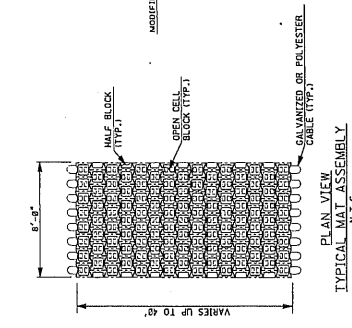
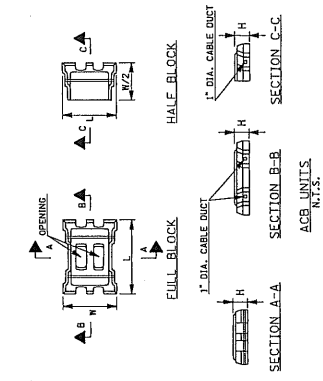
EAST HAZELWOOD AVENUE BRIDGE (R009)
OVER SOUTH BRANCH RAILWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAILWAY, UNION COUNTY, NJ

APPLICANT:
COUNTY OF UNION

DATE: AUGUST 2018

SCALE: 1" = 30'

3 OF 5
JUL 19 2019



ARTICULATED CONCRETE BLOCK MAT (ACBM) N.T.S.

Dewberry
 DEWBERRY ENGINEERS INC.
 200 BROADACRES DRIVE
 BLOOMFIELD, NJ 07003
 CERTIFICATE OF AUTHORIZATION NO. 24GA28047600

CONSTRUCTION DETAILS

EAST HAZELWOOD AVENUE BRIDGE (R009)
 OVER SOUTH BRANCH RAHWAY RIVER
 SCOUR COUNTERMEASURES
 CITY OF RAHWAY, UNION COUNTY, NJ

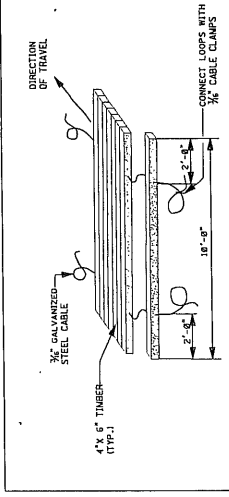
APPLICANT:
 COUNTY OF UNION

DATE: AUGUST 2018

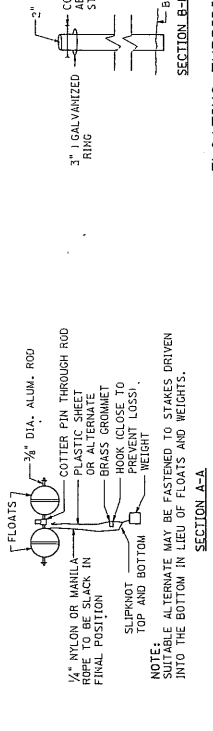
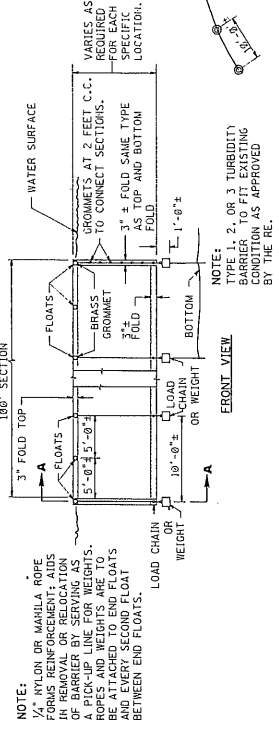
SCALE: NONE

40FS

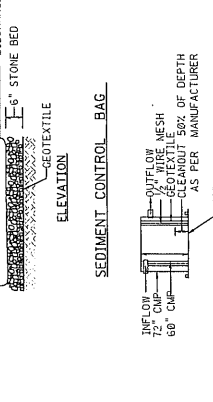
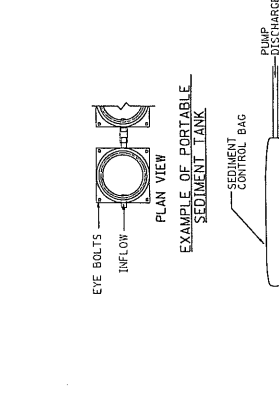
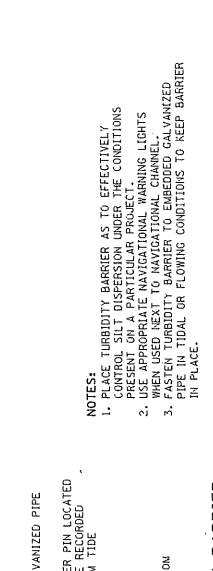
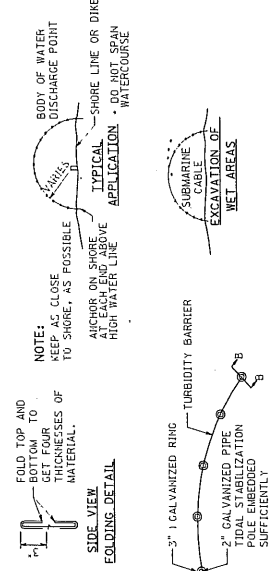
- NOTES:**
1. THE ARTICULATED CONCRETE BLOCK SHALL BE 4 IN. THICK MINIMUM.
 2. THE CONTRACTOR MAY, AT HIS OPTION, AND AT NO EXTRA COST TO THE COUNTY, PROPOSE OTHER COMPARABLE ACBM'S FOR THE ENGINEER'S APPROVAL. DETAILED DESIGN CALCULATIONS, MEETING THE DESIGN AND CONSTRUCTION REQUIREMENTS, SHALL BE SUBMITTED WITH ANY PROPOSED CHANGE TO ACB MATRESS TYPE. SUCH DESIGN SHALL BE SIGNED AND SEALED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.
 3. CONTRACTOR MAY, DEPENDING UPON METHOD OF INSTALLATION, PROPOSE DIFFERENT WIDTHS OF ACB MATS CONSISTENT WITH EQUIPMENT AND/OR METHOD OF INSTALLATION. REQUIRED MAT SHAPE CAN BE OBTAINED.
 4. CONTRACTOR SHALL SUBMIT HIS DETAILS FOR METHOD OF INSTALLATION OF PROPOSED GEOTEXTILE AND ROCK ANCHORS TO THE ENGINEER FOR APPROVAL. THE INSTALLATION OF GEOTEXTILE AND ROCK ANCHORS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND METHODOLOGY OF THE CONTRACTOR'S PROPOSED DESIGN. THE CONTRACTOR SHALL SUBMIT DETAILED "SHOP DRAWINGS", SPECIFICATIONS AND METHOD OF INSTALLATION FOR THE RESPECTIVE ANCHORS FOR APPROVAL.
 5. THE ACTUAL PLACEMENT OF ACB MAT, ALONG AND ACROSS THE RIVER BED, MAY VARY DEPENDING UPON THE EXISTING SITE CONDITION.
 6. THE ACB MAT SHALL BE PLACED BUTTING SUCH THAT THE GAP BETWEEN SIDE-BY-SIDE MATS IS NOT MORE THAN 1/2 INCH.
 7. EARTH MECHANICAL ANCHORS SHALL BE PROVIDED WITHIN EACH ACB MAT SUBJECT TO THE FOLLOWING CONDITIONS:
 a. EARTH MECHANICAL ANCHOR MINIMUM LENGTH IS 3 FEET.
 b. EARTH MECHANICAL ANCHORS SHALL BE PROVIDED AT 8 FOOT CENTER TO CENTER DISTANCE WITHIN THE MAT. THE CONTRACTOR MUST ENSURE THAT THE ANCHORS ARE ATTACHED TO THE CABLES FORMING THE ACB MAT AND FILLED WITH CONCRETE AS SHOWN.
 c. THE ACB MAT SHALL BE ANCHORED UPSTREAM AND DOWNSTREAM BY USING TWO BLOCKS OF 8" x 8" x 12" INCH. THE TRENCH SHALL BE FILLED WITH MEDIUM STONE DRAINER COURSE OF 1/2 INCH.
 d. NO SEPARATE PAVEMENT WILL BE FOR GEOTEXTILE, CONCRETE CLASS B, AND COARSE AGGREGATE LAYER, 2" THICK.
 e. COST FOR THESE ITEMS SHALL BE INCLUDED IN THE PAY ITEM "ARTICULATED CONCRETE BLOCK MATTING, 6\"/>
 8. FILL THE AC BLOCK OPEN CELLS WITH NATIVE SOIL.



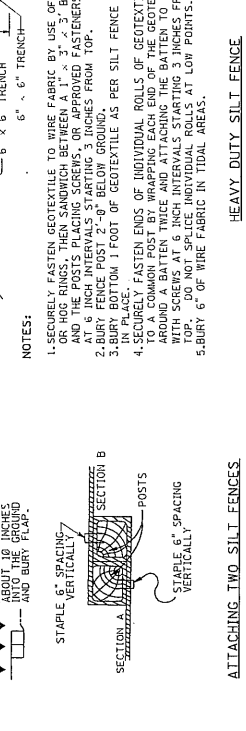
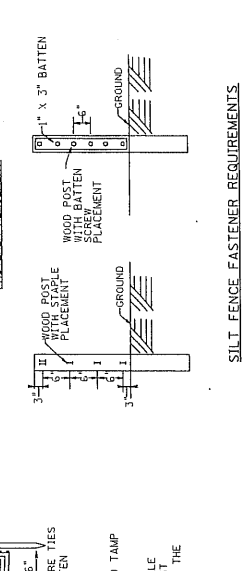
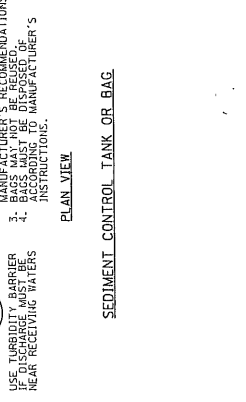
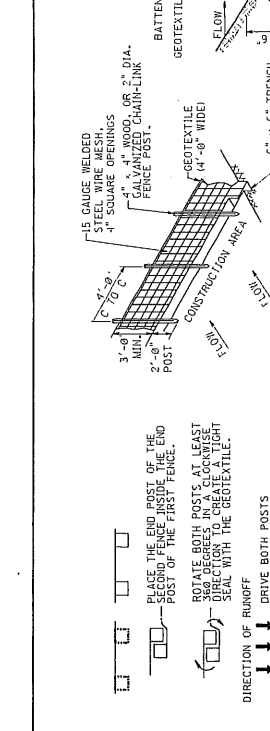
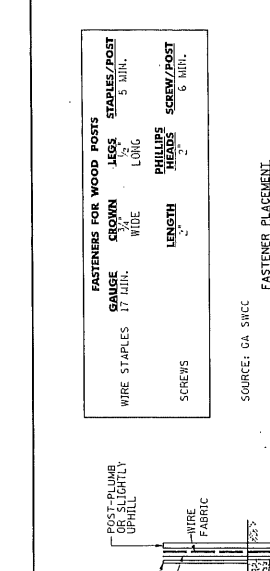
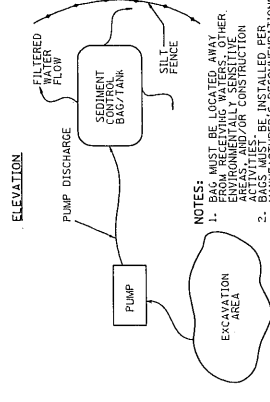
CONSTRUCTION DRIVEWAY HOOD MATS N.T.S.



FLOATING TURBIDITY BARRIER



SEDIMENT CONTROL BAG



SEDIMENT CONTROL TANK OR BAG

FASTENERS FOR WOOD POSTS

FASTENERS FOR WOOD POSTS

EAST HAZELWOOD AVENUE BRIDGE (R009)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY, UNION COUNTY, NJ

APPLICANT:
COUNTY OF UNION

DATE: AUGUST 2018
SCALE: NONE **SOF5**

CONSTRUCTION DETAILS

Dewberry®
DEWBERRY ENGINEERS INC.
200 BROADACRES DRIVE
BLOOMFIELD, NJ 07003
CERTIFICATE OF AUTHORIZATION NO. 24GA28047600

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
First Coast Guard District

Battery Park Bldg.
One South Street
New York, NY 10004-1466
Staff Symbol: (djb)
Phone: (212) 514-4336

16594
July 15, 2019

Dewberry Engineers Inc.
Mr. Ian Abrahamsen
Staff Engineer
200 Broadacres Drive, Suite 410
Bloomfield, NJ 07003

Dear Mr. Abrahamsen,

This is in response to your e-mail dated July 12, 2019 regarding scour countermeasures at the East Hazelwood Bridge across South Branch Rahway River, in Union County, NJ.

After reviewing the preliminary scour countermeasures plan, this office determined that this work does not require formal Coast Guard Bridge Permit as long as the scour materials do not reduce the existing channel depth.

Although this project will not require a formal bridge permit, we are providing the attached general construction requirements (enclosure 1) that apply for work on, over, near, or affecting the waterway and that must be complied with. These stipulations are based on the facts presently before us and additional requirements may be imposed if the contractor submits an approach or action not anticipated by this office. **Upon receipt and review of plans submitted pursuant paragraph 4 of enclosure (1), authorization to work over the waterway will be issued by this office.**

Please forward to this office, all permits/concurrence received from the Army Corps of Engineers and any other regulatory agency regarding the project.

If you have any questions, please contact me at the above number.

Sincerely,

A handwritten signature in cursive script that reads "Judy Leung-Yee".

J. Leung-Yee
Bridge Management Specialist
U.S. Coast Guard
By direction

E-Copy: Commander – Sector New York WWM

Enclosure (1): General Construction Requirements

U.S. Coast Guard Bridge Administration

GENERAL CONSTRUCTION REQUIREMENTS

1. All bridge closures, or bridge operating schedule changes, must be requested in writing, 90-days in advance, from the First Coast Guard District Bridge Branch Office. No channel restrictions, or vertical clearance reductions may be made without written approval from the above office.
2. Waterway closures/restrictions, barge placement or safety zones must also be requested a minimum of 90-days in advance. Please contact USCG Sector New York, 212 Coast Guard Drive, Staten Island, NY 10305-5005. Ph: (718) 354-4195/2353.
3. All submissions to the Coast Guard for review and approval must first be approved by the *owner of the bridge or their authorized agent*. All submission of plans, scope of work, and schedules of operation must be sent to the First Coast Guard District, Bridge Branch Office.
4. At least 30-days prior to commencement of any work, we must have for our review and approval, a copy of the construction plans, contractor schedule, preferably depicted in a time line graphic format, and the contractor's daily hours of operation. The construction plan package must show the following: (1) a plan of the entire waterway area in the vicinity of the project. (2) The location of work barges during working and off-hours. (3) In addition, a drawing must be included, if applicable, depicting any scaffolding or containment used indicating the location and the total vertical or horizontal channel reduction. All vertical clearance reductions below low steel or concrete under the bridge as a result of the use of scaffolding must be clearly detailed on the drawings shown in total feet. (4) Emergency 24-hour telephone numbers for all responsible individuals for this project must be submitted to this office before any phase of construction begins in case of an emergency situation during off-hours.
5. Scaffolding used under ANY span of the bridge must be lighted with constant burning red lights every 50 feet and on all corners. The placement of scaffolding must not interfere with the ability of a moveable bridge to open for vessel traffic. Moveable bridges must continue to operate according to their normal schedule unless special drawbridge operation regulation changes have been requested. Warning signs must be posted on both sides of the bridge, visible for a 1-mile range, to warn mariners of the vertical clearance reduction. The signs shall face upstream and downstream so as to draw the mariner's attention to the fact that the clearance has been reduced.
6. All barges placed in the waterway must be lighted with constant burning white lights on all four corners of the barge. The contractor is required to comply with all provisions of the Navigation Rules International-Inland, regarding the use of work barges or floating equipment in the waterway. www.navcen.uscg.gov .
7. Placement of construction barges in the navigable channel shall be done so as to provide a minimum horizontal clearance reduction. Only one navigation channel of a swing bridge may be blocked by work equipment at anytime. Barges must be moved out of the navigable channel after working hours unless approved in writing by the USCG.

8. Barges held in place by anchor lines must be marked by anchor buoys, which should be lighted.
9. The vertical and horizontal clearances through the navigable channel of the completed structure (as-built clearances) shall be certified in writing to this office by a responsible official of the permittee, a licensed surveyor or a registered professional engineer upon completion of bridge work. As built clearances consist of: vertical clearance in the navigational channel measured from mean high and mean low water to the lowest point of the superstructure; horizontal clearance through the navigational channel between piers or fenders measured normal to the axis of the channel. Documentation shall state the horizontal and vertical datum (e.g., NAVD88) used for all measurements. Please contact this office if there are questions regarding the required clearance data for specific bridge types, i.e. fixed or movable.
10. The on-scene contractor must have a VHF-FM marine radio set to the bridge communication channels 16/13 or the designated channel for the bridge. Additional marine radios monitoring the above channels must also be maintained at the main control of any floating equipment or barges on station.
11. Preventive measures must be taken to prevent any hot work, debris, or construction material from entering the waterway. This includes sandblasting material, paint, and any concrete work by-products. Welding and burning must cease upon approach of a vessel and shall not start again until the vessel has passed the bridge.
12. The project manager must contact the Coast Guard Sector New York-VTS via marine radio before commencement of any and after completion of any Hot Work. A cell phone back-up may be used to contact the above Coast Guard Unit at (718) 354-4088.
13. If permanent bridge navigational lighting cannot be maintained operational during any phase of this project, temporary battery/power lights must be installed at the same locations. These temporary lights must be visible for a distance of **2,000 yards on 90% of the nights of the year**. Generally, a lamp of **(50 candela)** will meet these requirements. Plans for temporary lighting shall be submitted to this office for written approval. Deviations from the approved temporary lighting shall be permitted only upon written authorization from this office.
14. **All newly constructed bridge piers, or those in the process of demolition, must be lighted with either red or white flashing (60 flashes per minute) lights. All cofferdams used during construction must also be lighted with red or white flashing (60 flashes per minute) on all four corners.**
15. Bridge protective fenders shall not be constructed or rebuilt with any metal surfaces on the rubbing face of the fender system. All bolts, spikes, or other metal fastening devices must be countersunk. Metal splicing plates, if used, shall be mounted on back of outer wales.
16. All piles including those previously damaged or broken that are not being used in the new or repaired fender shall be extracted rather than cut off at the mud line. Upon completion of all fender repairs a bottom sweep is required to determine if any piles or debris are present in the waterway. A wire-drag sweep or side-scan sonar is the preferred method.
17. It is the owners' responsibility to ensure that channel depths are not affected by this work.

NY & NJ

Any material, machinery or equipment lost, dumped, thrown into, or otherwise entering the waterway must be removed immediately. If immediate removal is impractical and the object entering the waterway could possibly obstruct or hazard navigation, the object must be marked immediately to protect navigation and the Coast Guard shall be notified as soon as possible. Such notification shall give the location and type of obstruction and the navigational markings installed.

18. Spillage of oil and hazardous substances is specifically prohibited by Section 311 of the Clean Water Act, as amended. Measures including properly maintaining construction equipment, designating fuel/hazardous substances handling areas to allow spills to be contained before reaching the waterway, instructing personnel not to dispose of oil/hazardous substances into drains or into the waterway directly, and other necessary procedures should be implemented to prevent spillage. If oil/hazardous substances are spilled into the waterway in spite of such planning, the U.S. Coast Guard is to be notified immediately at 800-424-8802. An adequate supply of absorbent material should be readily accessible to soak up any possible spillage pending Coast Guard arrival. The use of chemical dispersing agents and emulsifiers is not authorized without prior, specific, federal approval.
19. The bridge owner/contractor shall provide any and all necessary equipment and personnel to determine the presence of any "suspected" obstructions in the waterway at any time either during or following the completion of bridge construction or demolition operations.
20. The owner or registered professional engineer shall certify that the waterway depths have not been impaired and that the waterway is clear of materials or debris resulting from bridge construction or demolition.
21. This approval may be revoked and/or civil penalties imposed for failure to ensure that the above listed stipulations are adhered to or if work is determined to hazard or impair navigation.
22. This bridge work authorization does not relieve the project proponent of the responsibility to comply with applicable state, local or other federal requirements for this project.

