



COUNTY OF UNION

DEPARTMENT OF ENGINEERING, PUBLIC WORKS & FACILITIES MANAGEMENT
Joseph A. Graziano Sr., Director

BOARD OF
CHOSEN FREEHOLDERS

MEMORANDUM

ALEXANDER MIRABELLA
Chairman

ANGELA R. GARRETSON

SERGIO GRANADOS

CHRISTOPHER HUDAK

BETTE JANE KOWALSKI

KIMBERLY PALMIERI-MOUDED

ANDREA STATEN

REBECCA WILLIAMS

EDWARD T. OATMAN
County Manager

AMY C. WAGNER
Deputy County Manager

BRUCE H. BERGEN, ESQ.
County Counsel

JAMES E. PELLETIERE, RMC
Clerk of the Board

TO:

All Potential Bidders

FROM:

Thomas O. Mineo, P.E.
County Engineer

DATE:

September 29, 2020

RE:

ADDENDUM NUMBER 1
Snyder Avenue Turf Field Improvements,
Township of Berkeley Heights,
County of Union, New Jersey
BA# 24-2020, UC Engineering Project # 2019-006

PLEASE NOTE THAT THE ATTACHED "ADDENDUM NUMBER 1"
FORM MUST BE COMPLETED AND SUBMITTED WITH THE
ORIGINAL BID SUBMISSION PACKET

THOMAS O. MINEO, P.E.
County Engineer,
Director, Division of Engineering

DIVISION OF ENGINEERING

2325 South Avenue

Scotch Plains, NJ 07076

(908)789-3690

fax(908)789-3674

www.ucnj.org

We're Connected to You!

BIDDER'S NAME: _____

ACKNOWLEDGMENT OF ADDENDUM

ADDENDUM NUMBER 1

DATED: September 29, 2020

COUNTY OF UNION

**Snyder Avenue Turf Field Improvements
Township of Berkeley Heights, County of Union,
New Jersey**

**BA# 24-2020
Union County Engineering Project # 2019-006**

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.

Union County is issuing Addendum #1 for the above mentioned project as described below:

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received
<u>ADDENDUM NUMBER 1:</u> The "Landscaping" specification located within the Technical Specifications is being revised and <u>Page 101</u> shall be replaced with the updated "Landscaping" specification denoted as Addendum #1, 09/28/2020		
The "Bid Form" page B-6 located within the Bid Sheets is being revised, specifically item # 52 "White Oak, Quercus Alba" is being revised to "White Oak, Quercus Alba, 3"-3.5" Caliper". <u>Page B-6</u> shall be replaced with the updated "Bid Form" <u>Page B-6</u> denoted as Addendum #1, 09/28/2020		
The "Mitigation Plan" <u>Sheet 8.02</u> located within the plan set is being revised and <u>Sheet 8.02</u> shall be replaced with the updated "Mitigation Plan" sheet denoted as Addendum #1, 09/28/2020		

ACKNOWLEDGMENT BY BIDDER:

NAME OF BIDDER: _____

ORIGINAL SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

ADDENDUM NO. 1

DATED: 9/29/2020

LANDSCAPING

DESCRIPTION

Landscaping shall consist of the furnishing and planting of all plants, as directed by the County of Union and all incidental work related thereto. It shall consist of the furnishing and planting trees, plants, shrubs, grasses, etc., in accordance with the Contract Documents, or as directed by the Engineer. It shall also consist of the furnishing of one (1) 20-Gallon Tree Watering Bag per tree that require refilling once or twice a week; the bags shall be suitable for the specified tree. The plants shall be guaranteed in accordance with the construction drawings.

MATERIALS

N. J. Department of Transportation Standard Specifications.

Tree watering bags shall be made from heavy-duty, green coated polypropylene that is UV stabilized to last after long hours in the sun.

METHODS OF CONSTRUCTION

N. J. Department of Transportation Standard Specifications.

QUANTITY AND PAYMENT

The quantity of Landscaping for which payment will be made will be all of the various kinds of plant materials listed and planted in accordance with the Plans and Specifications or as directed by the Engineer.

Payment for Landscaping will be made on a unit price basis for trees planted under the "Native Dogwood, *Cornus Florida*, 8'-10' High", "Eastern Redbud, *Cercis Canadensis*, 8'-10' High", "Shagbark Hickory, *Carya Ovata*, 3"-3.5" Caliper", and "White Oak, *Quercus Alba*, 3"-3.5" Caliper", pay items in the Proposal, which price shall include the cost of furnishing the plants and protection thereof before planting, excavation of holes, planting, mixing and placing backfill material, fertilizing, pruning tops and roots, supporting trees, wrapping, wood chip mulch, furnishing and applying anti-desiccant or fungicide, repairing ground surface, disposal of excess excavated and waste materials, one (1) 20-Gallon Tree Watering Bags per tree, maintenance, replacements, and all else necessary therefore and incidental thereto.

Bidder's Name _____

43	BLEACHER, 5 ROW, 45' WIDE, ON 6" REINFORCED CONCRETE PAD	UNIT	2		
44	PRESS BOX, ON 6" REINFORCED CONCRETE PAD	UNIT	1		
45	STORAGE SHED, ON 6" REINFORCED CONCRETE PAD	UNIT	1		
46	SCOREBOARD, COMPLETE	UNIT	1		
47	TRASH RECEPTACLE, ON 6" REINFORCED CONCRETE PAD	UNIT	2		
48	ASPHALT PATHWAY (4" BASE COURSE, 2" SURFACE COURSE)	SY	975		
49	NATIVE DOGWOOD, CORNUS FLORIDA, 8'-10' HIGH	UNIT	5		
50	EASTERN REDBUD, CERCIS CANADENSIS, 8'-10' HIGH	UNIT	5		
51	SHAGBARK HICKORY, CARYA OVATA, 3"-3.5" CALIPER	UNIT	2		
52	WHITE OAK, QUERCUS ALBA, 3"-3.5" CALIPER	UNIT	5		
53	TOPSOIL AND HYDROSEED	SY	2,400		
54	FINAL CLEANUP AND SITE RESTORATION	LS	1		

Written

Figures

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

FOUR HUNDRED THOUSAND DOLLARS AND NO CENTS
Written

\$400,000.00
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.

SPECIFICATIONS
SNYDER AVENUE TURF FIELD IMPROVEMENTS,
TOWNSHIP OF BERKELEY HEIGHTS, COUNTY OF
UNION, NEW JERSEY

BA#24-2020; UNION COUNTY ENGINEERING PROJECT #2019-006

OCTOBER 2020

UNION COUNTY OFFICIALS
BOARD OF CHOSEN FREEHOLDERS

Alexander Mirabella, 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:
Neglia Engineering Associates
200 Central Avenue, Suite 102, Mountainside, NJ 07092
201-939-8805

**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, **October 9, 2020 at 11:30 a.m.**, prevailing time, in the **6th Floor Conference Room**, U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey for:

**SNYDER AVENUE TURF FIELD IMPROVEMENTS, TOWNSHIP OF BERKELEY HEIGHTS,
COUNTY OF UNION, NEW JERSEY
BA#24-2020; UNION COUNTY ENGINEERING PROJECT #2019-006**

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 and all bids and to waive any and all informalities in the bid in accordance with the New Jersey Local Public Contracts Law.

***Public access to the County of Union Administration Building is currently restricted during the statewide public health emergency. Accordingly there will not be an in-person public opening but instead will be conducted live and streamed via the County of Union live streaming platform which will feature both audio and video capabilities. A link will be provided on the day of the opening at <https://ucnj.org/>.

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. Hand delivery of proposals are strongly discouraged due to public restrictions. If delivered by hand, you will not receive confirmation of delivery. **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.

***Entire bid packages received will be scanned and available for public inspection on the portal, <http://ucnj.org/itb>, as they would be available for public inspection after an in-person bid opening. Bidders are reminded to review their submissions for any information they consider to be confidential. The County will not be responsible for the release of any information contained in the bid package which may be subject to confidentiality.

MICHELLE HAGOPIAN, ASSISTANT DIRECTOR OF PURCHASING

**UNION COUNTY BOARD
OF CHOSEN FREEHOLDERS**

We're Connected to You!

**SNYDER AVENUE TURF FIELD IMPROVEMENTS, TOWNSHIP OF BERKELEY HEIGHTS,
COUNTY OF UNION, NEW JERSEY
BA#24-2020; UNION COUNTY ENGINEERING PROJECT #2019-006
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: LABOR AND MATERIALS
Section 10: INSURANCE REQUIREMENTS
Section 11: INDEMNIFICATION REQUIREMENTS
Section 12: ROYALTIES AND PATENTS
Section 13: PLANS AND SPECIFICATIONS
Section 14: GUARANTEE AGAINST DEFECTIVE WORK
Section 15: TRAFFIC AND STREET MAINTENANCE
Section 16: CONTRACTOR'S EMPLOYEES
Section 17: OWNERSHIP DISCLOSURES REQUIRED
Section 18: NON-COLLUSION AFFIDAVIT
Section 19: EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCES
Section 20: COMPLIANCE WITH NEW JERSEY PREVAILING WAGE ACT
Section 21: BRAND NAME OR EQUAL
Section 22: LINES AND GRADES
Section 23: NUMBER OF WORKING DAYS
Section 24: PROMPT PAYMENT OF CONSTRUCTION CONTRACTS (NJ Prompt Payment Act)
Section 25: STOPPING WORK ON ACCOUNT OF BAD WEATHER
Section 26: ACCESS FOR OTHER CONTRACTORS
Section 27: CONDEMNED MATERIALS AND WORK
Section 28: STORAGE
Section 29: FINAL CLEAN UP
Section 30: SUB-LETTING OF WORK
Section 31: SAFETY
Section 32: QUALITY, SAFETY AND PERFORMANCE STANDARDS
Section 33: MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS
Section 34: PERMITS
Section 35: CONTRACTOR TO PROVIDE PROOF OF PAYMENT
Section 36: CHANGE ORDERS
Section 37: SUPPLEMENTAL WORK
Section 38: FORM OF CONTRACT
Section 39: PROGRESS PAYMENTS
Section 40: INSPECTION
Section 41: DAMAGES
Section 42: LIQUIDATED DAMAGES
Section 43: AFFIRMATIVE ACTION REQUIREMENTS
Section 44: INVESTMENT ACTIVITIES WITH IRAN

GENERAL SPECIFICATIONS CONTINUED

- Section 45: COMPLIANCE WITH THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT
(N.J.S.A. 34:11-56.48 et. seq.)
- Section 46: UTILITIES
- Section 47: MATERIAL COMPLIANCE AND SHOP DRAWINGS
- Section 48: PRECONSTRUCTION
- Section 49: DISPUTES UNDER THE CONTRACT
- Section 50: CONTRACTOR BUSINESS REGISTRATION CERTIFICATE
(New Mandatory Requirement – Effective 1/18/2010)
- Section 51: BID PROTEST - LEGAL FEES AND COSTS
- Section 52: AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE
- Section 53: NEW JERSEY PAY-TO-PLAY REQUIREMENTS
- Section 54: STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION
- Section 55: 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:

**SNYDER AVENUE TURF FIELD IMPROVEMENTS, TOWNSHIP OF BERKELEY HEIGHTS,
COUNTY OF UNION, NEW JERSEY
BA#24-2020; UNION COUNTY ENGINEERING PROJECT #2019-006**

BIDDER: Bidder shall be a single overall contract bidder

ENGINEER:

David R. Atkinson
Neglia Engineering Associates
200 Central Avenue, Suite 102, Mountainside, NJ 07092
201-393-8805

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

COUNTY ENGINEER:

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

CONSTRUCTION MANAGER:

Neglia Engineering Associates
200 Central Avenue, Suite 102, Mountainside, NJ 07092
201-393-8805

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 Contractor'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.

10. 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.

11. 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.”

12. 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.

13. 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".

14. 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.

15. 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.

16. 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.

17. 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)

18. 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.

19. 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.

20. 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)

21. 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.

22. 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.

23. 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.

24. 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.

25. 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.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. PERMITS

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

35. 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.

36. 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".

37. 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.

38. 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.

39. 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.

40. 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.

41. 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.

42. 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.

43. 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]

44. 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.

45. 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.

46. 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.

47. 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.

48. 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.

49. 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]

50. 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.

51. 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.

52. 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.

53. 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.

54. 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.

55. 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

**SNYDER AVENUE TURF FIELD IMPROVEMENTS, TOWNSHIP OF BERKELEY HEIGHTS, COUNTY
OF UNION, NEW JERSEY
BA#24-2020; UNION COUNTY ENGINEERING PROJECT #2019-006**

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 AND DEMOBILIZATION	LS	1		
2	SITE CLEARING AND DEMOLITION	LS	1		
3	CONSTRUCTION LAYOUT	LS	1		
4	SOIL EROSION AND SEDIMENT CONTROL DEVICES	LS	1		
5	EARTHWORK	LS	1		
6	TEST PITS (IF & WHERE DIRECTED)	CY	200		
7	MAINTENANCE AND PROTECTION OF TRAFFIC	LS	1		
8	PIPE, HDPE, 12", PERFORATED	LF	619		
9	PIPE, HDPE, 12"	LF	73		
10	PIPE, HDPE, 15", PERFORATED	LF	266		
11	PIPE, HDPE, 15"	LF	10		
12	PIPE, HDPE, 18", PERFORATED	LF	268		
13	PIPE, HDPE, 18"	LF	17		
14	PIPE, RCP, 24"	LF	56		
15	1"x12" TURF UNDERDRAIN	LF	5,460		
16	OUTLET CONTROL STRUCTURE, COMPLETE	UNIT	1		
17	MANHOLE, 4' DIAMETER	UNIT	1		
18	STORMWATER OUTFALL, COMPLETE	UNIT	1		

Bidder's Name _____

19	YARD INLET	UNIT	4		
20	CLEANOUT, YARD INLET, BURIED	UNIT	8		
21	SYNTHETIC TURF BASE	SY	12,450		
22	FENCE, CHAIN-LINK, BLACK VINYL-COATED, 8' HIGH	LF	1,405		
23	FENCE, CHAIN-LINK, BLACK VINYL-COATED, WITH SPORTS NETTING, 40' HIGH	LF	260		
24	GATE, CHAIN-LINK, BLACK VINYL-COATED, 8' HIGH, 16' WIDE	UNIT	1		
25	GATE, CHAIN-LINK, BLACK VINYL-COATED, 8' HIGH, 4' WIDE	UNIT	10		
26	BASEBALL BACKSTOP, 62' WIDE	UNIT	1		
27	DEER FENCING, 8' HIGH	LF	570		
28	4' WIDE PERSONNEL GATE (DEER FENCING)	UNIT	5		
29	12" WIDE TURF CURB	LF	1,625		
30	12" WIDE TURF CURB, VARIABLE HEIGHT	LF	115		
31	OUTFIELD FENCE WINDSCREEN	LF	570		
32	OUTFIELD DISTANCE BANNER	UNIT	4		
33	FOUL POLE, 20'	UNIT	2		
34	BATTING CAGE, COMPLETE	UNIT	2		
35	DUGOUT SHELTER, ON 6" REINFORCED CONCRETE PAD	UNIT	2		
36	PLAYER BENCH, 30'	UNIT	2		
37	DUGOUT STORAGE UNIT	UNIT	2		
38	PORTABLE PITCHING MOUND (FIELD)	UNIT	1		
39	PORTABLE PITCHING MOUND (BULLPEN)	UNIT	2		
40	PORTABLE BASES AND HOME PLATE, 1 SET	UNIT	1		
41	PERMANENT BASES AND HOME PLATE, 1 SET	UNIT	1		
42	BATTERS MAT (BATTING CAGE)	UNIT	2		

Bidder's Name _____

43	BLEACHER, 5 ROW, 45' WIDE, ON 6" REINFORCED CONCRETE PAD	UNIT	2		
44	PRESS BOX, ON 6" REINFORCED CONCRETE PAD	UNIT	1		
45	STORAGE SHED, ON 6" REINFORCED CONCRETE PAD	UNIT	1		
46	SCOREBOARD, COMPLETE	UNIT	1		
47	TRASH RECEPTACLE, ON 6" REINFORCED CONCRETE PAD	UNIT	2		
48	ASPHALT PATHWAY (4" BASE COURSE, 2" SURFACE COURSE)	SY	975		
49	NATIVE DOGWOOD, CORNUS FLORIDA, 8'-10' HIGH	UNIT	5		
50	EASTERN REDBUD, CERCIS CANADENSIS, 8'-10' HIGH	UNIT	5		
51	SHAGBARK HICKORY, CARYA OVATA, 3"-3.5" CALIPER	UNIT	2		
52	WHITE OAK, QUERCUS ALBA	UNIT	5		
53	TOPSOIL AND HYDROSEED	SY	2,400		
54	FINAL CLEANUP AND SITE RESTORATION	LS	1		

Written _____

Figures _____

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

FOUR HUNDRED THOUSAND DOLLARS AND NO CENTS

Written

\$400,000.00

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:	

Bidder's Name _____

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
10000 BKT
TRENTON, NJ 08646

TAXPAYER NAME: TAX REGISTRATION TEST ACCOUNT
TRACE NAME: CLIENT REGISTRATION
TAXPAYER IDENTIFICATION: 070-007-382/000
SEQUENCE NUMBER: 0107230
ADDRESS: 847 ROEBLING AVE
TRENTON NJ 08611
ISSUANCE DATE: 07/14/04
EFFECTIVE DATE: 01/01/04

APPROVED: *John S. Kelly*
Acting Director

FORM BRC(06/04)
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 _____

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 3 months 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

STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of New Jersey Department of Transportation, 2019 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.



STATE OF NEW JERSEY
Department of Labor and Workforce Development
Division of Wage and Hour Compliance - Public Contracts Section
PO Box 389
Trenton, NJ 08625-0389

PREVAILING WAGE RATE DETERMINATION

The New Jersey Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq.) requires that the Department of Labor and Workforce Development establish and enforce a prevailing wage level for workers engaged in public works in order to safeguard their efficiency and general well being and to protect them as well as their employers from the effects of serious and unfair competition.

Prevailing wage rates are wage and fringe benefit rates based on the collective bargaining agreements established for a particular craft or trade in the locality in which the public work is performed. In New Jersey, these rates vary by county and by the type of work performed.

Applicable prevailing wage rates are those wages and fringe benefits in effect on the date the contract is awarded. All pre-determined rate increases listed at the time the contract is awarded must also be paid, beginning on the dates specified. Rates that have expired will remain in effect until new rates are posted.

Prevailing Wage Rate

The prevailing wage rate for each craft will list the effective date of the rate and the following information:

W = Wage Rate per Hour **B** = Fringe Benefit Rate per Hour* **T** = Total Rate per Hour

* Fringe benefits are an integral part of the prevailing wage rate. Employers not providing such benefits must pay the fringe benefit amount directly to the employee each payday. Employers providing benefits worth less than the fringe benefit amount must pay the balance directly to the employee each payday.

Unless otherwise stated in the Prevailing Wage Rate Determination, the fringe benefit rate for overtime hours remains at the straight time rate.

When the Overtime Notes in the Prevailing Wage Rate Determination state that the overtime rates are "inclusive of benefits," the benefit rate is increased by the same factor as the wage rate (i.e. multiplied by 1.5 for time and one-half, multiplied by 2 for double time, etc.).

Apprentice Rate Schedule

An "apprentice" is an individual who is registered with the United States Department of Labor - Office of Apprenticeship and enrolled in a certified apprenticeship program during the period in which they are working on the public works project.

The apprentice wage rate is a percentage of the journeyman wage rate, unless otherwise indicated. The apprentice benefit rate is the full journeyman benefit rate, unless otherwise indicated.

If there is no apprentice rate schedule listed, the individual must be paid at least the journeyman rate even if that individual is in a certified apprentice program for that trade.

If there is no ratio of apprentices to journeymen listed for a particular craft, then the ratio shall be one (1) apprentice to every four (4) journeymen.

Comments/Notes

For each craft listed there will be comments/notes that cover the definition of the regular workday, shift differentials, overtime, recognized holidays, and any other relevant information.

Public Works Contractor Registration

The Public Works Contractor Registration Act (N.J.S.A. 34:11-56.48, et seq.) requires that **all** contractors, subcontractors, or lower tier subcontractors who are working on or who bid on public works projects register with the Department of Labor and Workforce Development. Applications are available at www.nj.gov/labor (click on Wage & Hour and then go to Registration & Permits).

Pursuant to N.J.S.A. 34:11-56.51:

No contractor shall bid on any contract for public work as defined in section 2 of P.L.1963, c. 150 (C.34:11-56.26) unless the contractor is registered pursuant to this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L.1999, c.238 (C.34:11-56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the contractor or subcontractor is registered pursuant to that act.

Snow Plowing

Snow plowing contracts are not subject to the New Jersey Prevailing Wage Act or the Public Works Contractor Registration Act.

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

County - UNION

Craft: Air Conditioning & Refrigeration - Service and Repair

PREVAILING WAGE RATE

	03/01/20
Journeyman (Mechanic)	W40.33 B25.67 T66.00

Craft: Air Conditioning & Refrigeration - Service and Repair

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
As Shown	1st Year	2nd Year	3rd Year	4th Year	5th Year	Wage = %	of Jnymn	Wage		
Wage and Bene	40%	50%	60%	70%	80%	Bene = %	of Jnymn	Bene		

Ratio of Apprentices to Journeymen - 1:4

Craft: Air Conditioning & Refrigeration - Service and Repair

COMMENTS/NOTES

THESE RATES MAY BE USED FOR THE FOLLOWING:

- Service/Repair/Maintenance Work to EXISTING facilities.
- Replacement or Installation of air conditioning and refrigeration equipment when the combined tonnage does not exceed 15 tons for refrigeration, or 25 tons for air conditioning.
- Replacement or Installation of "packaged" or "unitary" rooftop-type units when the combined tonnage of the units does not exceed 75 tons.

NOTE: These rates may NOT be used for any work in new construction (including work on new additions).

The regular workday shall consist of 8 hours, starting between 6:00 AM and 10:00 AM, Monday through Friday.

SHIFT DIFFERENTIALS:

- The second and third shifts shall be paid an additional 15% of the hourly rate.
- All shifts must run for a minimum of 5 consecutive days.

OVERTIME:

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

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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

County - UNION

Craft: Boilermaker PREVAILING WAGE RATE

	01/01/20
Foreman	W50.88 B45.21 T96.09
General Foreman	W52.88 B46.22 T99.10
Journeyman	W45.88 B43.54 T89.42

Craft: Boilermaker APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	65%	70%	75%	80%	85%	90%	95%			
1000 Hours										
Benefit =	37.08	37.99	39.49	39.84	40.78	41.70	42.61			

Ratio of Apprentices to Journeymen - *

* 1 apprentice will be allowed for the first 5 journeymen, 1 apprentice for the next 10 journeymen and 1 apprentice for each succeeding 20 journeymen up to a maximum of 5 apprentices per contractor on any one job.

Craft: Boilermaker COMMENTS/NOTES

HIGH WORK: All apprentices working on the erection, repair, or dismantling of smoke stacks, standpipes, or water towers shall be paid the Journeyman rate.

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

SHIFT DIFFERENTIALS:

- The second shift shall work 7½ hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 10%.
- The third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 20%.
- For "Municipal Water Works" projects only, the following shall apply: Two, four day, 10 hour shifts may be worked at straight time Monday through Thursday. The day shift shall work four days, at 10 hours, for 10 hours pay. The second shift shall work four days, at nine and a half hours, for 10 hours pay, plus 10% the hourly rate for new work and .25 cents on repair work. Friday may be used as a make-up day at straight time, due to weather conditions, holiday or any other circumstances beyond the employer's control.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.
- If any other craft employed by the same contractor, or a subcontractor thereof, receives double time in lieu of time and one-half, then the Boilermaker shall receive double time in lieu of time and one-half.
- For "Municipal Water Works" projects only, the following shall apply: Four 10 hour days may be worked Monday through Thursday at straight time. Friday may be used as a make-up day for a day lost to inclement weather, holiday or other conditions beyond the control of the employer. Overtime shall be paid for any hours that exceed 10 hours per day or 40

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

County - UNION

hours per week.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

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

County - UNION

Craft: Boilermaker - Minor Repairs

PREVAILING WAGE RATE

	01/01/20
Foreman	W33.62 B16.47 T50.09
General Foreman	W34.12 B16.47 T50.59
Mechanic	W32.12 B16.47 T48.59

Craft: Boilermaker - Minor Repairs

COMMENTS/NOTES

NOTE: These rates apply to MINOR REPAIR WORK ONLY (repair work in the field for which the contract amount does not exceed \$125,000.00), for boilers that do not produce electric or are not used in the heating of petroleum products.

OVERTIME:

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Thanksgiving Day, day after Thanksgiving, Christmas Day. Saturday holidays observed the preceding Friday, Sunday holidays observed the following Monday.

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

County - UNION

Craft: Bricklayer, Stone Mason

PREVAILING WAGE RATE

	05/01/20
Deputy Foreman	W47.18 B34.00 T81.18
Foreman	W50.18 B34.00 T84.18
Journeyman	W44.18 B34.00 T78.18

Craft: Bricklayer, Stone Mason

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	40%	50%	55%	60%	65%	70%	75%	80%		
6 Months										
Benefits	4.00	5.00	5.50	6.00	22.44	23.93	25.41	26.89		

Ratio of Apprentices to Journeymen - 1:5

Craft: Bricklayer, Stone Mason

COMMENTS/NOTES

The regular workday shall consist of 8 hours, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the first, or day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 10%, inclusive of benefits.

OVERTIME:

- The first 2 hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. The first 10 hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Saturday may be used as a make-up day for hours lost to inclement weather.
- When Bricklayers/Stone Masons work on Saturday with Laborers, and no other crafts are working on the project for the day, benefits may be paid at straight time. If other crafts are present, the applicable overtime rate for benefits shall be paid.

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

County - UNION

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

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

County - UNION

Craft: Carpenter PREVAILING WAGE RATE

	05/07/20
Foreman	W59.06 B34.29 T93.35
Journeyman	W51.36 B29.90 T81.26

Craft: Carpenter APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	40%	55%	65%	80%	90%					
Benefit	57% of	Appren	tice	Wage	for all	intervals	+ \$0.63			

Ratio of Apprentices to Journeymen - 1:3

Craft: Carpenter COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- When there are 2 or more Carpenters on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Carpenters on a job, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly 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 be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due 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, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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

County - UNION

Craft: Carpenter - Resilient Flooring

PREVAILING WAGE RATE

	05/05/20
Foreman	W59.06 B34.20 T93.26
Journeyman	W51.36 B29.81 T81.17

Craft: Carpenter - Resilient Flooring

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	40%	55%	65%	80%	90%					
Benefit	57%	of	Appren	tice	Wage	for all	intervals	+ \$0.54		

Ratio of Apprentices to Journeymen - *

* 1 apprentice shall be allowed to every 2 journeymen or major fraction thereof. No more than 3 apprentices on any one job or project.

Craft: Carpenter - Resilient Flooring

COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- On any job where there are 4 or more Carpenters of Resilient Flooring, 1 must be designated a Foreman.

FOR SYNTHETIC TURF INSTALLATION ONLY:

- The rate shall be 90% of the wage and benefit rate.

The regular workday consists of 8 hours, starting between 6:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular wage rate plus 10%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular wage rate, the second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

OVERTIME:

- Hours in excess of 8 per day or 40 per week, or before or after the regular workday, Monday through Friday, shall be paid at time and one-half the wage rate. Saturday may be used as a make-up day, at straight time, up to 8 hours, for hours lost to reasons beyond the control of the employer, up to a total of 40 hours per week; hours in excess of 8 on Saturday shall then be paid at time and one-half the wage rate. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the wage rate. All hours on Sundays and holidays shall be paid at double the wage rate.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for hours lost to reasons beyond the control of the employer. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the wage rate.

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

County - UNION

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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

County - UNION

Craft: Cement Mason

PREVAILING WAGE RATE

See "Bricklayer, Stone Mason" Rates

Craft: Cement Mason

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									

Ratio of Apprentices to Journeymen - 1:4

Craft: Cement Mason

COMMENTS/NOTES

See "Bricklayer, Stone Mason" Rates

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

County - UNION

Craft: Commercial Painter- New Construction

PREVAILING WAGE RATE

	07/28/20
Foreman	W47.45 B24.35 T71.80
General Foreman	W51.43 B24.67 T76.10
Journeyman	W43.47 B24.04 T67.51

Craft: Commercial Painter- New Construction

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	40%	45%	55%	65%	70%	75%	80%	80%		
Benefits	8.05	8.05	10.05	10.05	11.05	11.05	14.05	14.05		

Ratio of Apprentices to Journeymen - 1:4

Craft: Commercial Painter- New Construction

COMMENTS/NOTES

* Commercial Painters perform work on all commercial structures such as offices, schools, hotels, shopping malls, restaurants, condominiums, etc.

Spraying, sandblasting, lead abatement work on commercial buildings, work performed above 3 stories or 30 feet in height, or using swing scaffolds requires an additional 10% of the wage rate.

FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays 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.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day,

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

County - UNION

Veterans' Day, Thanksgiving Day, Christmas Day.

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

County - UNION

Craft: Commercial Painter- Repainting

PREVAILING WAGE RATE

	07/28/20
Foreman	W33.92 B19.95 T53.87
General Foreman	W36.85 B20.10 T56.95
Journeyman	W30.99 B19.77 T50.76

Craft: Commercial Painter- Repainting

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	PAINTER	NEW	CONSTR UC	TION					

Ratio of Apprentices to Journeymen - 1:4

Craft: Commercial Painter- Repainting

COMMENTS/NOTES

* Commercial Painters perform work on all commercial structures such as offices, schools, hotels, shopping malls, restaurants, condominiums, etc.

NOTE: These rates may only be used on jobs where no major alterations (only doing painting and carpeting with nothing else being changed in the commercial building) occur, and where not more than 3 other trades are present on the job, but may NOT, under any circumstances, be used for work on bridges, stacks, tanks, or generating stations.

Spraying, sandblasting, lead abatement work on commercial buildings, work performed above 3 stories or 30 feet in height, or using swing scaffolds requires an additional 10% of the wage rate.

FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

OVERTIME:

- Hours in excess of 8 per day and 40 per week 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.
- Four 10-hour days may be worked, at straight time, Monday through Sunday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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

County - UNION

Craft: Diver

PREVAILING WAGE RATE

	05/05/20
Diver	W60.24 B48.47 T108.71
Tender	W48.50 B48.47 T96.97

Craft: Diver

COMMENTS/NOTES

NOTE: All dive crews must consist of a Tender, a Diver, and a standby Diver (standby Diver is the same rate as a Diver).

DEPTH & PENETRATION RATES: Divers shall be paid the following depth and penetration rates, in addition to the regular hourly rate, when applicable:

AIR DIVES:

- 0-59 feet: No additional wage
- 60-74 feet: + \$0.25 per foot
- 75-125 feet: + \$0.78 per foot

MIXED GAS DIVES:

- 0-74 feet: No additional wage
- 75-125 feet: + \$1.00 per foot
- 126-200 feet: + \$2.00 per foot

PENETRATION DIVES:

- 126-200 feet: + \$1.50 per foot
- 201-275 feet: + \$1.75 per foot
- 276-350 feet: + \$2.00 per foot
- 351-425 feet: + \$2.50 per foot

OVERTIME:

Hours in excess of 8 per day, Monday through Friday, 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.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day, Christmas Day. Veterans' Day may be switched with the day after Thanksgiving.

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

County - UNION

Craft: Dockbuilder PREVAILING WAGE RATE

	05/05/20
Foreman	W55.78 B48.47 T104.25
Foreman (Concrete Form Work)	W54.97 B35.36 T90.33
Journeyman	W48.50 B48.47 T96.97
Journeyman (Concrete Form Work)	W47.80 B35.36 T83.16

Craft: Dockbuilder APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
Yearly	19.40	24.25	31.53	38.80						
Benefit	32.07	for all	intervals							

Ratio of Apprentices to Journeymen - *

* When there are 4 or fewer Dockbuilders on a job, no more than 1 may be an apprentice. When there are 5 or more Dockbuilders, there may be 1 apprentice for every 5 Dockbuilders.

Craft: Dockbuilder COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR CONCRETE FORM WORK ONLY:

INTERVAL	PERIOD AND RATES			
Yearly	19.12	23.90	31.07	38.24
Benefits	24.16	for all	intervals	

CREOSOTE HANDLING:

When handling creosote products on land piledriving, floating marine construction, and construction of wharves, the worker shall receive an additional \$0.25 per hour.

HAZARDOUS WASTE WORK:

- Hazardous waste removal work on a state or federally designated hazardous waste site where Level A, B, or C personal protection is required: an additional 20% of the hourly rate, per hour.
- Hazardous waste removal work in Level D, or where personal protection is not required: an additional \$1.00 per hour.

CERTIFIED WELDER: When required on the job by the project owner, a Certified Welder shall receive an additional \$1.00 per hour.

FOREMAN REQUIREMENTS:

The first Dockbuilder on the job shall be designated a Foreman.

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

County - UNION

OVERTIME:

Hours in excess of 8 per day, Monday through Friday, 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.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day, Christmas Day. Veterans' Day may be switched with the day after Thanksgiving.

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

County - UNION

Craft: Drywall Finisher

PREVAILING WAGE RATE

	11/01/18
Foreman	W43.95 B24.40 T68.35
General Foreman	W45.94 B24.40 T70.34
Journeyman	W39.95 B24.40 T64.35

Craft: Drywall Finisher

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	40%	50%		60%	70%		80%	90%		
6 Months										
Benefits	Intervals	1 to 2 =	10.65	Intervals	3 to 4 =	13.17	Intervals	5 to 6 =	16.25	

Ratio of Apprentices to Journeymen - 1:4

Craft: Drywall Finisher

COMMENTS/NOTES

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.
- Shift work must run for a minimum of 5 consecutive workdays.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, 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.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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

County - UNION

Craft: Electrician

PREVAILING WAGE RATE

	06/01/20	05/31/21
Cable Splicer	W63.83 B37.99 T101.82	W64.92 B39.29 T104.21
Foreman (11-20 Journeymen)	W67.90 B40.41 T108.31	W69.05 B41.78 T110.83
Foreman (1-3 Journeymen)	W63.83 B37.99 T101.82	W64.92 B39.29 T104.21
Foreman (4-10 Journeymen)	W66.74 B39.72 T106.46	W67.87 B41.07 T108.94
General Foreman (21-30 Journeymen)	W69.64 B41.44 T111.08	W70.82 B42.85 T113.67
General Foreman (31-60 Journeymen)	W75.44 B44.89 T120.33	W76.72 B46.42 T123.14
General Foreman (61+ Journeymen)	W76.60 B45.58 T122.18	W77.90 B47.13 T125.03
Journeyman	W58.03 B34.54 T92.57	W59.02 B35.72 T94.74
Sub-Foreman	W66.16 B39.37 T105.53	W67.28 B40.71 T107.99

Craft: Electrician

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
Yearly	40%	49%	58%	68%	80%		of Jour	neyman	Wage	Rate
Benefit	40%	49%	58%	68%	80%		of Jour	neyman	Benefit	Rate

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician

COMMENTS/NOTES

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

County - UNION

THESE RATES ALSO APPLY TO THE FOLLOWING:

- All burglar and fire alarm work.
- All fiber optic work.
- Teledata work in new construction.
- Teledata work involving 16 Voice/Data Lines or more.

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

FOREMAN REQUIREMENTS:

- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
- 4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
- 11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
- 21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
- 31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
- 41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
- 51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
- 61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% of the regular rate, per hour, inclusive of benefits.

OVERTIME:

Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, 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, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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

County - UNION

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

PREVAILING WAGE RATE

	10/28/19	11/02/20
Master	W56.16	W57.42
Technician/General	B30.89	B31.58
Foreman	T87.05	T89.00
Senior Technician/Lead Foreman (21-30 Workers on Job)	W51.41 B28.27 T79.68	W52.56 B28.91 T81.47
Technician A/Foreman (11-20 Workers on Job)	W49.25 B27.08 T76.33	W50.35 B27.69 T78.04
Technician B/Working Foreman (4-10 Workers on Job)	W47.09 B25.90 T72.99	W48.15 B26.47 T74.62
Technician C/Journeyman (1-3 Workers on Job)	W43.20 B23.76 T66.96	W44.17 B24.29 T68.46

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>										
6 Months						66%	72%	79%	86%		
Benefits						11.81	12.89	14.14	15.40		

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 10-31-14:

INTERVAL	PERIOD AND RATES										
6 Months	35%	35%	40%	43%	48%	54%	61%	67%	74%	81%	
Benefits	6.76	6.76	7.16	7.70	8.59	9.66	10.82	11.99	13.25	14.51	

NOTES:

- These rates are for service, maintenance, moves, and/or changes affecting 15 Voice/Data (teledata) lines or less. These rates may NOT be used for any teledata work in new construction (including additions) or any fiber optic work.
- The number of Teledata workers on the jobsite is the determining factor for which Foreman category applies .