NATIONWIDE GENERAL PERMIT
COMPLIANCE CERTIFICATION
AND REPORT FORM

Permit File Number: NAN-2019-00570-EMI

Permittee: Union County Division of Engineering

Location: East Hazelwood Avenue Bridge (Ra-09), City of Rahway, Union County, New Jersey

Date Permit Letter Issued: JUL 19 2019

Within 30 days of the completion of the activity authorized by this nationwide general permit and any mitigation required in the verification letter, please sign this certification and return it to the address at the bottom of this form.

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the permit's terms and conditions you are subject to permit suspension, modification or revocation.

I hereby certify that the work authorized by the above referenced nationwide general permit has been completed in accordance with the terms and conditions of said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

FOLD THIS FORM INTO THIRDS, WITH THE BOTTOM THIRD FACING OUTWARD.
TAPE IT TOGETHER AND MAIL TO THE ADDRESS BELOW OR FAX (212) 264-4260.

PLACE
STAMP
HERE

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
ATTN: CENAN-OP-RE
NEW YORK, NEW YORK 10278-0090

APPENDIX C

US Coast Guard Permit

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
First Coast Guard District

Battery Park Bldg.
One South Street
New York, NY 10004-1466
Staff Symbol: (dpb)
Phone: (212) 514-4336

16594
July 15, 2019

Dewberry Engineers Inc.
Mr. Ian Abrahamsen
Staff Engineer
200 Broadacres Drive, Suite 410
Bloomfield, NJ 07003

Dear Mr. Abrahamsen,

This is in response to your e-mail dated July 12, 2019 regarding scour countermeasures at the East Hazelwood Bridge across South Branch Rahway River, in Union County, NJ.

After reviewing the preliminary scour countermeasures plan, this office determined that this work does not require formal Coast Guard Bridge Permit as long as the scour materials do not reduce the existing channel depth.

Although this project will not require a formal bridge permit, we are providing the attached general construction requirements (enclosure 1) that apply for work on, over, near, or affecting the waterway and that must be complied with. These stipulations are based on the facts presently before us and additional requirements may be imposed if the contractor submits an approach or action not anticipated by this office. **Upon receipt and review of plans submitted pursuant paragraph 4 of enclosure (1), authorization to work over the waterway will be issued by this office.**

Please forward to this office, all permits/concurrence received from the Army Corps of Engineers and any other regulatory agency regarding the project.

If you have any questions, please contact me at the above number.

Sincerely,

A handwritten signature in cursive script that reads "Judy Leung-Yee".

J. Leung-Yee
Bridge Management Specialist
U.S. Coast Guard
By direction

E-Copy: Commander – Sector New York WWM

Enclosure (1): General Construction Requirements

U.S. Coast Guard Bridge Administration

GENERAL CONSTRUCTION REQUIREMENTS

1. All bridge closures, or bridge operating schedule changes, must be requested in writing, 90-days in advance, from the First Coast Guard District Bridge Branch Office. No channel restrictions, or vertical clearance reductions may be made without written approval from the above office.
2. Waterway closures/restrictions, barge placement or safety zones must also be requested a minimum of 90-days in advance. Please contact USCG Sector New York, 212 Coast Guard Drive, Staten Island, NY 10305-5005. Ph: (718) 354-4195/2353.
3. All submissions to the Coast Guard for review and approval must first be approved by the owner of the bridge or their authorized agent. All submission of plans, scope of work, and schedules of operation must be sent to the First Coast Guard District, Bridge Branch Office.
4. At least 30-days prior to commencement of any work, we must have for our review and approval, a copy of the construction plans, contractor schedule, preferably depicted in a time line graphic format, and the contractor's daily hours of operation. The construction plan package must show the following: (1) a plan of the entire waterway area in the vicinity of the project. (2) The location of work barges during working and off-hours. (3) In addition, a drawing must be included, if applicable, depicting any scaffolding or containment used indicating the location and the total vertical or horizontal channel reduction. All vertical clearance reductions below low steel or concrete under the bridge as a result of the use of scaffolding must be clearly detailed on the drawings shown in total feet. (4) Emergency 24-hour telephone numbers for all responsible individuals for this project must be submitted to this office before any phase of construction begins in case of an emergency situation during off-hours.
5. Scaffolding used under ANY span of the bridge must be lighted with constant burning red lights every 50 feet and on all corners. The placement of scaffolding must not interfere with the ability of a moveable bridge to open for vessel traffic. Moveable bridges must continue to operate according to their normal schedule unless special drawbridge operation regulation changes have been requested. Warning signs must be posted on both sides of the bridge, visible for a 1-mile range, to warn mariners of the vertical clearance reduction. The signs shall face upstream and downstream so as to draw the mariner's attention to the fact that the clearance has been reduced.
6. All barges placed in the waterway must be lighted with constant burning white lights on all four corners of the barge. The contractor is required to comply with all provisions of the Navigation Rules International-Inland, regarding the use of work barges or floating equipment in the waterway. www.navcen.uscg.gov .
7. Placement of construction barges in the navigable channel shall be done so as to provide a minimum horizontal clearance reduction. Only one navigation channel of a swing bridge may be blocked by work equipment at anytime. Barges must be moved out of the navigable channel after working hours unless approved in writing by the USCG.

ENCLOSURE (1)

NY & NJ

8. Barges held in place by anchor lines must be marked by anchor buoys, which should be lighted.
9. The vertical and horizontal clearances through the navigable channel of the completed structure (as-built clearances) shall be certified in writing to this office by a responsible official of the permittee, a licensed surveyor or a registered professional engineer upon completion of bridge work. As built clearances consist of: vertical clearance in the navigational channel measured from mean high and mean low water to the lowest point of the superstructure; horizontal clearance through the navigational channel between piers or fenders measured normal to the axis of the channel. Documentation shall state the horizontal and vertical datum (e.g., NAVD88) used for all measurements. Please contact this office if there are questions regarding the required clearance data for specific bridge types, i.e. fixed or movable.
10. The on-scene contractor must have a VHF-FM marine radio set to the bridge communication channels 16/13 or the designated channel for the bridge. Additional marine radios monitoring the above channels must also be maintained at the main control of any floating equipment or barges on station.
11. Preventive measures must be taken to prevent any hot work, debris, or construction material from entering the waterway. This includes sandblasting material, paint, and any concrete work by-products. Welding and burning must cease upon approach of a vessel and shall not start again until the vessel has passed the bridge.
12. The project manager must contact the Coast Guard Sector New York-VTS via marine radio before commencement of any and after completion of any Hot Work. A cell phone back-up may be used to contact the above Coast Guard Unit at (718) 354-4088.
13. If permanent bridge navigational lighting cannot be maintained operational during any phase of this project, temporary battery/power lights must be installed at the same locations. These temporary lights must be visible for a distance of **2,000 yards on 90% of the nights of the year**. Generally, a lamp of **(50 candela)** will meet these requirements. Plans for temporary lighting shall be submitted to this office for written approval. Deviations from the approved temporary lighting shall be permitted only upon written authorization from this office.
14. All newly constructed bridge piers, or those in the process of demolition, must be lighted with either red or white flashing (60 flashes per minute) lights. All cofferdams used during construction must also be lighted with red or white flashing (60 flashes per minute) on all four corners.
15. Bridge protective fenders shall not be constructed or rebuilt with any metal surfaces on the rubbing face of the fender system. All bolts, spikes, or other metal fastening devices must be countersunk. Metal splicing plates, if used, shall be mounted on back of outer wales.
16. All piles including those previously damaged or broken that are not being used in the new or repaired fender shall be extracted rather than cut off at the mud line. Upon completion of all fender repairs a bottom sweep is required to determine if any piles or debris are present in the waterway. A wire-drag sweep or side-scan sonar is the preferred method.
17. It is the owners' responsibility to ensure that channel depths are not affected by this work.

NY & NJ

Any material, machinery or equipment lost, dumped, thrown into, or otherwise entering the waterway must be removed immediately. If immediate removal is impractical and the object entering the waterway could possibly obstruct or hazard navigation, the object must be marked immediately to protect navigation and the Coast Guard shall be notified as soon as possible. Such notification shall give the location and type of obstruction and the navigational markings installed.

18. Spillage of oil and hazardous substances is specifically prohibited by Section 311 of the Clean Water Act, as amended. Measures including properly maintaining construction equipment, designating fuel/hazardous substances handling areas to allow spills to be contained before reaching the waterway, instructing personnel not to dispose of oil/hazardous substances into drains or into the waterway directly, and other necessary procedures should be implemented to prevent spillage. If oil/hazardous substances are spilled into the waterway in spite of such planning, the U.S. Coast Guard is to be notified immediately at 800-424-8802. An adequate supply of absorbent material should be readily accessible to soak up any possible spillage pending Coast Guard arrival. The use of chemical dispersing agents and emulsifiers is not authorized without prior, specific, federal approval.
19. The bridge owner/contractor shall provide any and all necessary equipment and personnel to determine the presence of any "suspected" obstructions in the waterway at any time either during or following the completion of bridge construction or demolition operations.
20. The owner or registered professional engineer shall certify that the waterway depths have not been impaired and that the waterway is clear of materials or debris resulting from bridge construction or demolition.
21. This approval may be revoked and/or civil penalties imposed for failure to ensure that the above listed stipulations are adhered to or if work is determined to hazard or impair navigation.
22. This bridge work authorization does not relieve the project proponent of the responsibility to comply with applicable state, local or other federal requirements for this project.

NATIONWIDE GENERAL PERMIT
COMPLIANCE CERTIFICATION
AND REPORT FORM

Permit File Number: NAN-2019-00570-EMI

Permittee: Union County Division of Engineering

Location: East Hazelwood Avenue Bridge (Ra-09), City of Rahway, Union County, New Jersey

Date Permit Letter Issued: JUL 19 2019

Within 30 days of the completion of the activity authorized by this nationwide general permit and any mitigation required in the verification letter, please sign this certification and return it to the address at the bottom of this form.

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the permit's terms and conditions you are subject to permit suspension, modification or revocation.

I hereby certify that the work authorized by the above referenced nationwide general permit has been completed in accordance with the terms and conditions of said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

**FOLD THIS FORM INTO THIRDS, WITH THE BOTTOM THIRD FACING OUTWARD.
TAPE IT TOGETHER AND MAIL TO THE ADDRESS BELOW OR FAX (212) 264-4260.**

**PLACE
STAMP
HERE**

**DEPARTMENT OF THE ARMY
NEW YORK DISTRICT CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
ATTN: CENAN-OP-RE
NEW YORK, NEW YORK 10278-0090**

APPENDIX D

Somerset-Union Soil Conservation Certification



SOMERSET - UNION SOIL CONSERVATION DISTRICT

Somerset County 4-H Center
308 Milltown Road • Bridgewater, NJ 08807
(908) 526-2701 Fax (908) 575-3977

May 9, 2019

Union County
Thomas Mineo, PE
2325 South Avenue
Scotch Plains, NJ 07076

RE: East Hazelwood Ave Bridgeover S Branch Rahway

River

**(plan dated 4/16/2019)
Block N/A, Lot N/A
City of Rahway
Application #2019-3671**

Dear Sir or Madam:

The Somerset-Union Soil Conservation District has reviewed the above erosion control plan and certifies that the plan is in accordance with the N.J. Erosion and Sediment Control Act, Chapter 251, P.L. 1975.

This approval is limited to the soil erosion and sedimentation controls specified in this plan. It is not authorization to engage in the proposed land use unless such use has been previously approved by the municipality or other controlling agency.

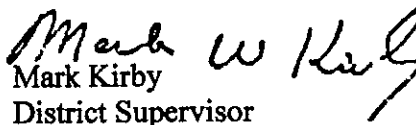
All revisions and municipal renewals of this project will require resubmission and approval by the District. Any conveyance of the project (or portion thereof) will transfer full responsibility for compliance to subsequent owner(s). The District must be notified in writing of any change of ownership.

The District requires written notification prior to the start of land disturbance. Please be advised that failure to do so is considered a violation of State Law and a fine will be imposed.

If there are any questions, please feel free to call our office.

Very truly yours,

SOMERSET-UNION S.C.D.


Mark Kirby
District Supervisor

MK/FC/JK #AccessMASTERPlan-15-SU.doc

Enclosure

cc: City of Rahway Const. Off.
Mun. Planning Board
Mun. Engineer
Dewberry-Goodkind, Inc.

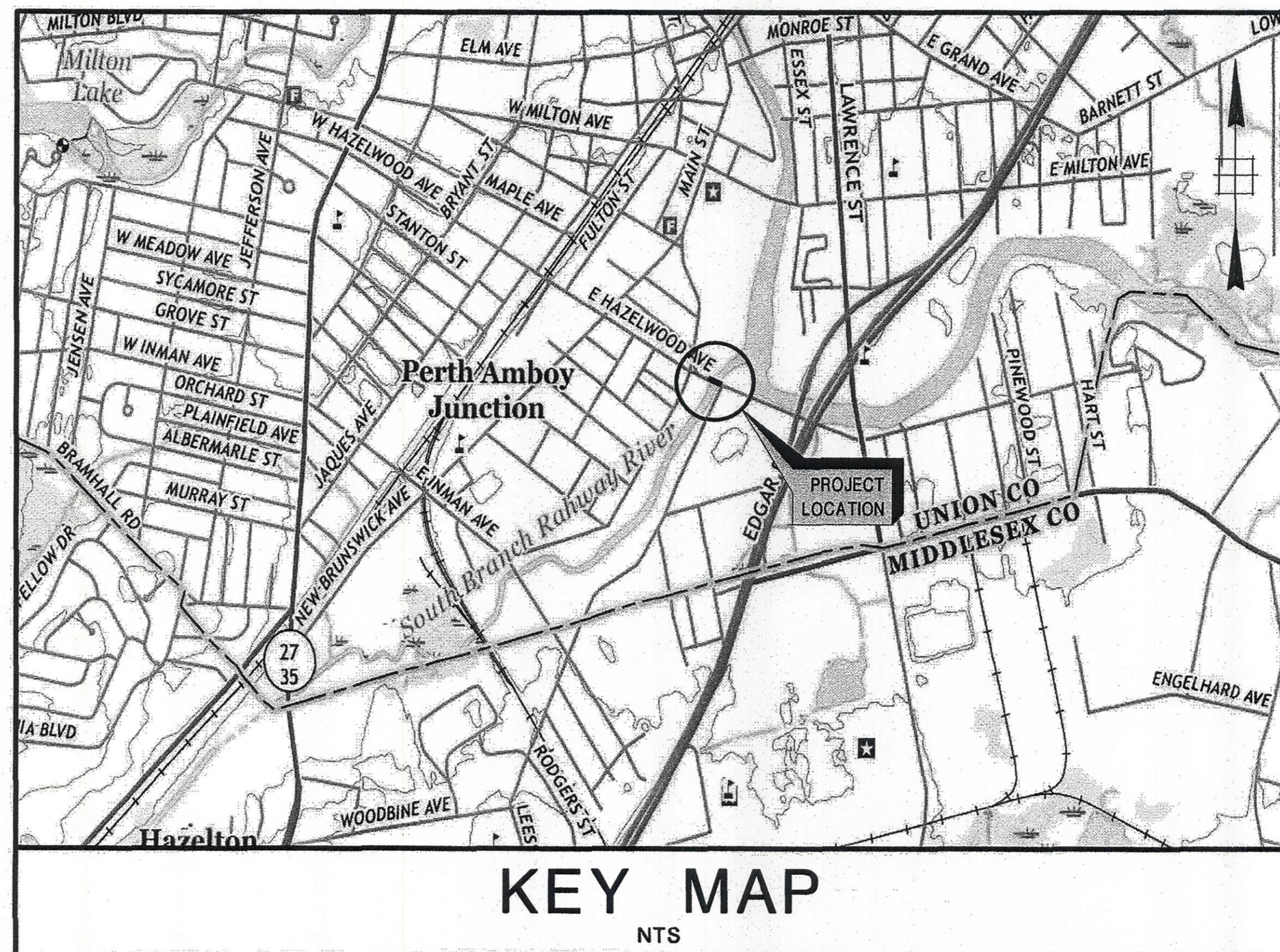
COUNTY OF UNION
BOARD OF CHOSEN FREEHOLDERS
PLANS FOR
EAST HAZELWOOD AVENUE BRIDGE (Ra09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES

UNION COUNTY ENGINEERING PROJECT # 2012-021

CITY OF RAHWAY

COUNTY OF UNION, NEW JERSEY

JUNE 2019



PUBLIC UTILITIES	
GAS	ELIZABETHTOWN GAS COMPANY
TELEPHONE	VERIZON - NEW JERSEY, INC.
CABLE TV	COMCAST CABLE OF NEW JERSEY
SANITARY	RAHWAY VALLEY SEWERAGE AUTHORITY
ELECTRIC	PUBLIC SERVICE ELECTRIC AND GAS

INDEX OF DRAWINGS	
SHEET NO.	DESCRIPTION
1	KEY SHEET
2	ESTIMATE OF QUANTITIES
3	LEGEND AND NOTES
4	CONSTRUCTION AND SOIL EROSION PLAN
5	ELEVATIONS AND SECTIONS
6	TIES
7-8	TRAFFIC CONTROL PLANS
9	CONSTRUCTION DETAILS
10	SOIL EROSION AND SEDIMENT CONTROL DETAILS
11	SOIL EROSION AND SEDIMENT CONTROL NOTES

NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD ROADWAY CONSTRUCTION / TRAFFIC CONTROL / BRIDGE CONSTRUCTION DETAILS BOOKLET DATED 2016 AND STANDARD ELECTRICAL DETAILS BOOKLET, DATED JULY 2007 ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2007
AS AMENDED BY THE SUPPLEMENTARY SPECIFICATIONS TO GOVERN

RECOMMENDED BY: JACQUELINE FOUSHEE, PE, CME *Jacqueline Foushee* DATE 6/24/19
 ENGINEER, CITY OF RAHWAY
 RECOMMENDED BY: RAYMOND A. GIACOBBE *Raymond A. Giacobbe* DATE 6/26/19
 MAYOR, CITY OF RAHWAY
 RECOMMENDED BY: THOMAS O. MINEO, P.E. *Thomas O. Mineo* DATE 7/2/19
 COUNTY ENGINEER, COUNTY OF UNION
 APPROVED BY: EDWARD T. OATMAN *Edward T. Oatman* DATE 7/5/19
 COUNTY MANAGER, COUNTY OF UNION

"CHANGES MADE TO THESE PLANS SINCE SIGNATURE BY THE CONSULTANT MAY BE DETERMINED BY COMPARISON OF THE PLANS FILED AT THE COUNTY WITH THOSE FILED AT THE OFFICE OF THE CONSULTANT."