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

SHIFT DIFFERENTIALS:

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

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

County - UNION

- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% of the regular rate, per hour, inclusive of benefits.

OVERTIME:

Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, 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, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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

County - UNION

Craft: Electrician - Teledata (16 Instruments & More)

PREVAILING WAGE RATE

See "Electrician" Rates

Craft: Electrician - Teledata (16 Instruments & More)

COMMENTS/NOTES

See ELECTRICIAN Rates

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

County - UNION

Craft: Electrician- Outside Commercial

PREVAILING WAGE RATE

	06/01/20	05/31/21
Cable Splicer	W64.14 B37.69 T101.83	W65.22 B38.97 T104.19
Certified Welder	W61.22 B35.97 T97.19	W62.26 B37.21 T99.47
Equipment Operator	W58.31 B34.26 T92.57	W59.29 B35.43 T94.72
Foreman (1-3 Journeymen workers on job)	W64.14 B37.69 T101.83	W65.22 B38.97 T104.19
Foreman (4-10 Journeymen workers on job)	W67.06 B39.40 T106.46	W68.19 B40.75 T108.94
General Foreman (11-20 Journeymen workers on job)	W68.22 B40.08 T108.30	W69.37 B41.45 T110.82
General Foreman (21-30 Journeymen workers on job)	W69.97 B41.11 T111.08	W71.16 B42.52 T113.68
General Foreman (31-60 Journeymen workers on job)	W75.80 B44.54 T120.34	W77.08 B46.06 T123.14
General Foreman (61+ Journeymen workers on job)	W76.96 B45.22 T122.18	W78.27 B46.77 T125.04
Groundman	W34.99 B20.56 T55.55	W35.58 B21.26 T56.84
Journeyman Lineman/Technician	W58.31 B34.26 T92.57	W59.29 B35.43 T94.72
Sub-Foreman	W66.47 B39.06 T105.53	W67.60 B40.40 T108.00

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

County - UNION

Craft: Electrician- Outside Commercial

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 Hours	60%	65%	70%	75%	80%	85%	90%			
Benefits	57.75% of	Journey	man	wage	+	\$.01				

Craft: Electrician- Outside Commercial

COMMENTS/NOTES

EFFECTIVE 6-1-20- The apprentice benefit rate shall be 58.75% + \$.01.
EFFECTIVE 5-31-21- The apprentice benefit rate shall be 59.75% + \$.01.

* FOR UTILITY WORK PLEASE SEE STATEWIDE RATES

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

FOREMAN REQUIREMENTS:

- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
- 4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
- 11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
- 21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
- 31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
- 41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
- 51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
- 61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM): 8 hrs. pay for 7.5 hrs. work + an additional 10% of the regular rate, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM): 8 hrs. pay for 7 hrs. work + an additional 15% of the regular rate per hour, inclusive benefits.

OVERTIME:

Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, 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, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day and Christmas Day.

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

County - UNION

Craft: Electrician-Utility Work (North)

PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (North)

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
* 6 Months	60%	65%	70%	75%	80%	85%	90%			
Benefits	69% of	Appren	tice	Wage	Rate	for all	intervals			

Craft: Electrician-Utility Work (North)

COMMENTS/NOTES

Electrician-Utility Work (North) rates are located in the "Statewide" rate package.

* The apprentice wage rate is paid at the percentage of the Journeyman Lineman wage rate located in the "Statewide" rate package.

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

County - UNION

Craft: Electrician-Utility Work (South)

PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (South)

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	29.11	31.54	33.96	36.39	38.82	41.24	43.67			
Benefits	25.61	27.04	28.46	29.90	31.33	32.79	34.23			

Craft: Electrician-Utility Work (South)

COMMENTS/NOTES

Electrician-Utility Work (South) rates are located in the "Statewide" rate package.

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

County - UNION

Craft: Elevator Constructor

PREVAILING WAGE RATE

	03/17/20	03/17/21	03/17/22	03/17/23
Journeyman	W69.56	W72.29	W75.14	W77.49
	B41.92	B42.92	B43.91	B45.57
	T111.48	T115.21	T119.05	T123.06

Craft: Elevator Constructor

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	29.85	36.82	43.52	50.21						
Benefits	32.71	33.51	34.80	36.09						

Ratio of Apprentices to Journeymen - 1:1

Craft: Elevator Constructor

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE AS OF 3-17-20:

INTERVAL	PERIOD AND RATES			
Yearly	31.03	38.26	45.21	52.17
Benefits	33.38	34.20	35.55	36.89

APPRENTICE RATE SCHEDULE AS OF 3-17-21:

INTERVAL	PERIOD AND RATES			
Yearly	32.27	39.76	46.99	54.22
Benefits	34.05	34.91	36.30	37.70

APPRENTICE RATE SCHEDULE AS OF 3-17-22:

INTERVAL	PERIOD AND RATES			
Yearly	33.56	41.33	48.84	56.36
Benefits	34.72	35.61	37.05	38.50

APPRENTICE RATE SCHEDULE AS OF 3-17-23:

INTERVAL	PERIOD AND RATES			
Yearly	34.60	42.62	50.37	58.12
Benefits	36.02	36.94	38.50	39.95

The regular workday shall consist of either 7 or 8 hours to be established at the beginning of the project, between 7:00 AM and 4:30 PM.

OVERTIME:

For all hours worked before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday, shall be paid at double the hourly rate. Holiday pay is one days wages (8 hours) plus double the hourly rate for all hours worked.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus

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

County - UNION

Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

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

County - UNION

Craft: Elevator Modernization & Service

PREVAILING WAGE RATE

	03/17/20	03/17/21	03/17/22	03/17/23
Journeyman	W54.56	W56.77	W59.09	W60.89
	B40.86	B41.82	B42.79	B44.41
	T95.42	T98.59	T101.88	T105.30

Craft: Elevator Modernization & Service

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	29.85	28.84	34.09	39.33						
Benefits	32.66	33.13	34.36	35.58						

Ratio of Apprentices to Journeymen - 1:1

Craft: Elevator Modernization & Service

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE AS OF 3-17-20:

INTERVAL	PERIOD AND RATES			
Yearly	31.03	30.01	35.46	40.92
Benefits	33.33	33.82	35.09	36.36

APPRENTICE RATE SCHEDULE AS OF 3-17-21:

INTERVAL	PERIOD AND RATES			
Yearly	32.27	31.22	36.90	42.58
Benefits	34.00	34.50	35.83	37.15

APPRENTICE RATE SCHEDULE AS OF 3-17-22:

INTERVAL	PERIOD AND RATES			
Yearly	33.56	32.50	38.41	44.32
Benefits	34.67	34.20	35.20	37.94

APPRENTICE RATE SCHEDULE AS OF 3-17-23:

INTERVAL	PERIOD AND RATES			
Yearly	34.60	33.49	39.58	45.67
Benefits	35.97	36.53	37.95	39.38

MODERNIZATION (addition, replacement, refurbishing, relocation, or changes in design or appearance, of elevator equipment in existing buildings):

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

- Overtime:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday shall be paid at time and one-half the hourly rate. Holiday pay is one days wages (8 hours) plus time and one-half the hourly rate for all hours worked.

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

County - UNION

SERVICE (repair or replacement of parts for the purpose of maintaining elevator equipment in good operating condition):

- The regular workday consists of 8 hours, between 6:00 AM and 6:00 PM.

- Overtime:

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

RECOGNIZED HOLIDAYS (Modernization and Service): New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

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

County - UNION

Craft: Glazier PREVAILING WAGE RATE

	05/01/19
* Leadman	W49.11 B25.06 T74.17
Foreman	W52.81 B23.62 T76.43
General Foreman	W54.81 B23.75 T78.56
Journeyman	W48.81 B23.36 T72.17

Craft: Glazier APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
	6 Months	50%	55%		60%	65%		70%	75%	
Benefits	Intervals	1 to 2 =	9.11	Intervals	3 to 4 =	11.71	Intervals	5 to 6 =	13.20	

Ratio of Apprentices to Journeymen - 1:4

Craft: Glazier COMMENTS/NOTES

Hazard/Height Pay: +\$1.00 per hour

* When there are three (3) men working on a jobsite for three (3) days or longer, 1 Journeyman may be designated as a Leadman for the duration of the job, provided he has his OSHA certification.

FOREMAN REQUIREMENTS:

- When there are 4 or more Glaziers on a job, 1 must be designated a Foreman.
- When there are 15 or more Glaziers on a job, 1 must be designated a General Foreman.

The regular workday shall consist of 8 hours, between 7:00 AM and 5:30 PM, Monday to Friday.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.

OVERTIME:

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

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

County - UNION

rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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

County - UNION

Craft: Heat & Frost Insulator

PREVAILING WAGE RATE

	09/24/19
Foreman	W57.02 B32.67 T89.69
General Foreman	W59.36 B33.78 T93.14
Journeyman	W55.24 B32.11 T87.35

Craft: Heat & Frost Insulator

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	25.79	30.59	36.89	43.16						
Benefits	19.07	22.58	24.92	27.16						

Ratio of Apprentices to Journeymen - 1:3

Craft: Heat & Frost Insulator

COMMENTS/NOTES

NOTE: These rates apply to the installing of insulation on hot and cold mechanical systems.

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

SHIFT DIFFERENTIAL:

- Shift work must run for a minimum of 5 consecutive workdays.
- Second Shift shall work 7.5 hours and receive 8 hours pay, at the regular rate, plus 25% per hour.
- Third Shift shall work 7 hours and receive 8 hours pay, at the regular rate, plus 30% per hour.

OVERTIME:

The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

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

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

County - UNION

Craft: Heat & Frost Insulator - Asbestos Worker

PREVAILING WAGE RATE

	09/24/19
Asbestos Helper	W36.89
Abatement	B24.92
	T61.81

Craft: Heat & Frost Insulator - Asbestos Worker

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	HEAT &	FROST	INSULAT OR						

Ratio of Apprentices to Journeymen - 1:3

Craft: Heat & Frost Insulator - Asbestos Worker

COMMENTS/NOTES

NOTE: These rates apply only to the removal of insulation materials/asbestos from mechanical systems, including containment erection and demolition, and placing material in appropriate containers.

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

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- The second shift shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 25% per hour.
- The third shift shall work 7 hours and receive 8 hours pay at the regular rate, plus 30% per hour.

OVERTIME: The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

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

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

County - UNION

Craft: Industrial Painter- Bridges

PREVAILING WAGE RATE

	07/28/20
Foreman	W62.18 B28.99 T91.17
General Foreman	W64.18 B28.99 T93.17
Journeyman	W57.18 B28.99 T86.17

Craft: Industrial Painter- Bridges

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	40%	50%			60%	70%		80%	90%	
6 Months										
Benefits	Intervals	1 to 2 =	10.28	Intervals	3 to 4 =	12.55	Intervals	5 to 6 =	15.56	

Ratio of Apprentices to Journeymen - 1:4

Craft: Industrial Painter- Bridges

COMMENTS/NOTES

* Industrial Painters perform work on all industrial structures, such as bridges, water tanks, waste water facilities, refineries, any structural steel work, etc.

These rates apply to: All bridges that span waterways, roadways, railways and canyons. All tunnels, overpasses, viaducts and all appurtenances.

FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday

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

County - UNION

observed the following Monday.

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

County - UNION

Craft: Industrial Painter- Structural Steel

PREVAILING WAGE RATE

	07/28/20
Foreman	W50.92 B26.64 T77.56
General Foreman	W52.92 B26.64 T79.56
Journeyman	W45.92 B26.64 T72.56

Craft: Industrial Painter- Structural Steel

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	PAINTER	BRIDGES							

Ratio of Apprentices to Journeymen - 1:4

Craft: Industrial Painter- Structural Steel

COMMENTS/NOTES

* Industrial Painters perform work on all industrial structures, such as bridges, water tanks, waste water facilities, refineries, any structural steel work, etc.

These rates apply to: All work in power plants (any aspect). On steeples, on dams, on hangers, transformers, substations, on all open steel, in refineries, tank farms, water/sewerage treatment facilities and on pipelines.

FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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

County - UNION

Craft: Industrial Painter- Water Tanks

PREVAILING WAGE RATE

	07/28/20
Foreman	W51.97 B26.29 T78.26
General Foreman	W53.97 B26.29 T80.26
Journeyman	W46.97 B26.29 T73.26

Craft: Industrial Painter- Water Tanks

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	PAINTER	BRIDGES							

Ratio of Apprentices to Journeymen - 1:4

Craft: Industrial Painter- Water Tanks

COMMENTS/NOTES

* Industrial Painters perform work on all industrial structures, such as bridges, water tanks, waste water facilities, refineries, any structural steel work, etc.

These rates apply to: All new and repaint water tanks (interior and exterior).

FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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

County - UNION

Craft: Industrial Painter-Containment

PREVAILING WAGE RATE

	07/28/20
Journeyman	W38.23 B26.04 T64.27

Craft: Industrial Painter-Containment

COMMENTS/NOTES

Note: These rates shall require no painting, but used in a supporting capacity only, such as wrapping, boxing, fencing, etc. on tanks.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays 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.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

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

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

County - UNION

Craft: Ironworker PREVAILING WAGE RATE

	07/24/20
Rod /Fence Foreman	W46.14 B48.12 T94.26
Rod/Fence Journeyman	W43.14 B48.12 T91.26
Structural Foreman	W48.44 B48.12 T96.56
Structural Journeyman	W45.44 B48.12 T93.56

Craft: Ironworker APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
6 Months	50%	60%		Yearly	70%	80%	90%			

Ratio of Apprentices to Journeymen - 1:4

Craft: Ironworker COMMENTS/NOTES

HAZARDOUS WASTE WORK: On hazardous waste removal work on a state or federally designated hazardous waste site where the Ironworker is required to wear Level A,B, or C personal protection: + \$3.00 per hour

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

FOREMAN REQUIREMENTS:

When there are 2 or more Ironworkers on a job, 1 shall be designated a Foreman.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule is established, the first, or day shift , shall be established on an 8 hour basis .The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15%, and the third shift shall receive the regular rate plus 20%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis.
- When an irregular shift is established for the Ironworker (Structural) classification, the rate shall be paid at time and one-half the regular rate, inclusive of benefits. When an irregular shift is established for the Rod/Fence classification, the shift shall be established on an 8 hour basis and receive the regular rate, plus 20%.

OVERTIME:

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

County - UNION

- All hours in excess of 8 per day, or before or after an established shift that are 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 Sunday and holidays shall be paid at double the hourly rate, inclusive of benefits. Saturday may be used as a make-up day for a day lost to inclement weather. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the hourly rate, inclusive of benefits.

- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be 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, 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.

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

County - UNION

Craft: Laborer - Asbestos & Hazardous Waste Removal

PREVAILING WAGE RATE

	10/24/19
Journeyman (Handler)	W32.48 B22.81 T55.29

Craft: Laborer - Asbestos & Hazardous Waste Removal

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	19.49	22.74	25.98	29.23						
Benefits	21.16	for	all	intervals						

Ratio of Apprentices to Journeymen - *

* Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

Craft: Laborer - Asbestos & Hazardous Waste Removal

COMMENTS/NOTES

NOTE: These rates apply to work in connection with Asbestos, Radiation, Hazardous Waste, Lead, Chemical, Biological, Mold Remediation and Abatement.

The regular workday shall be 8 hours.

OVERTIME:

- Hours in excess of 8 per day, Monday through Saturday, and all hours on Sunday and holidays shall be paid at time and one-half the regular rate.
- Benefits on ALL overtime hours shall be paid at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Good Friday, Easter, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. (Holidays start at 12:00 am).

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

County - UNION

Craft: Laborer - Building

PREVAILING WAGE RATE

	05/12/20
Class A Journeyman	W34.85 B30.27 T65.12
Class B Journeyman	W34.10 B30.27 T64.37
Class C Journeyman	W28.99 B30.27 T59.26
Foreman	W39.21 B30.27 T69.48
General Foreman	W43.56 B30.27 T73.83

Craft: Laborer - Building

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
	60%	70%	80%	90%						
6 Months										
Benefit	27.02	27.02	27.02	27.02						

Ratio of Apprentices to Journeymen - *

* Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

Craft: Laborer - Building

COMMENTS/NOTES

CLASS A: Specialist laborer including mason tender or concrete pour crew; scaffold builder (scaffolds up to 14 feet in height); operator of forklifts, Bobcats (or equivalent machinery), jack hammers, tampers, motorized tampers and compactors, vibrators, street cleaning machines, hydro demolition equipment, riding motor buggies, conveyors, burners; and nozzle men on gunite work.

CLASS B: Basic laborer - includes all laborer work not listed in Class A or Class C.

CLASS C: Janitorial-type light clean-up work associated with the TURNOVER of a project, or part of a project, to the owner. All other clean-up work is Class B.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- When a 2-shift schedule is worked, including a day shift, both shifts shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%.
- When a 3-shift schedule is worked, the day shift shall be established on the basis of 8 hours pay for 8 hours worked, the second shift shall be established on the basis of 8 hours pay for 7.5 hours worked, and the third shift shall be established

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

County - UNION

on the basis of 8 hours pay for 7 hours worked. The day shift shall receive the regular rate, the second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.

- When a second or third shift is worked with no day shift, the second or third shift shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.

OVERTIME:

- Hours in excess of 8 per day, or outside the regular workday that are not shift work, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. Saturday may be used as a make-up day (paid at straight time) for a day lost to inclement weather, or for a holiday that is observed during the work week, Monday through Friday. All hours on Sundays and holidays shall be paid at double the regular rate.

- Four 10-hour days may be worked Monday to Thursday, at straight time, with Friday used 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 regular rate.

- Benefits on ALL overtime hours shall be paid at time and one-half.

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.

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

County - UNION

Craft: Laborer - Heavy & General

PREVAILING WAGE RATE

Rates are located in the
"Statewide" rate package

Craft: Laborer - Heavy & General

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 Hours	60%	70%	80%	90%						
Benefit	21.78	for	all	intervals						

Ratio of Apprentices to Journeymen - *

* No more than 1 apprentice for the first journeyman and no more than 1 apprentice for each additional 3 journeymen.

Craft: Laborer - Heavy & General

COMMENTS/NOTES

Heavy & General Laborer rates are located in the "Statewide" rate package.

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

County - UNION

Craft: Laborer-Residential and Modular Construction

PREVAILING WAGE RATE

	04/01/20
* Skilled Tradesman (only applies to Modular Construction)	W26.55 B5.45 T32.00
Foreman (person directing crew, regardless of his skill classification)	W30.55 B5.45 T36.00
Laborer	W22.55 B5.45 T28.00
Laborer (for single family and stand-alone duplex owned by single owner)	W17.05 B2.95 T20.00

Craft: Laborer-Residential and Modular Construction

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
	As shown	800 hours	600 hours	600 hours						
wage & benefits	70%	80%	90%							

Ratio of Apprentices to Journeymen-

One (1) apprentice shall be allowed for the first journeyman on site and no more than one (1) additional apprentice for each additional three (3) journeymen on site.

Craft: Laborer-Residential and Modular Construction

COMMENTS/NOTES

* SKILLED TRADESMAN- any worker doing work not typically done by a Building Laborer. Some examples are installing interior doors, sheet rock, hooking up appliances, installing light fixtures, installing railing systems, etc. Please note where local building codes require that certain work be performed under the supervision of a licensed tradesman (i.e. Plumber, Electrician, etc.) Laborers shall work under such supervision.

RESIDENTIAL CONSTRUCTION- All residential construction (not commercial), single-family, stand-alone duplex houses, townhouses and multi-family buildings of not more than four (4) floors. Each housing unit must be fully and independently functional; each housing unit must have its own kitchen and bathroom. The definition includes all incidental items such as site work, parking areas, utilities, streets and sidewalks. Please note the construction must be Residential in nature. A First Floor at or below grade may contain commercial space not to exceed 50% square footage of the floor; at least 50% of the First Floor must contain living accommodations or related nonresidential uses (e.g. laundry space, recreation/hobby rooms, and/or corridor space). Basement stories below grade used for storage, parking, mechanical systems/equipment, etc., are considered basement stories which are not used in determining the building's height. An attic is an unfinished space located immediately below the roof. Such space is not used in determining a building's height even if used for storage purposes. In addition, barracks and dormitories are not considered residential projects.

MODULAR RESIDENTIAL CONSTRUCTION- all aspects of modular residential construction (not commercial) at the site of installation of structures of no more than four (4) stories, including all excavation and site preparation, footings and

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

County - UNION

foundation systems whether poured on-site or prefabricated, all underground waterproofing, underground utilities, concrete slabs, sidewalks, driveways, paving, hardscape and landscaping. Please note the construction must be Residential as defined above. All work performed by the Set Crew (the crew of workers who set the modular boxes on the foundation), including the rigging, setting, attaching and assembly of all modules and structural members, preparation of the foundation to accept modules, such as sill plates, connection of all in-module and under-module connections including, but not limited to, plumbing, electrical, HVAC, fire suppression, CATS, telephone, television/internet, and fiber optic, the building or installation of any porches or decks regardless of material or method of construction, the on-site installation of, or completion of any roof system, doors, windows and fenestrations, including flashing, gutter and soffit systems, waterproofing, insulation and interior and exterior trim work, and painting. Please note that modular construction does not include on-site stick built construction, tip up construction or panel built construction.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

OVERTIME:

Hours worked in excess of 8 per day/40 per week, Monday through Saturday, and all hours worked on Sunday and holidays shall be paid at time and one-half the hourly rate.

RECOGNIZED HOILDAYS:

New Year's Day, Martin Luther King Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day.

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

County - UNION

Craft: Millwright

PREVAILING WAGE RATE

	05/01/20
Foreman	W59.32 B35.01 T94.33
Journeyman	W51.58 B30.52 T82.10

Craft: Millwright

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	40%	55%	65%	80%	90%					
Benefits	58% of	Appren	tice	Wage	Rate	for all	intervals	+ \$.60		

Ratio of Apprentices to Journeymen - 1:3

Craft: Millwright

COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- When there are 2 or more Millwrights on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Millwrights on a job, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly 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 be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due 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, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be

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

County - UNION

substituted for the day after Thanksgiving.

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

County - UNION

Craft: Operating Engineer - Field Engineer

PREVAILING WAGE RATE

Rates are located in the
"Statewide" rate package

Craft: Operating Engineer - Field Engineer

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	70%	75%	of Rod/	Chainman	Wage					
Yearly			80%	90%	Transit/	Instrument	man	Wage		

Ratio of Apprentices to Journeymen - *

* No more than 1 Field Engineer Apprentice per Survey Crew.

Craft: Operating Engineer - Field Engineer

COMMENTS/NOTES

Operating Engineer - Field Engineer rates are located in the "Statewide" rate package.

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

County - UNION

Craft: Painter - Line Striping

PREVAILING WAGE RATE

	01/23/20
Apprentice (1st year)	W27.50 B11.90 T39.40
Apprentice (2nd year)	W31.50 B20.60 T52.10
Foreman (Charge Person)	W40.15 B21.38 T61.53
Journeyman 1 (at least 1 year of working exp. as a journeyman)	W35.38 B21.38 T56.76
Journeyman 2 (at least 2 years of working exp. as a journeyman)	W39.15 B21.38 T60.53

Craft: Painter - Line Striping

COMMENTS/NOTES

OVERTIME:

Hours in excess of 8 per day, Monday through Saturday, and all hours on Sundays and holidays 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, Veterans Day, Thanksgiving Day and Christmas Day. Veterans Day may be substituted for the day after Thanksgiving.

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

County - UNION

Craft: Paperhanger - New Construction

PREVAILING WAGE RATE

	05/01/20
Foreman	W47.68 B24.11 T71.79
Journeyman	W42.61 B24.11 T66.72

Craft: Paperhanger - New Construction

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	PAINTER	NEW	CONSTR UC	TION					

Ratio of Apprentices to Journeymen - 1:4

Craft: Paperhanger - New Construction

COMMENTS/NOTES

FOREMEN REQUIREMENTS:

- When there are 4 or more Paperhangers on a job, 1 shall be designated a Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays 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.

- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.

- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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

County - UNION

Craft: Paperhanger - Renovation

PREVAILING WAGE RATE

	05/01/20
Foreman	W35.15 B19.81 T54.96
Journeyman	W31.96 B19.81 T51.77

Craft: Paperhanger - Renovation

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
		SEE	PAINTER	NEW	CONSTR UC	TION				

Ratio of Apprentices to Journeymen - 1:4

Craft: Paperhanger - Renovation

COMMENTS/NOTES

NOTE: These rates may only be used on jobs where no major alterations occur, and where not more than 3 other trades are present on the job, but may NOT, under any circumstances, be used for work on bridges, stacks, elevated tanks, or generating stations.

FOREMEN REQUIREMENTS:

- When there are 4 or more Paperhangers on a job, 1 shall be designated a Foreman.

OVERTIME:

- Hours in excess of 8 per day and 40 per week shall be paid at time and one-half the regular rate.
- Four 10-hour days may be worked, at straight time, Monday through Sunday.

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

County - UNION

hours on Sundays and holidays shall be paid at double time, inclusive of benefits.

NOTE: Maintenance work is work to repair, restore, or improve the efficiency of existing facilities. This does NOT apply to ANY new construction.

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 are observed the following Monday.

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

County - UNION

Craft: Plasterer

PREVAILING WAGE RATE

See Bricklayer, Stone Mason Rates

Craft: Plasterer

COMMENTS/NOTES

See BRICKLAYER, STONE MASON Rates

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

County - UNION

Craft: Plumber PREVAILING WAGE RATE

	05/01/20
Foreman	W60.69 B37.32 T98.01
General Foreman	W64.62 B37.32 T101.94
Journeyman	W56.19 B37.32 T93.51

Craft: Plumber APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	30%	45%	55%	65%	75%					
Benefits	14.31	20.83	22.72	24.52	26.50					

Ratio of Apprentices to Journeymen - *

* Employers may employ 1 apprentice on any job where 1 or 2 journeymen are employed. Thereafter, 1 apprentice may be employed for every 4 journeymen.

Craft: Plumber COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- On any job having 2 or more Plumbers, 1 must be designated a Foreman.
- On any job having 9 or more Plumbers, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours between 7:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must continue for a minimum of 5 consecutive workdays.
- When two shifts are worked, the second shift shall work 7.5 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 10%, inclusive of benefits.
- When a third shift is worked, the third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 15%, inclusive of benefits.

OVERTIME:

- All hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, and all hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays, shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half, 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 will be observed the following Monday.

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

County - UNION

Craft: Roofer PREVAILING WAGE RATE

	06/04/20
Foreman	W42.77 B28.03 T70.80
Journeyman	W39.77 B28.03 T67.80

Craft: Roofer APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	15.90	19.89	23.86	27.84	31.82	35.79				
Benefits	2.10	2.10	25.28	25.28	25.28	25.28				

Ratio of Apprentices to Journeymen - *

- * A) For roofing jobs that are of the 1 or single ply nature: 1:2 or fraction thereof
- B) For roofing jobs on new built up roofs: 1:3 or fraction thereof
- C) For roofing jobs that are of a tear-off nature: 1:2 or fraction thereof
- D) For roofing jobs {not requiring complete removal of existing systems, installation done over existing roof}: 1:3 or fraction thereof

Craft: Roofer COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 4-1-17:

INTERVAL	PERIOD AND RATES								
6 Months	15.90	19.89	23.86	25.85	27.84	29.83	31.82	35.79	
Benefits	2.10	2.10	25.28	25.28	25.28	25.28	25.28	25.28	

Pitch: +.50 per hour

Mop Man: +.30 per hour

The regular workday consists of 8 hours between 8:00 AM and 4:30 PM.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays, Sundays, and holidays shall be paid at time and one-half the regular rate.

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

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

County - UNION

Craft: Sheet Metal Sign Installation

PREVAILING WAGE RATE

	04/16/20
Foreman	W38.29 B35.55 T73.84
Journeyman	W36.79 B35.55 T72.34

Craft: Sheet Metal Sign Installation

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 hours	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
Benefits	12.03	13.71	15.39	17.09	19.21	20.92	22.65	24.38	26.10	27.82

Ratio of Apprentices to Journeymen - 1:3

Craft: Sheet Metal Sign Installation

COMMENTS/NOTES

FOREMAN REQUIREMENT:

When there are 6 or more Sheet Metal Sign Installers on a job, 1 shall be designated a Foreman.

The regular workday consists of 8 hours, between 7:00 AM and 3:30 PM.

OVERTIME:

Hours before or after the regular workday, Monday through Friday, and all hours worked on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

Four(4) 10 hour days may be worked, Monday through Friday, at straight time, for projects lasting at least one week in duration. The fifth day may be used as a make-up day at straight time for a day lost due to inclement weather. However, if the fifth day is not a make-up day, all hours worked will be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays observed the preceding Friday, Sunday holidays observed the following Monday.

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

County - UNION

Craft: Sheet Metal Worker

PREVAILING WAGE RATE

	06/09/20
Foreman	W53.62 B46.85 T100.47
General Foreman	W54.62 B46.85 T101.47
Journeyman	W50.12 B46.85 T96.97

Craft: Sheet Metal Worker

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	35%	45%	55%	65%	of	Journey	man	Wage	Rate	
Benefit	35%	45%	55%	65%	of	Journey	man	Benefit	Rate	

Ratio of Apprentices to Journeymen - 1:4

Craft: Sheet Metal Worker

COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- When there are 2 or more Sheet Metal Workers on a project, 1 must be designated a Foreman.
- When there are 17 or more Sheet Metal Workers on a project, 1 must be designated a General Foreman.
- When there is only 1 Sheet Metal Worker (1 Journeyman) on a project, he/she shall receive \$1.00 more than the regular Journeyman's rate.

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

SHIFT DIFFERENTIAL:

- 2nd Shift (3:30 PM - 12:00 AM) : +17% of regular hourly rate
- Shift work must run for a minimum of 5 consecutive workdays.

OVERTIME:

- Hours in excess of 8 per day, or before or after the regular workday, that are not shift work, and the first 10 hours on Saturdays shall be paid at time and one-half of the regular rate, inclusive of benefits. Hours in excess of 10 per day on Saturday, and all hours on Sundays and holidays shall be at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Friday, at straight time, with hours in excess of 10 per day, and hours in excess of 40 per week paid at the overtime rates listed above.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

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

County - UNION

Craft: Sprinkler Fitter

PREVAILING WAGE RATE

	07/01/20
Foreman	W66.89 B32.13 T99.02
General Foreman	W70.15 B32.13 T102.28
Journeyman	W62.64 B32.13 T94.77

Craft: Sprinkler Fitter

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 Hours									80%	85%
Benefits							Intervals	9 to 10	Jourymn	Ben.

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 7-1-13:

INTERVAL	PERIOD AND RATES									
1000 hours	25%	30%	40%	45%	55%	60%	70%	75%	85%	90%
Benefits	12.33	12.33	25.63	25.63	25.63	25.63	Intervals	7 to 10	receive	Journeyman Ben.

Craft: Sprinkler Fitter

COMMENTS/NOTES

The regular workday consists of 8 consecutive hours between 6:00 AM and 4:30 PM.

FOREMAN REQUIREMENTS:

- The first Sprinkler Fitter on the job must be designated a Foreman.
- On any job having 12 or more Sprinkler Fitters, one must be designated a General Foreman.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 2 consecutive workdays.
- 2nd and 3rd shift shall receive an additional 15% of the regular rate, per hour.
- Any "off hours" shift starting at 8:00 PM or later shall receive an additional 25% of the regular rate, per hour.

OVERTIME:

The first 2 hours in excess of 8 per day, after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate. Hours worked in excess of 10 per day, Monday through Friday, and all hours on Saturday, Sunday and holidays, shall be paid double the regular rate.

Four 10 hour days may be worked, Monday through Friday, at straight-time.

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

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

County - UNION

Craft: Tile Finisher-Marble

PREVAILING WAGE RATE

	06/02/20
Finisher	W47.92 B35.14 T83.06

Craft: Tile Finisher-Marble

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
750 Hours	40%	45%	50%	55%	60%	65%	70%	75%	85%	95%

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Finisher-Marble

COMMENTS/NOTES

OVERTIME:

Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

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

County - UNION

Craft: Tile Setter - Ceramic

PREVAILING WAGE RATE

	06/02/20
Finisher	W46.21 B31.31 T77.52
Setter	W60.09 B34.63 T94.72

Craft: Tile Setter - Ceramic

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
750 Hours	35%	40%	50%	55%	60%	65%	70%	75%	80%	90%

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Ceramic

COMMENTS/NOTES

OVERTIME:

Hours in excess of 7 per day, and the first 10 hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Saturdays after 10 hours shall be paid double the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day.

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

County - UNION

Craft: Tile Setter - Marble

PREVAILING WAGE RATE

	06/02/20
Tile Setter	W60.35 B37.39 T97.74

Craft: Tile Setter - Marble

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
750 Hours	40%	45%	50%	55%	60%	65%	70%	75%	85%	95%

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Marble

COMMENTS/NOTES

OVERTIME:

Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays, and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

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

County - UNION

Craft: Tile Setter - Mosaic & Terrazzo

PREVAILING WAGE RATE

	07/09/20
Grinder or Assistant	W55.82 B37.31 T93.13
Mechanic	W57.42 B37.33 T94.75
Terrazzo Resinous Worker	W47.92 B30.24 T78.16

Craft: Tile Setter - Mosaic & Terrazzo

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
750 Hours	50%	55%	60%	65%	70%	75%	85%	95%	100%	

Ratio of Apprentices to Journeymen - 1:5

Craft: Tile Setter - Mosaic & Terrazzo

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 7-1-17:

INTERVAL	PERIOD AND RATES						
1500 Hours	35%	45%	60%	70%	80%	90%	100%

The regular workday consists of 7 hours, between 8:00 AM and 3:30 PM.

OVERTIME:

- Hours in excess of 7 per day, or before or after the regular workday, Monday through Friday, 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.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Monday after Easter, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

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

County - UNION

Craft: Truck Driver

PREVAILING WAGE RATE

	05/01/20
Bucket, Utility, Pick-up, Fuel Delivery trucks	W39.21 B38.05 T77.26
Dump truck, Asphalt Distributor, Tack Spreader	W39.21 B38.05 T77.26
Euclid-type vehicles (large, off-road equipment)	W39.31 B38.05 T77.36
Helper on Asphalt Distributor truck	W39.21 B38.05 T77.26
Slurry Seal, Seeding/Fertilizing/ Mulching truck	W39.21 B38.05 T77.26
Straight 3-axle truck	W39.21 B38.05 T77.26
Tractor Trailer (all types)	W39.31 B38.05 T77.36
Vacuum or Vac-All truck (entire unit)	W39.21 B38.05 T77.26
Winch Trailer	W39.41 B38.05 T77.46

Craft: Truck Driver

COMMENTS/NOTES

BLENDED RATE:

When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate" which shall be 80% of the above-listed wage rates, plus the full benefit rate. This rate shall be used when the driver "round robins" for a minimum of 6 hours during the work day.

HAZARDOUS WASTE REMOVAL:

- On hazardous waste removal work on a State designated hazardous waste site where the driver is in direct contact with hazardous materials and when personal protective equipment is required for respiratory, skin, and eye protection, the driver shall receive an additional \$3.00 per hour (with or without protective gear).
- A hazardous waste related certified worker at a designated hazardous waste site who is not working in a zone requiring level A, B or C personal protection shall receive an additional \$1.00 per hour.

TRUCK FOREMAN: \$.75 cents per hour above regular rate. Overtime shall be increased accordingly.

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

County - UNION

The regular workday shall be 8 hours, starting between 6:00 AM and 8:00 AM.

SHIFT DIFFERENTIAL:

- Shifts starting at 4:00 PM (2nd Shift): + \$3.00 per hour.
- Shifts starting at 12:00 AM (midnight/3rd Shift): time and one-half the hourly rate.
- Shifts starting at a time other than from 6:00 AM to 8:00 AM, when such hours are mandated by the project owner: + \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, or before or after 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 hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
 - Employees may work four 10-hour days at straight time, Monday through Thursday, with Friday used as a make-up day for a lost day. If Friday is not a make-up day, then all hours on Friday shall be paid at time and one-half the hourly rate.
 - Benefits on overtime shall be \$36.80.
- As of 5-1-20, benefits on overtime shall be \$37.80.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Presidential Election Day, Veteran's Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veteran's Day.

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

County - UNION

Craft: Truck Driver-Material Delivery Driver

PREVAILING WAGE RATE

	04/01/20
Driver	W25.60 B15.71 T41.31

Craft: Truck Driver-Material Delivery Driver

COMMENTS/NOTES

BLENDED RATE:

When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate". See the "Truck Driver" craft for the blended rates.

Truck Foreman/Shop Steward: +\$0.25 per hour

SHIFT DIFFERENTIALS:

- 2nd Shift shall receive an additional \$0.50 per hour
- 3rd Shift shall receive time and one-half the hourly rate.

OVERTIME:

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

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veterans' Day.

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

County - UNION

Craft: Welder

PREVAILING WAGE RATE

Welder

Craft: Welder

COMMENTS/NOTES

Welders rate is the same as the craft to which the welding is incidental .

STATEWIDE RATES

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
53.23	34.50	87.73	90.03	92.28

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
53.23	34.50	87.73	90.03	92.28

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
51.32	34.50	85.82	88.12	90.37

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
51.32	34.50	85.82	88.12	90.37

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
51.32	34.50	85.82	88.12	90.37

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:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
51.32	34.50	85.82	88.12	90.37

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:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
47.98	34.50	82.48	84.78	87.03

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:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
45.40	34.50	79.90	82.20	84.45

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
55.56	34.50	90.06	92.36	94.61

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
54.82	34.50	89.32	91.62	93.87

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
54.82	34.50	89.32	91.62	93.87

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
49.69	34.50	84.19	86.49	88.74

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
49.69	34.50	84.19	86.49	88.74

CLASSIFICATIONS:

Steam Generator or Boiler

Stone Spreader

Tamping Machine (vibrating ride-on type)

Temporary Heating Plant (Nelson or other type, including propane, 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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
56.64	34.50	91.14	93.44	95.69

CLASSIFICATIONS:

Helicopter Pilot/Engineer

Effective Dates:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
61.32	34.50	95.82	98.12	100.37

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
60.32	34.50	94.82	97.12	99.37

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
56.82	34.50	91.32	93.62	95.87

CLASSIFICATIONS:

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

Effective Dates:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
59.32	34.50	93.82	96.12	98.37

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
55.82	34.50	90.32	92.62	94.87

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
58.45	34.50	92.95	95.25	97.50

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
54.39	34.50	88.89	91.19	93.44

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
51.73	34.50	86.23	88.53	90.78

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:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
50.20	34.50	84.70	87.00	89.25

CLASSIFICATIONS:

Compressor (Single)

Generators

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

Welding System, Multiple (Rectifier Transformer Type)

Effective Dates:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
48.44	34.50	82.94	85.24	87.49

CLASSIFICATIONS:

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Off Road Back Dump

Effective Dates:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
56.01	34.50	90.51	92.81	95.06

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

Effective Dates:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
45.40	34.50	79.90	82.20	84.45

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
55.15	34.50	89.65	91.95	94.20

CLASSIFICATIONS:

Field Engineer-Chief of Party

Vacuum Truck

Effective Dates:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
63.34	34.50	97.84	100.14	102.39

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:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
61.68	34.50	96.18	98.48	100.73

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:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
58.84	34.50	93.34	95.64	97.89

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:

07/01/2020			07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
57.18	34.50	91.68	93.98	96.23

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
58.84	34.50	93.34	95.64	97.89

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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
54.82	34.50	89.32	91.62	93.87

CLASSIFICATIONS:

Driller

Effective Dates:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
47.98	34.50	82.48	84.78	87.03

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:

03/01/2020

Rate	Fringe	Total
45.75	32.53	78.28

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

03/01/2020

Rate	Fringe	Total
45.45	32.53	77.98

CLASSIFICATIONS:

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

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

Effective Dates:

03/01/2020

Rate	Fringe	Total
44.95	32.53	77.48

CLASSIFICATIONS:

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

Effective Dates:

03/01/2020

Rate	Fringe	Total
47.45	32.53	79.98

CLASSIFICATIONS:

Blaster

Effective Dates:

03/01/2020

Rate	Fringe	Total
44.40	32.53	76.93

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

03/01/2020

Rate	Fringe	Total
44.05	32.53	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:

03/01/2020

Rate	Fringe	Total
43.90	32.53	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:

03/01/2020

Rate	Fringe	Total
43.50	32.53	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:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
53.57	34.50	88.07	90.37	92.62

CLASSIFICATIONS:

Driller

Effective Dates:

	07/01/2020		07/01/2021	07/01/2022
Rate	Fringe	Total	Total	Total
47.33	34.50	81.83	83.53	85.78

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:

03/01/2020

Rate	Fringe	Total
45.25	32.53	77.78

CLASSIFICATIONS:

Paving Foreman

Effective Dates:

03/01/2020

Rate	Fringe	Total
43.80	32.53	76.33

CLASSIFICATIONS:

Head Raker

Effective Dates:

03/01/2020

Rate	Fringe	Total
43.65	32.53	76.18

CLASSIFICATIONS:

Raker, Screedman, Luteman

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

Effective Dates:

03/01/2020

Rate	Fringe	Total
43.40	32.53	75.93

CLASSIFICATIONS:

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

Effective Dates:

03/01/2020

Rate	Fringe	Total
43.50	32.53	76.03

CLASSIFICATIONS:

Milling Controller

Effective Dates:

03/01/2020

Rate	Fringe	Total
43.70	32.53	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:

03/01/2020

Rate	Fringe	Total
43.00	32.53	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:

03/01/2020

Rate	Fringe	Total
43.70	32.53	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:

03/01/2020

Rate	Fringe	Total
43.95	32.53	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:

03/01/2020

Rate	Fringe	Total
47.50	32.53	80.03

CLASSIFICATIONS:

"A" Rate:

blaster

Effective Dates:

03/01/2020

Rate	Fringe	Total
45.25	32.53	77.78

CLASSIFICATIONS:

"FOREMAN" Rate:

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

Effective Dates:

03/01/2020

Rate	Fringe	Total
46.25	32.53	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:

03/01/2020

Rate	Fringe	Total
43.00	32.53	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:

03/01/2020

Rate	Fringe	Total
43.00	32.53	75.53

CLASSIFICATIONS:

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

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

Effective Dates:

03/01/2020

Rate	Fringe	Total
43.70	32.53	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:

03/01/2020

Rate	Fringe	Total
43.70	32.53	76.23

CLASSIFICATIONS:

wagon or directional drill operator; drill master

Effective Dates:

03/01/2020

Rate	Fringe	Total
47.50	32.53	80.03

CLASSIFICATIONS:

blaster

Effective Dates:

03/01/2020

Rate	Fringe	Total
45.25	32.53	77.78

CLASSIFICATIONS:

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

Effective Dates:

03/01/2020

Rate	Fringe	Total
46.25	32.53	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:

03/01/2020

Rate	Fringe	Total
43.95	32.53	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: \$80.50; Pipeline Journeyman Welder: \$140.50; and Pipeline Helper: \$64.50. 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:

06/09/2020

Rate	Fringe	Total
54.58	32.80	87.38

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:

06/09/2020

Rate	Fringe	Total
54.58	32.80	87.38

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

06/09/2020

Rate	Fringe	Total
33.27	22.42	55.69

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:

03/01/2020

Rate	Fringe	Total
45.25	32.53	77.78

CLASSIFICATIONS:

Asphalt Foreman

Effective Dates:

03/01/2020

Rate	Fringe	Total
43.95	32.53	76.48

CLASSIFICATIONS:

Asphalt Screedman

Effective Dates:

03/01/2020

Rate	Fringe	Total
43.70	32.53	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:

03/01/2020

Rate	Fringe	Total
43.00	32.53	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

TERRITORY
ENTIRE STATE

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

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:

03/01/2020

Rate	Fringe	Total
68.63	32.53	101.16

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

03/01/2020

Rate	Fringe	Total
68.18	32.53	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:

03/01/2020

Rate	Fringe	Total
67.43	32.53	99.96

CLASSIFICATIONS:

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

Effective Dates:

03/01/2020

Rate	Fringe	Total
71.18	32.53	103.71

CLASSIFICATIONS:

Blaster

Effective Dates:

03/01/2020

Rate	Fringe	Total
66.60	32.53	99.13

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

03/01/2020

Rate	Fringe	Total
66.08	32.53	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:

03/01/2020

Rate	Fringe	Total
65.85	32.53	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:

03/01/2020

Rate	Fringe	Total
65.25	32.53	97.78

CLASSIFICATIONS:

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

TECHNICAL SPECIFICATIONS

This project shall be governed by the “New Jersey of Transportation Standard Specifications for Road and Bridge Construction” 2019 using U.S. Customary English Units except as noted in the following specification.

Payment descriptions within the following specifications prevail over the “New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction” 2019

All unit prices shall be in accordance with the Bidder’s Proposal. Any unit prices not included in the Bidder’s Proposals shall be assumed distributed across all unit prices.

Any references in this specification to a specific product line or proprietary item, it is understood that the specification refers to that product or approved equal. The lack of the phrase “or approved equal” does not imply that the specified product is the only product that will be allowed. However, it will be the successful bidder’s burden to prove that an alternate product meets the specification called for.

Should there be a conflict between the plans and specifications, the items shall govern in the following order.

- Addendums to the bid to include changes to the plans

- Supplemental (Technical) Specifications

- Plans

MOBILIZATION AND DEMOBILIZATION

DESCRIPTION

Mobilization and Demobilization shall consist of the cost of initiating the contract, including preparatory work and operations, necessary for the movement of personnel, equipment, supplies and incidentals to the Project site, and other work performed or costs incurred prior to beginning work. In any case of inconsistencies with the N.J.A.C. 7:14-2.9, the New Jersey Administrative Code shall govern.

QUANTITY AND PAYMENT

Payment for mobilization will be made on a lump sum basis, which price shall include the cost of initiating the contract, regardless of the fact that the Contractor may have, for any reason, shut down his work on the Project or moved equipment away from the Project and back again, in accordance with the 2019 NJDOT Standard Specifications Section 154.04.

Payment will be made in accordance with the following schedule:

1. When 5% of the work is completed - 25% of the amount bid for mobilization or 2.5% of the Total Contract Price, whichever is less, will be paid.
2. When 10% of the work is completed - 50% of the amount bid for mobilization or 5% of the Total Contract Price, whichever is less, will be paid.
3. When 15% of the work is completed – 75% of the amount bid for mobilization or 7.5% of the Total Contract Price, whichever is less, will be paid.
4. When 20% of the work is completed – 100% of the amount bid for mobilization or 10% of the Total Contract Price, whichever is less, will be paid.

Upon completion of all work on the project, payment for the amount bid for mobilization in excess of 10% of the Total Contract Price will be made.

The percentage of work completed shall be the total of payments earned compared to the Total Contract Price. The total of payments earned excludes the amount paid for this item and the amount paid for materials furnished but not incorporated into the work in accordance with Subsection 109.06 – Materials Payments and Storage, as shown on the monthly estimates of the approximate quantities of work done, prepared in accordance with Subsection 109.05 – Estimates of the 2019 NJDOT Standard Specification.

(A) The lump sum price bid for mobilization is limited to the following maximum amounts:
Original Contract Amount
(Including Mobilization)

<u>For More Than</u>	<u>To and Including</u>	<u>Max. Amount for Item of Mobilization</u>
\$ 0	100,000	\$ 3,000
100,000	500,000	15,000
500,000	1,000,000	30,000

1,000,000	2,000,000	60,000
2,000,000	3,000,000	90,000
3,000,000	4,000,000	120,000
4,000,000	5,000,000	125,000
5,000,000	6,000,000	150,000
6,000,000	7,000,000	175,000
7,000,000	10,000,000	200,000
10,000,000		2.5% of amount bid

Quantity and Payment for Mobilization/Demobilization will be made in accordance with the Contract Documents on a lump sum basis at the price bid for the item **MOBILIZATION AND DEMOBILIZATION** in the Proposal, which shall include the cost of delivery, installation, storage, permitting, agreements, and all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

-- END OF SECTION --

CONSTRUCTION LAYOUT

DESCRIPTION

Under this item the Contractor shall provide all work required in connection with the layout for construction of the project, using the control points and data furnished by the Engineer.

METHOD OF STAKEOUT

The Contractor shall submit all necessary computations to establish the exact position of all the work from the control points furnished by the Engineer, along with construction grade sheets, prepared by a licensed land surveyor, to the Engineer for approval prior to the start of construction.

The Contractor shall maintain the line and grade stakes furnished by the engineer for his/her use in staking out the work. If such control points are damaged, lost, displaced or removed, they shall be reset or replaced at a charge to the Contractor for the actual cost of the work at no additional cost to the Owner or Owner's Representatives.

The Contractor shall be responsible for maintaining the points he has established. Any error or apparent discrepancies found in the plans or specifications shall be called to the Engineers attention in writing for interpretation prior to proceeding with the work.

QUANTITY & PAYMENT

Construction Layout will not be measured. Payment for this item will be made on a lump sum basis for the item **CONSTRUCTION LAYOUT** as specified in the proposal.

--END OF SECTION--

PRE-CONSTRUCTION PHOTOGRAPHS

DESCRIPTION

The Contractor shall furnish photographs, taken by a professional photographer acceptable to the Engineer, to show the condition of the site prior to construction, as well as to show the progress of the work.

MATERIALS

Prints of pre-construction and construction photographs shall be 3 inch by 5 inch size, mounted on cardboard and provided with reinforced 1 inch wide flap, punched with 2 holes for binding, spaced 4 ¼ inches apart. The binding flap shall be located along the 8-inch dimension, and at the lower right hand corner on the front. The title shall include the name of the photographer, name of the project, contract number, station or other description, direction of view and date the picture was taken. The photographs shall also be numbered consecutively. Negatives of all photographs shall be furnished to the Engineer.

MEHODS OF PHOTOGRAPHS

Pre-construction photographs shall be taken where directed by the Engineer to especially note the character of all easements and the condition of any structures, lawns, trees, streets, sidewalks, etc., which might be damaged, and shall average at least one photograph for each 50 feet of street or easement in the contract. The Engineer shall be provided with one matte print of each photograph. A minimum of thirty six construction photographs shall be taken each month at regular intervals while the work is in progress. Photographs shall be taken at such times and at such locations as may be determined by the Engineer. One matte print of each picture taken during the month shall be submitted to the Engineer at the time of submitting the periodic estimate for progress payment.

QUANTITY AND PAYMENT

No specific payment shall be made for the above item. The cost of the above described work shall be included in the overall price bid on the project.

Contractors are advised that damage claims by property owners, which cannot be disputed by pre-construction photographs, will be required to restore the claimed damage. Therefore, pre-construction photos will be required, and furnished to the engineer. Separate payment will not be made for pre-construction photos and shall be included in the various bid items.

Should the Contractor fail to take pre-construction photos, any property damage complaints received will be repaired by the contractor at no cost to the owner.

--END OF SECTION--

MAINTENANCE AND PROTECTION OF TRAFFIC

DESCRIPTION

Under this Contract this item shall mean that the Contractor shall provide for the safe passage of vehicles and pedestrians for safe ingress and egress to properties abutting the limits of construction, including but not limited to the use of flagmen, cones, barrels, etc. in any and all areas where contractor deems it necessary. The portions outside the limits of construction which are open to traffic shall be kept in pre-construction conditions to allow for the safe passage of vehicular and pedestrian traffic.

This item shall also include the maintenance and protection of off-site traffic (e.g. roadways, sidewalks, curbs, etc.) and shall include any and all materials necessary to provide for this passage, and that the Contractor shall abide to all of the rules and regulations as set forth in Section 110 - Traffic Control of the applicable New Jersey State Highway Department Standard Specifications as amended in the Standard Specifications of this project.

The contractor may utilize outside agencies (e.g. security company) to maintain traffic.

The contractor is responsible for all maintenance, safety and protection of traffic until the project is complete and turned over to the project owner. The contractor shall hold harmless the County of Union and its representatives, project construction managers and Neglia Engineering Associates for any safety incidents during the project construction period.

If the need for Police Traffic Directors occurs, payment shall be made from the **Bid Contingency** item.

QUANTITY AND PAYMENT

It is the contractor's responsibility to maintain a safe working environment as well as protect pedestrian traffic from the construction site. The contractor shall include these costs within the bid item **MAINTENANCE AND PROTECTION OF TRAFFIC** in the proposal which price shall include the cost of, any and all materials, all labor and equipment and all else necessary and incidental thereto.

--END OF SECTION--

SITE CLEARING AND DEMOLITION

DESCRIPTION

Under this item the Contractor shall remove and dispose of all fences, concrete pads, concrete foundations, clay mounds, clay, utility poles, asphalt, bleachers, benches, drainage structures, flagpoles, gates, boulders, drainage pipes, irrigation system components (as indicated on the plans), curb, sidewalk, grass, trees up to 48" diameter (as indicated on the plans), tree roots/stumps, shrubs, hedges, brush, stumps, roots, topsoil, dirt, stones, and all debris; the removal of which is required for carrying out the work of this project, shall be removed. Contractor shall perform test pits to locate any uncertainties in existing utilities to determine if these structures interfere or affect the proposed construction.

The Contractor shall remove and dispose of pipes, inlets, manholes, reinforced concrete pavement, bituminous pavement, concrete and bituminous sidewalk, and curb, as necessary for the proposed construction. Contractor shall remove and reset street and road signs, not otherwise paid for; remove and reset any monuments, shrubs and fences; remove and reset to grade manhole and catch basin frames, fire hydrants, guide rail, gas and water valves; and complete all other removals and relocations required for the work and not specifically covered elsewhere for payment.

The Contractor shall provide a closed environment with a eight (8) foot minimum height chain link construction fence, construction signage and gates provided by the Contractor. The temporary gates on-site for construction shall remain locked and secured during non-working hours. The temporary fence shall remain on-site until all project work is complete or as directed by Engineer.

METHODS OF CONSTRUCTION

The lights, signs, inlets, sidewalk, pavement, bollards, curb, slabs, runways, posts, fence, and excavation unclassified shall be disposed of off-site at no additional cost to the Owner or Owner's Representatives in accordance with all client, local, state, and federal solid waste removal regulations.

Trees up to 48" dia. and shrubs removed by the Contractor shall be cut and the roots and stumps removed by grubbing shall be refilled with suitable material which shall be solidly compacted so as to make the surface at these locations conform with the adjoining grade in elevation and alignment. No trees shall be trimmed, cut, or removed outside the limits of construction without the permission of the Engineer.

Trees to be pruned shall be cut clean and straight. Measures shall be taken to protect the remaining limbs from damage during the work.

Any and all clean soil that is excavated during site clearing/demolition shall be backfilled and compacted with suitable soil.

Manhole frames, catch basin frames, valves, and other structures shall be removed and carefully reset to match proposed grades.

QUANTITY AND PAYMENT

The quantity of Site Clearing/Demolition for which payment will be made, will be a lump sum covering all work of **SITE CLEARING AND DEMOLITION** specified above. Such price shall include removal of debris, disposal of materials, and all else necessary therefore and incidental thereto.

The Contractor shall abide by all of the rules and regulations as set forth in Section 201 – Clearing Site of the NJDOT State Standard Specifications and the respective amendments.

--END OF SECTION--

SOIL EROSION AND SEDIMENT CONTROL DEVICES

DESCRIPTION

The work performed under this item shall include construction of all Best Management Practices (BMPs) soil erosion measures (e.g. inlet filter protection, silt sacks, silt fence, temporary seeding or mulching, stockpile protection, and general soil stabilization).

The Contractor shall construct additional stone tracking pads not specifically shown on the plans as necessary to facilitate the mobilization of construction equipment on site.

Furthermore, the contractor shall notify the Somerset - Union Soil Conservation District, in writing, seventy-two (72) hours prior to the start of construction.

MATERIALS

Materials shall be in conformance with the Plan and Details, and shall include silt fences, gravel inlet filters, fertilizer and soil stabilization. All materials shall be approved by the Engineer. Permanent seeding shall not be paid for under this item.

METHODS OF CONSTRUCTION

State Standard Specifications and Regulations:

- A. All erosion and sedimentation control measures shall be in place prior to any grading operations or construction of proposed facilities and shall be maintained until construction is complete and the construction area is stabilized. After restoration is complete, temporary control measures shall be removed and disposed of properly.
- B. All erosion and sedimentation control measures shall be constructed and maintained in accordance with the "Standards for Soil Erosion and Sediment Control in New Jersey," prepared by the New Jersey State Soil Conservation Committee, 1987.
- C. Disturbed areas that will be exposed in excess of fourteen (14) days shall be temporarily seeded and/or mulched until proper weather conditions exists for establishment of a permanent vegetative cover except in areas where final restoration is expected to be completed within seven days after the completion of construction, in which case no temporary protective measures will be required. If final restoration is expected to begin more than seven days and completed more than thirty (30) days after the start of construction, seeding shall be required for temporary protection, except where seasonal conditions are not suitable for growing vegetation. In this case, mulch may be applied until conditions are suitable for establishing vegetative cover or until final restoration is implemented

Somerset - Union Soil Conservation District soil erosion and sediment control procedures:

- A. All soil erosion and sediment control practices shall be installed prior to any major soil disturbance, or in their proper sequence and maintained until permanent protection is established.
- B. Any disturbed areas that will be left exposed more than thirty (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 state Standards.
- C. 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.
- D. All work shall be done in accordance with the State Standards for Soil Erosion and Sediment Control in New Jersey.
- E. 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 of preliminary grading.
- F. 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 State Standards.
- G. Any steep slopes (i.e. slopes greater than 3:1) receiving pipeline installation will be backfilled and stabilized daily, as the installation proceeds.
- H. Traffic Control Standards require the installation of a 100'L x24'W x1" Thick pad of 1 ½ " or 2" stone, at all construction driveways, immediately after initial site disturbance.
- I. The Somerset-Union Soil Conservation District shall be notified in writing 72 hours in advance of any land disturbing activity.
- J. At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide 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 or permanent ground stabilization will have to be employed.
- K. 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.

- L. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.
- M. 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 State Soil Erosion and Sediment Control Standards.
- N. The Somerset-Union Soil Conservation District shall be notified of any changes in ownership.
- O. Mulching in the Standards is required for obtaining a conditional Report of Compliance. Conditions are only issued when the season prohibits seeding.
- P. The Contractor is responsible for keeping all adjacent roads clean during the life of the construction project.
- Q. 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 soil Conservation District.
- R. Hydroseeding 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 the seeding operation, hydro-mulch should be applied at a rate of 1500 lbs. per acre in the second step. The use of hydro-mulch as opposed to straw, is limited to optimum seeding dates as listed in the Standards.

QUANTITY AND PAYMENT

The quantity of Soil Erosion and Sediment Control Devices, for which payment will be made, will be on a lump sum basis for the item **SOIL EROSION AND SEDIMENT CONTROL DEVICES** in the Proposal, which price shall include the cost of all BMPs, soil erosion measures, construction entrances, general soil stabilization techniques, and maintenance of the measures throughout the duration of construction.

Payment for this item shall include the furnishing of all materials, labor and equipment and all else necessary therefore and incidental thereto.

--END OF SECTION--

TEST PITS

DESCRIPTION

Test pits shall include the excavation of surface and subsurface materials for the location of subsurface utilities and backfill of all earth, rock, boulders, brick and removal of all materials encountered and all incidental work to the satisfaction of the engineer, and shall also include the restoration of all hardscape areas in accordance with the construction documents.

METHODS OF CONSTRUCTION

Prior to the excavation of Test Pits, all existing on-site and off-site subsurface items (e.g. utilities, drainage, conveyance networks, tunnels) shall be located which may be affected by or interfere with the proposed construction. Test pits shall be backfilled in accordance with Section 202 - Excavation in the 2019 New Jersey Department of Transportation Standard Specifications.

QUANTITY AND PAYMENT

Payment will be made for each cubic yard of excavated material for each Test Pit constructed in accordance with the Plans, or as directed by the Engineer at the unit price bid for the item **TEST PITS (IF & WHERE DIRECTED)** in the Proposal, which shall cover the cost of excavation, backfill, and restoration, whether temporary or permanent in nature furnishing all materials, labor and equipment necessary to construct the Test Pits, as shown on the Plans or as directed by the Engineer.

--END OF SECTION--

DEWATERING

DESCRIPTION

The Contractor shall at all times provide ample means and equipment with which to promptly remove and dispose of all water and drainage entering the excavations or other parts of the work, and to keep such excavations dry until the structures to be built therein are completed. In no case will the laying of pipe or placing of masonry be permitted with water in the excavation or in unsuitable soils or as directed by the Engineer.

Dewatering methods and equipment shall be subject to the approval of the Engineer, and all water removed from the work shall be disposed of in a manner without damage to adjacent properties or off-site areas and shall meet the maximum turbidity requirements of the local soil conservation district and State regulations.

QUANTITY AND PAYMENT

No specific payment will be made for dewatering and the cost thereof shall be included in the prices bid for the installation of various sizes of the proposed pipe and other structures.

--END OF SECTION--

UTILITY COORDINATION

DESCRIPTION

This work shall consist of the resetting of all existing castings to finished grade during the resurfacing of the streets and walkways as shown on the Contract Drawings, the reconstruction of valve boxes, utility connections, and structures as required, in accordance with all utility provider requirements. The contractor shall coordinate the resetting of any castings and the reconstruction of any valves and utility connections with the respective utility company and the Engineer within the limits of construction in accordance with the Contract Drawings.

MATERIALS

Portland cement concrete shall conform to Section 903 – Concrete and Section 909 - Drainage of the 2019 NJDOT Standard Specifications for Road and Bridge Construction.

CONSTRUCTION

The Castings shall be reset in a manner covered under Division 650 – Utilities and Section 602 – Drainage Structures of the 2019 NJDOT Standard Specifications for Road and Bridge Construction.

Castings will be reset once for this project. They will be set flush with the asphalt base course for the settling period and then again in the final wearing course elevation.

QUANTITY AND PAYMENT

Utility Coordination will not be measured. Quantity and Payment for this item, and all costs related thereto, shall be included in the price for the various items within the Proposal, which shall cover the cost of excavation, backfill, stems, caps, covers, extensions, fittings, inlets, manholes, cleanouts, and all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

-- END OF SECTION --

EARTHWORK

PART 1 - GENERAL

Description

The Contractor shall be responsible to implement the appropriate procedures as outlined within these specifications as it relates to work related to onsite soil excavation, grading, stockpiling and the exporting and disposal of excess onsite material. This work shall consist of excavating, temporary stockpiling, testing, and disposing of all materials excavated, inclusive of any contaminated non-hazardous and contaminated hazardous soils, that are unsuitable for backfill as set forth at NJAC 7:14A-2.13 and at the discretion of the engineer and not considered to be solid waste pursuant to NJAC 7:26-1.6.

Stockpile locations will be chosen by the County and/or property owner.

The boundary of the stockpile area shall be clearly marked by hay bales, silt fencing or another appropriate method. Where fill is to be stored in excess of 10 days, a suitable means of protecting excavated material from wind and water erosion shall be employed. Erosion control methods may include one or more of the following: mulching, sprinkling, silt fencing, hay bailing and stone covering.

Excess excavated material which is not considered to be solid waste pursuant to NJAC 7:26-1.6 shall be removed from the site and disposed of at an approved site in accordance with the following:

- i. Disposal sites selected by the Contractor shall be approved by the project sponsor prior to their use. The project sponsor, may, at its discretion, conduct periodic inspection of disposal sites to ensure compliance with the requirements of this subsection during the off-site disposal operation.
- ii. The disposal of excess excavated material in wetlands, vernal habitats, stream corridors and floodplains is strictly prohibited, even if the permission of the property owner is obtained. The contractor shall be responsible to remove any fill improperly placed by the contractor at the contractor's expense and restore the area impacted.
- iii. If excess excavated material is placed on private property, a hold harmless release in favor of the project sponsor shall be obtained from the property owner, to be obtained by the Contractor.

The Contractor shall prepare and implement a Site specific Health and Safety Plan in accordance with OSHA requirements including standards 29 CFR 1910.120, 29 CFR 1926, and the NJ Worker & Community Right to Know Act. The Contractor will be responsible for the Health and Safety of their own employees, all their subcontractors, and all other personnel on Site during Work activities under this Contract. The Contractor will be responsible to provide all personnel/materials/equipment necessary to implement and comply with the HASP (i.e. personal protective equipment, air monitoring equipment, etc.).

The excavated soil shall be sampled for classification (hazardous/non-hazardous) by the Contractor according to RCRA (Resource Conservation and Recovery Act) regulations. If the results of the testing indicate the presence of hazardous material, the Contractor shall immediately notify the Owner and secure the material. All impacted soils deemed to be hazardous will be secured in accordance with all applicable rules, laws and regulations. If sampling during the site investigation did not show any exceedances, or if the exceedance could be averaged away, then the necessary paperwork should be furnished that it meets the NJDEP's "Clean Fill" protocol outlined in the April 2015 Fill Material Guidance for SRP Sites. If the material is considered contaminated, then the material would have to be sampled for waste characterization prior to off-site disposal at a permitted facility.

Clean Soil shall be considered as: *"If soil sampling investigations determine that results are below the applicable New Jersey Department of Environmental Protection (NJDEP) Residential, Non-Residential Direct Contact Soil Remediation Standards (SRS), and/or the New Jersey Default Impact to Ground Water Soil Screening Levels in accordance with N.J.A.C. 7:26D, OR if the results can be remediated through a compliance protocol outlined in the Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria guidance document, then excess material should be sampled in accordance with NJDEP's Clean Fill protocol outlined in the April 2015 Fill Material Guidance for SRP Sites."*

Contaminated soil shall be defined as: *"If soil sampling investigations determine that results are above the applicable New Jersey Department of Environmental Protection (NJDEP) Residential, Non-Residential Direct Contact Soil Remediation Standards (SRS), and/or the New Jersey Default Impact to Ground Water Soil Screening Levels in accordance with N.J.A.C. 7:26D, and CANNOT be remediated through compliance of the protocols outlined in the Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria guidance document, then the material will need to be properly characterized and disposed of off-site at a permitted facility under manifest."*

The Contractor shall be responsible to furnish copies of the manifests for disposal of the material which shall outline but not limited to the truck information, the time the material left the construction site, the time it entered the receiving facility, the receiving facility location, the weight entering and leaving the receiving facility.

The Contractor shall ensure that all stockpiled material has had an opportunity to properly dry and is properly covered on route to the receiving facility.

1.1 DEFINITIONS

A. The following terms shall have the meanings ascribed to them in this Article, wherever they appear in this Section.

1. Earth Excavation: The removal of all surface and subsurface material not classified as rock (as defined below).
2. Rock Excavation, Unclassified: Rock excavation, unclassified shall mean removal of all rock, boulders or pieces of concrete, and solid ledge rock and masonry, which in the opinion of The Engineer requires for its removal,

drilling and blasting, wedging, sledging, barring, or breaking up with a power operated tool. Soft or disintegrated rock which can be removed with a pick or power operated excavator or shovel, loose, shaken or previously blasted rock, broken stone in rock fill or elsewhere, and rock exterior to the maximum limits allowed, or which may fall in the excavation, shall not be included as rock excavation. Pavements, curbs, gutters, sidewalks and driveways shall not be included as rock excavation.

3. Subgrade Surface: Surface upon which subbase or topsoil is placed.
4. Subbase: Select granular material or subbase course Type 2 which is placed immediately beneath pavement or concrete slabs.
5. Maximum Density: The dry unit weight in pounds per cubic foot of the soil at "Optimum Moisture Content" when determined by ASTM D 698 (Method C), and ASTM D 2922 (Method B).
6. Landscaped Areas: Areas not covered by structures, walks, roads, paving, or parking.
7. Unauthorized Excavation: The removal of material below required elevation indicated on the Drawings or beyond lateral dimensions indicated or specified without specific written direction by The Engineer.

1.2 SUBMITTALS

A. Product Data:

1. Filter Fabric: Manufacturer's catalog sheets, specifications, and installation instructions.

B. Samples: Submit samples as follows. Take the samples in the presence of the Engineer, and complete a Granular Material Sample Information Form for each sample. Forms and field sample designation numbers will be furnished by The Engineer.

1. Select Granular Material: 10 lb.
2. Selected Fill: 10 lb.
3. Subbase Course Type 2: 10 lb.

1.3 PROJECT CONDITIONS

A. Protect existing trees and plants during performance of the Work unless otherwise indicated. Box trees and plants indicated to remain within the grading limit line with temporary steel fencing or solidly constructed wood barricades as required. Protect root systems from smothering. Do not store excavated material, or allow vehicular traffic or parking within the branch drip line. Restrict foot traffic to prevent excessive compaction of soil over root systems.

B. Cold Weather Requirements:

1. When freezing temperatures are predicted, do not excavate to final required elevations for concrete Work unless concrete can be placed immediately.

Retain enough earth over the bottom elevation of footings to prevent frost penetration. If excavation has progressed to final footing elevations and concrete cannot be placed immediately, cover the bottom of the excavations with protective material to adequately insulate the exposed earth surface from frost. Remove protective material immediately before placing concrete.

2. Do not backfill between November 1 and April 1, except with written permission of the Engineer and/or the County of Union.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Select Granular Material: Stockpiled, sound, durable, sand, gravel, stone, or blends of these materials, free from organic and other deleterious materials. Comply with NJDOT Standard Specifications for subbase course material.

Sieve	Percent Passing
2 inch	100
1/4 inch	30-65
No. 40	5-40
No. 200	0-10

1. Magnesium Sulfate Soundness Test: 20 percent maximum loss by weight after 4 test cycles.
2. Plasticity Index: The plasticity index of the material passing the No. 40 mesh sieve shall not exceed 5.0.
3. Elongated Particles: Not more than 30 percent, by weight, of the particles retained on a 1/2 inch sieve shall consist of flat or elongated particles. A flat or elongated particle is defined as one which has its greatest dimension more than 3 times its least dimension.

- B. Selected Fill: Sound, durable, sand, gravel, stone, or blends of these materials, free from organic and other deleterious materials.

Sieve	Percent Passing
4 inch	100
No. 40	0-70
No. 200	0-15

- C. Subbase Course Type 2: Stockpiled, crushed ledge rock or approved blast furnace slag. Comply with NJDOT 2019 Standard Specifications for Subbase Course material.

Sieve	Percent Passing
2 inch	100

1/4 inch	25-60
No. 40	5-40
No. 200	0-10

1. Magnesium Sulfate Soundness Test: 20 percent maximum loss by weight after 4 test cycles.
 2. Plasticity Index: The plasticity index of the material passing the No. 40 mesh sieve shall not exceed 5.0.
 3. Elongated Particles: Not more than 30 percent, by weight, of the particles retained on a 1/2 inch sieve shall consist of flat or elongated particles. A flat or elongated particle is defined as one which has its greatest dimension more than 3 times its least dimension.
- D. Suitable Material (Fill and Backfill for Landscaped Areas): Material consisting of mineral soil (inorganic), blasted or broken rock and similar materials of natural or man-made origin, including mixtures thereof. Maximum particle size shall not exceed 2/3 of the specified layer thickness prior to compaction. NOTE: Material containing cinders, industrial waste, sludge, building rubble, land fill, muck, and peat shall be considered unsuitable for fill and backfill, except topsoil and organic silt may be used as suitable material in landscaped areas provided it is placed in the top layer of the subgrade surface.
- E. Filter Fabric (Separation, Drainage, Slope Protection): Amoco CEF 4545, CEF 4551; Exxon Chemical Co. GTF 150 EX; Mirafi Inc. 140N, 140NL; Nicolon Corp. Filterweave 70/06; Phillips Fibers Corp. Supac 4NP, 5NP, 7NP; Wellman Quline Inc. Q60, Q80, Q100 or approved equal.
- F. Filter Fabric (Stabilization): Amoco CEF 2002 & 2006; Exxon Chemical Co. GTF 350; Mirafi Inc. 500X, 600X, 700X; Nicolon Corp. 500; Phillips Fibers Corp. Supac 3WS, 4WS, 5WS, 6WS; Wellman Quline Inc. Q160 or approved equal.
- G. Light Weight Fill and Backfill: Contractor is advised to follow the specifications of lightweight fill and backfill material if proposed under this project. The placement of this and all fill material must meet the requirements of a geotechnical engineer.
- H. Geofoam: Contractor is advised to follow the specifications of Geofoam if proposed under this project. The placement of any Geofoam must meet the requirements of the Geotechnical Engineer and installed per manufacturer specifications.