ERIC J. BOSCHEN, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0385200
Eric J. Bosch DATE 6/28/19
Dewberry Engineers Inc. SCALE: NONE DATE: JUNE 2019
 Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J. SHEET NO. 1 OF 11

ROADWAY							
PAY ITEM	ITEM DESCRIPTION	FROM SHEET NO.		IF & WHERE DIRECTED	CONTRACT QUANTITY	UNIT	AS BUILT QUANTITY
		4					
1	MOBILIZATION				LS	LS	
2	FIELD OFFICE TYPE A SET UP				1	UNIT	
3	FIELD OFFICE TYPE A MAINTENANCE				7	MONTH	
4	CONSTRUCTION LAYOUT				DOLL	DOLL	
5	HEAVY DUTY SILT FENCE, ORANGE	57		50	107	LF	
6	FLOATING TURBIDITY BARRIER, TYPE 2	180		80	260	LF	
7	DEWATERING BASIN			9	9	UNIT	
8	SEDIMENT CONTROL BAG			9	9	UNIT	
9	CONSTRUCTION DRIVEWAY, WOOD MATS			80	80	SY	
10	CONCRETE WASHOUT SYSTEM				LS	LS	
11	OIL ONLY EMERGENCY SPILL KIT, TYPE 1			1	1	UNIT	
12	BREAKAWAY BARRICADE			15	15	UNIT	
13	DRUM			15	15	UNIT	
14	TRAFFIC CONE			15	15	UNIT	
15	CONSTRUCTION SIGNS			160	160	SF	
16	CONSTRUCTION IDENTIFICATION SIGNS, 4' X 8'			2	2	UNIT	
17	FLASHING ARROW BOARD, 4' X 8'			2	2	UNIT	
18	PORTABLE VARIABLE MESSAGE SIGN			2	2	UNIT	
19	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION			2	2	UNIT	
20	POLICE TRAFFIC DIRECTOR				ALLOW	ALLOW	
21	FINAL CLEANUP				LS	LS	
22	CLEARING SITE				LS	LS	
23	EXCAVATION, UNCLASSIFIED	151		24	175	CY	
24	TEMPORARY COFFERDAM				LS	LS	
25	EARTH ANCHOR FOR ARTICULATED CONCRETE BLOCK MATTING			100	100	UNIT	
26	ARTICULATED CONCRETE BLOCK MATTING, 6", OPEN CELL	860			860	SY	
27	RIPRAP STONE SCOUR PROTECTION (D50=12")	92		20	112	CY	
28	TOPSOILING, 4" THICK			116	116	SY	
29	BORROW TOPSOIL			20	20	CY	
30	FERTILIZING AND SEEDING, TYPE A			116	116	SY	
31	FERTILIZING AND SEEDING, TYPE F			20	20	SY	
32	STRAW MULCHING			136	136	SY	



UNION COUNTY ENGINEERING	
EAST HAZELWOOD AVENUE BRIDGE (Ra09) OVER SOUTH BRANCH RAHWAY RIVER SCOUR COUNTERMEASURES CITY OF RAHWAY	
ESTIMATE OF QUANTITIES	
JACOB POLAN, P.E. NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE03070200	
DATE: <u>2/20/2020</u>	DATE: <u>2/20/2020</u>
Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.	SCALE: NONE DATE: JUNE 2019 SHEET NO. <u>2</u> OF <u>11</u>

REVISION	
DATE	DESCRIPTION

LEGEND

Linear Features

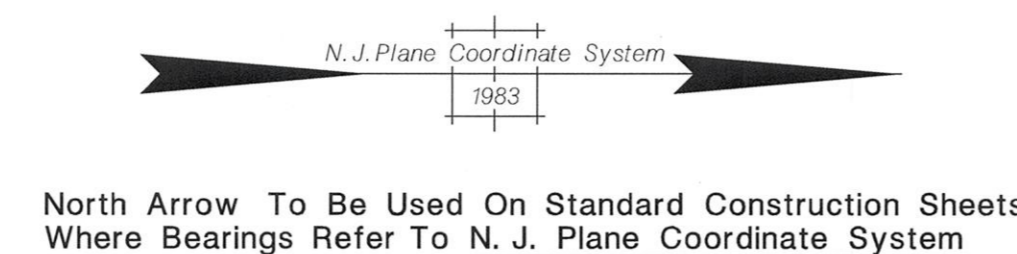
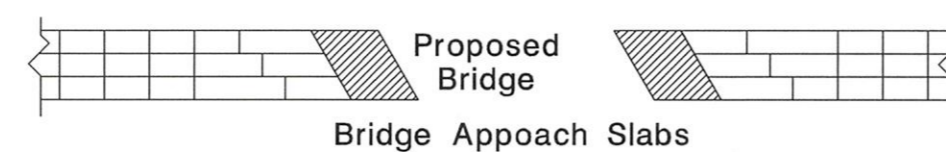
Existing	PROPOSED	
W _____	W _____	Water Main (Size)
G _____	G _____	Gas Main (Size)
T _____	T _____	Telephone Conduit
E _____	E _____	Electric Conduit (Highway or Utility)
CTV _____	CTV _____	Cable TV
FO _____	FO _____	Fiber Optic
		Sanitary Sewers or Storm Drains
		Pavements (Concrete or Bituminous)
		Shoulders
		Curbs
		Slopes (Cut & Fill)
		Base Line
		Twp., City, County Lines
		Right of Way Lines (Access Permitted)
		Right of Way Lines (No Access)
		Easements
		Property Line
		Fence (Size & Type)
		Reset Fence
		Beam Guide Rail
		Reset Beam Guide Rail
		Dual Rope Guide Rail
		Noise Walls
		Wetland Limit Line
		Silt Fence
		Ditches
		Railroad Tracks
		Tree Line

Miscellaneous Symbols

	Milling		Tree To Be Removed
	Removal of Concrete Base Course & Concrete Surface Courses		Wetlands
	Building to be Removed & Paid for Under Clearing Site		State Open Waters
	Demolition No. & Parcel No. of Building to be Demolished		Temporary Cofferdam
	PROFILE LEVEL LINE		Floating Turbidity Barrier
	High Point		
	Low Point		
	B.M.		

Topographical Features

Existing	PROPOSED	
		Inlets (Label Type)
		Inlets (Type ES)
		Manholes (Label Type or Utility)
		Reset (Inlets or Manholes)
		Reconstructed (Inlets or Manholes)
		Cast Iron Extension (Frame or Ring) (Inlet or Manhole)
		New Manhole Casting, Square Frame, Circular Cover
		R.C. End Section or C.M. Headwall
		Headwalls
		Headwalls & Aprons
		Water Gate Valves
		Reset Water Gate Valves
		Gas Gate Valves
		Reset Gas Gate Valves
		Hydrants
		Reset Hydrants
		Utility Pole (Type & Number)
		Temporary Utility Pole
		Traffic Signal
		Junction Box
		Fiber Optic Junction Box
		Junction Box Foundation
		Signs
		Vertical Panels
		Guide Rail End Terminals
		Beam Guide Rail Anchorages
		Monuments
		ROW Monument (ROW Control Points)
		TEST PIT NUMBER
		BORING NUMBER
		Borings (Boring Number)
		Deciduous Tree (Size, Kind)
		Evergreens
		Bush
		Hedges
		Swamp



N.T.S.

GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "2007 N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", AS MODIFIED BY THE SUPPLEMENTARY SPECIFICATIONS.
- HORIZONTAL CONTROL DATUM IS IN NAD 1983. VERTICAL CONTROL IN NAVD 1988.
- THE EXISTING R.O.W. WAS SET USING FOUND PROPERTY MARKERS, DEEDS AND TAX MAPS.
- ALL DIMENSIONS AND DETAILS SHALL BE VERIFIED AND COORDINATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- THE LOCATION OF ANY UTILITIES INDICATED ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES FOR FIELD MARK-OUTS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO THE START OF ANY WORK TO DETERMINE IF ANY CONFLICTS WILL OCCUR. SEPARATE PAYMENT WILL NOT BE MADE FOR THIS TASK.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY SAFEGUARDS TO PROTECT PUBLIC SAFETY AND ADJOINING PROPERTIES.
- ALL SIGNS AND BARRICADES SHALL BE FURNISHED BY THE CONTRACTOR AND PLACED BY HIM AT LOCATIONS SHOWN ON PLANS OR AS DESIGNATED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY EQUIPMENT AND METHODS TO KEEP EXCAVATIONS FREE OF WATER AND PROTECT WORK FROM DAMAGE BY WATER DURING ALL STAGES OF CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE FOR PROVIDING AND MAINTAINING EQUIPMENT AND METHODS TO KEEP EXCAVATIONS DEWATERED. COSTS THEREOF ARE TO BE INCLUDED IN PRICES BID FOR THE VARIOUS ITEMS IN THE PROPOSAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS.
- A PRECONSTRUCTION MEETING WITH THE COUNTY ENGINEER'S REPRESENTATIVE SHALL BE HELD PRIOR TO CONSTRUCTION.
- ENSURE FLOW OF THE RIVER IS MAINTAINED AT ALL TIMES. COFFERDAM AND DEWATERING ACTIVITIES SHALL NOT RESTRICT THE RIVER CHANNEL BY MORE THAN 50% OF ITS WIDTH/ CROSS SECTIONAL AREA.
- PROPOSED EASEMENT LINES SHOWN ON THESE CONTRACT PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING WORK WITHIN THE EASEMENT PROVIDED AS LAID DOWN IN THE GENERAL PROPERTY PARCEL MAPS ASSOCIATED WITH THIS CONSTRUCTION PROJECT.

UNION COUNTY ENGINEERING

EAST HAZELWOOD AVENUE BRIDGE (Ra09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY

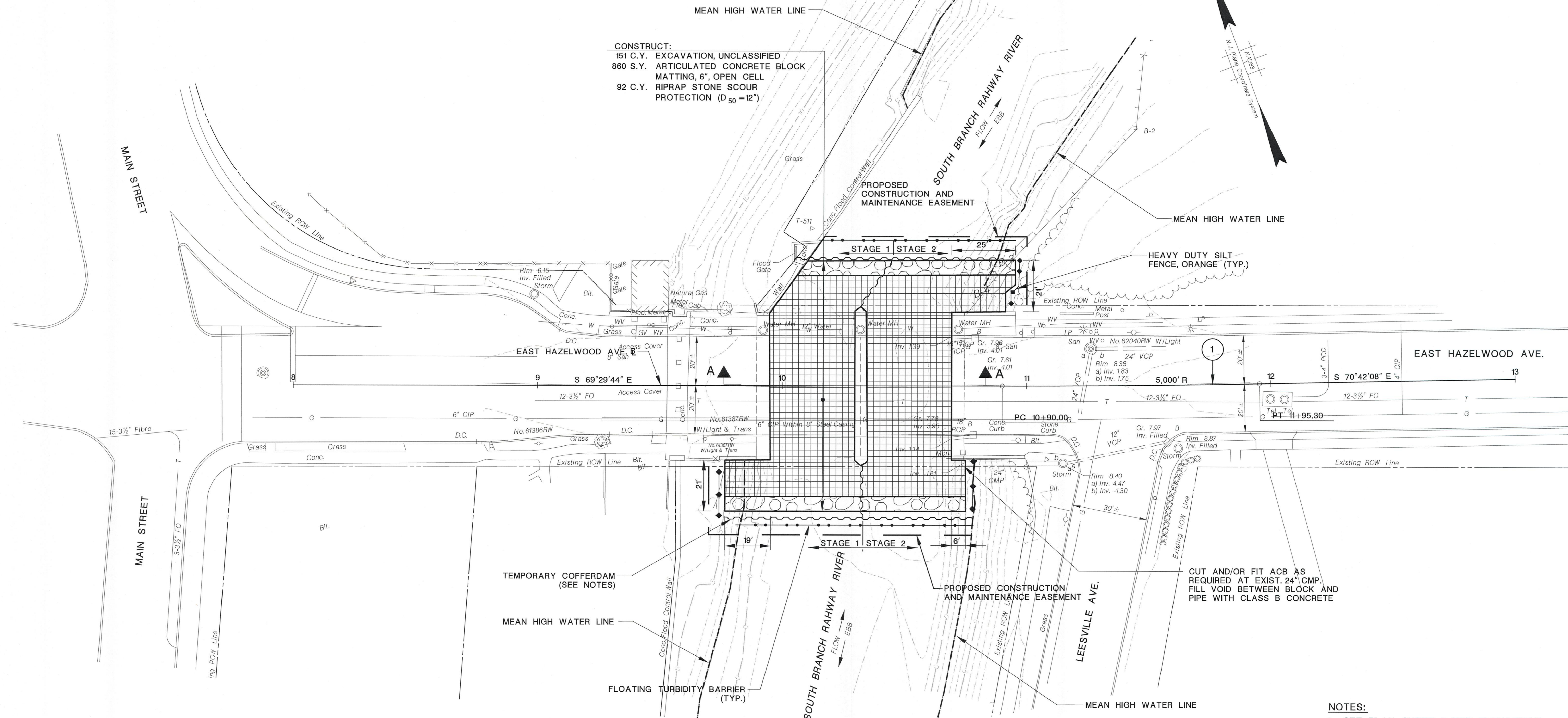
LEGEND AND NOTES

JACOB POLAN, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE03070200

DATE	DESCRIPTION	DATE	2/26/2020
Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.		SCALE: NONE	DATE: JUNE 2019 SHEET NO. 3 OF 11



CONSTRUCT:
 151 C.Y. EXCAVATION, UNCLASSIFIED
 860 S.Y. ARTICULATED CONCRETE BLOCK
 MATTING, 6", OPEN CELL
 92 C.Y. RIPRAP STONE SCOUR
 PROTECTION (D₆₀ = 12")



- NOTES:**
- SEE PLAN SHEET 5 FOR ELEVATIONS AND SECTIONS.
 - THE COST FOR THE INSTALLATION/ RESETTING OF COFFERDAM FOR ALL STAGES IS INCLUDED UNDER CONTRACT PAY ITEM #24, "TEMPORARY COFFERDAM".

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
5	HEAVY DUTY SILT FENCE, ORANGE	57 LF
6	FLOATING TURBIDITY BARRIER, TYPE 2	180 LF
23	EXCAVATION, UNCLASSIFIED	151 CY
26	ARTICULATED CONCRETE BLOCK MATTING, 6", OPEN CELL	860 SY
27	RIPRAP STONE SCOUR PROTECTION (D ₅₀ = 12")	92 CY

- LEGEND:**
- ARTICULATED CONCRETE BLOCK MAT (ACBM)
 - RIPRAP STONE
 - TOE TRENCH
 - MEAN HIGH WATER LINE

UNION COUNTY ENGINEERING
 EAST HAZELWOOD AVENUE BRIDGE (Ra09)
 OVER SOUTH BRANCH RAHWAY RIVER
 SCOUR COUNTERMEASURES
 CITY OF RAHWAY

**CONSTRUCTION AND
 SOIL EROSION PLAN**

JACOB POLAN, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE03070200
 DATE: 2/26/2020

DATE	REVISION DESCRIPTION

Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047800
 Bloomfield, N.J.

SCALE: 1"=20'
 DATE: JUNE 2019
 SHEET NO. 4 OF 11



ENVIRONMENTAL NOTES AND COMMITMENTS:

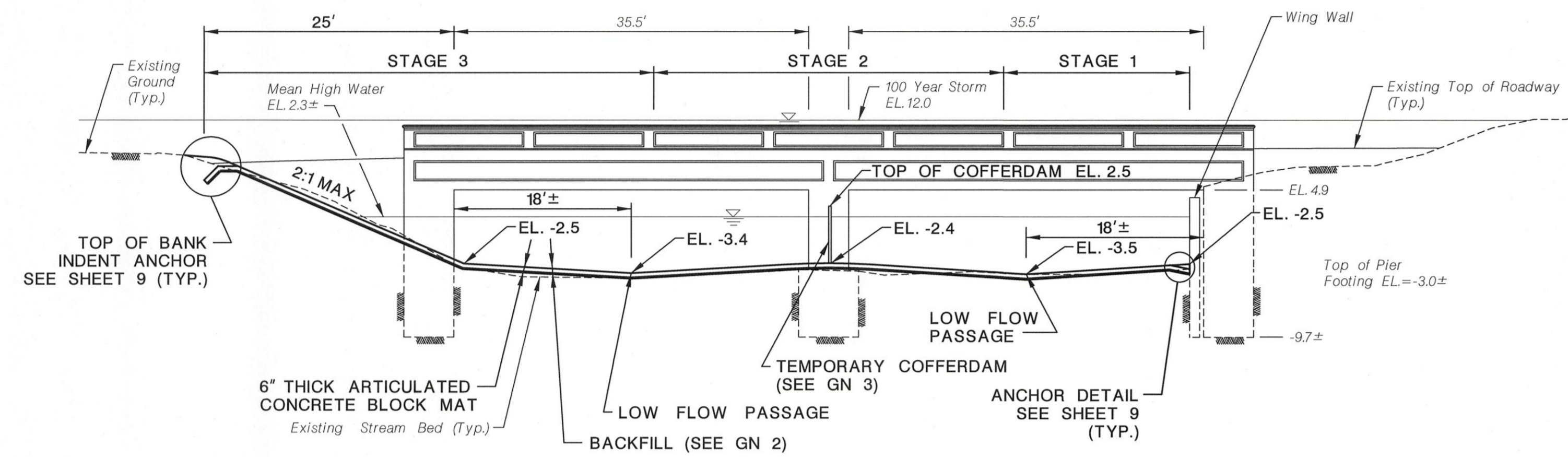
- CONSTRUCTION EQUIPMENT SHALL NOT BE WASHED IN THE WATERWAY OR IN THE AREAS IN WHICH WASH WATER WILL DRAIN INTO THE WATERWAY.
- SENSITIVE AREA - WETLANDS/STATE OPEN WATERS. THE CONTRACTOR SHALL NOT ENCROACH UPON OR STORE ANY EQUIPMENT/VEHICLE/MATERIALS IN WETLANDS/TRANSITION AREAS/ STATE OPEN WATER AREAS BEYOND THOSE APPROVED IN ANY ISSUED PERMITS OR SHOWN ON THE PLANS. THE CONTRACTOR IS PERMITTED TO BE ONLY IN THOSE WETLANDS/TRANSITION AREAS/ STATE OPEN WATER AREAS THAT ARE NECESSARY TO GAIN ACCESS TO THE WORK ZONE AS DEPICTED ON THE PLANS AND IN THE WORK ZONE ITSELF. ALL REMAINING AREAS OF WETLANDS, TRANSITION AREAS, OR STREAM ARE NOT TO BE ENCROACHED UPON. THEREFORE, THE CONTRACTOR MUST ADHERE TO THE LOCATIONS OF THE SILT FENCE AND ADHERE TO THE LIMITS OF DISTURBANCE IN THE STREAM. IN ADDITION, STOCKPILES, VEHICLES, AND/OR EQUIPMENT SHALL NOT BE LOCATED WITHIN 50 FEET OF A SLOPE, DRAINAGE FACILITY, WETLAND, OR FLOOD PLAIN OTHER THAN THE CONSTRUCTION AREA SHOWN ON THE PLANS. ALL STOCKPILE BASES SHALL BE PROTECTED BY A HAY BALE BARRIER OR SILT FENCE.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NJDOT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- AREAS OF TEMPORARY IMPACT SHALL BE RESTORED TO ORIGINAL CONDITION AS APPROVED BY THE RE.
- DISCHARGING OF SEDIMENT-LADEN WATER FROM DEWATERING ACTIVITIES DIRECTLY INTO THE STREAM IS PROHIBITED. DOWNSTREAM AREAS SHALL BE PROTECTED FROM EXCESS TURBIDITY DURING CONSTRUCTION.
- A DEWATERING BASIN SHALL BE INSTALLED FOR ANY IN-STREAM WORK REQUIRING DRY CONDITIONS WHERE RETURN DISCHARGES CAN RELEASE TURBID WATERS DOWNSTREAM. ALL DEWATERING REQUIRES USE OF A DEWATERING BASIN TO SETTLE OUT SUSPENDED SOLIDS. THE AREA OF RETURN DISCHARGE TO THE WATERWAY SHALL BE ENCOMPASSED BY TURBIDITY BARRIER. THE DEWATERING CONDUIT LEADING INTO THE BASIN SHALL BE FITTED WITH A SEDIMENT CONTROL BAG. VEGETATION AND OTHER AREAS OF TEMPORARY IMPACT, AS SHOWN ON THE PLANS, SHALL BE PRESERVED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- STREAM FLOW SHALL BE MAINTAINED AT ALL TIMES, REGARDLESS OF HOW THE CONSTRUCTION IS STAGED. FLOATING TURBIDITY BARRIER MUST BE USED. FLOATING TURBIDITY BARRIER SHALL BE TIED TO ONE BANK AND SURROUND THE IN-STREAM WORK. IF WATER IS TOO SHALLOW FOR FLOATING TURBIDITY BARRIER, USE TURBIDITY DAM INSTEAD. EARTHEN BERMS SHALL NOT BE USED AS COFFERDAMS.
- THE FOLLOWING TIMING RESTRICTIONS APPLY: IN ORDER TO PROTECT THE GENERAL GAME AND ANADROMOUS FISHERY RESOURCES IN THE SOUTH BRANCH RAHWAY RIVER FROM SEDIMENTATION, PROPOSED CONSTRUCTION ACTIVITIES ARE PROHIBITED BETWEEN APRIL 1 AND JULY 31 EACH YEAR. IN ADDITION, ANY ACTIVITY WITHIN THIS WATERCOURSE WHICH COULD INTRODUCE SEDIMENT INTO SAID RIVER OR WHICH COULD CAUSE AN INCREASE IN THE NATURAL LEVEL OF TURBIDITY IS ALSO PROHIBITED DURING THIS PERIOD. THE NJDEP RESERVES THE RIGHT TO SUSPEND ALL REGULATED ACTIVITIES ONSITE SHOULD IT BE DETERMINED THAT PROPER PRECAUTIONS HAVE NOT BEEN TAKEN TO ENSURE CONTINUOUS COMPLIANCE WITH THIS CONDITION.
- ANY CHANGES TO PERMIT RELATED WORK WILL REQUIRE NJDEP APPROVAL.
- ANY EXCAVATED MATERIAL THAT WILL NOT BE USED AS BACKFILL MUST BE DISPOSED OF IN A LAWFUL MANNER OUTSIDE THE LIMITS OF ANY REGULATED FLOODPLAIN, OPEN WATER, FRESHWATER WETLAND OR ADJACENT TRANSITION AREAS. DISPOSAL SHALL BE CONDUCTED IN SUCH A WAY AS TO NOT INTERFERE WITH THE POSITIVE DRAINAGE OF THE RECEIVING AREA.
- A COPY OF THE PERMIT(S) SHALL BE KEPT AT THE WORK SITE AND SHALL BE EXHIBITED UPON REQUEST OF ANY PERSON.
- DURING THE COURSE OF CONSTRUCTION, NEITHER THE APPLICANT NOR ITS AGENT, SHALL CAUSE OR PERMIT ANY UNREASONABLE INTERFERENCE WITH THE FREE FLOW OF THE STREAM BY PLACING OR DUMPING ANY MATERIALS, EQUIPMENT, DEBRIS OR STRUCTURES WITHIN OR ADJACENT TO THE STREAM CORRIDOR. UPON COMPLETION OR ABANDONMENT OF THE WORK, THE APPLICANT AND/OR ITS AGENTS SHALL REMOVE AND DISPOSE OF IN A LAWFUL MANNER ALL EXCESS MATERIALS, EQUIPMENT AND DEBRIS FROM THE STREAM CORRIDOR AND ADJACENT LANDS.
- ALL TERMS AND CONDITIONS OF NJDEP PERMITS/WAIVERS SHALL BE ADHERED TO.
- ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN 30 DAYS, SHALL IMMEDIATELY RECEIVE TEMPORARY SEEDING AND STRAW MULCHING (SEE SOIL EROSION AND SEDIMENT CONTROL NOTES).
- THE DEWATERING BASIN FOR ALL CONSTRUCTION ACTIVITIES IN THE STREAM SHALL BE CONSTRUCTED WITHIN RIGHT OF WAY.
- NATURAL SUBSTRATE FROM THE AREA OF DISTURBANCE SHALL BE UTILIZED TO FILL VOIDS WITHIN THE ARTICULATED CONCRETE BLOCK MATS. VOIDS SHALL BE FILLED FLUSH WITH THE TOP OF MATS. AFTER PLACING THE CONCRETE BETWEEN THE ACB MAT ENDS, LARGER STONES FROM THE NATURAL STREAM BED MATERIAL SHALL BE EMBEDDED RANDOMLY IN THE CONCRETE SURFACE, AVOIDING THE LOW-FLOW AREA.
- NO RAW CONCRETE SHALL COME IN CONTACT WITH THE WATER. CONCRETE MUST CURE FOR A MINIMUM OF 7 DAYS PRIOR TO WATER FLOW OVER THE CONCRETE. ANY GROUT/CONCRETE THAT COMES IN CONTACT WITH THE WATER MUST BE REMOVED IMMEDIATELY. NO PUMP WATER FROM GROUT/ CONCRETE OPERATIONS MAY BE DISCHARGED DIRECTLY TO THE WATER BODY. ALL PUMPED WATER SHALL BE DISCHARGED TO A HOLDING TANK AND DISPOSED OF PROPERLY.
- CONCRETE DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH 201.03.08 OF THE STANDARD SPECIFICATIONS AND SHALL NOT BE USED IN THE CONSTRUCTION OF EMBANKMENTS.