PART 3 - EXECUTION

3.1 CLEARING AND GRUBBING

- A. Clear and grub the site of trees, shrubs, brush, other prominent vegetation, debris, and obstructions except for those items indicated to remain. Completely remove stumps and roots protruding through the ground surface.

- B. Fill depressions caused by the clearing and grubbing operations in accordance with the requirements for filling and backfilling, unless further excavation is indicated.

3.2 UNDERGROUND UTILITIES

- A. Locate existing underground utilities and service connections prior to commencing excavation Work. Determine exact utility locations by hand excavated test pits. Support and protect utilities to remain in place.
- B. Remove inactive, abandoned utilities within the limits of the areas to be excavated. Cap or plug open ends of abandoned utilities extending outside the excavation limits.

3.3 EXCAVATION

- A. Excavate earth as required for the Work.
- B. Maintain sides and slopes of excavations in a safe condition until completion of backfilling. Comply with Code of Federal Regulations Title 29 - Labor, Part 1926 (OSHA).
- C. Stockpile excavated materials classified as suitable material where directed, until required for fill. Place, grade, and shape stockpiles for proper drainage as approved by The Engineer and/or the County of Union.
- D. Excavation for Structures: Conform to elevations, lines, and limits indicated. Excavate to a vertical tolerance of plus or minus 1 inch. Extend excavation a sufficient lateral distance to provide clearance to execute the Work.
- E. Footings and Foundations: Trim bottoms to required lines and elevations. Excavate to final elevations by hand just prior to concrete placement. Leave solid undisturbed base for concrete.
- F. Slabs and Floors: Excavate to the following depths below bottom of concrete for addition of select granular material:
 - 1. Interior Floors: 6 inches unless otherwise indicated.
 - 2. Exterior Slabs and Steps: 12 inches unless otherwise indicated.
- G. Pipe Trenches: Open only enough trench length to facilitate laying pipe sections. Unless otherwise indicated on the Drawings, excavate trenches approximately 24 inches wide plus the outside pipe diameter, equally divided on each side of pipe centerline. Cut trenches to cross section, elevation, profile, line, and grade indicated. Accurately grade and shape trench bottom for uniform bearing of pipe.
- H. Pavement: Excavate to subgrade surface elevation.

- I. Unauthorized Excavations: Unless otherwise directed, backfill unauthorized excavation under footings, foundation bases, and retaining walls with compacted select granular material without altering the required footing elevation. Elsewhere, backfill and compact unauthorized excavation as specified for authorized excavation of the same classification, unless otherwise directed by The Engineer.

3.4 ROCK EXCAVATION

- A. No blasting shall be performed by the Contractor except upon written permission of the Engineer. Any request by the Contractor for permission to blast must be submitted to The Engineer at least 24 hours prior to start of said proposed blasting.
- B. If blasting permission is granted, the Contractor shall adhere strictly to all required Federal, State and Local safety regulations. In no case shall blasting caps or other exploders be kept at the same place where dynamite or other explosives are stored. A watchman shall be stationed at all times at the place of storage of explosives.
- C. The prepared blast shall be carefully covered with a heavy woven wire blasting mat, placed so that the area affected by the explosion is positively confined. Should a gas, water or any other conduit intersect the line of trench, the rock must be removed without blasting from a distance of ten (10) feet on each side of such pipe or conduit.
- D. The Contractor shall be responsible for any damage to adjacent structures and property caused by his operations. He shall inspect all structures adjacent to the site of blasting and, when ordered by the Engineer, he shall take clear, close-up photographs of these structures before and after blasting. Copies of these photographs shall be submitted to the Engineer and the County of Union. The Engineer or their representative must be present at all times during blasting operations.

3.5 DEWATERING

- A. Prevent surface and subsurface water from flowing into excavations and trenches and from flooding the site and surrounding area.

3.6 PLACING FILTER FABRIC

- A. Place and overlap filter fabric in accordance with the manufacturer's installation instructions, unless otherwise shown. Backfill over fabric in accordance with the manufacturer's instructions and in a manner to prevent damage to the fabric.

3.7 PLACING FILL AND BACKFILL

- A. Surface Preparation of Fill Areas: Strip topsoil, remaining vegetation, and other deleterious materials prior to placement of fill. Break up or scarify old pavements to a maximum of 2 square feet.

- B. Excavations: Backfill as promptly as practicable, but only after approval by the Engineer. Do not backfill with excavated material unless it meets the requirements of this Section.
- C. Place backfill and fill materials in layers not more than 8 inches thick in loose depth unless otherwise specified. Before compaction, moisten or aerate each layer as necessary to facilitate compaction to the required density. Do not place backfill or fill material on surfaces that are muddy, frozen, or covered with ice.
 - 1. Place fill and backfill against foundation walls, and in confined areas (such as trenches) not easily accessible by larger compaction equipment, in maximum 6 inch thick (loose depth) layers.
- D. Prevent wedging action of backfill against structures by placing backfill uniformly around structure to approximately same elevation in each layer. Place backfill against walls of structures containing basements or crawl spaces only after the first floor structural members are in place.
- E. Under Exterior Concrete Slabs and Steps:
 - 1. Up to Subgrade Surface Elevation: Place selected fill when fill or backfill is required.
 - 2. Subbase Material: Place 12 inches of select granular material over subgrade surface.
- F. Under Interior Concrete Slabs:
 - 1. Up to Subgrade Surface Elevation: Place selected fill when fill or backfill is required.
 - 2. Subbase Material: Place 6 inches of select granular material over subgrade surface.
- G. Under Pavements and Walks:
 - 1. Up to Subgrade Surface Elevation: Place selected fill when fill or backfill is required.
 - 2. Subbase Material: Place as indicated.
- H. Landscaped Areas: Place suitable material when required to complete fill or backfill areas up to subgrade surface elevation. Do not use material containing rocks over 4 inches in diameter within the top 12 inches of suitable material.
- I. Plastic Pipe and Cement Water Pipe in Trenches: Place cushion material a minimum of 4 inches deep under pipe, 4 inches on both sides, and 4 inches over top of pipe. Complete balance of backfill as specified.

- J. Copper Tubing and Steel Gas Pipe in Trenches: Place cushion material a minimum of 6 inches deep under pipe, 6 inches on both sides, and 4 inches over top of pipe. Complete balance of backfill as specified.
- K. Rigid Non-Metallic Conduit: Except where concrete encasement is required, place cushion material a minimum of 4 inches deep under conduit, 4 inches on both sides, and 12 inches over top of conduit. Complete balance of backfill as specified.

3.8 COMPACTION

- A. Compact each layer of fill and backfill for the following area classifications to the percentage of maximum density specified below and at a moisture content suitable to obtain the required densities, but at not less than 3 percent drier or more than 2 percent wetter than the optimum content as determined by ASTM D 698.
 - 1. Structures: 95 percent.
 - 2. Concrete Slabs and Steps: 95 percent.
 - 3. Landscaped Areas: 90 percent.
 - 4. Pavements and Walks: 95 percent.
 - 5. Pipes: 95 percent.

3.9 GRADING

- A. Rough Grading: Trim and grade area required by this Contract to a level of 4 inches below the finish grades indicated unless otherwise specified herein or where greater depths are indicated. Provide smooth uniform transition to adjacent areas.
- B. Finish Grading: Finish surfaces free from irregular surface changes, and as follows:
 - 1. Grassed Areas: Finish areas to receive topsoil to within 1 inch above or below the required subgrade surface elevations.
 - 2. Walks and Pavements: Place and compact subbase material as specified. Shape surface of areas to required line, grade and cross section, with the finish surface not more than 1/2 inch above or below the required subbase elevation.
 - 3. Building Slabs: Grade subbase material smooth and even, free of voids, compacted as specified to within 1/4 inch above or below required subbase elevation.
- C. Spread approved topsoil directly upon prepared subgrade surface to a depth measuring 4 inches after natural settlement of the topsoil has occurred in areas to be seeded or to receive sod. Place to greater depth when necessary to adjust grades to required elevations.
 - 1. Approved existing topsoil within the Grading Limit Line may be used. Provide additional topsoil from outside sources as required.

- D. Finish topsoil surface free of depressions which will trap water, free of stones over 1 inch in any dimension, and free of debris.

3.10 SUBGRADE SURFACE FOR WALKS AND PAVEMENT

- A. Shape and grade subgrade surface as follows:

1. Walks: Shape the surface of areas under walks to required line, grade and cross section, with the finish surface not more than 1 inch above or below the required subgrade surface elevation.
2. Pavements: Shape the surface of areas under pavement to required line, grade and cross section, with the finish surface not more than 1/2 inch above or below the required subgrade surface elevation.

- B. Grade Control: During construction, maintain lines and grades including crown and cross-slope of subbase course.

- C. Thoroughly compact subgrade surface for walks and pavement by mechanical rolling, tamping, or with vibratory equipment as approved to the density specified.

3.11 RESTORATION

- A. Restore pavements, walks, curbs, lawns, and other exterior surfaces damaged during performance of the Work to match the appearance and performance of existing corresponding surfaces as closely as practicable.

- B. Topsoil and seed or sod damaged lawn areas outside of the project area as directed. Water as required until physical completion of the Work.

3.12 DISPOSAL OF EXCESS AND UNSUITABLE MATERIALS

- A. Remove from the project site and dispose of excess and unsuitable materials, including materials resulting from clearing and grubbing and removal of existing improvements.

- B. Transport excess and unsuitable materials, including materials resulting from clearing and grubbing and removal of existing improvements, to spoil areas away from the project site.

3.13 FIELD QUALITY CONTROL

- A. Compaction Testing: Notify The Engineer at least 3 working days in advance of all phases of filling and backfilling operations. Compaction testing will be performed by an independent lab retained by the contractor to ascertain the compacted density of the fill and backfill materials. Compaction testing will be performed on certain layers of the fill and backfill as determined by a Geotechnical Engineer. If a compacted layer fails to meet the specified percentage of maximum density, the layer shall be

recompacted and will be retested. No additional material may be placed over a compacted layer until the specified density is achieved.

3.14 PROTECTION

A. Protect areas from traffic and erosion, and keep them free of trash and debris.

PART 4 – QUANTITY AND PAYMENT

Exporting of soil and initial testing of soil, as well as solid waste shall not be measured for payment and the cost thereof shall be included in the **EARTHWORK** pay item and other various bid items. In the event the soil has been deemed “Contaminated”, the cost for Waste Characterization sampling and additional disposal cost shall be paid for out of the Bid Contingency.

Payment for testing and disposal of soils will be made on a reimbursement for all approved Testing and Disposal of “Contaminated” soil only for the allowance item **BID CONTINGENCY**, which price shall include the cost of any and all materials, all labor and equipment and all else necessary in incidental thereto. Use of this allowance shall only be used upon written authorization by the owner and/or engineer. Payment for work associated with “Clean” soil and Solid Waste shall be included within their respective bid items.

It is not anticipated that the onsite materials will be Contaminated, but in the event that this occurs the Contractor shall notify the Owner immediately. The Cost related to special onsite handling, stockpiling and disposal of this material is not included in the scope of this work. The Contractor shall submit a detailed cost breakdown for the additional work, for review and approval by the Owner and/or Engineer and/or LSRP. No work shall begin until written authorization has been provided by the Owner. Said work shall be paid for at a negotiated price and will be paid out of the project Bid Contingency in strict conformance with the Owner’s procedures for extra work.

-- END OF SECTION --

SITE GRADING

DESCRIPTION

Site Grading shall include grading, excavation, backfill, preparing and compacting all material required for construction of the sub-grade of the entire disturbed area and all incidental work necessary to the satisfaction of the Engineer. Contractor shall be responsible for provided as built survey on site.

MATERIALS

Borrow and export material required for site grading shall conform to Section 200 of the 2019 NJDOT Standard Specifications. The Contractor shall provide the Engineer with certification attesting that the said material is free of contaminants and suitable for this application. The soil shall be smooth, soft and free of depressions, clods, mounds, stones, or other debris as approved by the Engineer.

METHODS OF CONSTRUCTION

The site shall be graded within the limits shown on the Plans or as directed by the Engineer. The Contractor shall grade the sub-grade according to the elevations shown on the Plans, taking into account the thickness of the layers above, and if necessary borrow materials as approved by the Engineer. The soil shall be placed uniformly in layers not to exceed twelve (12) inches loose thickness. Each layer shall be compacted to 95% density in accordance with Section 200 of the NJDOT Standard Specifications.

The contractor shall make provisions to implement approved dust control measures while performing this work as not to impact surrounding property (e.g. railways, roadways, sidewalks, parking areas, buildings, athletic fields, business, residences, trees, landscape areas, vehicles, conveyance systems, watercourses). Should the contractor fail to implement these measures, the Contractor shall be responsible to restore all off-site surrounding properties to its original condition prior to the commencement of construction at no additional cost to the Owner or Owner's Representatives.

QUANTITY AND PAYMENT

Payment for Site Grading will be on a lump sum basis at the price bid for the item **EARTHWORK** in the Proposal, which price shall include the cost of furnishing the equipment for excavation, placing backfill, compaction of soil and all else necessary therefore and incidental thereto.

Any material excavated from the site which is not suitable for backfill as determined by the Engineer or is an excess of needed material shall be hauled off the site and disposed of in a suitable and timely manner and the cost thereof shall be included in the price bid for the item **EARTHWORK** in the Proposal.

--END OF SECTION--

EXCAVATION, UNCLASSIFIED

DESCRIPTION

Excavation Unclassified shall consist of the excavation, removal, and disposal of all materials of whatever nature, waste, rock, boulders, brick, stone, and concrete masonry, small structures, removal of pipe where directed, removal of any other materials encountered of whatsoever nature, required for the proposed construction, disposal of all excavated materials, the transportation of the excavated material, the construction of embankments with the material excavated when so required, the disposal of unsuitable and surplus materials, and all other work as herein described.

MATERIALS

No materials are involved.

METHODS OF CONSTRUCTION

N. J. Department of Transportation Standard Specifications – Section 202 – Roadway Excavation.

QUANTITY AND PAYMENT

Payment for Excavation, Unclassified will not be made. The item EXCAVATION, UNCLASSIFIED shall be included in the various items within the Proposal; which price shall include the cost of excavation of the materials encountered, removal of small structures, embankment with the materials excavated, the removal of existing pipes, and other structures encountered, the disposal of all excess and unsuitable materials, cleaning payment, Roadway Excavation-Rock, Roadway Excavation-Regulated Waste, Wet Excavation, Removal of Concrete Base Course and Concrete Surface Courses, Joint Removal, all labor equipment and all else necessary thereof and incidental thereto.

--END OF SECTION--

BORROW EXCAVATION & PIPE BEDDING

DESCRIPTION

Borrow Excavation and pipe bedding shall include furnishing, transporting, placing and compacting all material required for embankment, bedding under pipes and backfill, and all incidental work as specified herein or as directed by the Engineer.

MATERIALS

Borrow Excavation and Pipe Bedding shall be of the various types as specified in proposal and shall conform to the applicable section of the NJDOT Standard Specifications for each designation. The Contractor shall provide certified testing results for all Borrow Excavation and Pipe Bedding brought to the site; all Borrow Excavation and Pipe Bedding must be approved by the engineer, prior to its use on this project.

METHODS OF CONSTRUCTION

The borrow material and pipe bedding shall be placed and compacted in accordance with Subsection 203.07 of the Standard Specification.

The final grade shall match the elevations shown on the Plans. Losses due to settlement, compaction or erosion are to be included under this item.

QUANTITY AND PAYMENT

No specific payment will be made for borrow excavation and pipe bedding and the cost thereof shall be included in the prices bid for the installation of various sizes of the proposed pipe and other structures.

--END OF SECTION--

MANHOLES, INLETS, AND CATCH BASINS

DESCRIPTION

Manholes, Inlets, and Catch Basins shall consist of the construction of these structures, stone bedding, backfilling and backfill material, and the furnishing and placing of new heads, castings, grates, and covers.

MATERIALS

Pre-cast Concrete Manholes and Inlets may be used as approved by the Engineer.

All materials used in the construction of Manholes, Inlets, and Catch Basins, shall conform to Section 602 – Drainage Structures of the NJDOT Standard Specifications.

Manufactured PVC or HDPE drainage inlets, including all covers, lids, grates and necessary appurtenances, manufactured by Advanced Drainage Systems, Inc. (ADS), or approved equal.

All castings shall have the name of the County, the date, and the words “Sanitary” or “Storm” stamped or cast clearly and legibly thereon. Units not so furnished will not be accepted for use on County projects. Concrete blocks shall conform to the compressive strength and absorption requirements of A.S.T.M. C -139.

Dense-Graded Aggregate (DGA) and Recycled Concrete Aggregate (RCA) shall conform to the requirements of Section 901.10; Course Aggregate shall be broken stone or washed gravel conforming to the requirements of Section 901.03 and Section 901.05, respectively of the NJDOT Standard Specifications.

METHODS OF CONSTRUCTION

Construction for Manholes, Inlets, and Catch Basins shall be in accordance with Section 602 – Drainage Structures. Particular attention should be brought to Section 602.03 – Construction, for precast concrete structures, the reconstruction of concrete or block drainage structures, the resetting and setting of castings, and the reconstruction and conversion of existing structures in compliance with NJDOT Standard Specifications.

Excavation shall be in accordance with Subsection 202 – Excavation; and Backfilling shall be in accordance with Division 200 – Earthwork; of the NJDOT Standard Specifications.

OUTLET CONTROL STRUCTURE, COMPLETE, shall include the concrete chamber, weir wall with openings, pipe connections, manhole frames and covers, and all other associated appurtenances. Said structures shall be designed and constructed to withstand H-20 Loading.

STORMWATER OUTFALL, COMPLETE, shall include the concrete headwall with toe, scour hole, and gabion basket wall and all other associated appurtenances. Said structures shall be constructed as shown on the Construction Details.

QUANTITY AND PAYMENT

The quantity of Manholes, Inlets, and Catch Basins of the various categories herein above specified, for which payment will be made, will be the number of each type thereof constructed, reconstructed, reset or installed, in accordance with the Contract Plans or as directed by the Engineer, for the line items listed below:

- **Manhole, Concrete, 4' Dia.** (Unit)

- **Outlet Control Structure, Complete** (Unit)

- **Stormwater Outfall, Complete** (Unit)

- **Yard Inlet** (Unit)

- **Cleanout, Yard Inlet, Buried** (Unit)

Payment for the above-reference bid items will be on a per unit basis, at the price bid for the above items in the Bid Proposal which price shall include the cost of furnishing the equipment, materials, labors, and all else necessary therefore and incidental there to.

--END OF SECTION--

TURF UNDERDRAINAGE PIPE

DESCRIPTION

This work shall consist of furnishing and installing perforated HDPE flat underdrains (1"x12"), fittings, and adapters below the turf field.

SUBMITTALS

Submit samples and catalogue cuts of the proposed HDPE pipe, fittings, adapters, geogrid, and geotextile fabric.

MATERIALS

Flat Drains, fittings, and adapters shall be AdvanEdge as manufactured by Advanced Drainage Systems, Inc., Tel. 800-821-6710, or approved equal.

Geotextile fabric shall Type 140N as manufactured by Mirafi, Tel. 706-693-2226, or approved equal.

Geogrid to be Mirafi Miragrid or approved equal.

CONSTRUCTION

Excavation, bedding, and backfilling shall conform to Division 200 – Earthwork; of the NJDOT Standard Specifications.

The underground drainage basins shall be installed in accordance with ASTM D2321 – Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.

QUANTITY AND PAYMENT

Drainage Pipe will be measured on a linear foot basis for the “1”x12” Turf Underdrain” item in the proposal which price shall include all Fittings and Adapters, furnishing of all materials, labor and equipment and all else necessary therefore and incidental thereto for completion of the work as shown and specified in accordance with the Contract Plans and Specifications or as directed by the Engineer.

--END OF SECTION--

HDPE DRAINAGE PIPE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This work shall consist of furnishing and installing underground detention and pipe conveyance pipe systems composed of lengths of perforated and solid high-density polyethylene (HDPE) pipe varying in size as indicated on Contract Documents. It shall include the required excavation, clean stone, fabric and any other material, tools, equipment necessary to construct the underground detention basin and pipe conveyance systems and structures as shown on the Contract Drawings and shall conform to Division 200 – Earthwork of the NJDOT Standard Specifications for Road and Bridge Construction, latest revised.

- B. Clean Crushed Stone shall be furnished and placed above, around, and below the perforated recharge basin pipes, manifolds and fittings, and enclosed with geotextile filter fabric as specified and as shown on the Contract Drawings and as specified in this Section or as directed by the Engineer. 3/4" clean crushed stone shall be used.

1.2 SUBMITTALS

- A. Submit samples and catalogue cuts of the proposed HDPE pipe, risers, manifolds, fittings, covers/lids, geogrid, clean stone, cleanouts and geotextile fabric.

PART 2 - MATERIALS

- 2.1 High-Density Polyethylene Pipe (HDPE), perforated and solid, varying in size from 12" to 18" diameter, all risers and fittings of various sizes shall be Type N-12 as manufactured by Advanced Drainage Systems, Inc., Tel. 800-821-6710, or approved equal.

- 2.2 Geotextile Filter Fabric shall Type 140N as manufactured by Mirafi, Tel. 706-693-2226 or US Fabrics, Tel. 800-518-2290. Geogrid to be Mirafi Miragrid of US Fabrics, or approved equal.

- 2.3 Clean Crushed Stone shall be uniform in texture and quality and shall conform with Section 901 – Aggregates, Section 601 – Pipe, and Section 602 – Drainage Structures, of the 2019 NJDOT Standard Specifications, latest revised.

PART 3 - CONSTRUCTION

- 3.1 Excavation, bedding, and backfilling shall conform to the applicable Sections and/or Subsections of the 2019 NJDOT Standard Specifications.

- 3.2 All HDPE pipe shall be installed in accordance with ASTM D2321 – Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.

3.3 Pipe bedding shall be 18” minimum thickness for 15”, and 18” dia. perforated HDPE pipe.

3.4 Pipe bedding shall be 6” minimum thickness for all solid HDPE pipe for sizes 12” dia. up to 30” dia.

PART 4 – QUANTITY AND PAYMENT

4.1 Quantity and Payment for HDPE Drainage Pipe will be made in accordance with the Contract Documents at the linear foot price bid for items listed below:

- **Pipe, HDPE, 12” Perforated** (LF)
- **Pipe, HDPE, 12”** (LF)
- **Pipe, HDPE, 15” Perforated** (LF)
- **Pipe, HDPE, 15”** (LF)
- **Pipe, HDPE, 18” Perforated** (LF)
- **Pipe, HDPE, 18”** (LF)

Filter fabric shall not be measured and shall be included in the unit price for the various bid items in the Proposal, The above items price shall cover the cost of excavation, backfill, sheathing, shoring, bracing, pumping, dewatering, stone, geogrid, all bedding, fittings, risers, covers, compaction, testing, and all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

-- END OF SECTION --

REINFORCED CONCRETE PIPE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This Specification covers reinforced concrete pipe with 24” diameter intended to be used for the conveyance of storm water, and shall include the excavation for the construction of reinforced concrete storm pipe, subgrade, sawcutting, temporary reconstruction section for trench restoration, relocation of all gas, water and sanitary connections and in accordance with Section 602 - Storm Drains of the Standard Specifications, and as shown on the Contract Plans and Specifications, or as directed by the Engineer.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. All reinforced concrete pipe shall be Class V, unless otherwise noted.
- B. Fine aggregate shall conform to the requirements of Section 901.13; Coarse aggregate shall be broken stone or washed gravel conforming to the requirements of Section 901.04 and Section 901.05, respectively. Elliptical reinforcing will not be permitted in circular pipe.
- C. Sub-grade shall be as shown on the site plan

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. Construction shall be in accordance with Section 602 and excavation and backfill for all drains shall be governed by the provisions of Section 207 - Subsurface Structure Excavation of the Standard Specifications.

QUANTITY AND PAYMENT

RCP will be measured on a linear foot basis for the “**PIPE, RCP, 24”**” item in the proposal which price shall include furnishing of all materials, labor and equipment and all else necessary therefore and incidental thereto for completion of the work as shown and specified in accordance with the Contract Plans and Specifications or as directed by the Engineer.

DENSE GRADED AGGREGATE (DGA)

DESCRIPTION

This item shall include the placement of ¾” Dense Graded Aggregate (DGA), at the thickness shown on the plans including all necessary excavation and removal of all earth, rock, boulders, brick, stone and concrete masonry, including small structures and other materials encountered. It shall also include all necessary transportation, grading, placement and disposal of material in accordance with all Client, Local, State, and Federal regulations.

MATERIALS

The stone shall be free from pieces coated with clay, caked stone dust and other objectionable materials. It shall not contain more than 5% of weathered and decomposed rock, not more than 5% of stone of types other than the type being used, in accordance with the Specifications, and not more than 7% by weight of flat or elongated pieces. A flat piece shall be one in which the ratio of the width to thickness of its circumscribing rectangular prism is greater than 5:1, and an elongated piece shall be one in which the ratio of the length to width of its circumscribing rectangular prism is greater than 5:1. The percentage of wear shall be determined in accordance with A.A.S.H.T.O. Designation T3.

METHODS OF CONSTRUCTION

Excavation and backfill of the Dense Graded Aggregate shall be in accordance with Division 200 – Earthwork; of the NJDOT Standard Specifications.

QUANTITY AND PAYMENT

No Separate Payment will be made for the **DENSE GRADED AGGREGATE**. Cost to be included within various items in the proposal. The cost shall include all materials, labor, equipment and all else necessary to complete the work as directed by the Engineer.

--END OF SECTION--

HOT MIX ASPHALT SURFACE COURSE MIX 9.5M64

DESCRIPTION

Hot Mix Asphalt Surface Course shall be Mix HMA 9.5M 64, constructed in two lifts, and conforming to the lines and grades and at the thickness after compaction, as shown on the Contract Drawings. This surface course shall be installed on the dense graded aggregate base course, in accordance with the Contract Documents.

MATERIALS

The bituminous materials for Mix HMA 9.5M 64 shall consist of asphalt cement. The penetration grade shall be 85/100, conforming to the requirements specified therefore in SubSection 902 – Asphalt; of the NJDOT Standard Specifications unless otherwise directed by the Laboratory. All other materials shall be as shown in the Standard Specifications.

CONSTRUCTION

This article shall be as set forth in the "Standard Specifications", except that the following shall be included into the total price bid.

The Contractor shall be responsible for hiring an independent laboratory, which has been approved by the Engineer, for the purpose of taking pavement cores. These cores shall be tested to determine the conformance of the materials with the Specifications. Tests will be made for composition, air voids, and thickness.

The Contractor shall supply the Engineer with two (2) copies of all results.

QUANTITY AND PAYMENT

No specific payment will be made for Hot Mix Asphalt Surface Course, 2" Thick, Mix 9.5M64, associated with the asphalt pathway construction, and the cost thereof shall be included in the bid for the **ASPHALT PATHWAY (4" BASE COURSE, 2" SURFACE COURSE)** pay item within the bid proposal which price shall include the cost of any and all material, labor and equipment and all else necessary and incidental thereto

The quantity for which payment will be made, will be the actual tonnage delivered and used.

--END OF SECTION--

HOT MIX ASPHALT BASE COURSE MIX 19M64

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Hot Mix Asphalt Base Course shall be Mix 19M64, at the 4” thickness after compaction, as shown on the construction drawings. This work shall consist of the furnishing and placing of a 4” thick bituminous stabilized base course on the prescribed surfaces, locations, in accordance with the Plans, Details and Specifications.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. The composition of the Hot Mix Asphalt Mix 19M64 Course shall be coarse aggregate, fine aggregate, mineral filler and asphalt cement. These shall be as shown in the Standard Specifications, except that the materials shall conform to the requirements as shown for "Stone Mix". All reference to gravel mix is deleted.

PART 3 – EXECUTION

3.1 CONSTRUCTION

- A. After spreading and strike off, and while hot, each course shall be compacted thoroughly and uniformly by rolling. The rolling shall be done with a three-wheel ten (10) ton roller until the mixture is thoroughly compacted to the satisfaction of Neglia Engineering Associates.
- B. A tack coat shall be applied to any one or more layers of the Hot Mix Asphalt Mix 19M64, if in the opinion of the Engineer such layer or layers become coated with dust, dirt, or other foreign material sufficiently to prevent a good bond between the layers of Base Course or between the completed Base Course and Surface Course.

PART 4 – QUANTITY AND PAYMENT

No specific payment will be made for Hot Mix Asphalt Base Course, 4” Thick, Mix 19M64, associated with asphalt pathway construction, and the cost thereof shall be included in the prices bid for the **ASPHALT PATHWAY (4” BASE COURSE, 2” SURFACE COURSE)** pay item within the bid proposal which price shall include the cost of any and all material, labor and equipment and all else necessary and incidental thereto.

--END OF SECTION--

SYNTHETIC TURF

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division I Specification Sections apply to this section.

1.2 SUMMARY

- A. **The work under this section is shown for information purposes only. The contractor shall not be responsible for the furnishing and installation of the turf and associated striping, but shall be responsible to prepare the surface to finish grade for turf installation by others.** The work under this section shall consist of furnishing all labor, materials, and equipment necessary to install, in place, all synthetic turf and other materials as indicated on the plans and as specified herein. The installation of all new materials shall be performed in strict accordance with these specifications, the manufacturer's instructions and in accordance with all details and shop drawings.

1.3 SUBMITTALS

Items A, B, F, G, and H must be submitted with the bid.

- A. Product Data: For each type of product indicated. Includes product cut-sheets proving compliance with this specification..
- B. The contractor shall provide the following samples of the artificial turf system for this project:
 - 1. A 12-inch x 12-inch minimum infilled sample of the exact synthetic turf system being proposed for this project.
 - 2. Infill mix in accordance with product specifications.
- C. Synthetic turf system shall be approved as ADA Handicap accessible as determined by Test Method ASTM 1951-99 (Standard Specification for determination of accessibility of surface under and around playground equipment).
- D. All components of the synthetic turf system must indicate detection levels below those levels established in Table 1A - Residential Direct Contact Health Based Criteria and Soil Remediation Standards (mg/kg) N.J.A.C. 7:26D (Remediation Standards).
- E. Shop Drawings: Show fabrication and installation details for synthetic turf including, but not limited to:
 - a. Proposed locations of all seams in fabric surfacing.

- b. Field lining and marking - Submit a complete scale and dimensional drawing of inlaid or tufted-in field lines and marking boundaries. Include graphics for end zones and center logo artwork for approval as well.
 - c. This shall be submitted prior to field fabrication for approval.
 - d. 3rd party ASTM testing proving compliance with this specification.
- F. Manufacturer Certificates: Certified list of two (2) existing installations of a long pile synthetic turf and sand/rubber infill system with a nylon or polypropylene or polyethylene thatch layer in the last three years, including Owner Representative and telephone number, attesting compliance with quality assurance information. All must be located within the continental United States.
- G. Qualification Data: The turf contractor/manufacturer must have 100 full-sized sand/rubber infill fields that have been in use for a minimum of three years all being located in the Continental United States in locations similar in climate to the Northeast United States.
- H. Sample Warranty & Sample 3rd Party Insurance Policy: Provide a sample pre-paid third party insured warranty & sample manufacturer's warranty with the bid. Policy must be in force at the time of bid. Submission must comply with Section 1.5 Warranties.
- I. Maintenance and Operations Data: At the completion of the project submit 3 complete sets, in manual form, of all the manufacturer's recommended procedures and materials for, but not limited to general maintenance, line/marketing installation, small repair procedures, cleaning, etc.

1.4 QUALITY ASSURANCE

- A. All components and their installation method shall be designed and manufactured for use on outdoor athletic fields. The materials as hereinafter specified, should be able to withstand full climatic exposure in the Northeast USA, be resistant to insect infestation, rot, fungus and mildew; to ultra-violet light and heat degradation, and shall have the basic characteristic of flow-through drainage allowing free movement of surface run-off through the turf and directly into prepared granular base and into the field drainage system.
- B. The synthetic turf manufacturer shall be of national reputation with systems that have been in use at all levels of competition, including professional and collegiate levels of football and soccer and shall have been in use for a period of not less than three years. The turf fabric shall be produced by the manufacturer and installed by factory-authorized distributors directly employing the installation crew.

- C. The turf manufacturer must be experienced in the manufacture of synthetic turf. The turf manufacturer shall have completed installations in the United States and have completed at least two hundred (200) installations within the last two (2) years in the Continental United States.
- D. The turf manufacturer must have installed at least five (5) fields of tufted polyethylene fiber with a secondary nylon or polypropylene or polyethylene thatch layer tufted through a porous secondary backing with silica sand & SBR rubber infill.
- E. Prior to approval of a specified synthetic turf system, the company shall specify in writing that their turf system does not violate any other manufacturer's patents allowed or patents pending.

1.5 WARRANTIES

- A. The Contractor shall provide a manufacturer's warranty to the Owner that covers defects in materials and installation workmanship of the turf for a period of eight (8) years from the date of substantial completion. The turf manufacturer must verify that their representative has inspected the installation and that the work conforms to the manufacturer's requirements and any written directives. The manufacturer's warranty shall include general wear and damage caused from UV degradation. Other items that must be addressed include the following:
 - 1. Acceptable uses for the field.
 - 2. Fading.
 - 3. Color match within specifications.
 - 4. Excessive fiber wear.
 - 5. Wrinkling and panel movement.
 - 6. Shock absorbency (Gmax) not to exceed 175.
 - 7. Drainage (through the turf only).
 - 8. Flammability.
- B. The manufacturer's warranty shall be fully third party insured, through a pre-paid policy of 8 years and be non-prorated. Warranties that include language which pro-rates benefits shall not be accepted. Prior to final payment for the synthetic turf, the Contractor shall submit to the Owner, this policy guaranteeing the warranty to the Owner. Insurance must reflect the following values:
 - 1. Must provide coverage for \$7 million dollars per claim of total installed turf for removal, disposal and replacement of new synthetic turf.
 - 2. Must have a minimum of a \$15 million dollar annual aggregate towards repairs/replacements in a given policy year. The annual aggregate shall be applied only to policies executed in the 12 month policy window. Every annual policy year, another \$15 million worth of annual aggregate shall be set aside for the policies executed in that policy year.
 - 3. Policy must be in-force at time of bid.
 - 4. Policy must be issued by an A-rated or greater A.M. Best Rating

5. Must be pre-paid for the entire 8 years.
6. Policies that include self-insurance or self retention clauses shall not be considered.
7. Sample copy of this policy must be provided with the bid detailing compliance with policy limits as described.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

“Not Used” – The phrase means no manufacturer is specified. Bidders are directed to provide a manufacturer which meets the specification requirements for the material.

2.2 MATERIALS

- A. Synthetic Turf System: A complete synthetic turf system consisting of a minimum of 2" 100% polyethylene with a combination of extruded spined monofilament & slit-film polyethylene fiber and shorter texturized nylon or polypropylene or polyethylene monofilament thatch fiber tufted to a minimum two -part woven backing primary backing. The spined monofilament shall be a minimum 10,000 denier. The fiber shall be specifically designed to virtually eliminate abrasion.
- B. The tufted fiber shall not weight less than 60 ounces per square yard. The tufted rows of fibers are to be spaced no more than ½” apart. The tufted carpet shall consist of both spined monofilament & slit-film polyethylene fibers and texturized monofilament thatch fiber.
- C. The carpets' primary backing shall be a minimum of 6.5 oz/sy thick and coated with a secondary backing of polyurethane at a minimum application rate of 22 oz/sy. Non-perforated carpet shall not be accepted.
- D. The carpet shall be delivered in 15' wide rolls. The rolls shall be of sufficient length to go from sideline to sideline. Head seams, other than at sidelines, will not be acceptable.
 1. The pile surface shall provide good traction in all types of weather with the use of conventional sneaker type shoes, composition sole athletic shoes, baseball spikes and screw-on football spikes.
 2. The pile surface shall be suitable for both temporary and permanent line markings using acrylic paint, as per the manufacturer's recommendations.
 3. All synthetic turf seams shall be glued.

2.3 FABRIC SURFACE

- A. The pile surface shall resemble freshly mown natural grass in appearance, texture and color.

- B. The pile surface shall be nominally uniform in length.
- C. The pile fiber angle shall be 90 degrees + 15 degrees, measured from the horizontal after installation of the infill material.
- D. The synthetic turf system shall have a nominal fiber length of 2”.
- E. Each roll shall be minimum 15' wide.
- F. Synthetic turf system shall be perforated at 4-6" on center. Systems that are not perforated for maximum drainage shall not be acceptable.

2.4 PILE YARN SPECIFICATIONS

- A. Yarn shall be proved athletic quality yarn designed specifically for outdoor use and stabilized to resist the effects of ultraviolet degradation, heat, foot traffic, water and airborne pollutants. The fabric shall possess the following minimum physical characteristics. ASTM testing shall be provided with the bid and any products not meeting the minimum characteristics will be rejected.

1. Polyethylene Yarn Denier (minimum)	10,000
2. Texturized Yarn Denier (minimum)	4,200
3. Pile Height (nominal)	2”
4. Pile Ribbon Face Weight	60 oz/sy
5. Tufting Gauge	1/2” maximum
6. Primary Backing Weight	6.5 oz/sy
7. Secondary Backing Weight	22oz/sy
8. Total System Weight	86 oz/sy
9. Tuft Bind	>9 lbs
10. Carpet Percolation Rate	>30 in/hr
11. Grab Tear Strength	>200 lbs/force

2.4 INFILL MATERIAL

- A. Infill particles shall be recycled granulates SBR rubber, free of belting fabric and/or wire, with a minimum fill height necessary to achieve the required shock absorbing properties and silica sand. Manufacturer shall provide a cross section indicating fill materials with specific system dimensions of materials to be used with a minimum of three and a half (3.5) pounds per square foot of rubber and a minimum of two and a half (2.5) pounds per square foot of silica sand.
- B. Infill materials: Infill materials are comprised of a base layer of silica sand (minimum of three and a half (3.5) pounds per square foot) and a top layer of SBR rubber (minimum of two and a half (2.5) pounds per square foot) placed on top of the synthetic turf backing and dressed between the synthetic surface fibers.

2.5 SYNTHETIC TURF GROOMER:

- A. Groomer - Contractor shall supply a Manufacturer recommended grooming system as part of the price for the synthetic turf. The groomer shall include a deep rake that penetrates the infill and sweep away debris. This should include all necessary equipment to properly clean and maintain the turf. The equipment should be capable of being pulled behind a standard tractor or utility vehicle. No additional payment will be made for providing the equipment.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting performance of work. Proceed with installation only after satisfactory conditions have been corrected.
- B. Certification of prior work: The synthetic turf manufacturer and/or installation contractor shall perform an inspection of the field base onto which the synthetic turf system is to be installed and to examine the finished surface for required compaction, permeability and grade tolerances (through string line testing). After any discrepancies between the required materials, application and tolerance requirements noted have been corrected, the synthetic turf installer should submit a written certification of VISUAL acceptance of the base for installation of the synthetic turf system. Any tests other than VISUAL tests (string line, water hose, etc.) shall be the responsibility of the General Contractor or Design Professional.
- C. Installation of all materials shall be performed in full compliance with approved project shop drawings. Only factory trained technicians skilled in the installation of athletic caliber synthetic turf systems, working under the direct supervision of the manufacturer's supervisors, shall undertake the placement of the turf system. The designated Supervisory personnel on the project must be certified, in writing by the turf manufacturer as competent in the installation of these materials, including sewing seams and proper installation of the infill mixture. The manufacturer shall certify the installation and warranty compliance.
- D. Inspect delivered field surface fabric and components immediately prior to installation. Any damaged or defective items shall be rejected. Installed artificial system shall be inspected for, but not limited to, the following:
 - i. Uniformity of product and color.
 - ii. Surface bubbles.
 - iii. Field markings.

- iv. Field Edge installation.
 - v. Pile height of each roll shall be measured. Any material(s) that does not meet minimum height and thickness specifications shall be rejected.
 - vi. Pile height shall be measured in its finished positions.

- E. All installation shall be completed in strict accordance with the manufacturer's current printed installation instructions as approved by the Engineer.

- F. Environmental Conditions: Weather conditions are important for the successful installation of the systems. No work under this section will proceed when:
 - a. Ambient temperatures are below 45 degrees F.
 - b. Material temperatures are below 45 degrees F.
 - c. Surfaces are wet or damp.
 - d. Rain is imminent or falling.
 - e. Conditions exist or are imminent, which will be unsuitable to installation requirements of the systems specified herein. Humidity levels will be inside the limits recommended by the adhesive manufacturer to obtain optimum bonding characteristics of the surfaces.

- G. The carpet rolls are to be installed directly over the properly prepared base stone. Extreme care should be taken to avoid disturbing the base stone both in regard to compaction and planarity. A 2-5 ton static roller shall be on site and available to repair and properly compact any disturbed areas of the base stone.

- H. The full width rolls shall be laid out across the field. Utilizing standard state of the art gluing procedures, each roll shall be attached to the next. Each seam will be glued. When all of the rolls of the playing surface have been installed, the sideline areas will be installed at right angles to the playing field turf. All work shall be such that seams shall remain as required for the duration of the warranty period at a minimum. All seam widths are to be held to a minimum and shall be traverse to the field direction. Seams shall be flat, tight and permanent, with no separation or fraying.

- I. The perimeter of the field shall be firmly secured to the edge anchors for the life of the warranty and in accordance to project details.

- J. Resilient Infill: The infill material shall be spread evenly with a large spreader (minimum 5-foot wide). Between applications the infill area shall be brushed with a motorized rotary nylon broom.
 - a. Inlays shall conform to the manufacturer's specifications, directions and recommendations for the best results.

- b. Striping layout shall be accurately surveyed by the Contractor before installation of inlaid filed markings.
- c. Install inlays only when the surface is completely dry. Adhere all inlays securely into place. Never loose-lay and sew an inlay into place.

3.2 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Testing Services: Testing and inspecting of completed applications of synthetic turf system shall take place in suggestive states, in areas of extent and using methods that are industry standard. Do not proceed with application of next stages until test results for previously completed applications show compliance.
- C. Remove and replace items where test results indicate that it does not comply with specified requirements.

3.3 FINAL ACCEPTANCE

- A. Prior to final acceptance, the Contractor shall submit to the Owner three (3) copies of Maintenance Manual, which will include all necessary instructions for the proper care and preventative maintenance of the synthetic turf system, including painting and striping.
- B. The Contractor shall provide evidence that the turf can be plowed with conventional rubber bladed snow removal equipment.
- C. The finished playing surface shall appear as mowed grass with no irregularities and shall afford excellent traction for conventional athletic shoes for all types. The finished surface shall resist abrasion and cutting from normal use.

3.4 CLEANING

- A. Contractor shall provide the labor, supplies and equipment as necessary for final cleaning of surfaces and installed items. All usable remnants of new material shall become the property of the Owner. The Contractor shall keep the area clean throughout the project and clear of debris. Surfaces, recesses, enclosures, etc. shall be cleaned, as necessary, to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the Owner.

PART 4 – QUANTITIY AND PAYMENT

QUANTITY AND PAYMENT

The furnishing and installation of the Synthetic Turf will be performed by others. The Contractor is responsible to prepare the base material and header curb in preparation for others to install the turf.

-- END OF SECTION--

SYNTHETIC TURF BASE

DESCRIPTION

Furnish all labor, materials, tools and equipment necessary to install, in place, aggregate base, drainage and fabric for the synthetic turf as indicated on the plans and as specified herein. The installation of all new materials shall be performed in strict accordance with the manufacturer's written installation instructions, and in accordance with all approved shop drawings.

MATERIALS

The system shall consist of a vertical draining base consisting of the following:

GEOTEXTILE FABRIC

The entire field shall be underlain directly on subgrade by a continuous non-woven geotextile fabric, as manufactured by Tencate Mirafi, Mirafi 140N, approved or equal.

UNDERDRAIN SYSTEM

An underdrain system shall be installed as indicated on the plans and in accordance with all shop drawings. The underdrain system shall be connected to a perimeter drain as indicated on the plans.

POROUS STONE BASE

The 12" stone base shall consist of a large base stone and a porous "choking" finish aggregate material. The large stone base layer shall consist of a blended mix of clean, washed, No. 3 and No. 2 Crushed Stone or 3/4" clean stone as per turf manufacturer's recommendation (10" thick layer). The aggregate "choking" material shall consist of clean, washed, No. 1 Crushed Stone (2" thick layer). All stone must be approved in writing by the turf installer / supplier and must conform to the following gradations:

% PASSING		
<u>SIEVES</u>	<u>BASE STONE</u>	<u>FINISHING STONE</u>
3" or 75mm		
2" or 50mm	100	
1½" or 38mm	90-100	
1" or 25mm	75-100	
¾ or 19mm	65-95	
½" or 12.5mm	55-85	100
3/8" or 9.5mm	40-75	85-100
¼" or 6.3mm	25-65	75-100
US #4 or 4.75mm	15-60	60-90
US #8 or 2.36mm	0-40	35-75
US #16 or 1.18mm	0-20	10-55
US #30 or 600mm	0-7	0-40
US #60 or 250mm	0-5	0-15
US #100 or 150mm	0-3	0-8
US #200 or 75mm	0-2	0-2

RESTRICTIONS:

To ensure structural stability: $D_{60}/D_{10} > 5$ and $1 < \frac{D_{30}^2}{D_{10} D_{60}} < 3$

Fragmentation must be 100%.

To ensure separation of both stones: $\frac{D_{85} \text{ of finishing stone}}{D_{15} \text{ of base stone}} > 2$

and $3 < \frac{D_{50} \text{ of base stone}}{D_{50} \text{ of finishing stone}} < 6$

To ensure proper drainage: Permeability of base stone > 500 in/hr (3.5×10^{-1} cm/sec)
Permeability of finishing stone > 20 in/hr (1.4×10^{-2} cm/sec)
Porosity of both stones $> 25\%$
(When stone is saturated and compacted to 95% Proctor.)

Depending on the type of rock present in the crushed stone mix, other mechanical characteristics might be necessary for approval

“Dx” is the size of the sieve (in mm) that lets pass x% of the stone. For example, D₆₀ is the size of the sieve that lets 60% of the stone pass. These sizes, for calculation purposes, may be obtained by interpolation on a semi-log graph of the sieve analysis.

CONSTRUCTION

All topsoil, organic, and non-compactable materials shall be removed. The sub-grade slope shall be between 0.5% to 1% from the center of the field to the sidelines. The base installer shall strictly adhere to the installation procedures outlined under this section. Any variance from these requirements must be approved in writing by the manufacturer's representative, and submitted to the Engineer, verifying that the changes do not in any way affect the warranty. The turf manufacturer and turf installer must accept the aggregate base prior to the installation of the synthetic grass system. The surface tolerance shall not exceed 1/4 inch over 10 feet when measured in any direction. Laser grading shall be utilized. The soil bed must be compacted in both directions to attain the specified compaction rate which is generally 95% standard Proctor.

The 10” crushed stone shall be laid without damaging the soil bed. If the required compacted depth of the base course exceeds 10”, the base shall be constructed in 2 or more layers or lifts of approximate equal thickness. Each layer shall be compacted in both directions to attain the specified compaction rate. The finished crushed stone base shall be sloped 0.5% from the center longitudinal axis towards the sidelines or as specified. The finished crushed stone base surface of the leveling course shall not vary from the specified grade by more than 1/4 inch over 10 feet when measured in any direction.

The final grade aggregate layer shall not be more than 2” thick. The final grade material shall be sloped 1.5% from the center longitudinal axis towards the sidelines unless otherwise specified. The final grade shall be compacted in both directions according to the specifications. Survey to be performed and submitted by Contractor within one week of completion of stone layer.

Contractor to make new grade adjustment immediately thereafter.

QUANTITY AND PAYMENT

Synthetic Turf Base will not be measured under a separate item. Quantity and Payment for this item, including stone, fabric, and all materials, labor and equipment and all else necessary therefore and incidental thereto, shall be included in the square yard price bid for **SYNTHETIC TURF BASE** in the Proposal.

-- END OF SECTION --

TURF EDGE

DESCRIPTION

This item shall include the construction of 12” x 12” Concrete Curb and 12” wide, variable height turf curb with attached nailer around the outside of the synthetic turf field, the attachment of the synthetic turf to the curb, the excavation and removal of all earth, rock, boulders, brick, stone and concrete masonry, including small structures and other materials encountered of whatever nature, required for the construction of concrete curb. It shall also include the transportation of the excavated materials; the construction of embankments with the materials excavated; the disposal of unsuitable and surplus materials; and other work as shown on the plans or specified herein.

MATERIALS

Class B concrete shall be used throughout.

CONSTRUCTION

Excavation and backfill shall conform to the requirements of NJDOT Specifications Section 202 - Excavation. The backfill and curb foundation shall be well compacted by means of flat-faced mechanical tampers, or by other means to be approved by the Engineer.

Curbs shall be constructed in accordance with Section 607 – Curbs of the NJDOT specifications.

QUANTITY AND PAYMENT

Turf Edge shall be measured under a separate item. Quantity and Payment for this item, and all costs related thereto, shall be included in the linear foot price bid for **12” WIDE TURF CURB** and **12” WIDE TURF CURB, VARIABLE HEIGHT** in the Proposal.

-- END OF SECTION --

FIELD NETTING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This item shall include all labor, material and equipment for furnishing and the complete installation of sports field barrier netting, posts, sleeves and anchors, including all hardware, in accordance with the manufacturer's installation specifications. It shall include the construction of footings and foundations as required along the field. It shall include the transportation and/or delivery of the equipment, the disposal of any surplus materials, as required and other work as herein described.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Base: Model #BSS420 as manufactured by:

Sportsfield Specialties
41155 NY-10
Dehli, NY 13753
PH: (607) 746 - 8911
Or Approved Equal;

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. The contractor shall install the system in accordance with manufacturer's specifications. Netting shall be sized to comply with Baseball. **The contractor shall submit shop drawings and designs, signed and sealed by a licensed professional, proving that the system is structurally sound and will withstand wind, ice, snow and other loads appropriate to this area including ice loads and wind loads together.**

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantities of Field Netting, for which payment will be made, will be the actual linear footage constructed in accordance with the Contract Plans, or as directed by the Engineer.

- a. Payment for Field Netting will be made for the linear footage actually constructed, for the items **FENCE, CHAIN-LINK, BLACK VINYL-COATED, WITH SPORTS NETTING, 40' HIGH** in the Proposal, which shall include the furnishing of the net, posts, sleeves, footings, anchors, foundations and all materials, labor and equipment and all else necessary therefore and incidental thereto.
- B. Excavation and backfill will not be measured as a separate item and must be included in the unit price for this item. If and where sawcutting is required, this must also be included in this item.

END OF SECTION

BLACK VINYL COATED CHAIN LINK FENCE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Chain Link Fence shall include the furnishing of materials and the erection of Black Vinyl Coated Chain Link Fence, varying sized Swing Gates w/ Hardware in accordance with the Contract Plans, Specifications, and the direction of the Engineer.

PART 2 – PRODUCTS

2.1 MATERIALS

A. POSTS, RAILS, AND BRACES

All Structural and Roll-Formed shapes shall conform to provisions of ASTM A123 for galvanized coating. All tubular members shall comply with provisions of ASTM A120, Schedule 40, for weight and coating.

1. END, CORNER AND PULL POST

Fence - Up to and Including 8'-0" in Height: 3.00" O.D., Schedule 40 Pipe, with a minimum bending strength of 381 lbs.

2. LINE POSTS (10'-0" MAXIMUM SPACING)

Fabric - Up to 8'-0" in Height: "C" Section, Standard Roll-Formed, 2.50" O.D., Schedule 40 Pipe, with minimum bending strength of 117 lbs.

3. GATE POSTS

Gate Leaves - Up to and Including 6'-0" Wide: Roll-Formed Section (2.50" O.D., Schedule 40 Pipe.)

Gate Leaves over 6'-0" and up to and Including 13'-0" wide: 2.50" O.D., Schedule 40 Pipe.

4. TOP RAIL, INTERMEDIATE RAILS, & BOTTOM RAIL

1 5/8" O.D., Schedule 40 Pipe, with minimum bending strength of 202 lbs. Furnish in manufacturer's standard lengths of approximately 21'-0" with couplings approximately 6" long for each joint; one (1) coupling in each five (5) shall have expansion spring. Provide means for attaching top rail securely to each gate, corner, pull and end posts. Top rail shall form continuous brace from end-to-end to each run of fence.

5. POST BRACING ASSEMBLY

Shall match top rail. Brace rail assembly shall be complete with 3/8" diameter rod and adjustable take-up.

B. CHAIN-LINK FABRIC

One piece fabric widths for fences up to 12'-0", 2" mesh, #9 gauge, as indicated on Contract drawings. Fence Fabric shall be coated with Black PVC or polyolefin elastomer coating, 7 mil thickness minimum, thermally fused.

1. SELVAGE EDGES

Fabric in heights of 60" and under shall be knuckled at both selvages. Fabric 72" and over shall be knuckled at bottom selvage and twisted and barbed at top.

2. FINISHES

Black Vinyl Coated conforming to ASTM F 668 Class 2b fused and adhered.

C. ACCESSORIES

All accessories shall be black vinyl coated.

1. STRETCHER BARS

(For tubular end, corner, pull or gate posts only)

One piece lengths equal to full height of fabric with a minimum cross-section of 1" x 3/4". Provide one stretcher bar for each gate and end post, and two for each corner and pull post.

2. STRETCHER BAR BANDS

Heavy pressed steel, spaced not over 15" O.C. to secure stretcher bars to tubular end, corner pull and gate post.

3. PERMANENT SILT FENCE as shown on the Construction Details

PART 3 – QUANTITY AND PAYMENT

3.1 QUANTITY AND PAYMENT

A. The quantities of Black Vinyl Coated Chain Link Fence, for which payment will be made, will be the actual linear footage constructed in accordance with the Contract Plans, or as directed by the Engineer. Payment for Black Vinyl Coated Chain Link Fence will be made for the linear footage actually constructed, measured at the unit prices bid for the items **FENCE, CHAIN-LINK, BLACK, VINYL-COATED, 8' HIGH** in the Proposal, which shall include the furnishing of the net, posts, sleeves, footings, anchors, foundations and all materials, labor and equipment and all else necessary therefore and incidental thereto.

- B. The quantities of gates, for which payment will be made, will be the unit of gates constructed and installed in accordance with the Contract Plans, or as directed by the Engineer. Payment will be made at the unit price bid for the following items: **“GATE, CHAIN-LINK, BLACK, VINYL-COATED, 8’ HIGH, 16’ WIDE”** and **“GATE, CHAIN-LINK, BLACK VINYL-COATED, 8’ HIGH, 4’ WIDE”** in the Proposal, which shall include the furnishing of all materials, foundations, labor and equipment and all else necessary therefore and incidental thereto.
- C. Excavation and backfill will not be measured as a separate item and must be included in the unit price for this item. If and where sawcutting is required, this must also be included in this item.

--END OF SECTION--

OUTFIELD FENCE WINDSCREEN & DISTANCE BANNERS

PART 1 GENERAL

1.01 WORK INCLUDED

A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. VCP9 - 9'H Windscreen or approved equal.
2. SSI – Banner – Vinyl Distance Banner or approved equal.

1.02 RELATED WORK

A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete, Asphalt and Site Improvements

1.03 REFERENCES

A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Association of Athletics Federations (IAAF)
4. ASTM International
5. American Sports Builders Association (ASBA)
6. Manufacturers Data and Recommended Installation Requirements

1.04 SUBMITTALS

A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives

review.

B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

1.05 QUALITY ASSURANCE

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 VCP9 - 9'H Windscreen

- A.** BASE: VCP9 - 9'H Windscreen as Manufactured and Supplied by:

Sportsfield Specialties, Inc. or approved equal.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 607-746-1460
www.sportsfieldspecialties.com

- B.** COMPONENTS:

1. VCP9 - 9'H Windscreen or approved equal.:
 - a. Vinyl Coated Polyester Mesh (VCP/VCM) 9 x 12
 - b. Base Fabric: 9 x 12 1000 Denier Polyester
 - c. Weight (Test Method 5041): Eight Ounces (8 oz.) Per Square Yard, Plus or Minus One Ounce (1 oz.)
 - d. Eighty Percent (80%) Closed Mesh, Twenty Percent (20%) Open
 - e. Heights: Standard Nine Feet (9'), Custom to Nine Feet ($\leq 9'$)

- f. Tensile Strength (Test Method 5100-Warp x Fill): 210 x 220lbs.
- g. Adhesion (Test Method 5970-Warp x Fill): 8 x 8 lbs./2”
- h. Tear Strength (Test Method 5134-Warp x Fill): 90 x 90 lbs.
- i. Heat Welded Perimeter Hem with 30mm PVC-Coated Weldable Webbing Reinforcement Tape (Tensile Strength: 1650 lbs.)
- j. #2 Brass Grommets Inserted in Perimeter Hem Every Twelve Inches (12”) On-Center and Corners for Attachment Purposes
- k. Includes Horizontal Center Grommet Strip for Additional Attachment
- l. Standard Machine-Cut Half Moon Air Vents Located Approximately 12’ On-Center
- m. Weather, Ultraviolet (UV), Rot, Mildew and Flame Resistant
- n. Standard Colors: Black, Green, Royal Blue, Navy Blue, Red, Burgundy, Purple and Yellow
- o. Standard Three (3) Year Limited Product Warranty

- 2. SSI-Banner – Vinyl Distance Banner or approved equal.
 - a. 19 oz. Heavy Duty Vinyl
 - b. Numbers digitally printed on vinyl
 - c. Grommet Attachment
 - d. Height, Length, & Colors to be selected by owner

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All Windscreen shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings. Installer should have a minimum of five (5) windscreen material installations or similar experience in the previous three (3) years.

PART 4 QUANTITY AND PAYMENT

Quantity and Payment for the outfield fence windscreen will be made in accordance with the Contract Documents at the linear foot unit price bid for the item “**Outfield Fence Windscreen**” and “**Outfield Distance Banner**” in the Proposal, which shall cover the cost of all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

END OF SECTION

DEER FENCE

DESCRIPTION

Deer Fence shall include the furnishing of materials and the erection of Deer Fence and Swing Gates w/ Hardware in accordance with the Contract Plans, Specifications, and the direction of the Engineer.

MATERIALS

Materials used for the construction of deer fence shall be 11 Gauge Wire, Wood Posts, Hog Rings/Wire Ties, and any and all other materials required by manufacturer for proper Deer Fence construction. Materials shall be submitted to owner and/or engineer for approval prior to ordering.

METHODS OF CONSTRUCTION

Deer Fence shall be constructed as per the project Construction details and manufacturers installation requirements.

QUANTITY AND PAYMENT

The quantities of Deer Fence, for which payment will be made, will be the actual linear footage constructed in accordance with the Contract Plans, or as directed by the Engineer. Payment for Deer Fence will be made for the linear footage actually constructed, measured at the unit prices bid for the items “**DEER FENCING, 8’ HIGH**” and “**4’ WIDE PERSONNEL GATE (DEER FENCING)**” in the Proposal, which shall include the furnishing of the net, posts, sleeves, footings, anchors, foundations and all materials, labor and equipment and all else necessary therefore and incidental thereto.

BLEACHERS

Non-Elevated Aluminum Angle Frame

**NON-ELEVATED ALUMINUM ANGLE FRAME BLEACHERS – MODEL
NE050450004BO or approved equal.**

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Design and fabrication of Non-Elevated angle frame bleachers

1.02 QUALITY ASSURANCE

A. Manufacturer: National Recreation Systems, Inc. or approved equal.

1300-D Airport North Office Park, Ft. Wayne, IN, 46825 as represented by MRC. Contact Donald Cooper. 732-781-9034. Email: dcooper@mrcrec.com

B. Manufacturer Qualifications: Manufacturer must have a minimum of ten years experience in the design and manufacture of bleachers.

C. Welders must conform to AWS / CWB standards.

D. Source Quality Control: Mill Test Certification.

E. Codes and Standards: 2012/2015 International Building Code / ICC 300 2010.

1.03 WARRANTY

A. Warranty shall guarantee bleachers to be free from defect in materials and workmanship for a period of 1 year under normal use. Warranty period shall begin on date of completion for projects installed by manufacturer, or its subcontractors, OR warranty period shall begin on date of final delivery on projects installed by others.

B. Anodized finish of plank extrusions shall be covered by a 5 year warranty against loss of structural strength or finish deterioration due to exposure to weather conditions or UV rays. Discoloration of mill finish aluminum due to galvanic reaction not covered.

1.04 PRODUCT LIABILITY INSURANCE

A. Product liability insurance is carried for the life of the product in the amount of \$2,000,000.

1.05 ENGINEERING

A. Engineering certifications and calculations by a Registered Professional Engineer shall be provided upon request.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

A. National Recreation Systems, Inc. or approved equal.

2.02 DESIGN

A. Applicable Codes:

INTERNATIONAL BUILDING CODE (IBC), 2012/2015 EDITION / ICC 300 2010

B. Design Loads:

1. Live Loads: Uniform loading - Structure = 100 psf

Uniform loading - Seat and Foot plank = 120 plf

2. Sway Loads: Perpendicular to seats = 10 plf

Parallel to seats = 24 plf

3. Guardrail Loads: Uniform vertical load = 100 plf

Uniform horizontal load = 50 plf

Concentrated horizontal load = 200 pounds

4. *Wind Loads: Basic design wind speed = 150 mph (exposure “B”)

*Note: Bleacher must be anchored to meet wind loads above

2.03 NON-ELEVATED ANGLE FRAME BLEACHERS

A. Framework: Prefabricated aluminum angle spaced at 6' - 0" intervals joined by means of aluminum cross bracing.

B. Shop connections: Welded to meet AWS / CWB standards and local code requirements National Recreation Systems, Inc. 1300-D Airport North Office Park Ft. Wayne, IN 46825

C. Joint Sleeve Assembly: Internal splices, where required shall be two per joint, and shall penetrate the joint a minimum of 8" in each direction and be riveted at one end only to allow for contraction and expansion.

D. Rise and Depth Dimensions: 8" vertical rise and 24" tread depth, Seat height is 17" above its respective tread.

E. Seats: Nominal 2" x 10" anodized aluminum with anodized end caps.

F. Treads: Nominal two (2) 2" x 10" mill finish aluminum with aluminum end caps on rows 2 & up.

G. Risers: Nominal two (2) 1" x 6" mill finish aluminum with aluminum end caps on top row. Nominal 1" x 6" mill finish aluminum with end caps on rows 1 & up.

H. Aisles: Aisle footboards shall be of aluminum alloy 6063-T6 and be of mill finish with contrasting aisle markings. Three aisle stiffener angles shall be used to strengthen the aisle step.

I. Aisle Handrail: Anodized aluminum pipe with intermediate rail.

J. Guardrail: Rails shall be anodized aluminum tube with end plugs and elbows where required. All Rails shall be secured to angle supports with galvanized fasteners. Top rails at sides, rear and front shall be 42" above the leading edge of seat or walking surfaces. Rear rail support members shall be aluminum channel, side and front rail support s shall be aluminum angle.

1. Chainlink System: Fencing shall consist of 9 gauge, 2" mesh galvanized chainlink fabric, heavy duty tension bands, tension bars, brace bands, combo rail endcaps, and wire ties.

K. ADA Accessibility: Shall be provided as required by the code listed above.

2.04 MATERIALS / FINISHES

A. Framework:

1. Aluminum: Structural fabrication with aluminum alloy 6061-T6 mill finish. Each frame shall be unit-welded, using metal inert gas method, under guidelines by the American Welding Society.

After fabrication all steel is hot dipped galvanized to ASTM A-123 specifications. All crossbracing and horizontal bracing shall be aluminum alloy 6061-T6 mill finish.

B. Extruded Aluminum:

1. Seat planks: Aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II

With a wall thickness nominally .078" for impact and deformation resistance.

2. Tread and Riser Planks: Aluminum alloy 6063-T6, mill finish. With a wall thickness nominally .078" for impact and deformation resistance.

3. Guardrail Pipe: 1-5/8 OD schedule 40 aluminum alloy 6105-T5, clear anodized 204R1, AA-M10C22A31, Class II.

C. Accessories:

1. Channel End Caps: Aluminum alloy 6063-T6, clear anodized 204R1,AA-M10C22A31,Class II.
2. Hardware: Bolts and Nuts shall be hot dipped galvanized.
3. Hold Down Clip Assembly: Aluminum alloy 6063-T6 mill finish.
4. Joint Sleeve Assembly: Aluminum alloy 6061-T6, mill finish.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Install bleacher unit in accordance with manufacturer written instructions and shop drawings.

Note: Building codes may vary from requirements.

CONCRETE FOUNDATION SPECIFICATIONS

SCOPE:

Foundation construction is not part of NATIONAL RECREATION SYSTEMS, INC's., scope of work unless noted otherwise in the contract documents. The OWNER shall review the foundation design with local code authorities and coordinate with NRS, Inc.

FOUNDATION DESIGN & ANCHORS:

- 1) The foundation designs are based on the following:
 - a) Minimum presumed soil bearing of 1000 psf.
 - b) Bleacher frame dead and live load of 700 lbs./ft.
 - c) Bleacher frame wind uplift of 250 lbs./ft.
- 2) Unless otherwise specified on the drawings the bleacher frames shall be attached to concrete with a $\frac{3}{8}$ " dia. x 3" wedge type expansion anchor. The anchors shall be embedded a minimum of 2" into the concrete.

CONCRETE SPECIFICATIONS:

- 1) All concrete construction shall be in accordance with *ACI 318.08*.
- 2) All concrete shall be air-entrained using an air entraining admixtruing meeting *ASTM C620*. Total air content: 5%-7% per *ASTM C173*
- 3) All concrete shall have a minimum 28-day strength of $F_c=3000$ psi. Concrete shall have air-entrainment
- 4) A $\frac{1}{4}$ " bituminous expansion joint material shall be placed between strip and slab foundations when adjacent to each other.
- 5) The depressions in the top of the foundations between high spots shall not exceed $\frac{5}{16}$ " below 10-foot long straightedge. The 10-foot straightedge method used to measure foundation flatness shall be in accordance with *ACI 302.1R-04 "Guide for Concrete Floor and Slab Construction"*.

CONCRETE SLAB RECOMMENDED SPECIFICATIONS:

- 1) Concrete slab shall have a minimum thickness of 5" (some areas may require 6") and placed on 4" of compacted gravel or compacted sub base.
- 2) NRS, INC., recommends that the concrete slab be reinforced with 6x6-W2.1xW2.1 welded wire fabric at $1\frac{1}{2}$ " concrete cover from the top. In lieu of welded wire fabric, steel fiber substitution requires OWNER approval and his understanding of potential maintenance issues.
- 3) Contractor may substitute blended fiber reinforcing, provided the blend consists of multifilament polypropylene fibers and cold drawn steel wire fibers. Novamesh 3 (BB)50 or approved equivalent, applied at a dosage rate of 5lb/CY unless specified otherwise or a different recommendation is made by the manufacturer.
- 4) Crack control joints shall be sawed into slab to form approximate square patterns. The maximum spacing for control joints shall not exceed 12'-6", UNLESS INDICATED OTHERWISE. The bleacher frames shall not be set on control joints. The designer shall contact NRS to coordinate joint spacing requirements with the specific bleacher design.
- 5) The slab may be sloped a maximum of 1/8 inch per foot for drainage. The maximum overall out of level slope for the slab perpendicular to the seats (front to rear) shall not exceed 2" and parallel to the seats (end to end) shall not exceed 4".

PART 4 - QUANTITY AND PAYMENT

- A. Quantity and Payment for Bleachers will be made in accordance with the Contract Documents at the per unit price bid for the item “**BLEACHER, 5 ROW, 45’ LONG, ON 6” REINFORCED CONCRETE PAD**” in the Proposal, which shall cover the cost of excavation, backfill, grading, seeding, concrete, reinforcement, formwork, and all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

Note: Building codes may vary from site to site. The Contractor shall install in accordance with local code requirements.

-- END OF SECTION --

ATHLETIC EQUIPMENT – BASEBALL BASES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. **TBS - TurfBase® Set or approved equal.**
2. **TBHP - TurfBase® Home Plate or approved equal.**
3. **SHP-UM – Schutt Hollywood MLB Universal Pro Style Home Plate or approved equal.**
4. **SHIBL – Schutt Hollywood Impact Bases or approved equal.**

1.02 RELATED WORK

- A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Association of Athletics Federations (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

1.04 SUBMITTALS

- A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field

installation work, for Architects or Owners representatives review.

B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

1.05 QUALITY ASSURANCE

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 TBS - TurfBase® Set or approved equal

- A. TBS - TurfBase® Set & Home Plate as Manufactured or Supplied by:**

Sportsfield Specialties, Inc. or approved equal
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfieldspecialties.com

- B. Schutt Hollywood Impact Bases & Home Plate as Manufactured or Supplied by:**

Sportsfield Specialties, Inc. or approved equal
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfieldspecialties.com

C. COMPONENTS:

1. TBS - TurfBase® Set (Portable) or approved equal
 - a. Durable Rubber Mesh Reinforced Construction
 - b. Specifically Designed Molded Pegs Embed in Synthetic Turf Infill Material Preventing Horizontal Movement with No Ground Anchor Necessary in Synthetic Infill Turf Applications
 - c. Official Size 15" x 15" x 3" Bases
 - d. Set of Three (3)
 - e. Color: White/Off-White
2. TBHP - TurfBase® Home Plate (Portable) or approved equal
 - a. Durable Rubber Mesh Reinforced Construction
 - b. Specifically Designed Molded Pegs Embed in Synthetic Turf Infill Material Preventing Horizontal Movement with No Ground Anchor Necessary in Synthetic Infill Turf Applications
 - c. Official Size
 - d. Color: White/Off-White
3. SHP-UM- Schutt Hollywood MLB Universal Pro Style Home Plate (Permanent) or approved equal
 - a. Official Size Hollywood MLB Universal Pro Style Home Plate with 7" Stanchion with one (1) ground anchor and one (1) anchor plug and five (5) zinc-plated mounted spikes.
 - b. 1 ½" Thick
 - c. 18 L.B. shipping weight
 - d. Permanent or Removable Installations
 - e. High Durability Molded Rubber Construction
4. SHIBL – Schutt Hollywood Impact Bases (Permanent) or approved equal
 - a. Premium, Professional construction with patented chevron design
 - b. Advanced Design Compresses upon impact
 - c. Regulation Size: 15" x 15" x 2 ½"
 - d. Includes 6" Base Stanchions
 - e. Ground Anchor Mounts and Base Plugs
 - f. Set of Three (3)

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All TurfBase® and Schutt products shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings.

PART 4 QUANTITY AND PAYMENT

Quantity and Payment for Athletic Equipment – Baseball Bases will be made in accordance with the Contract Documents at the per unit price bid for the items **“Portable Bases and Home Plate, 1 Set”**, and **“Permanent Bases and Home Plate, 1 Set”** in the Proposal, which shall cover the cost of all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

END OF SECTION

BULLPEN PITCHING MOUND

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. PPBPBIT - Porta-Pitch Bullpen Mound with Brown Synthetic Turf or approved equal

1.02 RELATED WORK

- A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Association of Athletics Federations (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

1.04 SUBMITTALS

- A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

- B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

1.05 QUALITY ASSURANCE

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A. Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 PPBPBIT - Porta-Pitch Bullpen Mound with Brown Synthetic Turf

- A. **BASE: PPBPBIT - Porta-Pitch Bullpen Mound with Brown Synthetic Turf as Manufactured and Supplied by:**

Sportsfield Specialties, Inc. or approved equal.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfieldspecialties.com

- B. **COMPONENTS:**

1. Porta-Pitch Bullpen Mound or approved equal.:
 - a. Welded Construction, Fabricated of Aluminum Plate, Structural Members and 1/8" (0.125") Thick Aluminum Panel Factory Covered with a 6mm Rubber Shock Absorption Impact Pad and Brown Colored Synthetic Turf with Thatch Layer Securely Attached with NORDOT® Urethane Adhesive #34G
 - b. Size: 6'-4"W x 13'-6"L
 - c. Tapered Height of 10" Above Finish Grade and Sloped 1" Vertical Per 1' Horizontal

- d. Four (4) Modular Pitching Mound Sections Designed to Rest on the Athletic Surface, No Ground Anchors Required
- e. Center Section Includes Synthetic Infill Turf with Black SBR Rubber, Flexible Gasket Seal Perimeter, One (1) Regulation Size 6”W x 24”L Professional Four (4) Sided Removable and Replaceable Pitching Rubber
- f. Detachable External Wheel System with Lifting Jack and Powder Coated Steel Tow Hitch for Portability and Transport Purposes
- g. Designed to be Set-up or Removed in +/- 20 Minutes with Three (3) Trained Adults

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All Porta-Pitch Mounds shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings.