GENERAL NOTES (GN):

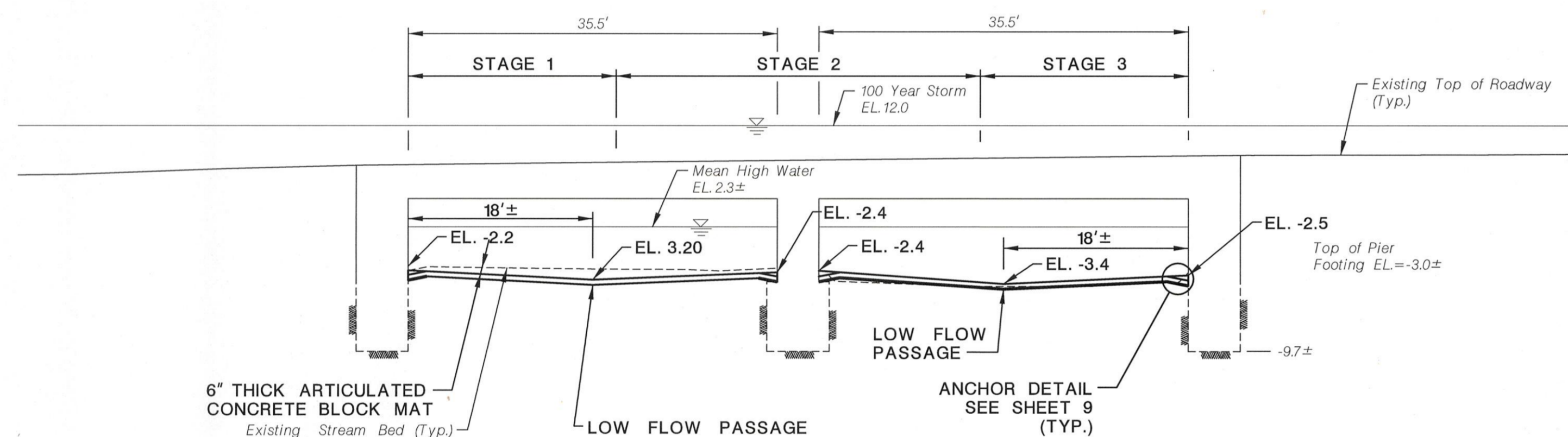
- SEE CONSTRUCTION DETAILS FOR ARTICULATED CONCRETE BLOCK MAT (ACBM) DETAILS.
- BACKFILL WITH SUITABLE EXCAVATED ON SITE MATERIAL OR COARSE AGGREGATE STONE, SIZE NO. 57 AS DIRECTED BY THE RE.
- REFER TO SHEET NO. 4 FOR LOCATION OF TEMPORARY COFFERDAMS.

WATERWAY STAGING AND DIVERSION NOTES:

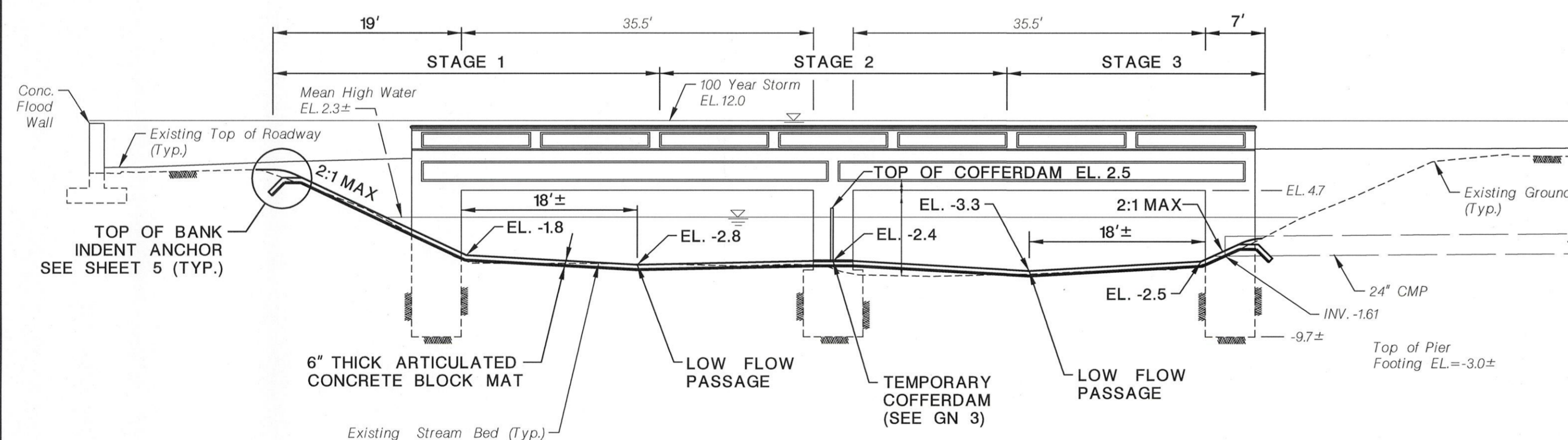
- STREAM DIVERSION STAGES 1 AND 2 CAN BE DONE IN ANY ORDER.
- THE TOP OF COFFERDAM SHALL NOT TO EXCEED EL. 2.7.
- UPSTREAM AND DOWNSTREAM SECTIONS DEPICT THE FINAL CONSTRUCTED ACBM AND WORK ZONES FOR 2 STAGES OF CONSTRUCTION.



ELEVATION
(DOWNSTREAM FASCIA LOOKING UPSTREAM)



SECTION A-A
(AT ROADWAY LOOKING DOWNSTREAM)



ELEVATION
(UPSTREAM FASCIA LOOKING DOWNSTREAM)

UNION COUNTY ENGINEERING

EAST HAZELWOOD AVENUE BRIDGE (Ra09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY

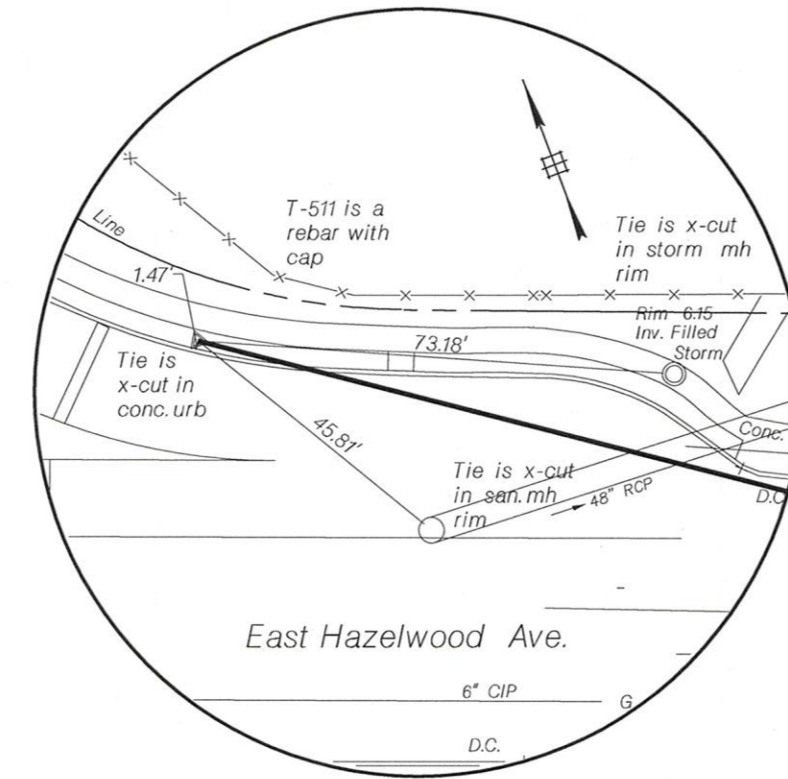
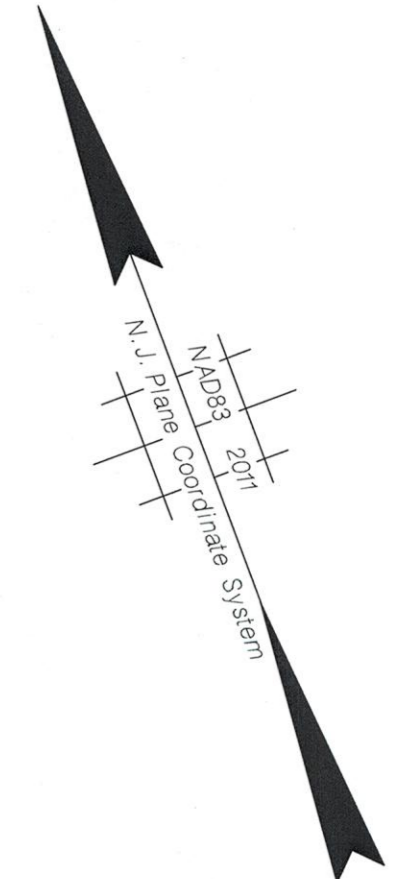
ELEVATIONS AND SECTIONS

JACOB POLAN, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE03070200

DATE: 2/26/2020

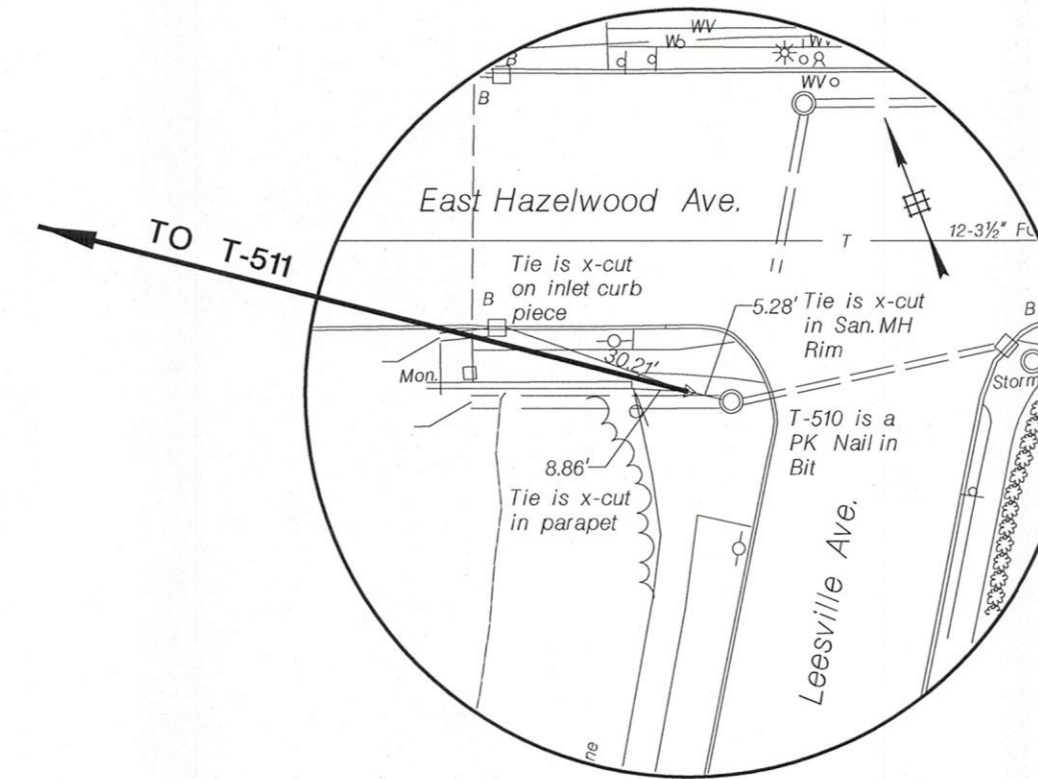
Dewberry Engineers Inc. SCALE: DATE: JUNE 2019
Certificate of Authorization No. 24GA28047600 1"=10'H&V
Bloomfield, N.J. SHEET NO. 5 OF 11

REVISION	
DATE	DESCRIPTION



T-511

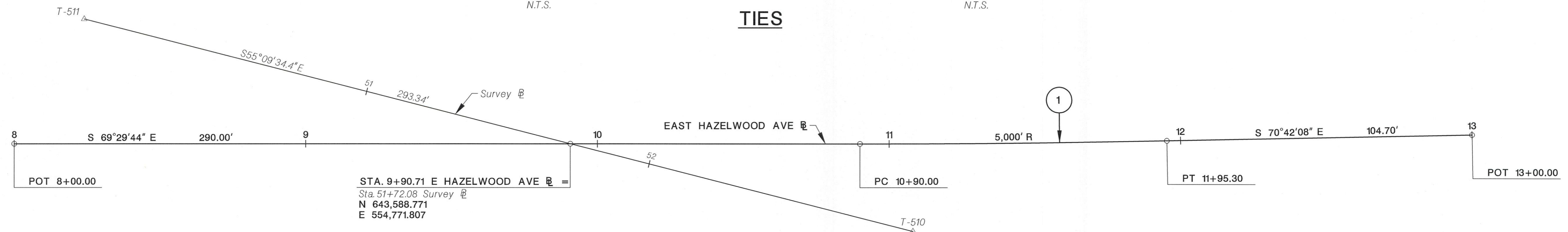
Sta. 50+00.00
N 643,687.081
E 554,630.570
EL. 5.42
N.T.S.



T-510

Sta. 52+93.34
N 643,519.499
E 554,671.326
EL. 8.41
N.T.S.

TIES



EAST HAZELWOOD AVE CURVE DATA

NO.	Δ	R	L	T	CHORD		COORDINATES OF CENTER	
					BEARING	DISTANCE	NORTHING	EASTING
1	1°12'24" (L)	5,000'	105.30'	52.65'	S 70°05'56" E	105.30'	648,237.218	556,616.203

EAST HAZELWOOD AVE ALIGNMENT DATA

POINT	EAST HAZELWOOD AVE		OFFSET FROM SURVEY	
	NORTHING	EASTING	STATION	OFFSET
POT 8+00.00	643,655.575	554,593.175	N/A	N/A
POT 8+13.10	643,650.986	554,605.445	50+00.00	43.98' R
PC 10+90.00	643,553.993	554,864.802	52+68.28	24.58' L
POC 11+15.88	643,544.990	554,889.069	52+93.34	31.06' L
PT 11+95.30	643,518.150	554,963.812	N/A	N/A
POT 13+00.00	643,483.549	555,062.629	N/A	N/A

HORIZONTAL CONTROL

NORTH AMERICAN DATUM OF 1983-(2011)

VERTICAL CONTROL

NORTH AMERICAN VERTICAL DATUM OF 1988

REVISION	
DATE	DESCRIPTION

UNION COUNTY ENGINEERING

**EAST HAZELWOOD AVENUE BRIDGE (Ra09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY**










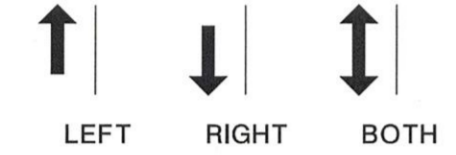

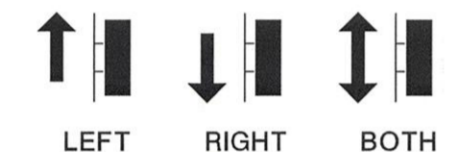





TIES

LISA MARIE PETERSON, P.E., P.L.S.
NEW JERSEY PROF ENGINEER & LAND SURVEYOR LIC. NO. 24GB04258400

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA26047500
Bloomfield, N.J.