PART 4 QUANTITY AND PAYMENT

Quantity and Payment for the Bullpen Pitching Mound will be made in accordance with the Contract Documents at the per unit price bid for the item “**Portable Pitching Mound (Bullpen)**” in the Proposal, which shall cover the cost of all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

END OF SECTION

BASEBALL PITCHING MOUND

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

2. PPBIT - Porta-Pitch Baseball Mound with Brown Synthetic Turf or approved equal.

1.02 RELATED WORK

- A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Association of Athletics Federations (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

1.04 SUBMITTALS

- A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

- B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

1.05 QUALITY ASSURANCE

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 PPBIT - Porta-Pitch Baseball Mound with Brown Synthetic Turf

- A. BASE: PPBIT - Porta-Pitch Baseball Mound with Brown Synthetic Turf as Manufactured and Supplied by:**

Sportsfield Specialties, Inc. or approved equal.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfieldspecialties.com

- B. COMPONENTS:**

1. Porta-Pitch Baseball Mound with Brown Synthetic Turf or approved equal.:
 - h. Welded Construction, Fabricated of Aluminum Plate, Structural Members and 1/8" (0.125") Thick Aluminum Panel Factory Covered with a 6mm Rubber Shock Absorption Impact Pad and Brown Colored Synthetic Turf with Thatch Layer Securely Attached with NORDOT® Urethane Adhesive #34G
 - i. Official Size 18' Outside Diameter with a Domed Height of 10" Above Finish Grade and Sloped 1" Vertical Per 1' Horizontal Per Specifications, Rules and Requirements

- j. Seven (7) Interlocking Tapered Pitching Mound Sections Designed to Rest on the Athletic Surface, No Ground Anchors Required
- k. Center Section Includes Synthetic Infill Turf with Black SBR Rubber, Flexible Gasket Seal Perimeter, One (1) Regulation Size 6”W x 24”L Professional Four (4) Sided Removable and Replaceable Pitching Rubber
- l. Detachable External Wheel System with Lifting Jack and Powder Coated Steel Tow Hitch for Portability and Transport Purposes
- m. Designed to be Set-up or Removed in +/- 20 Minutes with Three (3) Trained Adults
- n. Optional 5’W x 10’L x 17.5”H Aluminum Porta-Pitch Transport Cart for Stacking, Transporting and/or Storing Six (6) Perimeter Tapered Pitching Mound Sections, 12” Pneumatic Swivel Front and Rigid Rear Wheels and Tow Hitch for Portability and Transport Purposes

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All Porta-Pitch Baseball Mounds shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings. Installer should have a minimum of five (5) Porta-Pitch Baseball Mound installations or similar experience in the previous three (3) years.

PART 4 QUANTITY AND PAYMENT

Quantity and Payment for the Baseball Pitching Mound will be made in accordance with the Contract Documents at the per unit price bid for the item “**Portable Pitching Mound (Field)**” in the Proposal, which shall cover the cost of all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

END OF SECTION

BATTING CAGES

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. **BTTBS - Tension Batting Tunnel; Baseball Single or approved equal.**

1.02 RELATED WORK

- A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Association of Athletics Federations (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

1.04 SUBMITTALS

- A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

- B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

1.05 QUALITY ASSURANCE

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A. Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 BTTBS - Tension Batting Tunnel; Baseball Single

- A. **BASE: BTTBS - Tension Batting Tunnel; Baseball Single as Manufactured and Supplied by:**

Sportsfield Specialties, Inc. or approved equal.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfieldspecialties.com

- B. **COMPONENTS:**

1. Tension Cable Style Batting Tunnel or approved equal.:
 - a. Upright Poles: 8” Schedule 40 Steel (8.625” O.D.) Pipe
 - i. 4’ Direct Embedment
 - b. Extension Arms: 3/8” Steel Plate x 18” Long
 - c. Crossbar Supports: 4” x 3/16” wall Square Steel Tube
 - d. Super Durable Black Powder Coated Finish
 - i. Enhanced Resistance to UV
 - e. Tension Cable Support: ¼” 7x19 Black Powder Coated Galvanized Aircraft Cable with ½” x 6” Jaw and Jaw Turnbuckles

- f. 13'H x 14'W x 75'L Baseball Standard #36 Black Nylon Net, 1-3/4" Square Mesh with Rope Bound Perimeter
 - i. 4'W x Full Height Overlapped Entryways
 - ii. Black Vinyl Encased 1/4" Galvanized Chain Ground Weight
 - g. Model Specific Hardware Kit and Installation Instructions
2. Deluxe Batters Mat with Permanent Home Plate or approved equal.
- a. Permanent White Turf and Regulation Placed Batter's Box Lines
 - b. Permanent White Turf "Inlaid" Home Plate
 - c. Constructed from Dense 36 oz. Spring Set "Bermuda" Turf Pile
 - d. Heavy Duty, Non-Slip 5mm Urelon Foam Cushion Secondary Backing
 - e. Approx. 3/4" Thick
 - f. Reinforcing Scrim Fabric on Foam Backing for Added Protection
 - g. Color: Green

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All Tension Batting Tunnels shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings. Concrete anchoring foundations to be determined by others based on local soil conditions and building codes. Installer should have a minimum of five (5) baseball/softball equipment installations or similar experience in the previous three (3) years.

PART 4 QUANTITY AND PAYMENT

Quantity and Payment for the Batting Cage will be made in accordance with the Contract Documents at the per unit price bid for the item "**Batting Cage, Complete**" and "**Batters Mat (Batting Cage)**" in the Proposal, which shall cover the cost of all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

END OF SECTION

FOUL POLE

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. FPW420 - 20' Foul Pole with Wing or approved equal.

1.02 RELATED WORK

- A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Association of Athletics Federations (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

1.04 SUBMITTALS

- A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

- B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

1.05 QUALITY ASSURANCE

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A. Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 FPW420 - 20' Foul Pole with Wing

- A. **BASE: FPW420 - 20' Foul Pole with Wing as Manufactured and/or Supplied by:**

Sportsfield Specialties, Inc. or approved equal.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfieldspecialties.com

- B. **COMPONENTS:**

1. Foul Pole Upright or approved equal.:
 - a. 4" Aluminum Tube (4" O.D. x 1/8" Wall)
 - b. 20' Height Above Finish Grade
 - c. Super Durable Powder Coated Finish
 - i. Color: Yellow, Orange, or White
2. Foul Pole Wing or approved equal.:
 - a. Stamped 1/8" (0.125") Aluminum Sheet with Double Reinforced Bends Welded at Corners
 - b. 1.5" Square Open Mesh
 - c. 18"W x 12'L
 - i. Top of Upright Pole to 8' Above Finish Grade

3. Ground Sleeve or approved equal.:
 - a. 2-6" Depth
 - b. Aluminum Construction
 - c. Alignment Bolt
 - d. Welded Leveling Plate
4. Stainless Steel Assembly Hardware

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All Foul Pole Equipment and Accessories shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings. Concrete anchoring foundations to be determined by others based on local soil conditions and building codes. Installer should have a minimum of five (5) baseball/softball equipment installations or similar experience in the previous three (3) years.

PART 4 QUANTITY AND PAYMENT

Quantity and Payment for the Foul Pole will be made in accordance with the Contract Documents at the per unit price bid for the item **FOUL POLE, 20'** in the Proposal, which shall cover the cost of all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

END OF SECTION

DUGOUT

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. **ED8X40 - Enclosed Dugout 8'W x 40'L or approved equal.**

1.02 RELATED WORK

- A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Association of Athletics Federations (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

1.04 SUBMITTALS

- A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

- B. Shop Drawings

1. Provide drawings of the manufacturers recommended

installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

1.05 QUALITY ASSURANCE

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A. Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 ED8X40 - Enclosed Dugout 8’W x 40’L

- A. **BASE: ED8X40 - Enclosed Dugout 8’W x 40’L as Manufactured and Supplied by:**

Sportsfield Specialties, Inc. or approved equal.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 607-746-1460
www.sportsfieldspecialties.com

- B. DESIGN CRITERIA:

1. Building Code: ASCE 7-10
2. Maximum Wind Speed Rating: 140mph, Exposure Category C
3. Maximum Ground Snow Load: 60psf
4. Seismic Design: Category E, Ss=1.5g, S1=0.75g
5. Roof Pitch: 2” Rise Back-to-Front

- C. COMPONENTS:

1. Enclosed Dugout:
 - a. Overall Dimensions: 8’-1”W x 40’L
 - b. Wall Frames Fabricated of:

- i. 3-1/2" x 3-1/2" x 3/16" (0.1875") Structural Steel Tube, Fully Welded Construction
 - ii. Vertical Columns Include Factory Pre-Drilled 8-1/4" x 8" x 5/8" (0.625") A36 Steel Base Mounting Plates
 - 1. Maximum Allowable Spacing Between Rear Columns is Eight Feet (8') On-Center
 - 2. Maximum Allowable Spacing Between Front Columns is Sixteen Feet (16') On-Center
 - iii. 18 Gauge Galvanized Steel Track and Studs, 16" On-Center (In Wall)
 - c. Roof Frame Fabricated of:
 - i. 3-1/2" x 3-1/2" x 3/16" (0.1875") Structural Steel Perimeter and Transverse Roof Tubes, and 3" x 2" x 11 Gauge Structural Steel Longitudinal Roof Tubes
 - ii. Fully Welded Construction
 - d. Structural Steel Wall and Roof Frame Receives a Powder Coated Primer and Coated Finish, Various Standard and Custom Colors Available
 - e. Roofing Material is 29 Gauge, Classic Rib® Style Corrugated Metal with J-Channel Drip Cap Installed on Front and Sides, Various Standard Paint Finish Colors Available
 - f. Exterior Siding:
 - i. Standard SmartSide® Lap Siding (Metal Siding Available Upon Request)
 - ii. Installed over OSB Sheathing and Housewrap
 - g. Finished Interior Walls:
 - i. Interior Walls Covered with a Minimum Thickness of 1/2" (0.5") Medium Density Overlay (MDO) Fir Plywood Manufactured with 100% Waterproof Adhesives and Coated with Resin Treated Fiber Overlay that Provides Smooth Painting Surface, Seams Sealed with Caulk and Covered with Wood Batten Trim Strips
 - ii. Interior Wall Surface and Wood Trim Hand Spackled, Sanded and Sealed with Exterior Grade Primer and Paint Finish
 - h. Includes Carbon Steel Anchoring Hardware, Epoxy and Lifting Eye Bolts
- 2. PESDO - Stamped and Sealed Drawings and Calculations by a Licensed Professional Engineer of Record in the State of Project Location
- 3. Options:
 - a. EDSC - Storage Closet
 - i. Size: 6' x 8'
 - ii. Fully Integrated with Enclosed Dugout
 - iii. Includes One (1) 3'W x 6'-8"H Galvannealed 18 Gauge Steel Hollow Door with Honeycomb Flush Core, Galvannealed 16 Gauge Steel Door Frame, Three (3) Stainless Steel Hinges, One (1) Lever Handle and Lockset, One (1) Door Sweep, One

- (1) Closer, One (1) Threshold and One (1) Weatherstrip, Door and Door Frame Receive a Powder Coated Primer and Finish
- iv. Interior Walls Finished with Primed 7/16" Oriented Strand Board (OSB) Panels Attached 18 Gauge Flange Steel Studs
- v. Optional Interior/Exterior Lighting, Electrical Outlets, Windows, Fully Finished Interior, and Scorer's Counter Available Upon Request
- b. ED8X40ELEC - Standard Electrical Package Includes Four (4) Overhead Lights Two (2) Light Switches Three (3) Dual Outlet Receptacles and One (1) Junction Box for Electrical Supply

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All Dugouts shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings. Concrete anchoring foundations to be determined by others based on local soil conditions and building codes. Installer should have a minimum of five (5) Dugout installations or similar experience in the previous three (3) years.

PART 4 QUANTITY AND PAYMENT

Quantity and Payment for the Dugout will be made in accordance with the Contract Documents at the per unit price bid for the item **“Dugout Shelter, on 6” Reinforced Concrete Pad**” in the Proposal, which shall cover the cost of all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

END OF SECTION

ALUMINUM STORAGE UNIT, HELMET CUBBY, BAT BIN, SIDE STORAGE

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:
1. SUAHCBBSS - Aluminum Storage Unit; Helmet Cubby, Bat Bin, and Side Storage or approved equal.

1.02 RELATED WORK

- A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:
1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
 2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
 3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
1. National Federation of State High School Associations (NFHS)
 2. National Collegiate Athletic Association (NCAA)
 3. International Association of Athletics Federations (IAAF)
 4. American Sports Builders Association (ASBA)
 5. Manufacturers Data and Recommended Installation Requirements

1.04 SUBMITTALS

- A. Manufacturers Product Data
1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

1.05 QUALITY ASSURANCE

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 SUAHCBBSS - Aluminum Storage Unit; Helmet Cubby, Bat Bin, and Side Storage

- A. BASE: SUAHCBBSS - Aluminum Storage Unit; Helmet Cubby, Bat Bin, and Side Storage as Manufactured and Supplied by:**

Sportsfield Specialties, Inc. or approved equal.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfieldspecialties.com

- B. COMPONENTS: Aluminum Storage Unit; Helmet Cubby, Bat Bin, and Side Storage:**

1. Pre-Assembled All-Weather Aluminum Bat, Helmet and Storage Cubby Unit or approved equal:
 - a. Overall Dimensions: 7'-6"H x 4'W x 3'-5/16"D
 - b. Constructed with Formed .090" 5052 Aluminum Sheet and Stainless Steel Domed Rivets
 - c. Durable Powder Coated Finish
 - i. Weather Resistant and Unsusceptible to Rust

- ii. Choose From Various Standard Color Options
- d. Helmet Cubbies: Sixteen (16) 10-3/8" x 10-3/8" x 18"D
- e. Bat Bins: Eight (8) 10-3/8" x 10-3/8" x +/- 3'D
- f. Side Storage: Lockable Access Doors with Recessed Pull Handle
- g. Bolt-on Powder Coated Steel Understructure Assembly with 1/2" Galvanized Steel Wedge Anchors for Optional Surface Mounting to Concrete Slab
- h. 5-Year Manufacturer's Limited Product Warranty

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All Aluminum Storage Units shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings. Concrete anchoring foundations to be determined by others based on local soil conditions and building codes. Installer should have a minimum of five (5) baseball/softball equipment installations or similar experience in the previous three (3) years.

PART 4 QUANTITY AND PAYMENT

Quantity and Payment for the aluminum storage unit, helmet cubby, bat bin, and side storage will be made in accordance with the contract documents at the per unit price bid for the item "**Dugout Storage Unit**" in the Proposal, which shall cover the cost of all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

END OF SECTION

PLAYER BENCH

PART 1 GENERAL

1.01 WORK INCLUDED

A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. Single Tier Portable Aluminum Plank Bench With Back Rest or approved equal.

1.02 RELATED WORK

A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 12 – Furnishings; Sections: Other Furnishings
3. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
4. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Association of Athletics Federations (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

1.04 SUBMITTALS

A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

1.05 QUALITY ASSURANCE

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 Single Tier Portable Aluminum Plank Bench With Back Rest or approved equal.

- A.** Single Tier Portable Aluminum Plank Bench With Back Rest as Manufactured and/or Supplied by:

Sportsfield Specialties, Inc. or approved equal.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfieldspecialties.com

B. COMPONENTS:

1. Single Tier Portable Aluminum Plank Bench With Back Rest or approved equal.:
 - a. Standard Lengths: 8', 10', 12', or 15' (Custom Sizing Available)
 - b. Fully Welded Frame Fabricated with 1/8" (0.125") Formed Aluminum and 2" x 2" x 1/8" (0.125") Square Aluminum Tubing
 - i. Durable Powder Coated Finish
 - ii. Weather Resistant and Unsusceptible to Rust

- iii. Choose From Various Standard Color Options
- c. 5-Year Manufacturer's Limited Product Warranty

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All Single Tier Portable Aluminum Plank Bench With Back Rest shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings. Concrete anchoring foundations to be determined by others based on local soil conditions and building codes.

PART 4 QUANTITY AND PAYMENT

Quantity and Payment for the player bench will be made in accordance with the contract documents at the per unit price bid for the item **PLAYER BENCH, 30'** in the Proposal, which shall cover the cost of all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

END OF SECTION

BACKSTOP

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This item shall include all labor, material and equipment for furnishing and the complete installation of the permanent backstop, including all hardware, in accordance with the manufacturer's installation specifications. It shall include the transportation and/or delivery of the equipment, the disposal of any surplus materials, as required and other work as herein described.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Permanent Backstop (to be erected at each permanent baseball and softball field):
- B. Permanent backstop shall have either a 62-foot front opening, refer to Site Plan for location of each size (see details for specific installation information).
- C. As manufactured by:
Steelcraft Products
1975 Lincoln Avenue
Pasadena, California 91103

OR APPROVED EQUAL

62-foot Arched Baseball Backstop (Model #AB-62P5) or approved equal.:

Front and base arches shall be 2-3/8-inch outer diameter;
Vertical ribs shall be 2-3/8-inch outer diameter;
Horizontal braces shall be 1-inch outer diameter;
Height shall be 20 feet; and
Install per manufacturer's specifications.

- D. Backstop shall be Black Vinyl Coated Chain-Link

PART 3 – EXECUTION

3.1 INSTALLATION OF EQUIPMENT

- A. All equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Quantity and Payment for backstops will be made for the backstop unit actually constructed in accordance with the Construction Documents at the unit price bid for the item **BASEBALL BACKSTOP, 62' WIDE** in the Proposal, which prices shall cover the cost of all labor, tools, equipment, foundations, and materials, and all else necessary therefore and incidental thereto for a complete system as specified herein and as shown on the plans or as directed by the engineer.

END OF SECTION

SCOREBOARD

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Under this section, the Contractor shall supply and install scoreboards at locations shown on the site plans, complete with foundations, mounting and electrical service, conduit, and all necessary appurtenances as required by the respective manufacturer. The Contractor is to submit shop drawings for approval.
- B. Under this section, the Contractor shall carefully dismantle and remove the existing scoreboard indicated to be removed on the Contract Documents. The Contractor shall securely store the dismantled scoreboard. Storage location to be coordinated with owner and/or engineer.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Scoreboard shall be as manufactured by Translux Fair-Play Multi-Purpose Scoreboard Model #MP-7114-2 or equal, with a height of 5'-6", length 14'-0", depth 10", weight 500 lbs. or approved equal.
- B. Standard equipment shall include the following:
 - 1. Energy efficient wide-angle amber LED's
 - 2. Factory authorized national and local sales, service and installation
 - 3. Durable paint colors, with Vinyl trim
 - 4. Sport specific control console inserts
 - 5. HB-800 data connection kit
 - 6. Fair-Play's or equals scorekeeper approved score systems
 - 7. 4-level control console display brightness adjustment
 - 8. Changeable scoreboard game captions
 - 9. 5-year limited warranty
 - 10. ETL/CETL listed to UL standard
 - 11. Convenient built-in service points for easy access
 - 12. Water resistant aluminum construction
 - 13. Complete, safe and durable display mounting system
 - 14. 9-segment digits
 - 15. Built-in lightning suppressor

C. Scoreboard padding:

1. Padding manufactured from 19-ounce Heavy Coated Vinyl, with 2-inch thick high-impact foam. Padding shall be designed to fit scoreboard structural poles and bottom portion of scoreboard. Each padding shall include a 1-1/2" W sewn in hook and loop vertical closure.
2. The municipality has the right to choose from the full color spectrum provided by the manufacturer.
3. The contractor shall provide pole padding, as manufactured by Sportsfield Specialties, Inc., or approved equal.

D. Poles:

1. Scoreboard to be mounted 10 feet from ground level, with a height to top of scoreboard of 15'-16'.
2. Column size – W8x18
3. Column Spacing – 7.0 feet
4. Footing Diameter – 2.5 feet
5. Footing Depth – 7.0 feet
6. Contractor to confirm dimensions with manufacturer. Install per manufacturer specifications.

PART 3 – EXECUTION

3.1 INSTALLATION OF EQUIPMENT

- A. All equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.
- B. OPERATING TEMPERATURES: Scoreboard display: -22° to 131° Fahrenheit (-30° to 55° Celsius), Control console: 32° to 131° Fahrenheit (0° to 55° Celsius)

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Quantity and Payment for Scoreboard will be made for the scoreboard actually constructed in accordance with the Construction Documents at the unit price bid for the item **SCOREBOARD, COMPLETE** in the Proposal, which prices shall cover the cost of foundations, poles, conduit, wiring, pullboxes, padding, pile support systems, power source all labor, tools, equipment and materials, and all else necessary therefore and incidental thereto for a complete system as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

PRESS BOX

PART 1 GENERAL

1.1 SUMMARY

- A. Provide all equipment and materials, and do all work necessary to furnish and install the Press Box as indicated on the drawings and as specified herein.

1.2 RELATED WORK

- A. Examine Contract Documents for requirements that affect work of this section. Other specification sections that directly relate to work of this Section include, but are not limited to:
1. Section 02200 - Earthwork; Excavation and Backfill and establishment of subgrade elevations.
 2. Section 02511 - Asphalt Concrete Pavement
 3. Section 03300 - Cast-in-Place Concrete; Concrete foundations and bases for goals.

1.3 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
1. U.S. Tennis Court and Track Builders Association
 2. National Federation of State High School Associations (NFSHSA)
 3. National Collegiate Athletic Association (NCAA)
 4. International Amateur Athletic Foundation (I.A.A.F.)
 5. Manufacturers Data and Recommended Installation Requirements.

1.4 SUBMITTALS

- A. Manufacturers Product Data
1. Provide manufacturer's product literature, technical specifications and other data prior to actual field installation work for Architect or Owner's Representative review.

Shop Drawings

1. Provide drawings of manufacturers recommended installation and foundation requirements prior to actual field installation work for Architect or Owner's Representative review.

1.5 QUALITY ASSURANCE

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Materials delivered to the site shall be examined for concealed damage or defects in shipping. Any defects shall be noted and reported to the Owner's Representative.
- B. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule.
- C. Sound materials shall be stored above the ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers and product selections named are provided to establish the minimum standard.
 - 1. As manufactured by AAE (Aluminum Athletic Equipment Co.); 1000 Enterprise Drive, Royersford, PA 19468; Toll Free (800) 523-5471, or approved equal.
 - 2. Press box shall be Model DONKEY-2-UMP-MLS, as shown in the Construction Details, or approved equal.
- B. Contractor shall submit shop drawing for approval prior to ordering materials.

PART 3 EXECUTION

3.1 INSPECTION

- A. Examine the areas and conditions where equipment and systems are to be installed and notify the contractor of conditions detrimental to the proper and timely installation and completion of the work.

- B. Do not proceed with the work until unsatisfactory conditions have been corrected by the contractor in a manner acceptable and to the satisfaction of the Architect/Engineer or Owner's Representative.

3.2 INSTALLATION

- A. All athletic equipment shall be installed as indicated on approved submittals as recommended and in strict accordance with manufacturer's written directions and as indicated on the drawings and specified herein.
- B. All athletic equipment shall be installed in strict accordance with the latest rules, regulations and specifications governing that sport or event for which it is being installed.

3.3 TESTING, ADJUSTMENT AND OPERATION

- A. All athletic equipment requiring testing, adjustments and operation shall be tested for proper operation and adjusted to conform to specified standards.
- B. Provide certifications as required, indicating that equipment has been tested and adjusted to conform to specified standards.
- C. Provide operating and maintenance instructions and manuals to Owner - designated personnel for the proper operation and care of equipment after equipment has been tested and adjusted to conform to specified standards.

3.4 CLEANING

- A. Upon completion of work in any given area, remove all trash and debris from the work area and leave in clean condition.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Quantity and Payment for Press Box will be made for the press box actually constructed in accordance with the Construction Documents at the unit price bid for the item **PRESS BOX, ON 6” REINFORCED CONCRETE PAD** in the Proposal, which prices shall cover the cost of foundations, poles, conduit, wiring, pullboxes, padding, pile support systems, power source all labor, tools, equipment and materials, and all else necessary therefore and incidental thereto for a complete system as specified herein and as shown on the plans or as directed by the Engineer.

STORAGE SHED

DESCRIPTION

This item shall consist of the furnishing and complete installation of the proposed storage shed in the location shown in the Construction plans, with all necessary conduits, fittings, wiring, panels as required for complete installation.

Quality Assurance:

- A. Manufacturer Qualifications: Company experienced in design and manufacture of shelters of the type specified, and having the following:
 - 1. Three references of similar shelters completed within the past year.
- B. Perform the work in accordance with applicable federal, State, and local building and safety codes and regulations.

Submittals:

- A. Minimum 3 sets of shop drawings, showing all details of construction, including concrete pad sizes, reinforcement, and locations.
- B. Selection Samples: For each finish product specified, color charts representing manufacturer's full range of available colors.
- C. Warranty
 - 1. Provide roofing manufacturer's lifetime warranty.

MATERIALS

- A. Shed shall be 12'x20', Cape Cod style timber shed with t1-11 siding, asphalt shingles and gable vents as manufactured by: Amish Mike, 480 Rt. 46., Hackettstown, NJ 07840 or approved equal.
- B. Shed shall have a 9' wide x 8' high standard overhead garage door on the short side of the shed and a standard 5' double door on the long side of the shed.
- C. Shed shall have two (2) power outlets and lighting. Conduit and any & all required electrical components for proper installation of storage shed. Contractor shall be responsible to inspect and locate appropriate on-site power supply for the storage shed.
- D. Contractor shall include in the price bid for this item Approx. 775 linear feet of conduit of suitable size with one spare conduit. Contractor shall provide a shop drawing detailing conduit installation from the power source to the proposed shed. Drawing shall include, but not be limited to, main service connection to off-site area(s), coordination with

PSE&G, primary service conduits, connections, and terminations for a complete electrical system for the Storage Shed.

- E. Shed shall be installed on 6" Thick, Reinforced Concrete Pad as shown in the Construction Details.

METHODS OF CONSTRUCTION

All equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

All construction must meet the minimum requirements of the NEC, PSE&G as well as local codes.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Quantity and Payment for Storage Shed will be made for the shed actually constructed in accordance with the Construction Documents at the unit price bid for the item **STORAGE SHED, ON 6" REINFORCED CONCRETE PAD** in the Proposal, which prices shall cover the cost of foundations, poles, conduit, wiring, pullboxes, padding, pile support systems, power source all labor, tools, equipment and materials, and all else necessary therefore and incidental thereto for a complete system as specified herein and as shown on the plans or as directed by the Engineer.

TRASH RECEPTACLE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Trash Receptacles shall include all materials and labor necessary for the furnishing and permanent installation of the above noted site furnishings consisting of ornamental trash receptacles including stainless steel bolts and concrete anchors, permanent anchoring and fastening to concrete base, and the installation of concrete pads as shown on the Plans or as directed by the Engineer. The Trash Receptacles shall include placement in a location shall include one labeled for garbage and one labeled for recycle; however two (2) cans shall be considered a unit. (A total of Four (4) cans shall be supplied).

PART 2 – PRODUCTS

2.1 MATERIALS

A. Trash Receptacles:

1. Trash and recycling receptacle Model No. CFTR-011-02 Streetscape Receptacle, 44 gallon letter receptacle by Custom Fabrication Inc., or approved equivalent.
2. Incorporated or approved equal.
3. Owner/Engineer to select color from standard colors.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. Permanent installation and assembly shall be according to manufacturer's specifications, the plans and as directed by the Engineer. Site amenities shall be tamper resistant.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Quantity and Payment for Trash Receptacle will be made for the amount actually constructed in accordance with the Construction Documents at the unit price bid for the item **TRASH RECEPTACLE, ON 6" REINFORCED CONCRETE PAD** in the Proposal, which prices shall cover the cost of all labor, tools, equipment and materials, and all else necessary therefore and incidental thereto for a complete system as specified herein and as shown on the plans or as directed by the Engineer.

– END OF SECTION –

LANDSCAPING

DESCRIPTION

Landscaping shall consist of the furnishing and planting of all plants, as directed by the County of Union and all incidental work related thereto. It shall consist of the furnishing and planting trees, plants, shrubs, grasses, etc., in accordance with the Contract Documents, or as directed by the Engineer. It shall also consist of the furnishing of one (1) 20-Gallon Tree Watering Bag per tree that require refilling once or twice a week; the bags shall be suitable for the specified tree. The plants shall be guaranteed in accordance with the construction drawings.

The plants shall be guaranteed in accordance with the construction drawings.

MATERIALS

N. J. Department of Transportation Standard Specifications.

Tree watering bags shall be made from heavy-duty, green coated polypropylene that is UV stabilized to last after long hours in the sun.

METHODS OF CONSTRUCTION

N. J. Department of Transportation Standard Specifications.

QUANTITY AND PAYMENT

The quantity of Landscaping for which payment will be made will be all of the various kinds of plant materials listed and planted in accordance with the Plans and Specifications or as directed by the Engineer.

Payment for Landscaping will be made on a unit price basis for trees planted under the “Native Dogwood, *Cornus Florida*, 8'-10' High”, “Eastern Redbud, *Cercis Canadensis*, 8'-10' High”, “Shagbark Hickory, *Carya Ovata*, 3"-3.5" Caliper”, and “White Oak, *Quercus Alba*”, pay items in the Proposal, which price shall include the cost of furnishing the plants and protection thereof before planting, excavation of holes, planting, mixing and placing backfill material, fertilizing, pruning tops and roots, supporting trees, wrapping, wood chip mulch, furnishing and applying anti-desiccant or fungicide, repairing ground surface, disposal of excess excavated and waste materials, one (1) 20-Gallon Tree Watering Bags per tree, maintenance, replacements, and all else necessary therefore and incidental thereto.

TOPSOILING & HYDROSEEDING

DESCRIPTION

Topsoil obtained from stripping within limits of the project, or furnished from outside the project, shall contain no stones, lumps, roots, or similar objects larger than 2 inches in any dimension, and shall have a pH value of not less than 5.8. When the pH value of the topsoil is less than 5.8, it shall be increased by applying ground limestone at a rate necessary to attain a pH value of 6.5.

Material from the following sources shall not be considered suitable for use as topsoil.

- A. Soils having a pH value less than 4.1
- B. Chemically contaminated soils.
- C. Areas from which the original surface has been stripped and/or covered over, such as borrow pits, open mines, demolition sites, dumps, and sanitary landfills.
- D. Wet excavation.
- E. Manufactured topsoil.

Topsoil furnished from sources outside the limits of the project shall have a minimum organic content of not less than 2.75 percent by weight. When the organic content of the topsoil furnished from sources outside the limits of the project is less than 2.75 percent, it shall be increased by adding peat at a rate necessary to attain this minimum organic content. The organic content of soils shall be determined by the Laboratory using the chromic acid titration method, as described in the United States Department of Agriculture's Circular 757.

The organic content of all topsoil used for planting shall conform to the requirements specified above.

The gradation of the topsoil furnished from sources outside the limits of the project shall be determined by the Laboratory, using the Bouyoucos Hydrometer Analysis conforming to the requirements of current A.A.S.H.O. Designation T88. The gradation of the topsoil shall be within the following ranges:

Sand (1.00 MM to 0.25 MM) 70% to 80%

Silt and Clay (less than .25 MM) 20% to 30%

A percolation rate of 1 inch/Hour to 2 inch/Hour is required after root growth by the sod has been established.

Provide topsoil and hydroseed as shown on the Contract Drawings and as directed by the Engineer.

MATERIALS

The materials to be used for topsoiling shall conform to the appropriate sections as follows:

FertilizerSec. 917.03 and further clarified
within "Planting Bed
Preparation"

Ground Limestone	Sec. 917.04 and further clarified within "Planting Bed Preparation"
Mulch, Straw.....	Sec. 917.06
Topsoil	Sec. 917.01 and further clarified herein
Grass Seed Mixture.....	Hydroseed Lesco 3 Rye

The hydroseed shall be furnished and delivered premixed. A manufacturer's certificate of compliance to the specified mixes shall be submitted by the manufacturer

METHODS OF CONSTRUCTION

The topsoil shall be spread over the surface in a uniform layer that will produce the prescribed compacted thickness. When required, ground limestone which has been protected from moisture and is dry and free flowing, shall be evenly spread over the area to be seeded at a rate that will produce a pH value of the soil of 6.5. The area shall then be raked, disked or otherwise worked to incorporate the limestone into the upper 3 to 4 inches of soil to remove stones, roots, debris and other unsuitable material and to form an even surface. Fertilizer shall be applied at the rate of 1200 pounds per acre. The soil shall be in a pliable condition at the time of seeding.

If the quantity of topsoil obtained from stripping, or from storage piles when prescribed, or both, is insufficient for the requirements of the project, the Contractor shall furnish the required additional topsoil from other sources.

The contractor shall hydro-seed only on a calm day. No seeding shall be performed on frozen ground or when the temperature is 32 degrees Fahrenheit or lower. Schedules for fertilizing and seeding must be submitted to Neglia Engineering Associates for approval prior to the work. Hydroseeding shall be done within ten days following soil preparation.

Fertilizer shall be 5-10-5 and shall be applied at a rate of 325 lbs. per acre.

Virgin wood fiber mulch shall be applied at a rate of 1500 lbs. per acre.

ECT tackifier shall be applied at a rate of 5 lbs. per acre.

Hydroseed mix shall be Lesco 3 Rye.

QUANTITY AND PAYMENT

Quantity and Payment for Topsoiling & Hydroseeding will be made in accordance with the Contract Documents at the square yard price bid for the item **TOPSOIL AND HYDROSEED** in the Proposal, which shall cover the cost of planting, landscaping, trees, shrubs, excavating, backfilling, top-dressing, stabilization, seeding, spreading, watering, irrigating, fertilizer, raking, rolling, re-fertilizing, reseeding, and all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

-- END OF SECTION --

PLANTING SOIL PREPARATION

DESCRIPTION

Work under this specification shall consist of furnishing the materials identified herein and mixing and installing the completed planting soil mix as specified within specification item Topsoiling and per recommendations of soil laboratory test reports for topsoil and planting soil mix.

DEFINITIONS

- A. Finished Grade: Elevation of finished surface of planting soil.
- B. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- C. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Product Certificates: For soil amendments and fertilizers, signed by product manufacturer.
- C. Material Test Reports: For existing surface soil and imported topsoil.

QUALITY ASSURANCE

- A. Soil-Testing Laboratory Qualifications: An independent laboratory recognized by the NJ State Department of Agriculture or as approved by the Landscape Architect, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- B. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
 - 1. Report suitability of topsoil for lawn and plant growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.

MATERIALS

Topsoil

A. Topsoil: Topsoil shall meet ASTM D 5268, pH range of 5.5 to 7.0, a minimum of 6 percent organic material content; free of stones 1 inch (25 mm) or larger in any dimension and other extraneous materials harmful to plant growth.

1. Topsoil Source:

- a. Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
- b. Supplement with imported topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from agricultural land, bogs or marshes.

Inorganic Soil Amendments

A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:

1. Provide lime in form of dolomitic limestone.

- A. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 (3.35-mm) sieve and a maximum 10 percent passing through No. 40 (0.425-mm) sieve.
- B. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- C. Aluminum Sulfate: Commercial grade, unadulterated.
- D. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- E. Sand: Clean, washed, natural or manufactured, free of toxic materials.
- F. Water absorbing polymer, or approved equivalent.

Organic Soil Amendments

A. Transplant Inoculant (for all non-ericaceous trees and shrubs):

1. Mycorrhizal fungi transplant inoculate,
 - a. Form: pre-measured, 3 oz. Packets.

- b. Rate of Application: one (1) packet for each caliper-inch for trees, in accordance with manufacturer's recommendations for shrubs and planting beds.
- B. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8.0; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2-inch (12.5-mm) sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
- 1. Organic Matter Content: 50-60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- C. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
- 1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with at least 0.15 lb. (2.4 kg) of ammonium nitrate or 0.25 lb. (4 kg) of ammonium sulfate per cubic foot (cubic meter) of loose sawdust or ground bark.
- A. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

Planting Soil Mix

A. Planting Soil Mix:

- 1. Planting Soil Mix: Shrub and groundcover areas (Type 1) and tree planting (Type 2).
 - a. Two parts native soil to one part organic matter and one part topsoil. (2:1:1 ratio)
 - b. Mix in fertilizers in amounts recommended in soil reports from a qualified soil-testing agency.
 - c. Water absorbing polymer and transplant inoculants.