SCALE: 1"=20'
DATE: JUNE 2019
SHEET NO. 6 OF 11

LEGEND

-  BREAKAWAY BARRICADES
-  BREAKAWAY BARRICADES WITH SIGN
-  CONSTRUCTION SIGNS
-  DRUMS
-  CONE
-  CONSTRUCTION BARRIER CURB (TYPE SPECIFIED)
-  DIRECTION OF TRAFFIC FLOW
-  TRAFFIC DIRECTOR, FLAGGER
-  TRAILER MOUNTED MOUNTED ARROW BOARD SHOWING CAUTION MODE
-  ILLUMINATED FLASHING ARROW MOUNTED ON TOWING VEHICLE SHOWING ARROW PATTERN (LEFT, RIGHT, BOTH)
LEFT RIGHT BOTH
-  TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND ARROW BOARD SHOWING CAUTION MODE
-  TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND ARROW BOARD SHOWING ARROW PATTERN (LEFT, RIGHT, BOTH)
LEFT RIGHT BOTH
-  TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM
-  TEMPORARY CRASH CUSHION, (ALL OTHER APPROVED)
-  BUFFER ZONE
-  WORK AREA
-  PAINT STRIPING TRUCK OR OTHER OPERATING VEHICLE

GENERAL TRAFFIC CONTROL NOTES:

1. ADVANCE WARNING SIGNS DISTANCES AND TAPER LENGTHS MAY BE EXTENDED, AT DIRECTION OF THE COUNTY, TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY.
2. THE APPROXIMATE LOCATIONS OF THE ILLUMINATED FLASHING ARROW BOARDS ARE SHOWN ON THE TRAFFIC CONTROL PLANS. THESE LOCATIONS MAY BE MODIFIED AS APPROVED BY RE TO ADJUST FOR VISIBILITY DUE TO HORIZONTAL OR VERTICAL CURVATURE OF THE ROADWAY OR TO POSITION AT A SAFER LOCATION. ILLUMINATED FLASHING ARROW BOARDS ARE TO BE USED FOR TEMPORARY LANE CLOSINGS AND AT LOCATIONS SHOWN ON THE TRAFFIC CONTROL PLANS.
3. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES ARE TO BE IN PLACE.
4. RAMPS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN ARE TO BE PROVIDED WITH AT LEAST ONE W20-IF SIGN (ROAD WORK AHEAD) AS A MINIMUM.
5. ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS, AND / OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE PROPOSED TRAFFIC CONTROL PLAN ARE TO BE COVERED, REMOVED, OR RELOCATED AS DIRECTED BY THE RE.
6. MAINTENANCE AND PROTECTION OF TRAFFIC TO BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES - PART VI "STANDARDS AND GUIDES FOR TRAFFIC CONTROL FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY, AND INCIDENT MANAGEMENT OPERATIONS", UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS.
7. CONSTRUCTION SIGN W99-2 (GIVE US A BRAKE) TO BE LOCATED 200 FEET IN ADVANCE OF PROJECT LIMITS.
8. THE CONTRACTOR TO SUBMIT A PLAN FOR THE SAFE ACCESS OF CONSTRUCTION VEHICLES THROUGHOUT THE WORK SITE WHERE SPACE CONSTRAINTS PREVENT THE USE OF LANE CLOSURES. THE PLAN TO BE SUBMITTED TO THE RE AS SPECIFIED IN THE SPECIFICATIONS.
9. WHERE REQUIRED, THE CONTRACTOR IS TO MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN CROSSING LOCATIONS AND TYPE AS DIRECTED BY THE RE.
10. PLACE TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. AS SHOWN ON PLANS. NO SIGNS ARE TO BE PLACED WITHOUT ACTUAL LANE CLOSURES AND REMOVE IMMEDIATELY UPON REMOVAL OF THE CLOSURES.
11. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE RE.

CONSTRUCTION SIGN TABLE

SIGN DESIGNATION	MESSAGE	SIZE IN X IN	AREA IN S.F.	REQUIRED QUANTITY IN NUMBER	TOTAL AREA IN S.F.
W20-1D	ROAD WORK 1/2 MILE	36"X 36"	9	2	18
W20-1A	ROAD WORK 1500 FT	36"X 36"	9	2	18
W20-1C	ROAD WORK 500 FT	36"X 36"	9	2	18
W20-1F	ROAD WORK AHEAD	36"X 36"	9	2	18
R9-9	SIDEWALK CLOSED	24"X 12"	2	3	6
G20-2A	END ROAD WORK	48"X 24"	8	2	16
W99-2	GIVE US A BRAKE SLOW DOWN	48"X 48"	16	2	32
ADDITIONAL SIGNS AS REQUESTED BY THE RE					34
CONSTRUCTION SIGN TOTAL					160

UNION COUNTY ENGINEERING

EAST HAZELWOOD AVENUE BRIDGE (Ra09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY

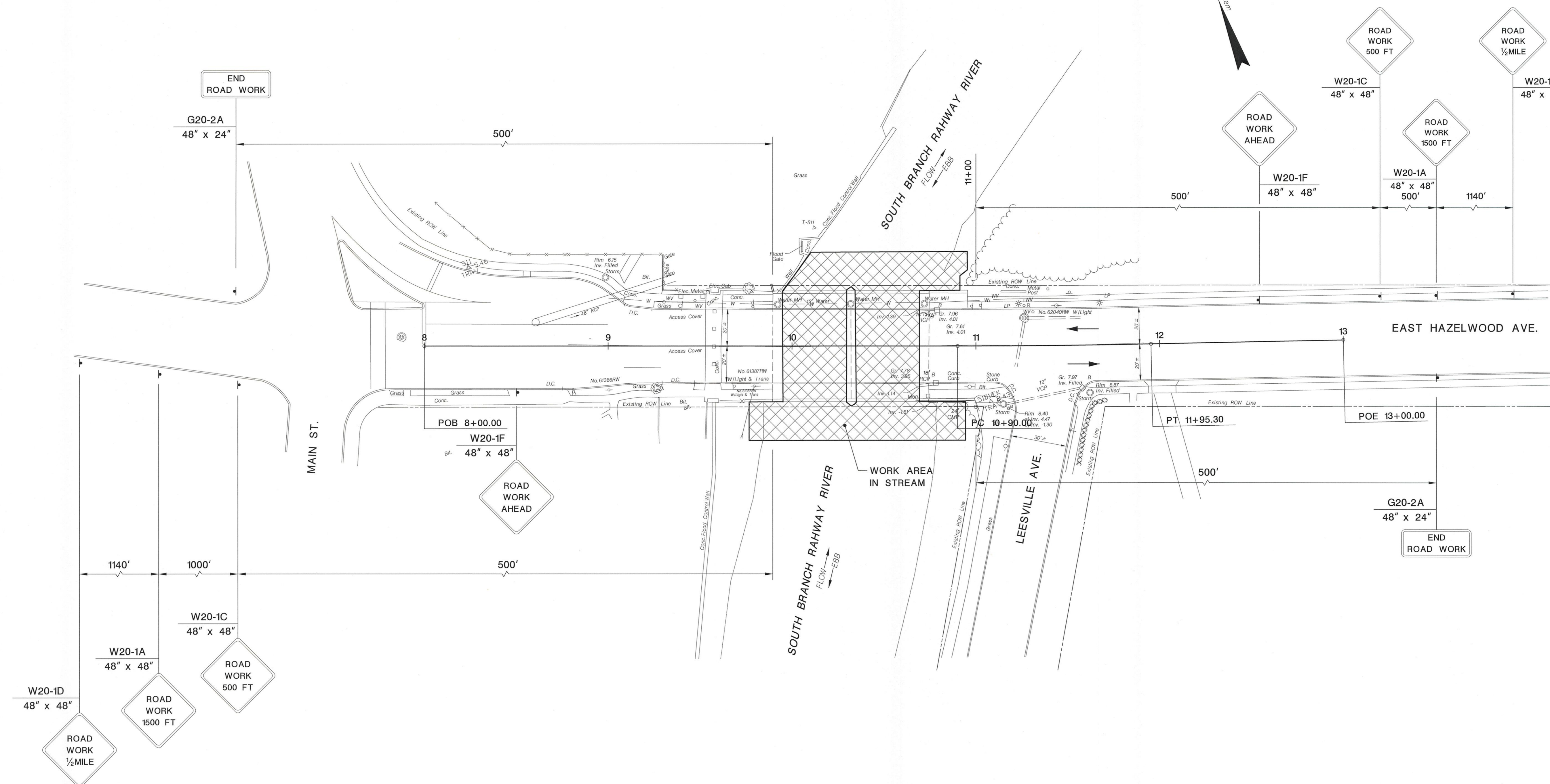
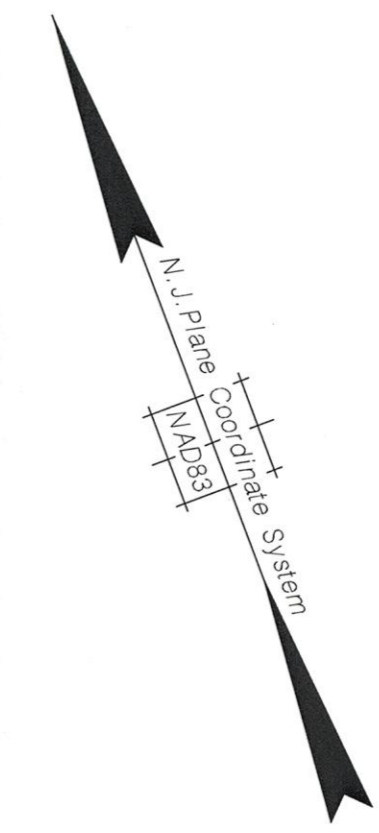
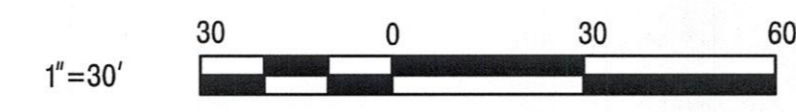
TRAFFIC CONTROL PLAN
- 1 -

JACOB POLAN, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE03070200
DATE 2/26/2020

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

SCALE: NONE DATE: JUNE 2019
SHEET NO. 7 OF 11

DATE	REVISION DESCRIPTION



GENERAL NOTES:

1. MAINTAIN AT LEAST ONE SIDEWALK ON THE BRIDGE OPEN AT ALL TIMES AND ADJUST SIGNS R9-9 AS DIRECTED BY THE RE.
2. TWO LANES OF TRAFFIC TO BE MAINTAINED AT ALL TIMES.
3. LANE AND SHOULDER CLOSINGS SHALL BE IN ACCORDANCE WITH NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT) TRAFFIC CONTROL DETAIL DRAWING TCD-3

LEGEND:



REVISION	
DATE	DESCRIPTION

UNION COUNTY ENGINEERING

EAST HAZELWOOD AVENUE BRIDGE (Ra09)
 OVER SOUTH BRANCH RAHWAY RIVER
 SCOUR COUNTERMEASURES
 CITY OF RAHWAY

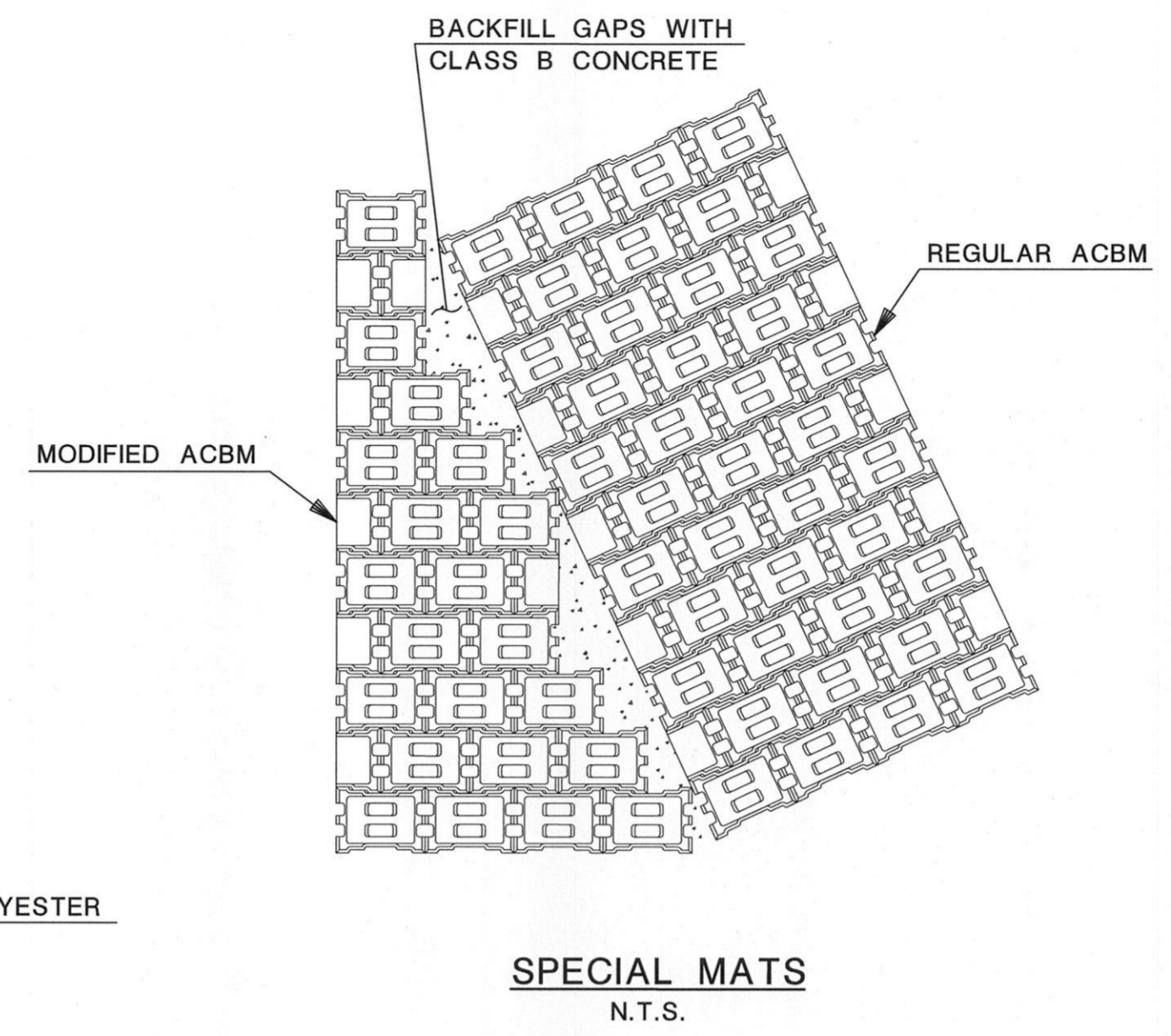
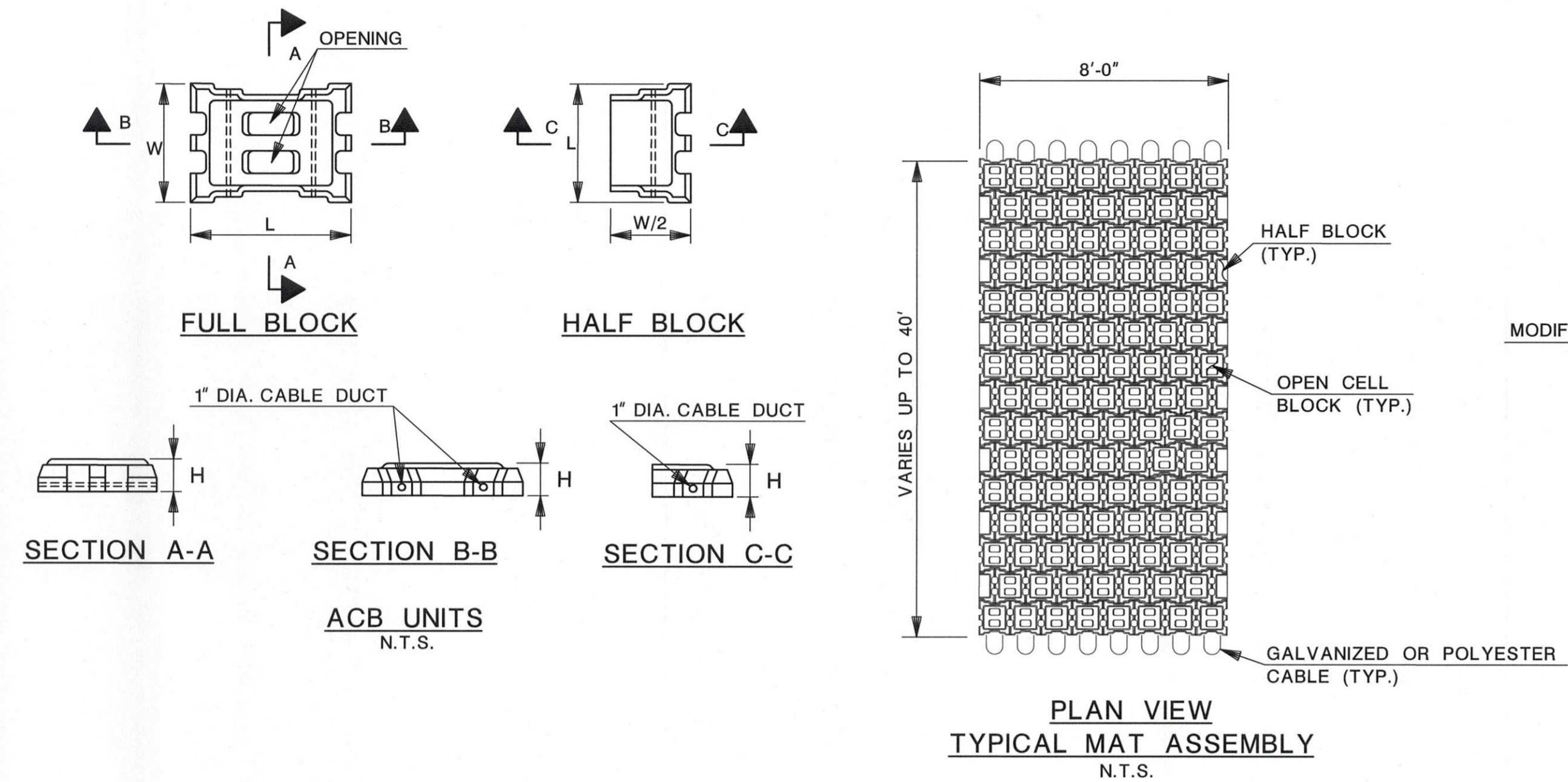
TRAFFIC CONTROL PLAN
 - 2 -

JACOB POLAN, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE03070200
 DATE: 2/26/2020

Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J.

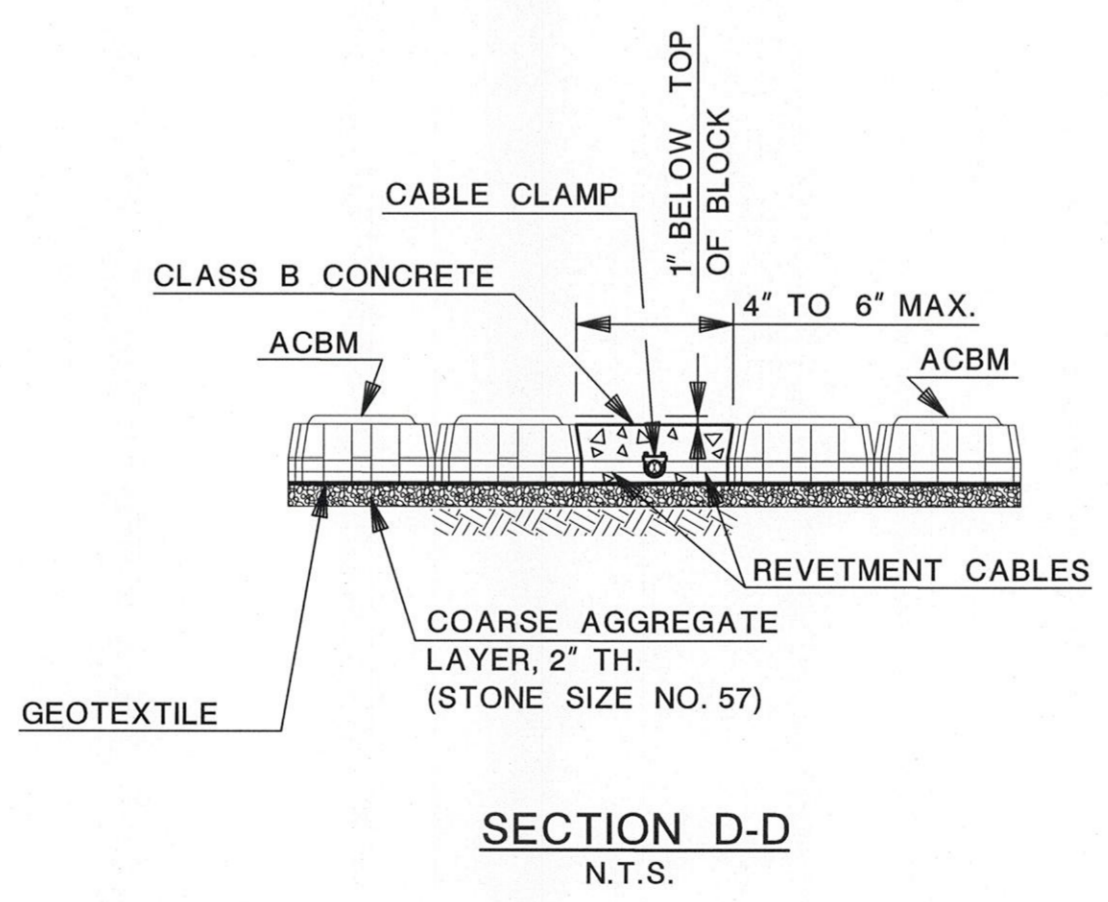
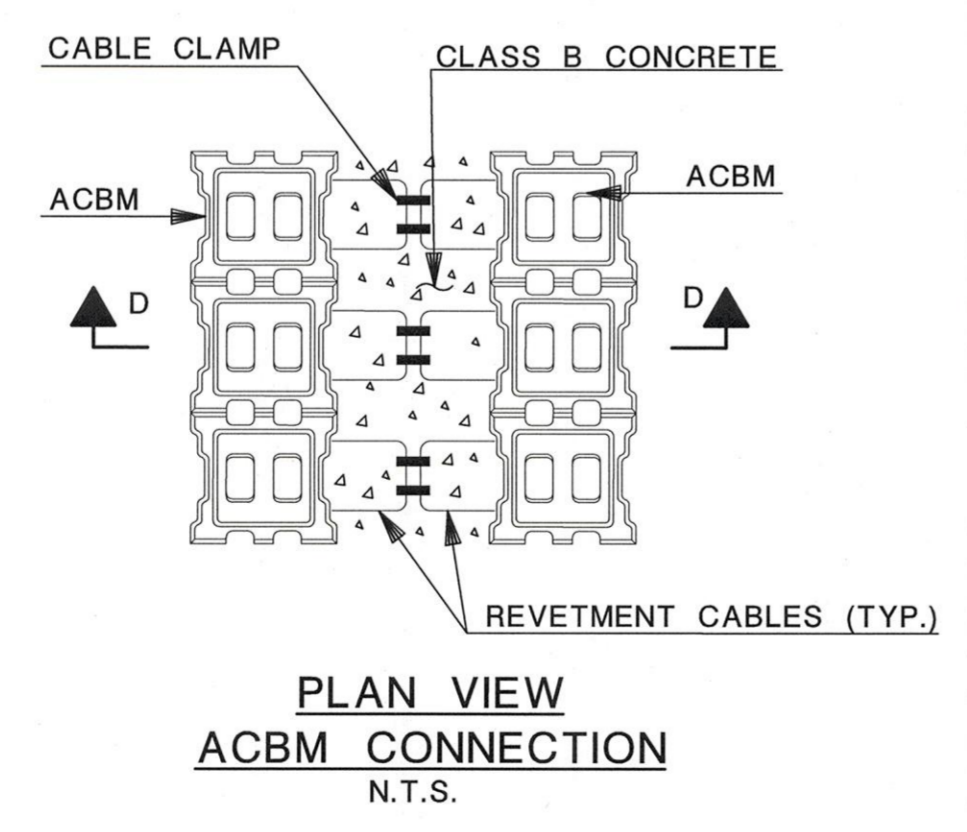
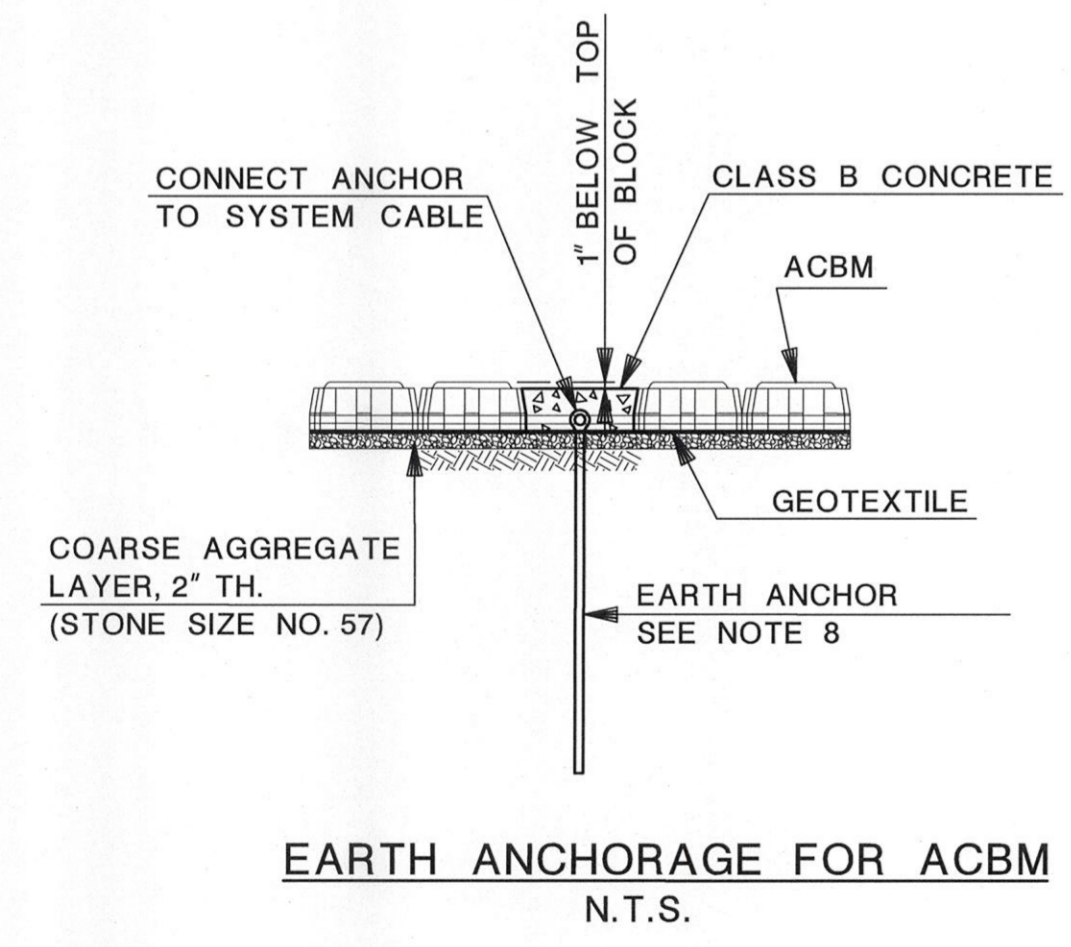
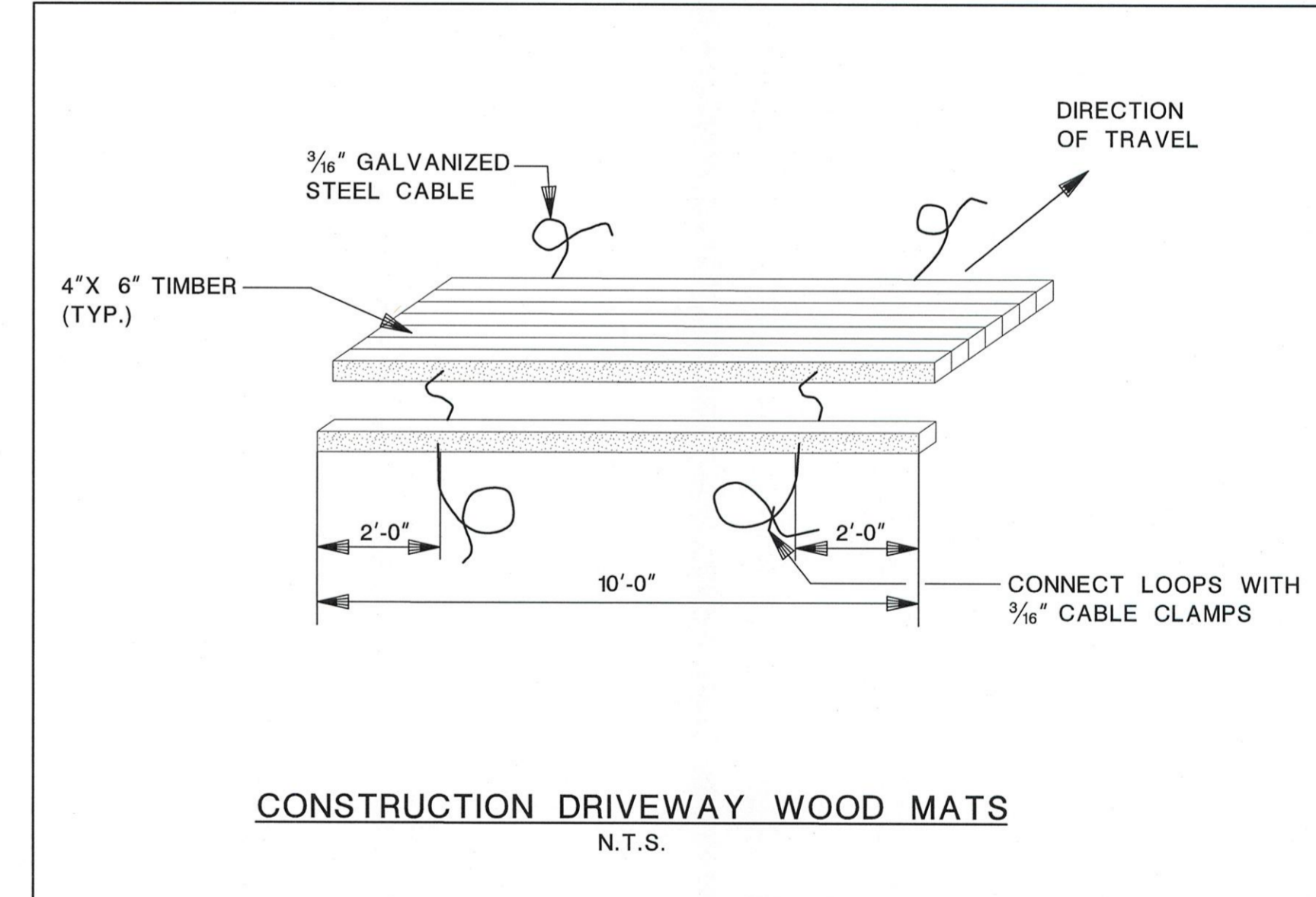
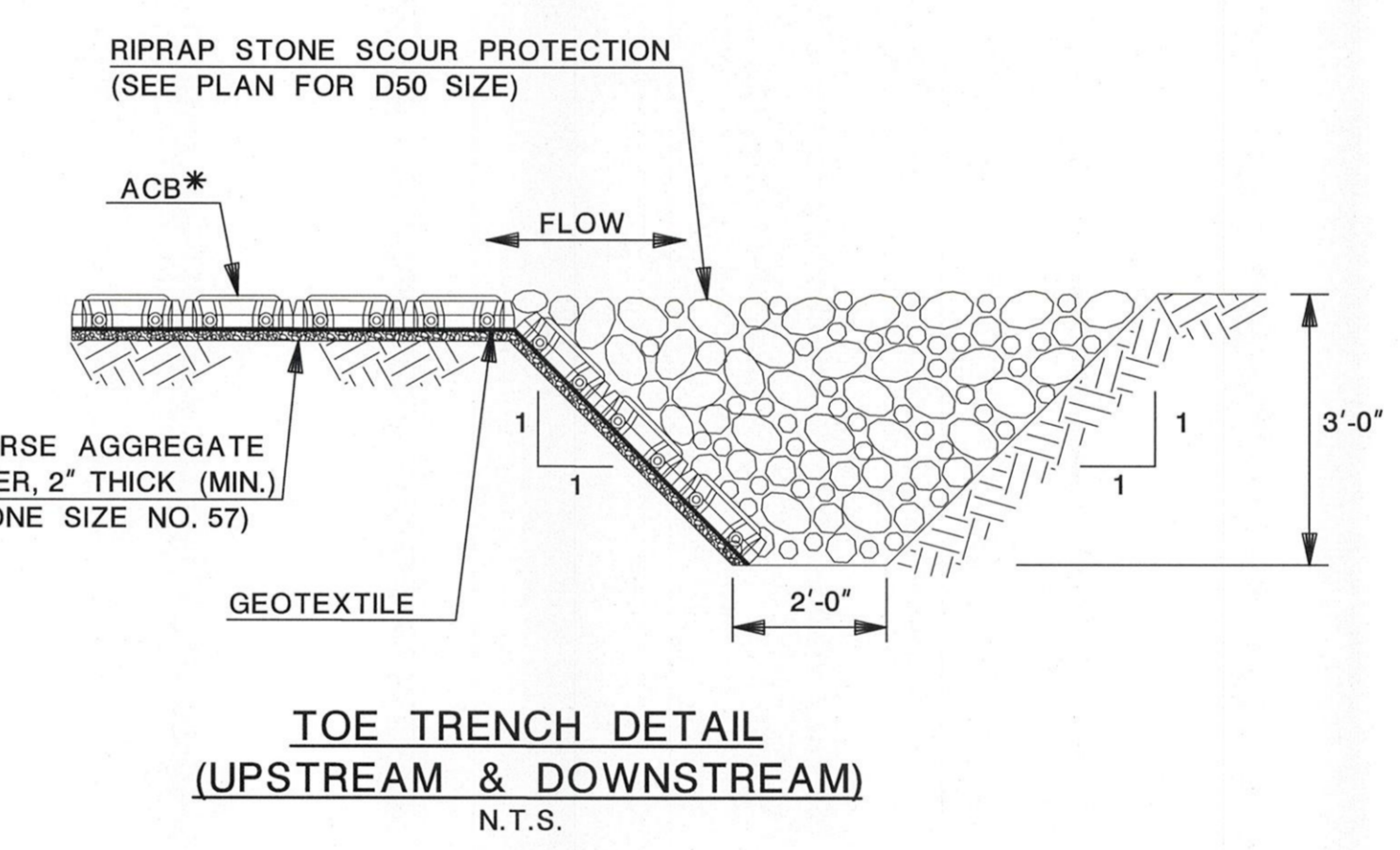
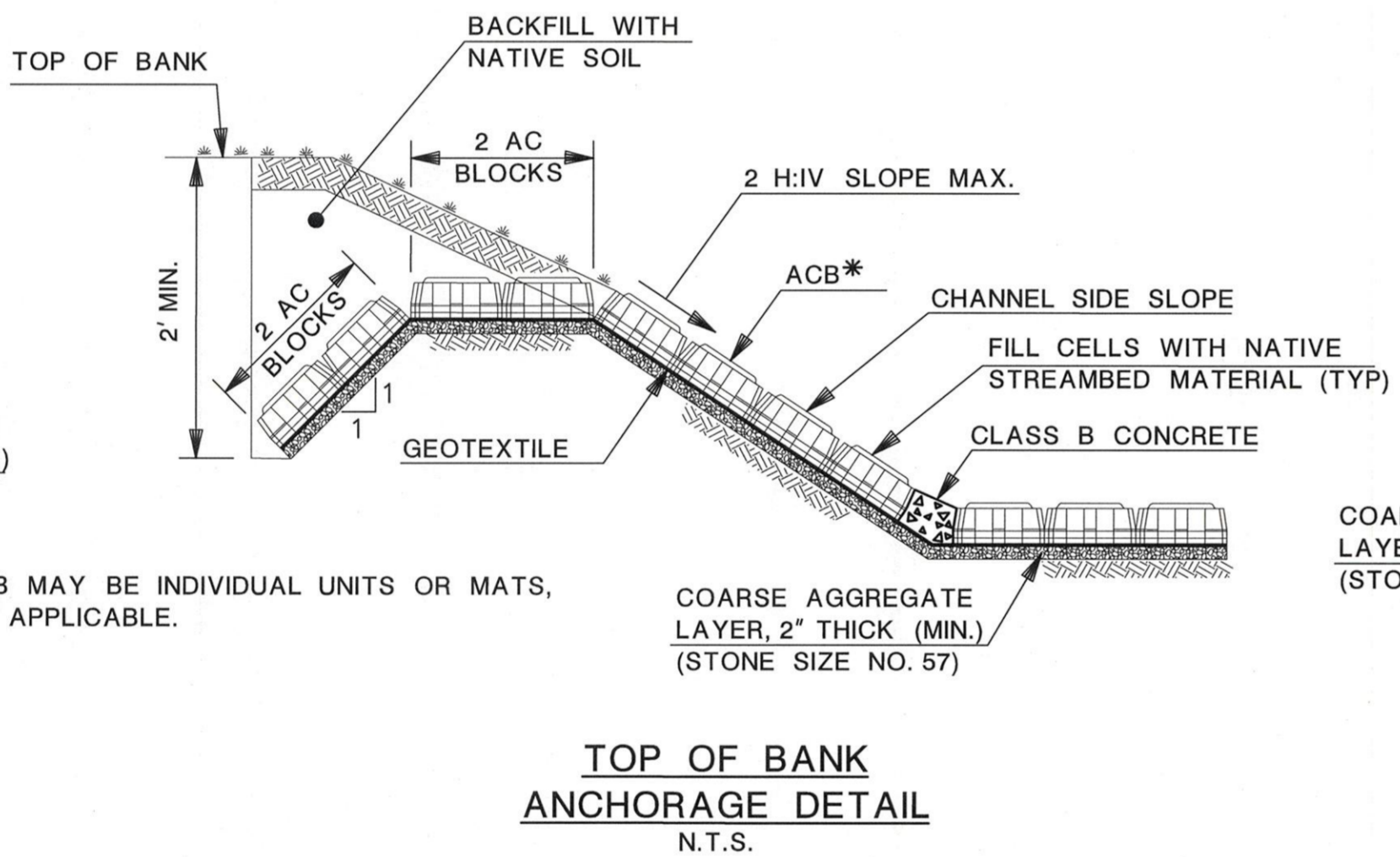
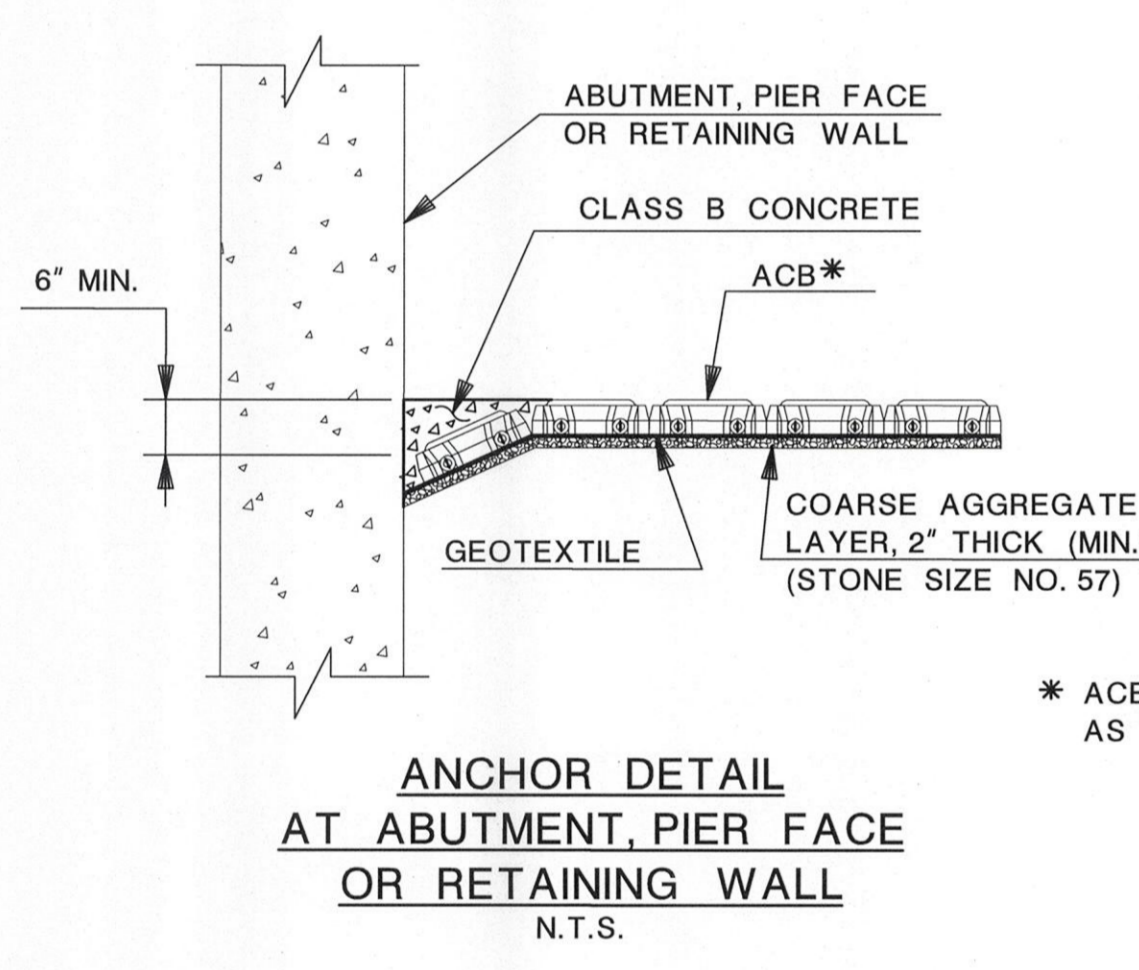
SCALE: 1"=30'
 DATE: JUNE 2019
 SHEET NO. 8 OF 11





NOTE:
1. USE CABLE TIE SYSTEM FOR THE ACBM SECTIONS ADJACENT TO THE TOE TRENCH ENDS.