Fertilizer

- A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 1 percent nitrogen and 10 percent phosphoric acid.
- B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
- 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

D. Slow-Release Fertilizer: Granular or pelletized fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

METHODS OF CONSTRUCTION

Examination

A. Ensure that grading and subbase will provide adequate subsurface drainage prior to placing planting soil mix.

B. Installation constitutes the Contractor's acceptance of existing conditions. If existing conditions are found to be unsatisfactory, contact Landscape Architect for resolution prior to installation.

General Preparation

A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by soil preparation operations.

B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

Planting Bed Establishment

A. Loosen subgrade of planting beds to a minimum depth of 8 inches for perennial areas and 18 inches for shrub areas or as indicated on drawings. Remove stones larger than 1 inch (25 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Apply fertilizer directly to subgrade before loosening.
2. Spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix to the depth indicated on the plans.
3. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
4. Mix lime with dry soil before mixing fertilizer.
5. Add water absorbing polymer to entire planting area for soil mix types 1, 2 & 3 and thoroughly mix into planting soil per manufacturer's written instructions, at the rate recommended by the manufacturer for this climatic zone and the soil types present on site.
6. Add transplant inoculants to soil mix by either
 - a. Mixing into entire planting area per manufacturer's written instructions, at the manufacturer's recommended rate for planting areas, or

- a. Adding to each shrub, groundcover, and perennial planting pit per the manufacturer's written instructions, at the manufacturer's recommended rate for individual planting pits.
 7. Add transplant inoculants to soil mix type 2 by adding to each tree planting pit per the manufacturer's written instructions, at the manufacturer's recommended rate for individual planting pits.
- B. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- C. Restore planting beds if eroded or otherwise disturbed after finish grading and before planting.

Clean-up and Protection

- A. Promptly remove soil and debris created by soil preparation work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

QUANTITY AND PAYMENT

- A. Planting Soil Preparation will not be measured as a separate item. Quantity and Payment for this item, and all costs related thereto, shall be included in the square yard price bid for the item **TOPSOIL AND HYDROSEED** in the Proposal.

-- END OF SECTION --

SEEDING

DESCRIPTION

Seeding shall include furnishing and placing of turf grass seed all newly graded areas on the Contract Drawings or as directed by the Engineer.

SUBMITTALS

Product Data: For each type of product indicated.

Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of lawns during a calendar year. Submit before expiration of required maintenance periods.

MATERIALS

Seed

Deliver seed in original sealed, labeled, and undamaged containers. Seed shall be fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances

Seed Species: Seed of grass species as follows, with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed. Seed variety shall have endophytes.

Sun and Partial Shade: Proportioned by weight as follows:

- A. 50 percent Turf-type tall fescue (Three (3) varieties of *Festuca* sp. Such as Pennfine, Falcon, or Rebel).
- B. 25 percent Kentucky bluegrass (*Poa pratensis*).
- C. 25 percent perennial ryegrass (*Lolium perenne*).

Topsoil

Topsoil: Shall comply with the topsoil specified in item TOPSOILING

Inorganic Soil Amendments

Inorganic Soil Amendments: Shall comply with the inorganic soil amendments specified in item PLANTING SOIL PREPARATION

Organic Soil Amendments

Organic Soil Amendments: Shall comply with the organic soil amendments specified in item PLANTING SOIL PREPARATION

Fertilizer

Fertilizer: Shall comply with the fertilizer specified in item PLANTING SOIL PREPARATION.

Mulch

Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

Planting Soil Mix

Planting Soil Mix: Planting soil mix shall conform to item PLANTING SOIL PREPARATION.

CONSTRUCTION METHODS

Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

A. Spring Planting: March 15 – June 15

B. Fall Planting: August 15 to October 5

Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

Examine areas to receive lawns and grass for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

Lawn Preparation

Limit lawn subgrade preparation to areas to be planted.

Newly Graded Subgrades: Loosen subgrade to a minimum depth of **6 inches (150 mm)** Remove stones larger than **1 inch (25 mm)** in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

A. Apply fertilizer directly to subgrade before loosening.

B. Thoroughly blend planting soil mix off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.

Delay mixing fertilizer with planting soil if planting will not proceed within a few days.

Mix lime with dry soil before mixing fertilizer.

Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus **1/2 inch (13 mm)** of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future.

Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

Restore areas if eroded or otherwise disturbed after finish grading and before planting.

Seeding

Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds **5 mph (8 km/h)**. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other. Do not use wet seed or seed that is moldy or otherwise damaged.

Sow seed at the rate recommended by the supplier.

Rake seed lightly into top **1/8 inch (3 mm)** of planting soil mix, roll lightly, and water with fine spray.

Protect seeded areas by spreading straw mulch. Spread uniformly at a minimum rate of **90 lbs. per 1000 square feet** to form a continuous blanket **3/8" depth** over seeded areas. Spread by hand, blower, or other suitable equipment. Anchor straw mulch by crimping into topsoil with suitable mechanical equipment.

Lawn Maintenance

Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than 60 days from date of Substantial Completion. When full maintenance period has not elapsed before end of planting season, or if lawn is not fully established, continue maintenance during next planting season.

Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch. Anchor as required to prevent displacement.

Watering: Schedule watering by hand to prevent wilting, puddling, erosion, and displacement of seed or mulch. Water lawn evenly at a minimum rate of **1 inch (25 mm)** per week.

Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 40 percent of grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height: Mow grass **2 to 3 inches (50 to 75 mm)** high.

Lawn Postfertilization: Apply fertilizer after initial mowing and when grass is dry. Use fertilizer that will provide actual nitrogen of at least **1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m)** to lawn area. Adjust if necessary depending upon amount of fertilizer applied at initial planting.

Satisfactory Lawns

Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 95 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding **2 by 2 inches (25 by 25 mm)**]. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

Cleanup and Protection

Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established.

Remove erosion-control measures after grass establishment period.

QUANTITY AND PAYMENT

Seeding will not be measured. Quantity and Payment for this item, and all work related thereto, shall be included in the square yard price bid for the item **TOPSOIL AND HYDROSEED** in the Proposal.

-- END OF SECTION --

FINAL CLEANUP/SITE RESTORATION

DESCRIPTION

Under this item the Contractor shall restore the work site and access area to its original condition including, but not limited to signage, existing monuments, fences, hedges, re-grading, seeding, landscape areas, trees, drainage structures and castings, repair of driveways, (both bituminous and concrete) sidewalks, roadways, curbs, cleaning and removal of stockpiles and equipment, any underground electrical conduit servicing lighting and all else not specifically covered elsewhere in these specifications.

MATERIALS

2019 NJDOT Standard Specifications for Road and Bridge Construction, latest revised.

METHODS OF CONSTRUCTION

The site shall be returned to its original condition. Fences shall be reinstalled with posts in concrete footings in accordance with specifications herein. Hedges shall be reinstalled where possible or replaced in kind and in the same locations as existing. Lawn areas disturbed by Contractor's activities shall be re-graded, hydroseeded and mulched as specified by the Engineer. Temporary safety fence shall be removed and the holes filled to meet finished grade and match the existing/proposed surface material(s). Cleaning shall include hand brooming of sidewalk and pavement areas. Adjacent structures shall be cleaned, as necessary, by a method approved by the Engineer. Sidewalks shall be replaced with 4-inch thick concrete walk in evenly sized slabs, sawcut where necessary, only to the extent damaged by the construction. Both concrete and bituminous concrete shall be repaired as specified by the Engineer sawcut where necessary, only to the extent damaged by the construction. All construction equipment and stockpiles shall be removed from the site and disposed of by the Contractor in a suitable and timely manner.

QUANTITY AND PAYMENT

Payment for Final Cleanup/Site Restoration will be made at the lump sum price bid for the item **FINAL CLEANUP AND SITE RESTORATION** in the Proposal, which shall cover the cost of sweeping, washing, loading, hauling, removal, disposal, storage, landscaping, seeding, topsoiling, mulch, asphalt, concrete, striping, signage, structures, lighting and appurtenances, utilities and appurtenances, bleachers, drainage, and all labor, tools, equipment and materials necessary therefore and incidental thereto or as directed by the Engineer.

-- END OF SECTION --

**APPENDIX 'A'-
SUBSURFACE INVESTIGATION REPORT**

**APPENDIX 'B' –
NJDEP PERMIT**

**APPENDIX 'C' –
NJDEP APPROVED PLAN SHEETS**

SOR CONSULTING ENGINEERS, INC.

Geotechnical Engineering - Materials Testing - Forensic Studies

98 Sand Park Rd., Cedar Grove, NJ 07009
(973) 239-6001 Fax (973) 239-8380

SUBSURFACE INVESTIGATION REPORT SNYDER PARK – FIELD CONVERSION BERKELEY HEIGHTS, NEW JERSEY

FOR

**NEGLIA ENGINEERING ASSOCIATES
MOUNTAINSIDE, NEW JERSEY**

**Prepared by: Sor Consulting Engineers, Inc.
98 Sand Park Road
Cedar Grove, New Jersey 07009**

**Report No. 19-C-40
Job No. 19-C-33
October 23, 2019**

SOR CONSULTING ENGINEERS, INC.

Geotechnical Engineering - Materials Testing - Forensic Studies

98 Sand Park Rd., Cedar Grove, NJ 07009
(973) 239-6001 Fax (973) 239-8380

Kamil Sor, Ph.D.
Orhun Sor, P.E.
Atilla Sencar, P.E.

October 23, 2019
Job No. 19-C-33
Report No. 19-C-40

Neglia Engineering Associates
200 Central Avenue
Suite 102
Mountainside, NJ 07092

Attention: Kamil Olechowski
E-Mail: kolechowski@negliaengineering.com

Re: Subsurface Investigation Report
Snyder Park – Field Conversion
Berkeley Heights, New Jersey

INTRODUCTION

This report presents the results of a subsurface investigation performed at the existing Snyder Park field located at 222 Snyder Avenue in Berkeley Heights, New Jersey.

Based on information provided to us, the project will consist of conversion of the existing grass baseball field to a new artificial turf surface.

PURPOSE AND SCOPE OF WORK

The purpose of this study was to:

- explore the subsurface conditions within the existing field area;
- estimate the geotechnical engineering properties of the encountered subsurface materials including soil permeability;
- measure the thickness of the surface topsoil layer;
- identify the nature and extent of hydraulically restrictive layers, if present; and
- estimate the depth to the seasonal high water table.

To accomplish this, an exploration program consisting of eight soil probes was conducted on October 14, 2019. The probes were advanced by Gold Star, Inc. using a “Geoprobe” direct push drilling system and extended to depths of 5 to 12 feet beneath the existing ground surface. Relatively undisturbed tube samples suitable for identification and laboratory testing purposes were continuously extracted from the probes. Upon completion, the explorations were backfilled with clean sand so as not to leave any open holes.

The probes were performed under the direct technical observation of a licensed geotechnical engineer from Sor Consulting Engineers. Our engineer located the probes at the site and supervised the soil sampling operations so as to obtain the appropriate subsurface information. The locations of the probes are shown relative to the existing site features on the Geoprobe Location Plan contained in Appendix I of this report. Detailed descriptions of the encountered subsurface conditions are presented on the individual Geoprobe logs included in Appendix II. The soils were visually classified in accordance with the Burmeister and USDA Soil Classification System also included in Appendix II.

Tube samples obtained from the probes were subsequently returned to our office where they were further examined in our soil mechanics laboratory and subjected to index and permeability testing. Grain size analyses and tube permeability tests were performed on five selected samples. The laboratory permeability test results are presented on the Geoprobe logs in Appendix II. Laboratory grain size analyses and permeability test results are presented in Appendix III.

The results of the subsurface exploration and laboratory testing programs have provided the basis for our engineering analysis and geotechnical recommendations. The following discussions of our findings and recommendations are subject to the limitations contained in Appendix IV of this report.

SITE OBSERVATIONS AND FINDINGS

The existing baseball field is presently natural turf with sandy infield surface which at the time of our field work was in a relatively fair to poor condition. Some turf wear was observed in high traffic areas. The probes encountered a 6 to 12 inch thick layer of topsoil or 8 inch thick layer of infield sand. Below the topsoil/sand, a layer of sand/gravel fill to approximate depths of 1 to 3 feet was encountered in Probes 1, 3, 4, 5, 6 and 7. At Probe No. 8 location, the fill layer consisting of brown sandy clayey silt with trace roots, brick was encountered beneath the topsoil and extended to a depth of 6 feet below surface. Beneath the topsoil or fill, natural soil consisting of sandy clayey silt or silty clayey sand with minor amounts of gravel was encountered. The sandy clayey silt or silty clayey sand was in a firm to stiff condition and extended to maximum depths explored, 5 to 12 feet.

Groundwater, as evidenced by wet soils, was encountered in Probes 7 and 8 at a depth of 8 feet below the ground surface. The remaining probes did not encounter groundwater nor seasonal high groundwater to the maximum depths explored.

CONCLUSIONS AND RECOMMENDATIONS

Based on the subsurface conditions encountered in the geoprobes performed for this study, the clayey soil beneath the topsoil/fill is in a firm to stiff condition and would provide suitable support for the new synthetic turf.

Five falling head tube permeability tests were performed in the laboratory on undisturbed soil samples obtained from the geoprobes. Laboratory permeability test results on the natural clayey soils indicate that the clayey soils are relatively impermeable with a permeability value <0.2 in/hr.

Following removal of the topsoil and grading to reach the proposed finished grade, we recommend that stone filled trenches spanning and surrounding the field be installed in order to improve drainage beneath the field. The stone filled trenches should be connected to the site stormwater collection system. The synthetic turf along

with subbase material may then be installed in accordance with the manufacturer's recommendations.

Sor Consulting Engineers appreciates the opportunity to be of assistance with this project. Please do not hesitate to contact us if there are any questions concerning this report. The following appendices are attached and complete this report:

Appendix I: Geoprobe Location Plans

Appendix II: Geoprobe Logs P-1 through P-8

Burmeister and USDA Soil Classification Systems

Appendix III: Laboratory Test Results

Appendix IV: Limitations

Very truly yours,

SOR CONSULTING ENGINEERS, INC

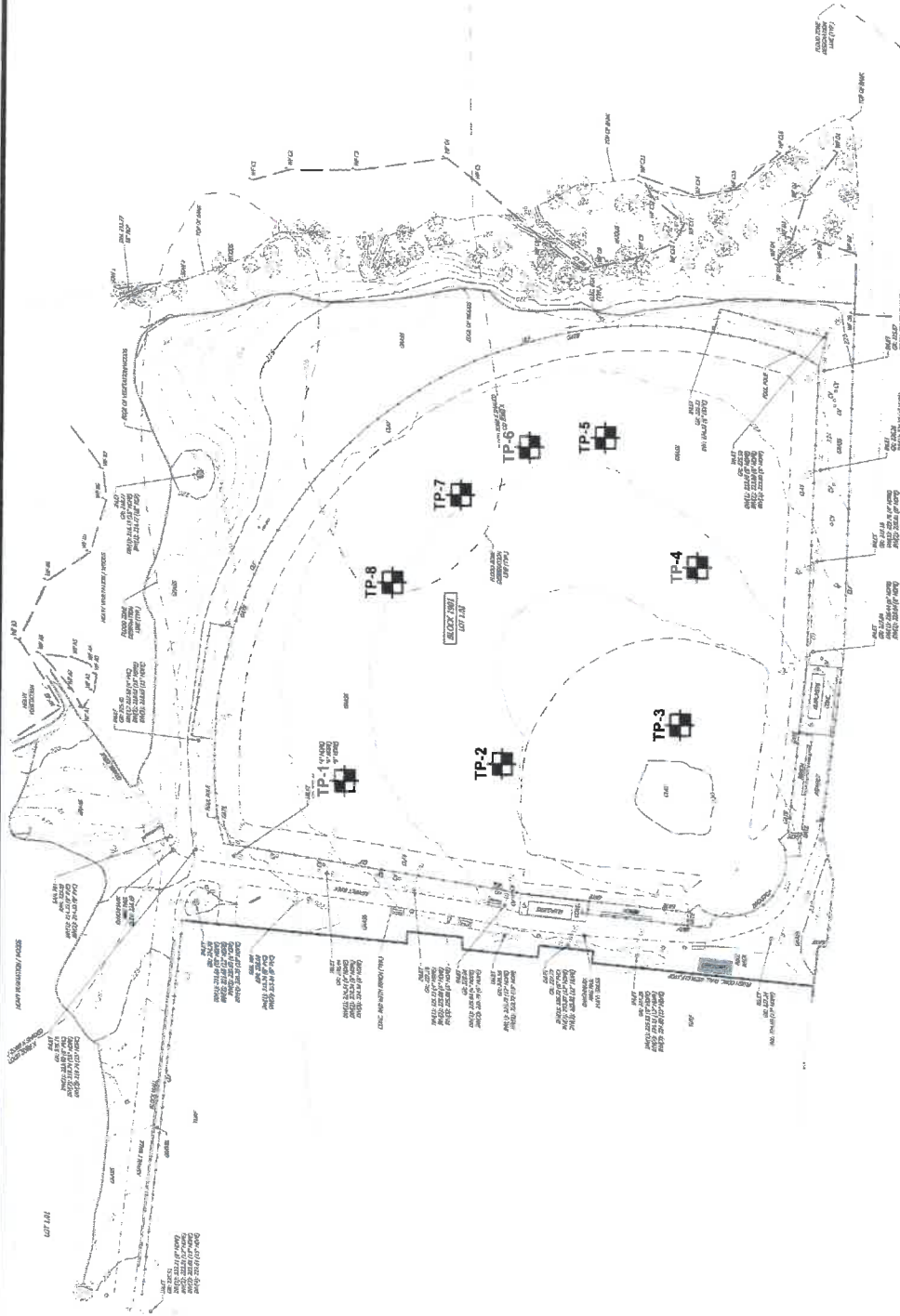


Atilla Sencar, P.E.
Senior Engineer

AS/gs

APPENDIX I
GEOPROBE LOCATION PLAN

Called
North



LEGEND



TP-1 Number and approximate location of geotechnical test probe performed by SCE for this study.

NOTES

1. This drawing is part of Sor Consulting Engineers, Inc. Report No. 19-C-40 and should be read together with the report for complete evaluation.

TEST PROBE LOCATION PLAN
NEGLIA ENGINEERING ASSOCIATES
SNYDER PARK FIELD CONVERSION
BERKELEY HEIGHTS, NEW JERSEY

SOR CONSULTING ENGINEERS, INC.
 Geotechnical Engineering – Materials Testing – Forensic Studies
 98 Sand Park Road, Cedar Grove, New Jersey 07009

Prepared By : A.S.	Approved By : .	DRAWING NO.
Date : 10/23/2019	Date :	19-C-33-1
Scale : NTS	Report No. : 19-C-40	Sheet No. 1 of 1

APPENDIX II

GEOPROBE LOGS P-1 THROUGH P-8

BURMEISTER AND USDA SOIL CLASSIFICATION SYSTEMS

SOR CONSULTING ENGINEERS, INC.		GEOPROBE LOG		PROBE NO. 1	
CLIENT: Neglia Engineering Associates				GSE +227.5' (±)	
PROJECT: Snyder Park – Field Conversion				WATER LEVEL NE	
LOCATION: Berkeley Heights, New Jersey				DATE 10/14/19	
				JOB NO. 19-C-33	
				REPORT NO. 19-C-40	

DEPTH FT.	DENSITY	MOISTURE	DESCRIPTION	REMARKS
1	Stiff	Moist	Topsoil 6"	Permeability @ 3' K=0.001 in/hr (K0)
2			Dense Graded Aggregate (DGA) (Fill)	
3			1'-6"	
4			Brown Clayey SILT, some coarse to fine Sand, little medium to fine Gravel (Silty Clay Loam)	
5				
6				
7				
8				
9				
10				
11			Geoprobe Completed at 10'-0"	
12				
13				
14				
15				
16				
17				
18				
19				
20				

DRILLING CONTRACTOR: Gold Star, Inc.
 EQUIPMENT: Geoprobe
 SCE REPRESENTATIVE: Atila Sencar

SOR CONSULTING ENGINEERS, INC.		GEOPROBE LOG		PROBE NO. 2	
CLIENT: <u>Neglia Engineering Associates</u>				GSE	+229' (±)
PROJECT: <u>Snyder Park – Field Conversion</u>				WATER LEVEL	NE
LOCATION: <u>Berkeley Heights, New Jersey</u>				DATE	10/14/19
				JOB NO.	19-C-33
				REPORT NO.	19-C-40

DEPTH FT	DENSITY	MOISTURE	DESCRIPTION	REMARKS
1	Stiff	Moist	Topsoil 8"	Permeability @ 2' K=0.002 in/hr (K0)
2			Brown coarse to fine Sand, and Clayey Silt, some medium to fine Gravel (Clay Loam)	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

DRILLING CONTRACTOR: Gold Star, Inc.
 EQUIPMENT: Geoprobe
 SCE REPRESENTATIVE: Atilla Sencar

SOR CONSULTING ENGINEERS, INC.		GEOPROBE LOG		PROBE NO. 3	
CLIENT: Neglia Engineering Associates				GSE	+229.5' (±)
PROJECT: Snyder Park – Field Conversion				WATER LEVEL	NE
LOCATION: Berkeley Heights, New Jersey				DATE	10/14/19
				JOB NO.	19-C-33
				REPORT NO.	19-C-40

DEPTH FT.	DENSITY	MOISTURE	DESCRIPTION	REMARKS
1	Stiff	Moist	Dark yellow brown coarse to fine SAND, little Silt/Clay, trace fine Gravel 8"	
2			Gray Sand and Gravel (Fill) 1'-2"	
3			Brown Clayey SILT, some medium to fine Sand, little coarse to fine Gravel (Silty Clay Loam)	
4				
5				
6				
7			Geoprobe Completed at 6'-0"	
8			(Refusal on Boulder)	
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

DRILLING CONTRACTOR: Gold Star, Inc.
 EQUIPMENT: Geoprobe
 SCE REPRESENTATIVE: Atila Sencar

SOR CONSULTING ENGINEERS, INC.		GEOPROBE LOG		PROBE NO. 4	
CLIENT: Neglia Engineering Associates				GSE	+228.5' (±)
PROJECT: Snyder Park – Field Conversion				WATER LEVEL	NE
LOCATION: Berkeley Heights, New Jersey				DATE	10/14/19
				JOB NO.	19-C-33
				REPORT NO.	19-C-40

DEPTH FT.	DENSITY	MOISTURE	DESCRIPTION	REMARKS
1	Firm to Stiff	Moist	Topsoil 12"	Permeability @ 4' K=0.006 in/hr (K0)
2			Gray DGA (Fill) 1'-4"	
3			Brown Clayey SILT, some coarse to fine Sand, little medium to fine Gravel (Silty Clay Loam)	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13	Geoprobe Completed at 12'-0"			
14				
15				
16				
17				
18				
19				
20				

DRILLING CONTRACTOR: Gold Star, Inc.
 EQUIPMENT: Geoprobe
 SCE REPRESENTATIVE: Atila Sencar

SOR CONSULTING ENGINEERS, INC.		GEOPROBE LOG		PROBE NO. 5	
CLIENT: Neglia Engineering Associates		GSE		+228' (±)	
PROJECT: Snyder Park – Field Conversion		WATER LEVEL		NE	
LOCATION: Berkeley Heights, New Jersey		DATE		10/14/19	
		JOB NO.		19-C-33	
		REPORT NO.		19-C-40	

DEPTH FT.	DENSITY	MOISTURE	DESCRIPTION	REMARKS
1			Topsoil 12"	
2			Gray DGA (Fill)	
3				
4	Stiff	Moist		
5			Brown Clayey SILT, some medium to fine Sand, some coarse to fine Gravel (Silty Clay Loam)	
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

DRILLING CONTRACTOR: Gold Star, Inc.
 EQUIPMENT: Geoprobe
 SCE REPRESENTATIVE: Atilla Sencar

SOR CONSULTING ENGINEERS, INC.		GEOPROBE LOG		PROBE NO. 6	
CLIENT: Neglia Engineering Associates		GSE		+228' (±)	
PROJECT: Snyder Park – Field Conversion		WATER LEVEL		NE	
LOCATION: Berkeley Heights, New Jersey		DATE		10/14/19	
		JOB NO.		19-C-33	
		REPORT NO.		19-C-40	

DEPTH FT.	DENSITY	MOISTURE	DESCRIPTION	REMARKS
1	Dense	Moist	Topsoil 12"	Permeability @ 2' K=0.006 in/hr (K0)
2			Gray DGA (Fill) 1'-6"	
3			Brown Clayey SILT, some coarse to fine Sand, little medium to fine Gravel (Silty Clay Loam)	
4				
5				
6			Geoprobe Completed at 5'-0" (Refusal on Boulder)	
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

DRILLING CONTRACTOR: Gold Star, Inc.
 EQUIPMENT: Geoprobe
 SCE REPRESENTATIVE: Atila Sencar

SOR CONSULTING ENGINEERS, INC.		GEOPROBE LOG		PROBE NO. 7	
CLIENT: Neglia Engineering Associates		GSE		+228' (±)	
PROJECT: Snyder Park – Field Conversion		WATER LEVEL		8'-0"	
LOCATION: Berkeley Heights, New Jersey		DATE		10/14/19	
		JOB NO.		19-C-33	
		REPORT NO.		19-C-40	

DEPTH FT.	DENSITY	MOISTURE	DESCRIPTION	REMARKS
1	Stiff	Moist	Topsoil 6"	
2			Brown to gray Sand and Gravel (Fill)	
3				
4				
5				
6				
7				
8				
9	Dense	Wet	Brown coarse to fine Sand, some coarse to fine Gravel (Silty Clay Loam)	
10				
11				
12				
13			Geoprobe Completed at 12'-0"	
14				
15				
16				
17				
18				
19				
20				

DRILLING CONTRACTOR: Gold Star, Inc.
 EQUIPMENT: Geoprobe
 SCE REPRESENTATIVE: Atila Sencar

SOR CONSULTING ENGINEERS, INC.		GEOPROBE LOG		PROBE NO. 8	
CLIENT: Neglia Engineering Associates				GSE +228' (±)	
PROJECT: Snyder Park – Field Conversion				WATER LEVEL 8'-0"	
LOCATION: Berkeley Heights, New Jersey				DATE 10/14/19	
				JOB NO. 19-C-33	
				REPORT NO. 19-C-40	

DEPTH FT.	DENSITY	MOISTURE	DESCRIPTION	REMARKS
1	Firm	Moist	Topsoil 8"	Permeability @ 4' K=0.004 in/hr (K0)
2			Brown Clayey SILT, some coarse to fine Sand, little medium to fine Gravel, roots, brick (Fill) (Silty Clay Loam)	
3				
4				
5				
6				
7	Stiff	Wet	Brown Clayey SILT, some medium to fine Sand, little medium to fine Gravel (Silty Clay Loam)	
8				
9				
10				
11			Geoprobe Completed at 10'-0"	
12				
13				
14				
15				
16				
17				
18				
19				
20				

DRILLING CONTRACTOR: Gold Star, Inc.
 EQUIPMENT: Geoprobe
 SCE REPRESENTATIVE: Atilla Sencar

VISUAL IDENTIFICATION OF SAMPLES

The samples were identified in accordance with the American Society for Engineering Education System of Definition described by Professor Donald M. Burmeister in ASTM Special Technical Publication 479, 5th Edition, 1970.

I. Definition of Soil Components and Fractions

MATERIAL	SYMBOL	FRACTION	SIEVE SIZE	DEFINITION
Boulders	Bldr	--	9" +	Material retained on 9" sieve.
Cobbles	Cbl	--	3" to 9"	Material passing the 9" sieve and retained on the 3" sieve.
Gravel	G	Coarse (c) Medium (m) Fine (f)	1" to 3" 3/8" to 1" No. 10 to 3/8"	Material passing the 3" sieve and retained on the No. 10 sieve.
Sand	S	Coarse (c) Medium (m) Fine (f)	No.30 to No. 10 No.60 to No. 30 No.200 to No. 60	Material passing the No. 10 sieve and retained on the No. 200 sieve.
Silt	\$	--	Passing No. 200 (0.074 mm)	Material passing the No. 200 sieve that is non-plastic in character and exhibits little or no strength when air dried.

Organic Silt (O\$)

Material passing the No. 200 sieve which exhibits plastic properties within a certain range of moisture content, and exhibits fine granular and organic characteristics.

		PLASTICITY	PLASTICITY INDEX	CLAY-SOIL
Clayey SILT	Cy\$	Slight (sl)	1 to 5	Material passing the No. 200 sieve which can be made to exhibit plasticity and clay qualities within a certain range of moisture content, and which exhibits considerable strength when air-dried.
SILT & CLAY	\$&C	Low (l)	5 to 10	
CLAY & SILT	C&\$	Medium (m)	10 to 20	
Silty CLAY	\$yC	High (h)	20 t 40	
CLAY	C	Very High (vh)	40 plus	

II. Definition of Component Proportions

COMPONENT	WRITTEN	PROPORTIONS	SYMBOL	PERCENTAGE RANGE BY WEIGHT*
Principal	CAPITALS	--		50 or more
Minor	Lower Case	and some little trace	a.	35 to 50
			s.	20 to 35
			l.	10 to 20
			t.	1 to 10

*Minus sign (-) lower limit, plus sign (+) upper limit, no sign middle range.

III. Glossary of Modifying Abbreviations

CATEGORY	SYMBOL	TERM	SYMBOL	TERM	SYMBOL	TERM
A. Borings	U/D	Undisturbed	B	Exploratory	A	Auger
B. Samples	C D O.E.	Casing Denison Open End	L S	Lost Spoon	U W	Undisturbed Wash
C. Colors	bk bl br gr	black blue brown gray	gn or rd tn	green orange red tan	wh yw dk lt	white yellow dark light
D. Organic Soils	dec dec'g lig	decayed decaying lignite	o rts ts	organic roots topsoil	veg pt	Vegetation peat
E. Rocks	LS Gns	Limestone Gneiss	rk SS	rock Sandstone	Shst Sh	Schist Shale
F. Fill and Misc. Material	bldr(s) brk(s) cndr(s)	boulder(s) brick(s) cinder(s)	cbl (s) wd dbr	cobble (s) wood debris	gls misc rbl	glass miscellaneous rubble
G. Misc. Terms	do el, El fgmt (s) frqt lrg mtld no rec pen	ditto elevation fragment(s) frequent large mottled no recovery penetration	pp P.I. P pc(s) rec or R	pocket penetrometer Plasticity Index pushed pressed piece(s) recovered	ref sm W.L. W.H. W.R.	refusal small water level weight of hammer weight of rods
H. Stratified Soils	alt thk thn w prt seam lyr stra vvd c pkt Ins occ freq	alternating thick thin with parting seam layer stratum varved Clay pocket lens occasional frequent	-) to 1/16" thickness - 1/16 to 1/2" thickness - 1/2 to 12" thickness - greater than 12" thickness - alternating seams or layers of sand, silt and clay - small, erratic deposit, usually less than 1 foot - lenticular deposit - one or less per foot of thickness - more than one per foot of thickness			

IV. Other Descriptive Criteria

A. Relative density of coarse-grained soils and non-plastic silts.

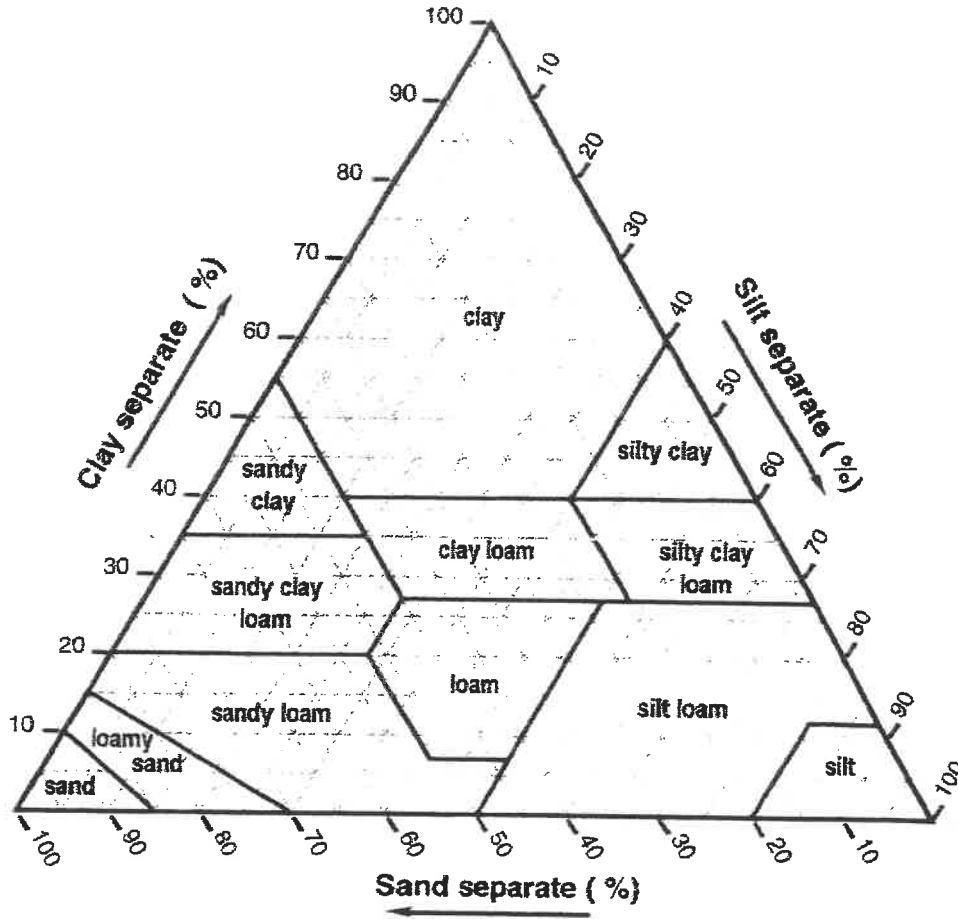
N-VALUE	DESCRIPTIVE TERM	RELATIVE DENSITY (%)
0-4	Very Loose	0-15
4-10	Loose	15-45
10-30	Medium Dense	45-70
30-50	Dense	70-85
50+	Very Dense	85-100

B. Consistency of fine-grained soils with some plasticity.

N-VALUE	DESCRIPTIVE TERM	UNCONFINED COMPRESSIVE STRENGTH (tsf)
0-2	Very Soft	Less than 0.25
2-4	Soft	0.25-0.50
4-8	Medium	0.50-1.00
8-16	Stiff	1.00-2.00
16-32	Very Stiff	2.00-4.00
32+	Hard	4.00+

Texture Triangle:

Fine Earth Texture Classes (——)



USDA SOIL CLASSIFICATION SYSTEM

APPENDIX III
LABORATORY TEST RESULTS

SOR TESTING LABORATORIES, INC.