- NOTES:**
1. THE ARTICULATED CONCRETE BLOCK SHALL BE 6 IN. THICK (MINIMUM).
 2. THE CONTRACTOR MAY, AT HIS OPTION, AND AT NO EXTRA COST TO THE COUNTY, PROPOSE OTHER COMPARABLE ACBM'S FOR THE ENGINEER'S APPROVAL. DETAILED DESIGN CALCULATIONS MEETING THE STABILITY, CONSTRUCTION, AND INSTALLATION CRITERIA THAT SATISFY ALL PERMITTING AGENCY REQUIREMENTS, SHALL BE SUBMITTED WITH ANY PROPOSED CHANGE TO ACB MATTRESS TYPE. SUCH DESIGN SHALL BE SIGNED AND SEALED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.
 3. CONTRACTOR MAY, DEPENDING UPON METHOD OF INSTALLATION, PROPOSE DIFFERENT WIDTHS OF ACB MATS CONSISTENT WITH EQUIPMENT AND/OR METHOD OF INSTALLATION.
 4. MODIFIED MATS SHALL BE CONSTRUCTED BY REMOVING THE REQUIRED BLOCKS SO THE REQUIRED MAT SHAPE CAN BE OBTAINED.
 5. CONTRACTOR SHALL SUBMIT HIS DETAILS FOR METHOD OF INSTALLATION OF PROPOSED ACB MATS INCLUDING EQUIPMENT, METHOD OF ACCESS TO THE SITE, INSTALLATION OF GEOTEXTILE AND METHOD OF VERIFYING FINAL ACB MAT LAYOUT THAT INCLUDES THE EARTH AND ROCK ANCHORS. THE VERTICAL OFFSET BETWEEN ADJACENT BLOCKS IN THEIR FINAL POSITION SHALL NOT BE MORE THAN 1/2 INCH. THE CONTRACTOR SHALL SUBMIT DETAILED "SHOP DRAWINGS", SPECIFICATIONS AND METHOD OF INSTALLATION FOR THE RESPECTIVE ANCHORS FOR APPROVAL.
 6. THE ACTUAL PLACEMENT OF ACB MAT, ALONG AND ACROSS THE RIVER BED, MAY VARY DEPENDING UPON THE EXISTING SITE CONDITION.
 7. THE ACB MAT SHALL BE PLACED BUTTING SUCH THAT THE GAP BETWEEN SIDE-BY-SIDE MATS IS NOT MORE THAN 1/2 INCH.
 8. FOR AREAS USING CABLE TIES, EARTH MECHANICAL ANCHORS SHALL BE PROVIDED WITHIN EACH ACB MAT SUBJECT TO THE FOLLOWING CRITERIA:
EARTH ANCHOR: MINIMUM LENGTH = 3 FEET.
IF THE LENGTH OF THE ACB MAT IS LONGER THAN 8 FEET, ANCHORS SHALL BE PROVIDED AT 8 FOOT CENTER TO CENTER DISTANCE WITHIN THE MAT. THE CONTRACTOR MUST ENSURE THAT THE ANCHORS ARE ATTACHED TO THE CABLES FORMING THE ACB MAT AND FILLED WITH CONCRETE AS SHOWN.
 9. THERE WILL BE NO SEPARATE PAYMENT FOR GEOTEXTILE FIBER FABRIC, CONCRETE CLASS B, AND COARSE AGGREGATE STONE, SIZE NO. 57. COST FOR THESE ITEMS SHALL BE INCLUDED IN THE PAY ITEM "ARTICULATED CONCRETE BLOCK MATTING, 6", OPEN CELL". RIPRAP STONE SHALL BE PAID FOR UNDER THE ITEM RIPRAP STONE SCOUR PROTECTION (D50=12")
 10. COST OF EXCAVATION FOR TOE TRENCH AND TOP OF BANK ANCHORAGE TO BE INCLUDED IN THE PAY ITEM "EXCAVATION, UNCLASSIFIED".
 11. FILL THE ARTICULATED CONCRETE BLOCK OPEN CELLS WITH NATIVE STREAMBED MATERIAL.
 12. CONTRACTOR IS ADVISED THAT ARTICULATED CONCRETE BLOCKS MAY NEED TO BE HAND PLACED IN AREAS UNDER THE STRUCTURE. HOWEVER, AREAS OF ACB UPSTREAM AND DOWNSTREAM OF THE BRIDGE FASCIA SHALL BE INSTALLED AS MATS WITH BLOCKS CABLED TOGETHER AS SHOWN IN THE DETAILS.



CABLE TIED ARTICULATED CONCRETE BLOCK MAT (ACBM) N.T.S.

DATE	REVISION	DESCRIPTION
07-19-19	MADE ADJUSTMENTS FOR HAND PLACEMENT OF ACBM	
06-06-19	INCREASED ACBM TOE DEPTH TO BE GREATER THAN SCOUR DEPTH	
04-19-19	ORIGINAL SUBMISSION	

UNION COUNTY ENGINEERING
EAST HAZELWOOD AVENUE BRIDGE (Ra09)
OVER SOUTH BRANCH RAHWAY RIVER
SCOUR COUNTERMEASURES
CITY OF RAHWAY

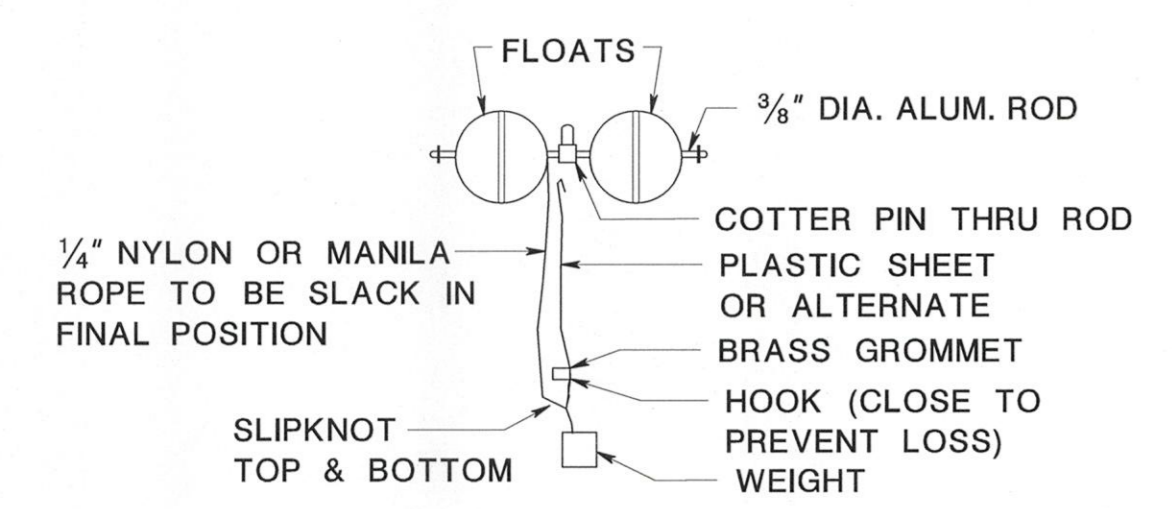
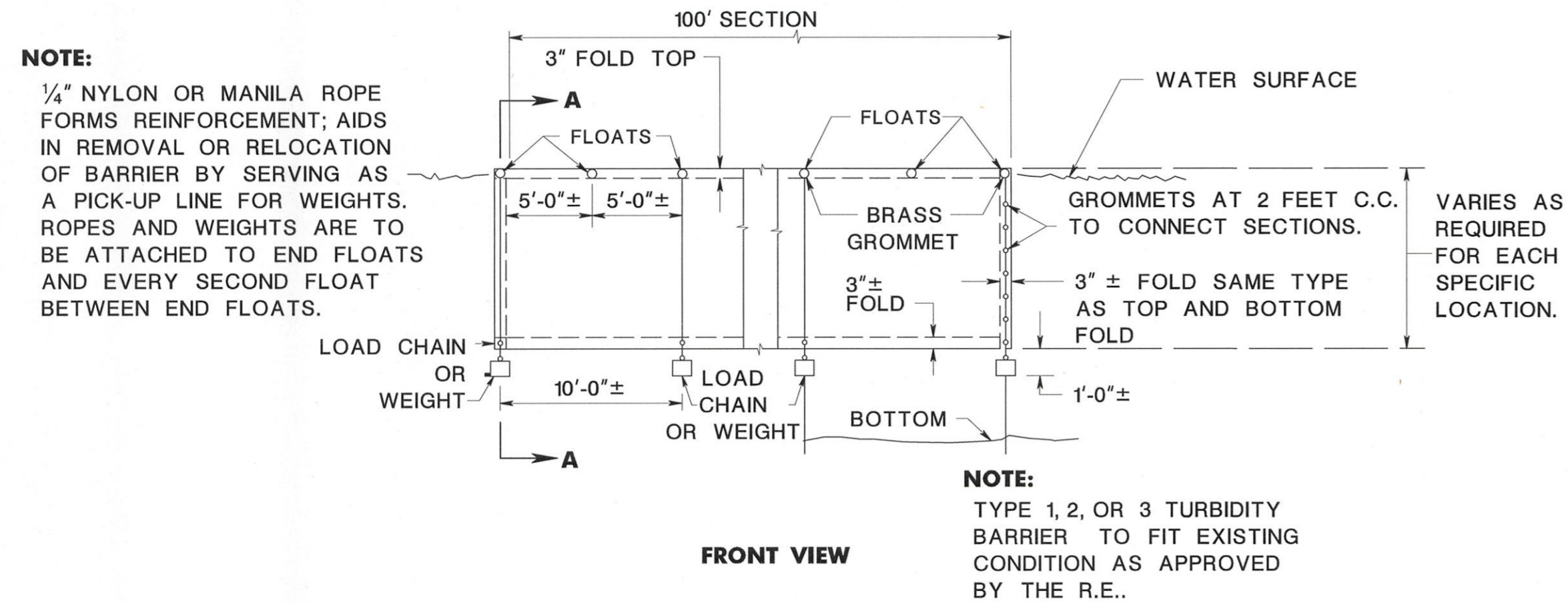
CONSTRUCTION DETAILS

JACOB POLAN, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE03070200
DATE 2/26/2020

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

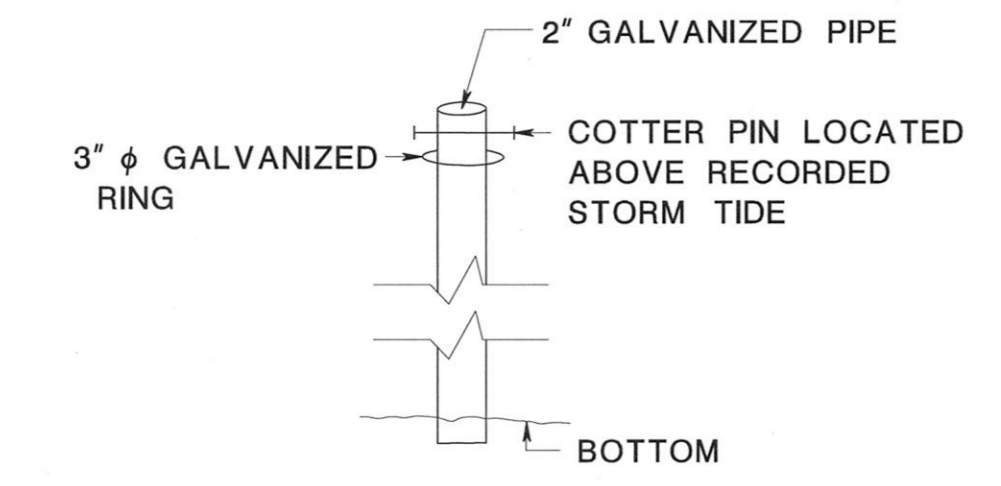
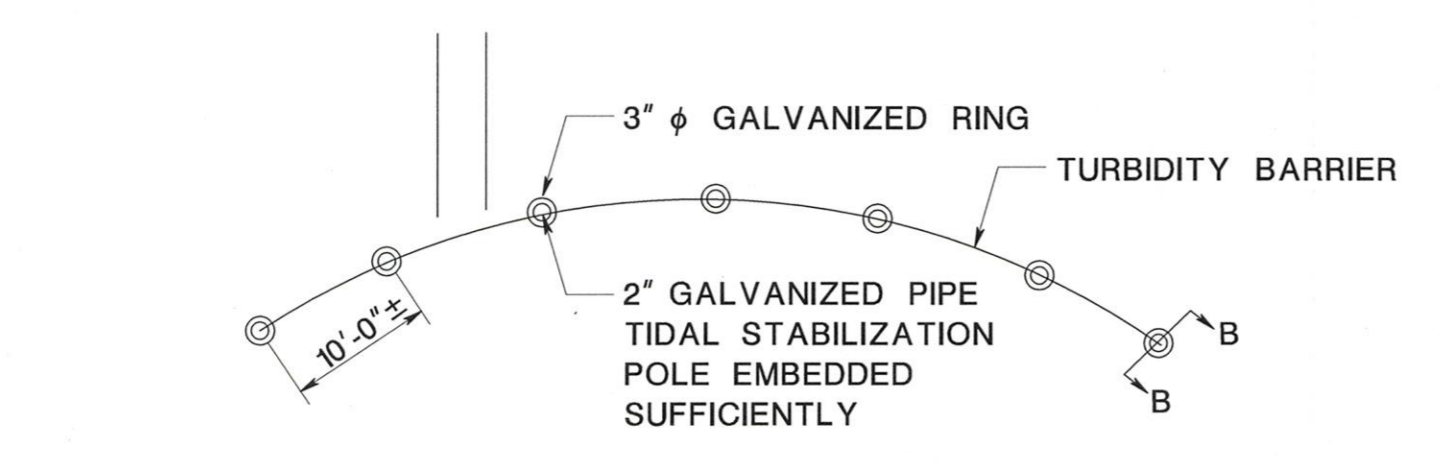
SCALE: NONE
DATE: JUNE 2019
SHEET NO. 9 OF 11



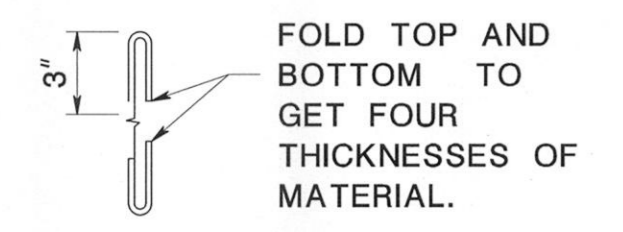


NOTE:
 SUITABLE ALTERNATE MAY BE FASTENED TO STAKES DRIVEN INTO THE BOTTOM IN LIEU OF FLOATS AND WEIGHTS

SECTION A-A



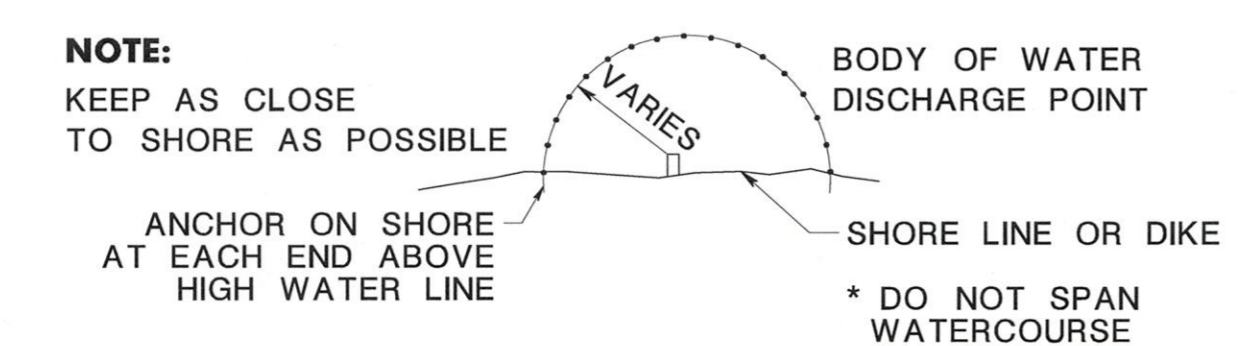
SECTION B-B



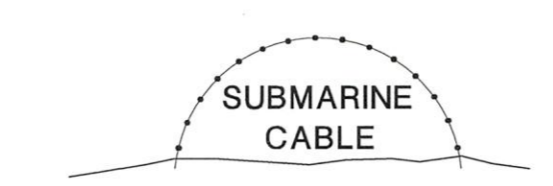
SIDE VIEW FOLDING DETAIL

GENERAL NOTES:

1. PLACE TURBIDITY BARRIER AS TO EFFECTIVELY CONTROL SILT DISPERSION UNDER THE CONDITIONS PRESENT ON A PARTICULAR PROJECT.
2. USE APPROPRIATE NAVIGATIONAL WARNING LIGHTS WHEN USED NEXT TO NAVIGATIONAL CHANNEL.
3. FASTEN TURBIDITY BARRIER TO EMBEDDED GALVANIZED PIPE IN TIDAL OR FLOWING CONDITIONS TO KEEP BARRIER IN PLACE.

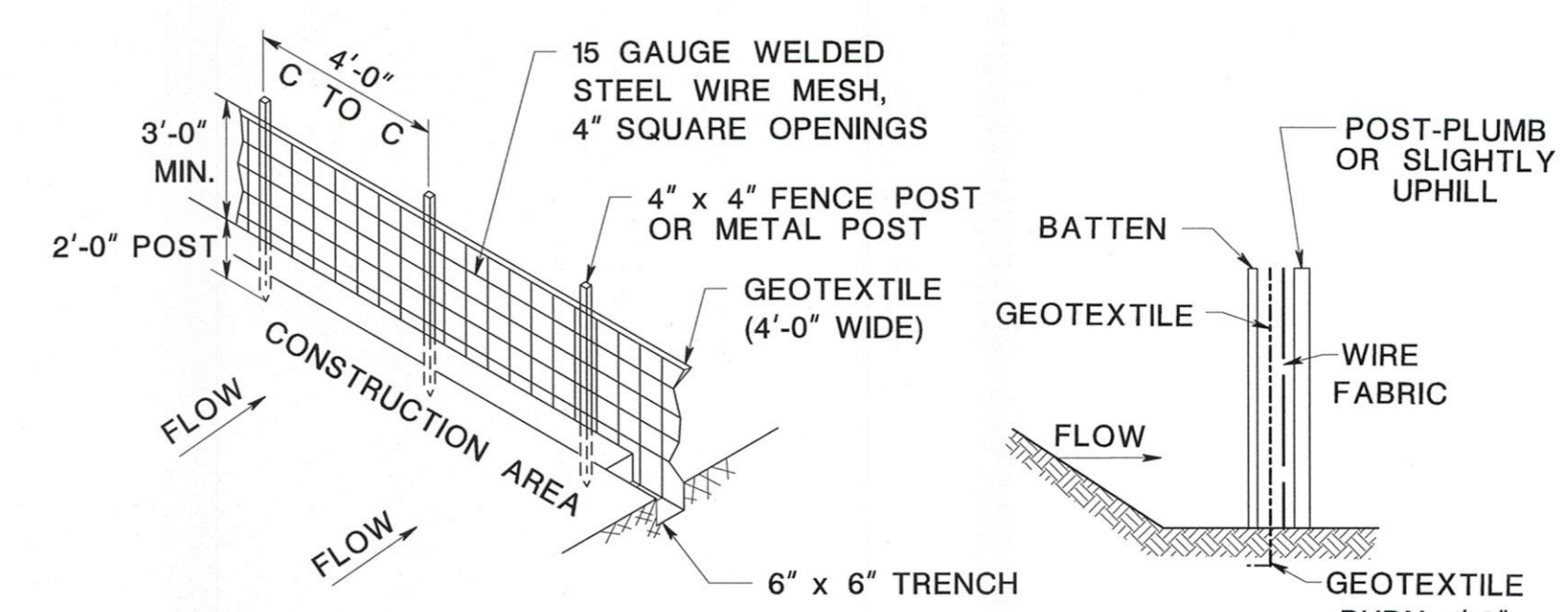


TYPICAL APPLICATION



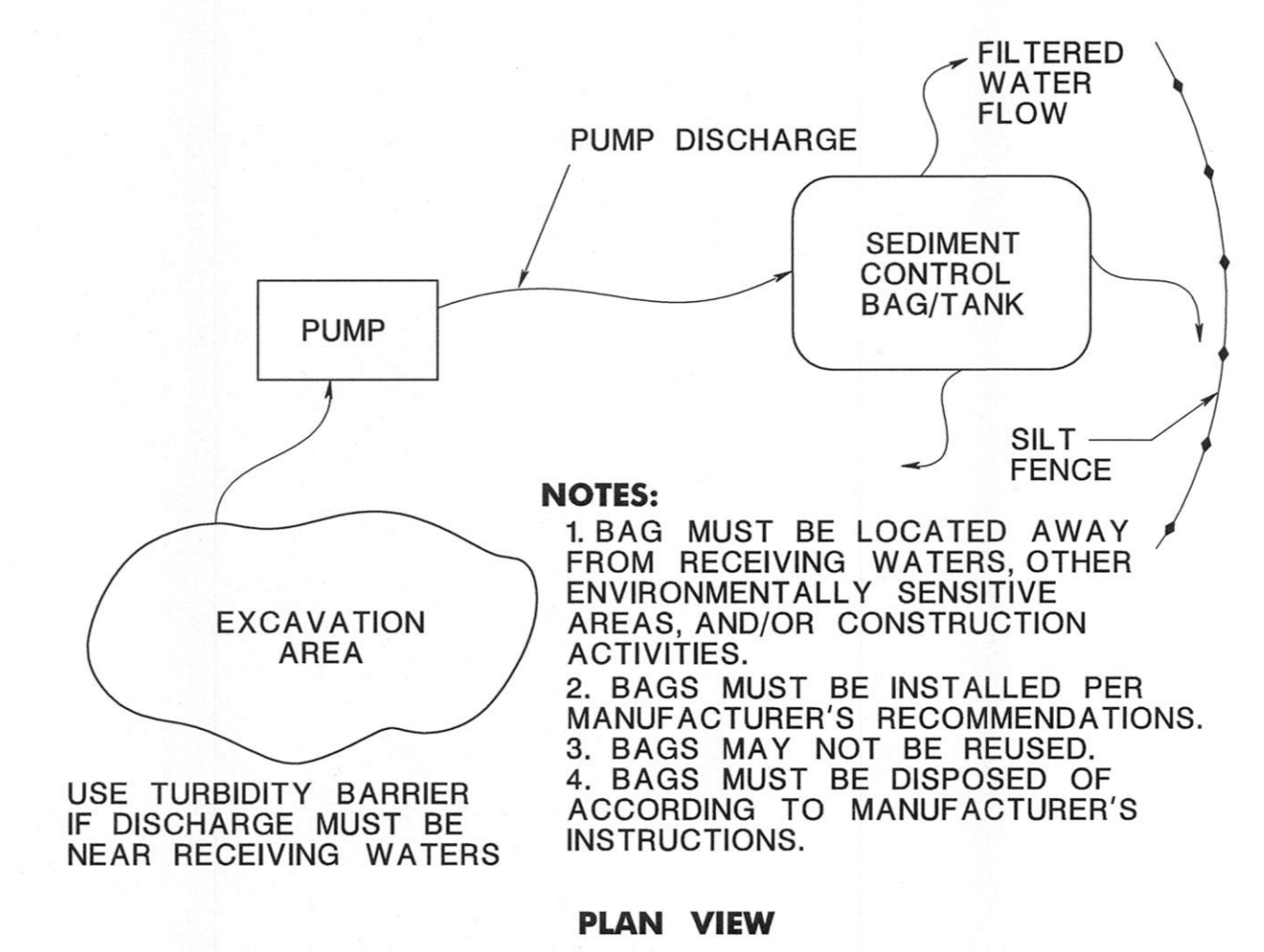
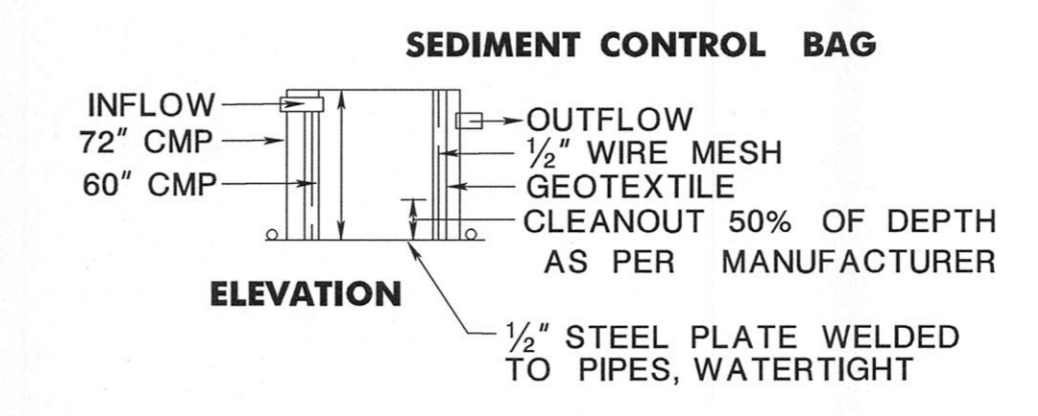
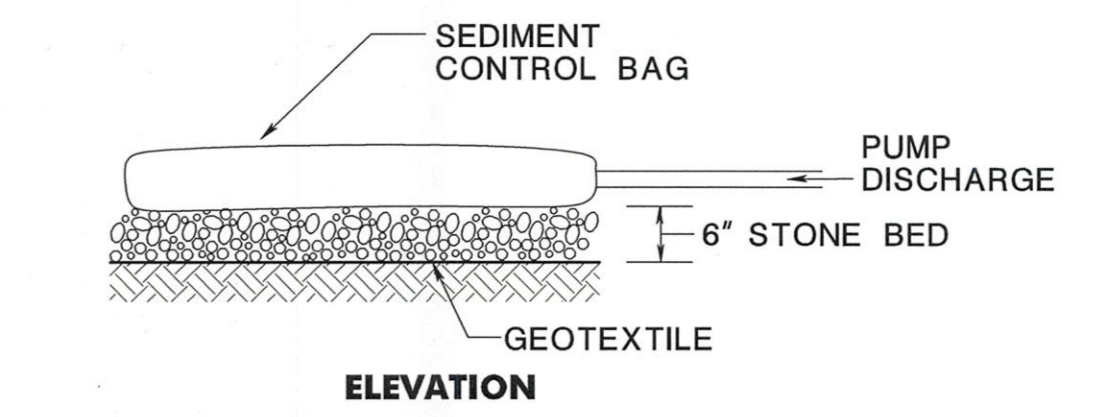
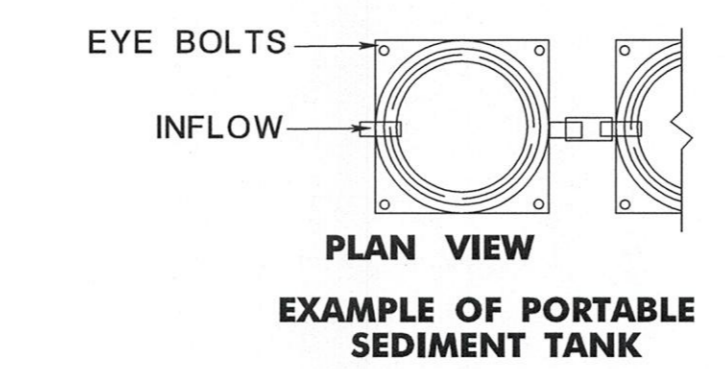
EXCAVATION OF WET AREAS

FLOATING TURBIDITY BARRIER



- NOTES:**
1. SECURELY FASTEN GEOTEXTILE TO WIRE FABRIC BY USE OF WIRE TIES OR HOG RINGS, THEN SANDWICH BETWEEN A 1" x 3" x 3" BATTEN AND THE POSTS PLACING SCREWS AT 6 INCH INTERVALS STARTING 3 INCHES FROM TOP.
 2. BURY 4" X 4" FENCE POST 2'-0" BELOW GROUND.
 3. BURY BOTTOM 1 FOOT OF GEOTEXTILE AS PER SILT FENCE AND TAMP IN PLACE.
 4. SECURELY FASTEN ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE TO A COMMON POST BY WRAPPING EACH END OF THE GEOTEXTILE AROUND A BATTEN TWICE AND ATTACHING THE BATTEN TO POST WITH SCREWS AT 6 INCH INTERVALS STARTING 3 INCHES FROM THE TOP. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
 5. BURY 6" OF WIRE FABRIC IN TIDAL AREAS.
 6. HEAVY DUTY SILT FENCE TO BE USED ADJACENT TO ENVIRONMENTALLY SENSITIVE AREAS INCLUDING WETLANDS, TRANSITION AREAS, RIPARIAN ZONES AND OPEN WATERS.

HEAVY DUTY SILT FENCE



SEDIMENT CONTROL TANK OR BAG

- NOTES:**
1. BAG MUST BE LOCATED AWAY FROM RECEIVING WATERS, OTHER ENVIRONMENTALLY SENSITIVE AREAS, AND/OR CONSTRUCTION ACTIVITIES.
 2. BAGS MUST BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
 3. BAGS MAY NOT BE REUSED.
 4. BAGS MUST BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

USE TURBIDITY BARRIER IF DISCHARGE MUST BE NEAR RECEIVING WATERS

UNION COUNTY ENGINEERING
 EAST HAZELWOOD AVENUE BRIDGE (Ra09)
 OVER SOUTH BRANCH RAHWAY RIVER
 SCOUR COUNTERMEASURES
 CITY OF RAHWAY

SOIL EROSION AND
 SEDIMENT CONTROL DETAILS

JACOB POLAN, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE03070200
 DATE 2/26/2020

Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J.

SCALE: NONE
 DATE: JUNE 2019
 SHEET NO. 10 OF 11

DATE	REVISION	DESCRIPTION

SOMERSET-UNION COUNTY SOIL CONSERVATION DISTRICT SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE SOMERSET-UNION COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING 48 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY.
2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO NJ STATE STANDARDS
4. PERMANENT VEGETATION SHALL BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH WILL BE USED FOR PROTECTION UNTIL SEEDING IS ESTABLISHED
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NJ STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
6. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OR PRELIMINARY GRADING.
7. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING ALL CRITICAL AREAS SUBJECT TO EROSION (I.E.: STEEP SLOPES, ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO THE NJ STATE STANDARDS.
8. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (I.E.: SLOPES GREATER THAN 3:1)
9. TRAFFIC CONTROL STANDARDS REQUIRE THE INSTALLATION OF A 50 X30 X6 PAD OF 1/2 OR 2 STONE, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.
10. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

TEMPORARY STABILIZATION NOTES

1. FOR AREAS SUBJECT TO SOIL COMPACTION, AND NO DANGER TO UNDERGROUND STRUCTURES OR UTILITIES, THE SURFACE SHALL BE SCARIFIED 6" TO 12" IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION.
2. APPLY GROUND LIMESTONE AT A RATE OF 2 TONS/ACRE, UNLESS SOIL TEST INDICATES OTHERWISE. IF SOIL TEST REVEALS A SOIL HAVING A HIGH AMOUNT OF SULFIDES OR A pH VALUE OF 4 OR LESS, REFER TO THE NEW JERSEY STANDARDS FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS FOR MANAGEMENT PRACTICES.
3. APPLY FERTILIZER (10-20-10) AT A RATE OF 11LBS/1000 SF AND WORK INTO SOIL 4" DEEP (REFER TO FERTILIZER APPLICATION TABLE BELOW).
4. THE SEED MIXTURE SHALL BE PERENNIAL RYEGRASS SEED APPLIED AT THE RATE OF 1 LB /1000 SF, AS DESCRIBED IN THE SEEDING TABLE SHOWN IN THIS SHEET.
5. MULCH WITH UNROTTED SALT HAY OR SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. APPLY MULCH AT A RATE OF 90 LBS/1000 SF, SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 95% OF THE SOILS SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION. ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND AND WATER. REFER TO SECTION 7-3 IN THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY FOR ANCHORING DETAILS.
6. PLANT SEED BETWEEN MARCH 1 AND MAY 15 OR BETWEEN AUGUST 15 AND OCTOBER 1, IF POSSIBLE.

PERMANENT STABILIZATION SPECIFICATIONS

1. FOR AREAS SUBJECT TO SOIL COMPACTION, AND NO DANGER TO UNDERGROUND STRUCTURES OR UTILITIES, THE SURFACE SHALL BE SCARIFIED 6" TO 12" IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION.
2. APPLY TOPSOIL TO A DEPTH OF 5" (FINAL SETTLED CONDITION).
3. APPLY GROUND LIMESTONE AT A RATE OF 90 LBS/1000 SF WHEN TOPSOIL HAS LESS THAN A 5.8 pH VALUE, APPLY PULVERIZED LIMESTONE AT A RATE NECESSARY TO ATTAIN A 6.5 pH VALUE.
4. APPLY FERTILIZER (10-20-10) AT A RATE OF 11LBS/1000 SF REFER TO STANDARDS FOR SESC IN NEW JERSEY SECTION 4-1 FOR ADDITIONAL APPLICATION GUIDELINES.
5. MULCH WITH UNROTTED SALT HAY OR SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING, AND APPLY AT A RATE OF 90 LBS/1000 SF.
6. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 95% OF THE SOILS SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION. ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND AND WATER.
7. PLANT SEED BETWEEN MARCH 1 AND MAY 15 OR BETWEEN AUGUST 15 AND OCTOBER 1, IF POSSIBLE.

11. IN THAT NJSA 4:24-39 ET SEQ., REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE THE PROVISIONS OF THE CERTIFIED PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES, ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS, WILL HAVE TO BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
12. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
13. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RECERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT NJ STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.
14. THE SOMERSET-UNION COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.
15. MULCHING TO THE NJ STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONALS ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING.
16. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF CONSTRUCTION PROJECT.
17. THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION AT THE REQUEST OF THE SOMERSET-UNION COUNTY SOIL CONSERVATION DISTRICT.
18. HYDRO SEEDING IS A TWO-STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED TO SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF SEEDING OPERATION, HYDROMULCH SHOULD BE APPLIED AT A RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDROMULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE NJ STANDARDS.
19. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SOIL TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.

DEWATERING NOTES

1. PUMPING OF SEDIMENT-LADEN WATER FROM DEWATERING ACTIVITIES DIRECTLY INTO WATER BODIES, WETLANDS, OR INLETS IS PROHIBITED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER.
2. BASINS/SEDIMENT CONTROL TANKS/SEDIMENT CONTROL BAGS NEEDED FOR DEWATERING ACTIVITIES SHOULD NOT BE LOCATED IN UN-IMPACTED WETLANDS OR TRANSITION AREAS OR IN FLOODPLAINS OR RIPARIAN ZONES, IF FEASIBLE.
3. CONSTRUCTION OF DEWATERING FACILITIES INVOLVING GROUND DISTURBANCE NEAR A WATER BODY IS TO BE DONE OUTSIDE OF ANY REGULATORY PERMIT TIMING RESTRICTION PERIOD.
4. CLEAN AND CLEAR WATER FROM DEWATERING ACTIVITIES SHOULD BE RETURNED TO A PORTION OF THE WATER BODY THAT IS PROTECTED BY TURBIDITY BARRIER WITHOUT CAUSING SCOUR OR EROSION.
5. PLACE SILT FENCE/HAY BALES AROUND SEDIMENT CONTROL BAGS WHERE APPLICABLE. ALSO PLACE FLOATING TURBIDITY BARRIERS AND/OR TURBIDITY DAMS TO CORRAL THE DISCHARGE AREA IF THE DISCHARGE FROM THE SEDIMENT CONTROL BAG FLOWS INTO A RECEIVING WATER BODY.

SOIL RESTORATION

THE PROJECT IMPROVEMENTS DO NOT ANTICIPATE CONTIGUOUS AREAS OF LAND GRADING LARGER THAN 500 SQUARE FEET THAT MAY REQUIRE SOIL COMPACTION MITIGATION.

FERTILIZER APPLICATION TABLE

FERTILIZER ANALYSIS (N-P-K)	WEIGHT OF BAG (LBS.)	BAGS/ACRE
5 - 10 - 5	50	18
5 - 10 - 5	80	11
5 - 10 - 5	100	9
10 - 20 - 10	50	9
10 - 20 - 10	80	5.5
10 - 20 - 10	100	4.5

SEEDING TABLE

SEED SELECTION	SEEDING RATE (POUNDS PER 1000 SQ. FT.)	OPTIMUM SEEDING DATE (PLANT HARDINESS ZONE 6B)	OPTIMUM SEED DEPTH (INCHES)
COOL SEASON GRASSES			
PERENNIAL RYEGRASS	1.0	3/15 - 6/1 8/1 - 9/15	0.5

SEQUENCE OF CONSTRUCTION

1. INSTALL SOIL EROSION AND SEDIMENT CONTROL MEASURES.
2. ESTABLISH TRAFFIC CONTROLS, IF REQUIRED.
3. INSTALL TEMPORARY STREAM DIVERSION.
4. INSTALL ARTICULATED CONCRETE BLOCK MAT (ACBM) AND REESTABLISH THE CHANNEL BED.
5. REMOVE TEMPORARY STREAM DIVERSION.
6. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES, PERFORM FINAL CLEANUP.

CITY OF RAHWAY

COUNTY OF UNION

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "2007 N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", AS MODIFIED BY THE SUPPLEMENTARY SPECIFICATIONS.
2. THE EXISTING R.O.W. WAS SET USING FOUND PROPERTY MARKERS, DEEDS AND TAX MAPS.
3. ALL DIMENSIONS AND DETAILS SHALL BE VERIFIED AND COORDINATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY SAFEGUARDS TO PROTECT PUBLIC SAFETY AND ADJOINING PROPERTIES.
5. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY EQUIPMENT AND METHODS TO KEEP EXCAVATIONS FREE OF WATER AND PROTECT WORK FROM DAMAGE BY WATER DURING ALL STAGES OF CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE FOR PROVIDING AND MAINTAINING EQUIPMENT AND METHODS TO KEEP EXCAVATIONS DEWATERED. COSTS THEREOF ARE TO BE INCLUDED IN PRICES BID FOR THE VARIOUS ITEMS IN THE PROPOSAL.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS.
8. COMPACTION OF ALL FILL MATERIALS SHALL BE TO 95% STANDARD PROCTER DENSITY (ASTM D-698).
7. ALL EARTH FILL SHALL BE FREE FROM BRUSH, ROOTS AND OTHER ORGANIC MATERIAL SUBJECT TO DECOMPOSITION.
8. ALL TREES TO BE CUT SHALL BE FIELD MARKED BY THE CONTRACTOR FOR APPROVAL BY THE COUNTY INSPECTOR PRIOR TO FELLING.
9. NO TREES SHALL BE REMOVED UNLESS APPROVED IN THE FIELD BY THE COUNTY INSPECTOR. ALL TREE REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CLEARING SITE". FOR LOCATION OF TREES TO BE REMOVED, SEE CONSTRUCTION AND DEMOLITION PLANS. LOCATION OF NEW TREES SHALL BE AS DIRECTED BY THE ENGINEER.
10. A PRECONSTRUCTION MEETING WITH THE COUNTY ENGINEER'S REPRESENTATIVE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION.
11. STREAM FLOW SHALL BE MAINTAINED AT ALL TIMES.



UNION COUNTY ENGINEERING
 EAST HAZELWOOD AVENUE BRIDGE (Ra09)
 OVER SOUTH BRANCH RAHWAY RIVER
 SCOUR COUNTERMEASURES
 CITY OF RAHWAY

**SOIL EROSION AND
 SEDIMENT CONTROL NOTES**

JACOB POLAN, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE03070200
 DATE: 2/26/2020

Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J.

SCALE: NONE
 DATE: JUNE 2019
 SHEET NO. 11 OF 11

REVISION	
DATE	DESCRIPTION