98 Sand Park Road - Cedar Grove, NJ 07009
 Tel.: (973) 239-6001 Fax: (973) 239-8380 <http://www.sorlabs.com>

PARTICLE SIZE DISTRIBUTION TEST REPORT

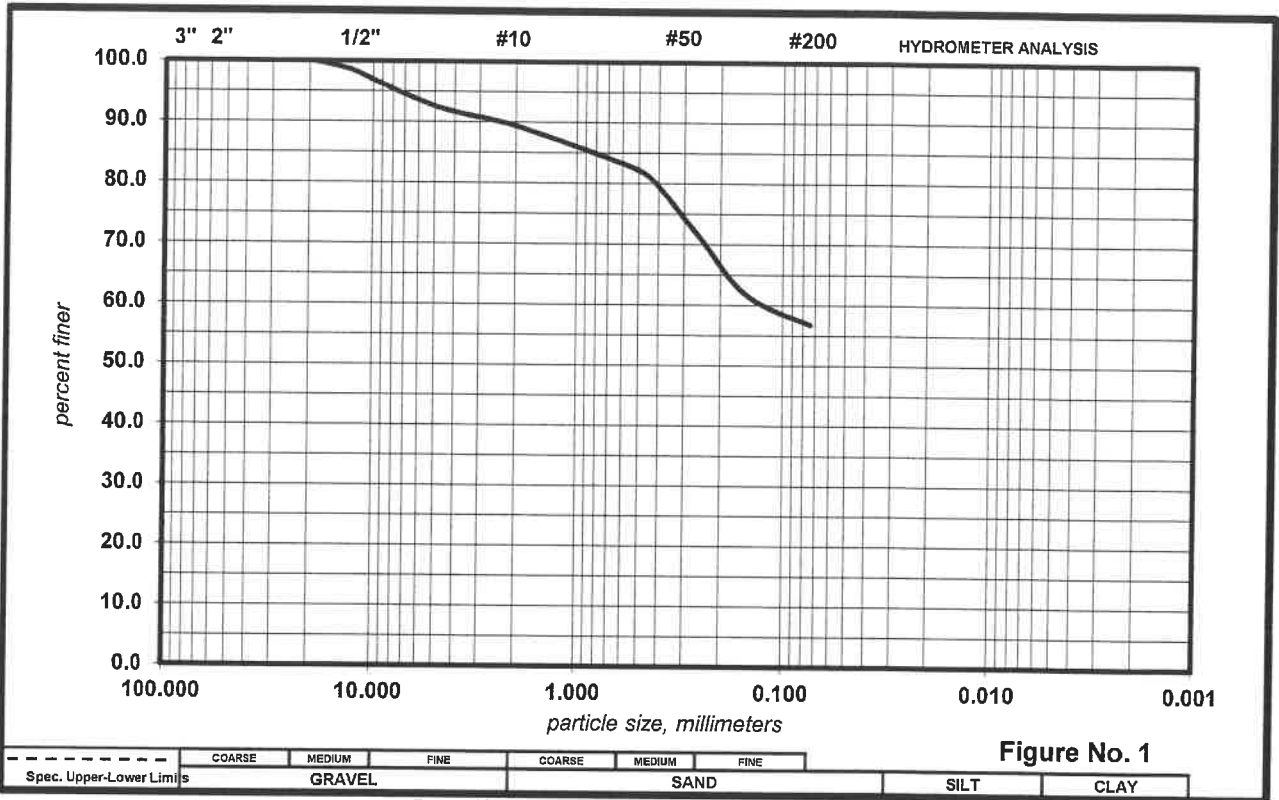


Figure No. 1

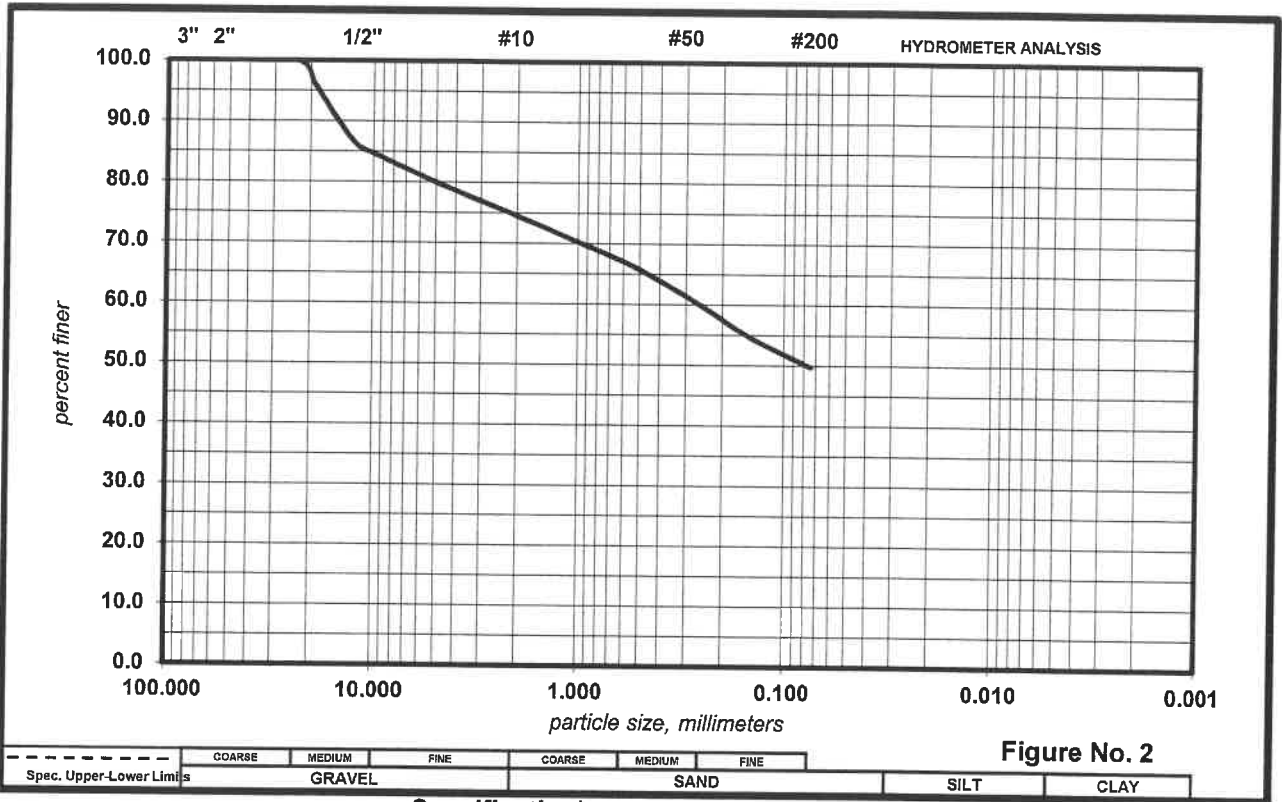
Specification*

Sieve Size	% Finer	Min.(%)	Max.(%)	Sample Identification		
3" (75 mm)				Sample No.: P-1 Lab No.: A19-235-01 Source/Location: 3'-4' Description: Dark Brown Clayey SILT and, cf Sand, little mf Gravel <i>sample description in accordance with Burmister System</i>		
2 1/2" (63 mm)						
2" (50 mm)						
1 1/2" (38.1 mm)						
1" (25 mm)				LL : PL : PI :		
3/4" (19 mm)	100.0					
5/8" (16 mm)				As received Moisture Content: %		
1/2" (12.5 mm)	98.5					
3/8" (9.5 mm)	96.6			Classification: USCS: [ML] USDA:		
5/16" (8 mm)						
1/4" (6.3 mm)				Remarks: Sample received in lab on October 16, 2019 Permeability, k: 7.2 x 10 ⁻⁷ cm/s (0.001 in/hr) K0 Permeability, k: 7.5 x 10 ⁻⁷ cm/s (0.001 in/hr) K0 Client: Neglia Engineering Associates Project: Snyder Park Location: Berkeley Heights, New Jersey Date: 22-Oct-19 Job No.: 19-C-33 Report No.: 19-C-40		
#4 (4.75 mm)	92.3					
#6 (3.35 mm)						
#8 (2.36 mm)						
#10 (2 mm)	89.4					
#14 (1.4 mm)						
#16 (1.18 mm)						
#20 (850 µm)						
#30 (600 µm)	83.2					
#40 (425 µm)	80.3					
#50 (300 µm)						
#60 (250 µm)	70.9					
#100 (150 µm)	61.5					
#200 (75 µm)	56.8					

SOR TESTING LABORATORIES, INC.

98 Sand Park Road - Cedar Grove, NJ 07009
 Tel.: (973) 239-6001 Fax: (973) 239-8380 <http://www.sorlabs.com>

PARTICLE SIZE DISTRIBUTION TEST REPORT



Specification*

Sieve Size	% Finer	Min.(%)	Max.(%)	Sample Identification		
3" (75 mm)				Sample No.: P-2 Lab No.: A19-235-02 Source/Location: 2'-3' Description: Dark Brown of Sand, and Clayey Silt, some mf Gravel <small>sample description in accordance with Burmister System</small>		
2 1/2" (63 mm)						
2" (50 mm)						
1 1/2" (38.1 mm)						
1" (25 mm)	100.0			LL : PL : PI :		
3/4" (19 mm)	95.9					
5/8" (16 mm)						
1/2" (12.5 mm)	86.9			As received Moisture Content: %		
3/8" (9.5 mm)	84.4					
5/16" (8 mm)				Classification: USCS: [SM] USDA:		
1/4" (6.3 mm)						
#4 (4.75 mm)	79.7					
#6 (3.35 mm)				Remarks: Sample received in lab on October 16, 2019 Permeability, k: 1.1 x 10 ⁻⁶ cm/s (0.002 in/hr) K0 Permeability, k: 1.2 x 10 ⁻⁶ cm/s (0.002 in/hr) K0		
#8 (2.36 mm)						
#10 (2 mm)	74.5					
#14 (1.4 mm)						
#16 (1.18 mm)						
#20 (850 µm)						
#30 (600 µm)	66.9					
#40 (425 µm)	64.3					
#50 (300 µm)						
#60 (250 µm)	59.7					
#100 (150 µm)	54.7			Client: Neglia Engineering Associates Project: Snyder Park Location: Berkeley Heights, New Jersey Date: 22-Oct-19		
#200 (75 µm)	49.7					
* -				Job No.: 19-C-33 Report No.: 19-C-40		

SOR TESTING LABORATORIES, INC.

98 Sand Park Road - Cedar Grove, NJ 07009
 Tel.: (973) 239-6001 Fax: (973) 239-8380 <http://www.sorlabs.com>

PARTICLE SIZE DISTRIBUTION TEST REPORT

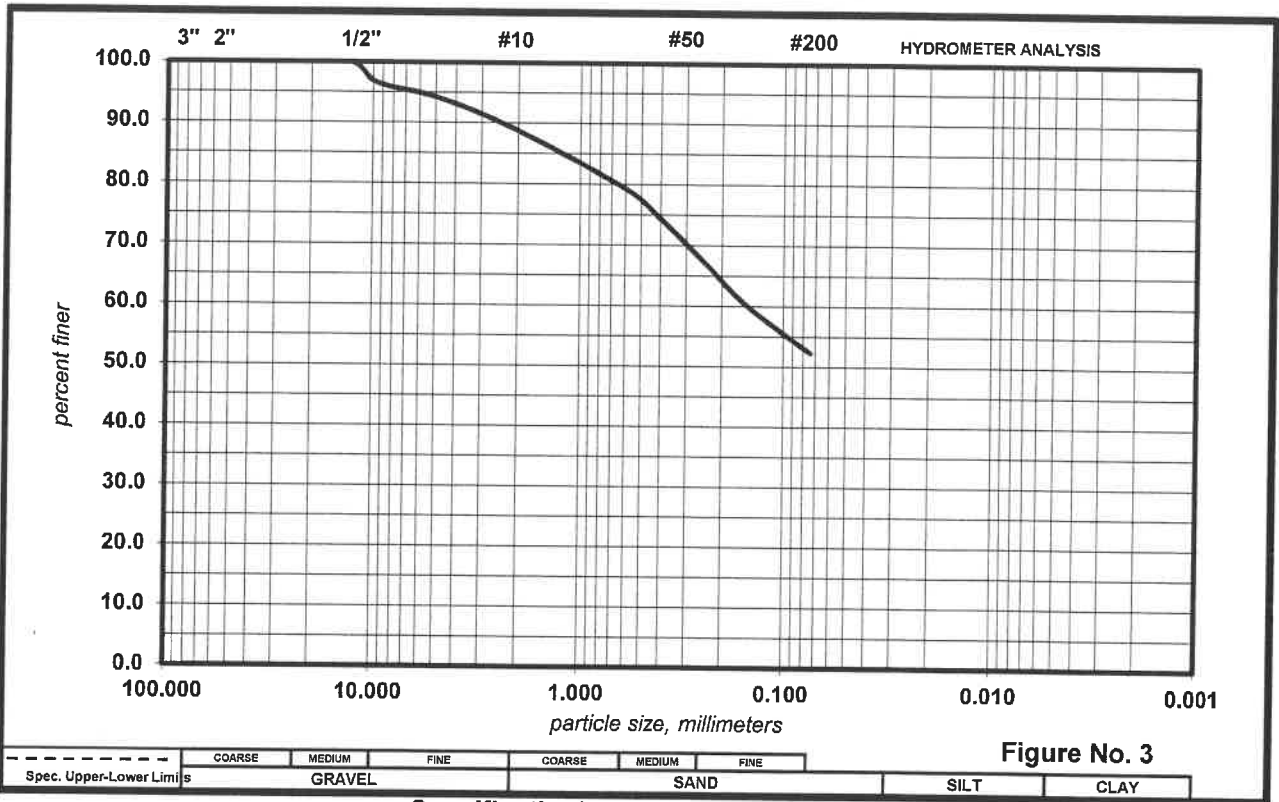


Figure No. 3

Specification*

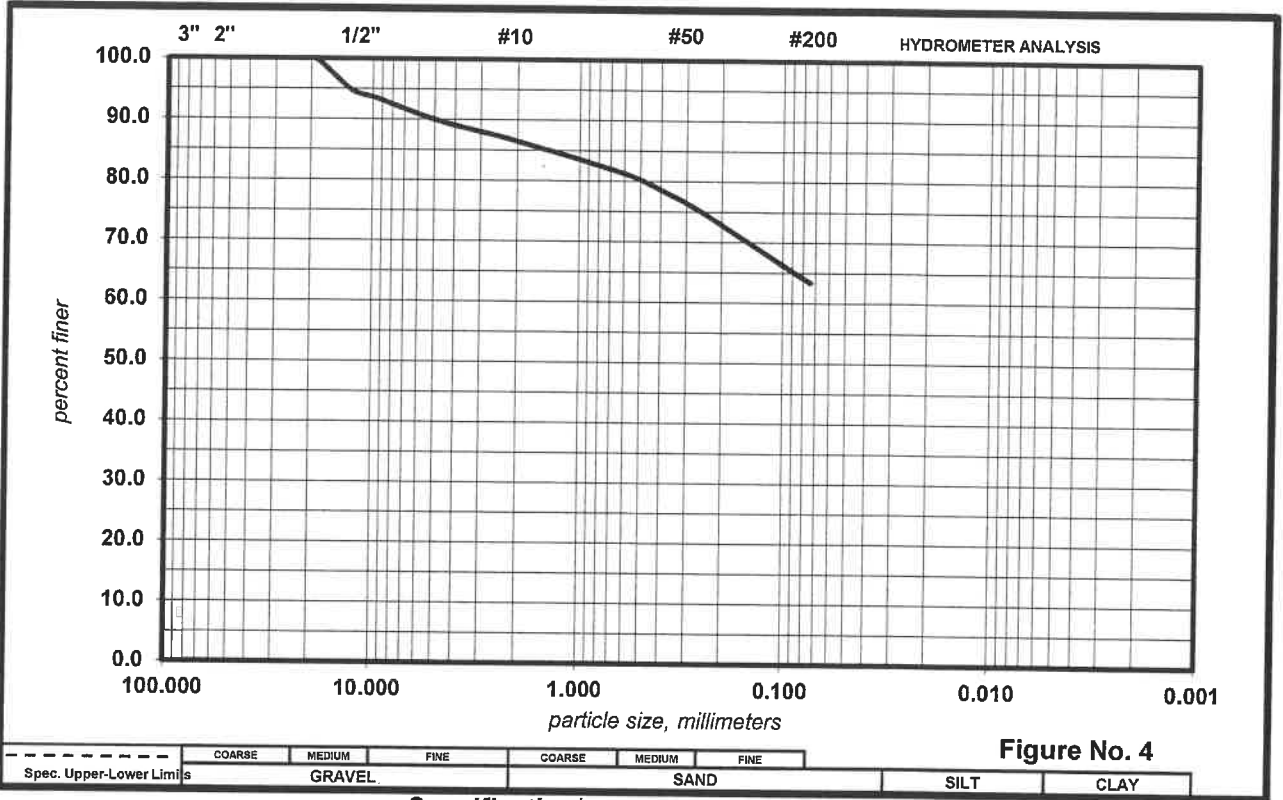
Sieve Size	% Finer	Min.(%)	Max.(%)	Sample Identification		
3" (75 mm)				Sample No.: P-4 Lab No.: A19-235-03 Source/Location: 4'-5' Description: Dark Brown Clayey SILT and, cf Sand, little mf Gravel <i>sample description in accordance with Burmister System</i> LL : PL : PI : As received Moisture Content: % Classification: USCS: [ML] USDA:		
2 1/2" (63 mm)						
2" (50 mm)						
1 1/2" (38.1 mm)						
1" (25 mm)						
3/4" (19 mm)						
5/8" (16 mm)						
1/2" (12.5 mm)	100.0					
3/8" (9.5 mm)	96.6					
5/16" (8 mm)						
1/4" (6.3 mm)						
#4 (4.75 mm)	94.0			Remarks: Sample received in lab on October 16, 2019 Permeability, k: 4.4 x 10 ⁻⁶ cm/s (0.006 in/hr) K0 Permeability, k: 3.9 x 10 ⁻⁶ cm/s (0.006 in/hr) K0 Client: Neglia Engineering Associates Project: Snyder Park Location: Berkeley Heights, New Jersey Date: 22-Oct-19 Job No.: 19-C-33 Report No.: 19-C-40		
#6 (3.35 mm)						
#8 (2.36 mm)						
#10 (2 mm)	88.7					
#14 (1.4 mm)						
#16 (1.18 mm)						
#20 (850 µm)						
#30 (600 µm)	79.1					
#40 (425 µm)	75.0					
#50 (300 µm)						
#60 (250 µm)	67.5					
#100 (150 µm)	59.9					
#200 (75 µm)	52.3					

* -

SOR TESTING LABORATORIES, INC.

98 Sand Park Road - Cedar Grove, NJ 07009
 Tel.: (973) 239-6001 Fax: (973) 239-8380 <http://www.sorlabs.com>

PARTICLE SIZE DISTRIBUTION TEST REPORT



	COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE		
Spec. Upper-Lower Limits	GRAVEL			SAND			SILT	CLAY

Specification*

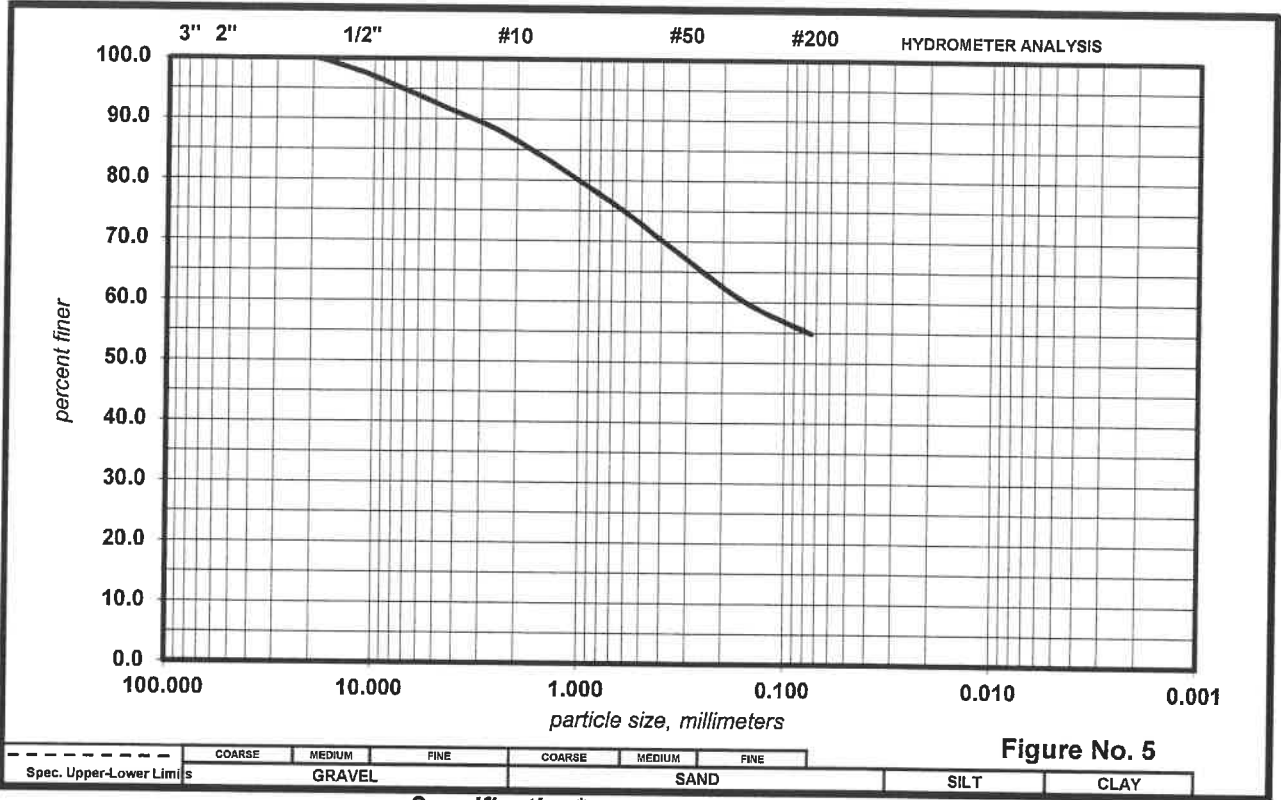
Sieve Size	% Finer	Min.(%)	Max.(%)	Sample Identification		
3" (75 mm)				Sample No.: P-6 Lab No.: A19-235-04 Source/Location: 2'-3' Description: Dark Brown Clayey SILT and, cf Sand, little mf Gravel		
2 1/2" (63 mm)						
2" (50 mm)						
1 1/2" (38.1 mm)						
1" (25 mm)				<i>sample description in accordance with Burmister System</i>		
3/4" (19 mm)	100.0			LL :	PL :	PI :
5/8" (16 mm)				As received Moisture Content: %		
1/2" (12.5 mm)	94.8					
3/8" (9.5 mm)	93.4			Classification: USCS: [ML] USDA:		
5/16" (8 mm)						
1/4" (6.3 mm)				Remarks: Sample received in lab on October 16, 2019 Permeability, k: 4.1 x 10 ⁻⁶ cm/s (0.006 in/hr) K0 Permeability, k: 4.2 x 10 ⁻⁶ cm/s (0.006 in/hr) K0		
#4 (4.75 mm)	89.8					
#6 (3.35 mm)						
#8 (2.36 mm)						
#10 (2 mm)	86.5			Client: Neglia Engineering Associates Project: Snyder Park Location: Berkeley Heights, New Jersey Date: 22-Oct-19 Job No.: 19-C-33 Report No.: 19-C-40		
#14 (1.4 mm)						
#16 (1.18 mm)						
#20 (850 µm)						
#30 (600 µm)	81.2					
#40 (425 µm)	79.0					
#50 (300 µm)						
#60 (250 µm)	74.9					
#100 (150 µm)	70.0					
#200 (75 µm)	63.4					

* -

SOR TESTING LABORATORIES, INC.

98 Sand Park Road - Cedar Grove, NJ 07009
 Tel.: (973) 239-6001 Fax: (973) 239-8380 <http://www.sorlabs.com>

PARTICLE SIZE DISTRIBUTION TEST REPORT



Specification*

Sieve Size	% Finer	Min.(%)	Max.(%)	Sample Identification	
3" (75 mm)				Sample No.: P-8 Lab No.: A19-235-05 Source/Location: 4'-5' Description: Dark Brown Clayey SILT and, of Sand, little mf Gravel <small>sample description in accordance with Burmister System</small>	
2 1/2" (63 mm)					
2" (50 mm)					
1 1/2" (38.1 mm)					
1" (25 mm)				LL : PL : PI :	
3/4" (19 mm)	100.0				
5/8" (16 mm)				As received Moisture Content: %	
1/2" (12.5 mm)	98.2				
3/8" (9.5 mm)	96.7			Classification: USCS: [ML] USDA:	
5/16" (8 mm)					
1/4" (6.3 mm)				Remarks: Sample received in lab on October 16, 2019 Permeability, k: 2.5 x 10 ⁻⁶ cm/s (0.004 in/hr) K0 Permeability, k: 2.7 x 10 ⁻⁶ cm/s (0.004 in/hr) K0 Client: Neglia Engineering Associates Project: Snyder Park Location: Berkeley Heights, New Jersey Date: 22-Oct-19 Job No.: 19-C-33 Report No.: 19-C-40	
#4 (4.75 mm)	92.3				
#6 (3.35 mm)					
#8 (2.36 mm)					
#10 (2 mm)	86.4				
#14 (1.4 mm)					
#16 (1.18 mm)					
#20 (850 µm)					
#30 (600 µm)	74.6				
#40 (425 µm)	70.7				
#50 (300 µm)					
#60 (250 µm)	65.0				
#100 (150 µm)	59.6				
#200 (75 µm)	54.8				

* -

APPENDIX IV
LIMITATIONS

SOR CONSULTING ENGINEERS, INC

LIMITATIONS

The conclusions and recommendations contained in this geotechnical report no. 19-C-40 are based upon the applicable standards of our profession at the time this report was prepared.

The analyses and recommendations submitted in this report are based in part upon the data obtained from eight widely-spaced geoprobes performed for this study. The stratification lines shown on the individual logs of the subsurface explorations represent the approximate boundaries between soil types. However, the transition between soil types may be gradual.

In our opinion, the number of explorations performed for this study are adequate for a general understanding of the site subsurface conditions. However, the nature and extent of variations between the explorations may not become evident until construction. If, during construction, variations become evident, it will be necessary to re-evaluate the recommendations of this report.

This geotechnical engineering report was prepared for the project by Sor Consulting Engineers, Inc. for design purposes only, and may not be sufficient to prepare an accurate bid. Contractors utilizing the information in the report should do so with the express understanding that its scope is limited to design considerations. Prospective bidders should obtain the owner's permission to perform whatever additional explorations or data gathering they deem necessary to prepare their bid accurately.

This report has been prepared in accordance with generally accepted geotechnical engineering practices for the exclusive use of Neglia Engineering Associates and/or their authorized representatives for specific application to the reconstruction of the Snyder Park baseball field located in Berkeley Heights, New Jersey. No other warranty, expressed or implied, is made.



**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 terms, conditions, and limitations 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>		Approval Date 05/29/2020
		Expiration Date 05/28/2025
Permit Number(s): 2001-08-0001.3 LUP 200001	Type of Approval(s): Flood Hazard Area Individual Permit Freshwater Wetlands General Permit No. 11 Freshwater Wetlands Transition Area Special Activity Waiver	Governing Rule(s): N.J.A.C. 7:13-1.1(b) N.J.A.C. 7:7A-1.1(a)
Permittee: Union County Mr. Thomas O. Mineo, P.E. 2325 South Avenue Scotch Plains, NJ 07076	Site Location: Block(s) & Lot(s): [1901, 1.02] Municipality: Berkeley Heights Township County: Union	
Description of Authorized Activities: <p>This document authorizes the construction of an outfall structure in the flood hazard area of the Robbins Avenue Branch Tributary in connection with the improvements to an existing baseball field at the Snyder Park Athletic Complex on the parcel referenced above, in the Township of Berkeley Heights, Union County, New Jersey.</p>		
Prepared by: Valda Opara	Received and/or Recorded by County Clerk:	
<p>If the permittee undertakes any regulated activity, project, or development authorized under this 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 requirements of the permit and all conditions therein.</p>		
<p>This permit is not valid unless authorizing signature appears on the last page.</p>		

STATEMENT OF AUTHORIZED IMPACTS:

The authorized activities allow for the permittee to undertake impacts to regulated areas as described below. Additional impacts to regulated areas without prior Department approval shall constitute a violation of the rules under which this document is issued and may subject the permittee and/or property owner to enforcement action, pursuant to N.J.A.C. 7:13-2.1; N.J.A.C. 7:7A-2.1

FWW GP11 Outfalls/Intake Structures	Permanent Disturbance (Acres)	Temporary Disturbance (Acres)
Freshwater wetlands	0	0
Transition areas	0.046	0
State open waters	0	0

TAW - Reduction	Permanent Disturbance (Acres)	Temporary Disturbance (Acres)
Transition areas	1.125	0

Riparian Zone Vegetation	Area of riparian zone (Acres)
Permanent Disturbed	0.072
Temporary Disturbed	0

PRE-CONSTRUCTION CONDITIONS:

1. **Within 90 days of permit issuance** or prior to site preparation, clearing, grading or construction, whichever comes first, the permittee shall execute and record a Division approved conservation restriction in accordance with N.J.A.C. 7:7A-8.1(e). The conservation restriction shall address the "proposed deed restricted mitigation conservation area 1 and 2, 12,818 square feet (0.294 acres)" area depicted on the approved "MITIGATION PLAN" plan. The restriction shall be included on the deed and recorded in the office of the County Clerk (the REGISTRAR OF DEEDS AND MORTGAGES), in the county wherein the lands included in the waiver are located. Said restriction shall run with the land and be binding upon all successive owners. All individual lot surveys shall show the approved transition area boundaries. Any regulated activities undertaken on the site before a copy of this recorded restriction is submitted to the Division will be considered in violation of the Freshwater Wetlands Protection Act. The applicant shall use the model draft conservation restriction found on the Division's webpage at http://www.nj.gov/dep/landuse/download/lur_035.pdf. Please send a copy of the draft restriction Monica Zabroski at Monica.Zabroski@dep.nj.gov of this office for review prior to executing and recording.

SPECIAL CONDITIONS FOR A FLOOD HAZARD AREA PERMIT:

1. **The Division has determined that the required riparian zone adjacent to the regulated water affected by the project is 50 feet from the top of bank of Robbins Avenue Brook. This permit authorizes the disturbance to 1,900 square feet (0.044 acres) of riparian zone vegetation for the construction and installation of a headwall with an outlet structure and a stormwater pipe. In addition, this permit authorizes the disturbance to 1,200 square feet (0.028 acres) of riparian zone vegetation for the placement of synthetic turf in the existing baseball field. Only work located within the riparian zone identified on the approved plans are permitted. Any additional disturbance to the riparian zone shall be considered a violation of the Flood Hazard Area Control Act rules (FHACAR) unless a permit is obtained from the Division of Land Use Regulation prior to the start of the disturbance.**
2. Although no work is proposed within Robbins Avenue Brook, special caution shall be taken to protect general game fisheries within said waterways between **May 1 through July 31 of each year**. Furthermore, any proposed grading or construction activities within the riparian zone which likely would introduce sediment into said watercourse or which could cause an increase in the natural level of turbidity is also prohibited anytime and especially during this period. The Department reserves the right to suspend all regulated activities on-site should it be determined that the applicant has not taken proper precautions to ensure continuous compliance with this condition.
3. Prior to commencing any activity such as clearing, grading, or construction onsite, the permittee shall obtain all necessary approvals from the local Soil Conservation District (SCD) or its designee and the Natural Resource Conservation Service (NRCS). If neither SCD or NRCS approval is required, the permittee shall implement soil erosion control measures such as, but not limited to, standards specified in N.J.A.C. 7:13-12.1(e) to include the **installation and maintenance of a silt fence sediment barrier** around all disturbed soils, which is sufficient to prevent the sedimentation of the remaining wetlands, transition areas, and waters.
4. 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.
5. **Material Disposal:** All excavated material and construction debris 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.
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 of the top of any stream bank onsite shall be disturbed for any reason. This condition applies to all channels onsite regardless of the contributory drainage area.
7. All riparian zone vegetation that is temporarily cleared, cut, and/or removed to conduct a regulated activity, access an area where regulated activities will be conducted, or otherwise accommodate a regulated activity shall be replanted immediately after completion of the regulated activity, unless

prevented by seasonal weather, in which case the vegetation shall be replanted as soon as conditions permit. The vegetation to be replanted shall:

- i. Consist of vegetation of equal or greater ecological function and value as the vegetation that was cleared, cut, or removed. For example, herbaceous vegetation may be replaced with the same type of vegetation or with trees, but the trees in forested areas must be replaced with trees of equal or greater density and ecological function and value;
 - ii. Consist of native, non-invasive vegetation, except in an actively disturbed area. In an actively disturbed area, the vegetation may be replaced with the same type of vegetation that was cleared, cut, or removed, or with another kind of vegetation typical of an actively disturbed area. For example, lawn grass may be replaced with garden plants or agricultural crops; and
 - iii. In cases where replanting would interfere with continued access to or maintenance of a structure that is required by Federal, State, or local law, the vegetation replanted shall meet the requirements to the extent feasible
8. Upon completion of the project, all temporary disturbed areas within 50 feet of the top of any stream bank onsite shall be restored to original topography and replanted with indigenous, non-invasive vegetation in accordance with N.J.A.C. 7:13-11.2(z).
9. All temporary disturbances must be permanently discontinued within six months after they are begun, and all temporary disturbed areas must be restored to their original condition.

FRESHWATER WETLANDS PERMIT CONDITIONS:

1. **The permittee shall plant native trees and shrubs within the deed restricted wetland transition area, as depicted on the approved "MITIGATION PLAN". This planting shall be done no later than the first available planting season following the completion of construction. Once planted, appropriate steps, such as fencing around each plant or around the entire planted area, shall be taken to prevent predation by deer. If the stock plants are sufficiently large such that the growing tips of the trees/shrubs are above the level of where deer can reach, fencing will not be required. In addition, this area shall not be mowed and shall be allowed to revert to natural vegetation.**
2. **The total amount of disturbance associated with this authorization shall not exceed 0.046 acres (2,000 square feet) of freshwater wetlands transition area for the construction and installation of a headwall with an outlet structure and a stormwater pipe under a Freshwater Wetlands Statewide General Permit No. 11. In addition, the permit authorizes the disturbance to 1.125 acres (49,000 square feet) of transition area for the placement of synthetic turf on the existing baseball field under a Freshwater Wetlands Transition Area Waiver at N.J.A.C. 7:7A-8.1(d). Any additional un-permitted disturbance of freshwater wetlands, State open waters and/or transition areas besides that shown on the approved plans shall be considered a violation of the Freshwater Wetlands Protection Act Rules unless the activity is exempt or a permit is obtained from the Department prior to the start of the proposed disturbance.**
3. Regulated areas on site feature documented and suitable habitat for Indiana bat. In order to prevent adverse impacts to Indiana bat, the clearing of trees 5 inches diameter at breast height or greater may not occur on site from April 1 to September 30.
4. The construction activities shall not cause any change in pre-construction elevation of freshwater wetlands, transition areas, or State open waters.

5. Any pipes laid shall be properly sealed so as to prevent leaking or infiltration.
6. The trench into which the utility line is placed shall be no wider than necessary to comply with the Federal O.S.H.A. safety standards.
7. Temporary disturbance, as defined at N.J.A.C. 7:7A-1.4, such as temporary construction clearing or temporary storage of dirt or equipment, shall be the minimum size necessary for compliance with applicable laws.
8. The permittee shall submit written notification to the Bureau of Coastal and Land Use Compliance and Enforcement, Mail Code 401-04C, 401 East State Street, PO Box 420, Trenton, NJ 08625-0420, at least seven days prior to the commencement of site preparation, or of regulated activities, whichever comes first.
9. If the permittee, before or during the work authorizes, encounters a possible historic property, as described at N.J.A.C. 7:7A-19.5(l), that is or may be eligible for listing in the New Jersey or National Register, the permittee shall preserve the resource and immediately notify the Department and proceed as directed.
10. Any and all precautions must be taken to prevent raw concrete [e.g. abutments/footings] from coming in contact with the waters of the tributary; raw concrete is toxic to aquatic biota.
11. If activities under the general permit involve excavation or dredging, the applicant shall use an acceptable disposal site for the excavated or dredged material. No material shall be deposited or dewatered in freshwater wetlands, transition areas, State open waters or other environmentally sensitive areas. The Department may require testing of dredged material if there is reason to suspect that the material is contaminated. If any dredged material is contaminated with toxic substances, the dredged material shall be removed and disposed of in accordance with Department-approved procedures.
12. The permittee shall plant native trees and shrubs within the modified transition area as depicted on the approved plan. The planting shall be done no later than the first available planting season following the completion of construction. Once planted, appropriate steps, such as fencing around each plant or around the entire planted area, shall be taken to prevent predation by deer.
13. Within 30 days following the planting of this area, the permittee shall submit a Construction Completion Report to the Division detailing as-built conditions and any changes to the approved planting plan that were made during construction. The Construction Completion Report shall contain, at a minimum, the following information:
 - a. A certification that the planting project has been constructed as proposed, including a table of the species and quantities of vegetation that were planted; and
 - b. Photos of the planting project with a photo location map.
 - c. Once planted, these areas shall remain undisturbed and not be mowed or maintained. Rather, these areas shall be allowed to revert to a natural habitat.
 - d. The permittee shall monitor the planted area for 3 growing seasons following the completion of planting to ensure that at least 85 percent of the plantings have survived.

Additional plantings consisting of tree species native to New Jersey shall be provided if this survival rate is not met. The transition areas shall be monitored for the intrusion and growth of invasive species into the buffers. Mechanical means and proper horticultural methods shall be utilized primarily to eradicate invasive species. Limited use of selective herbicides is permitted only if mechanical and horticultural methods are not successful.

14. This permit does not verify the full extent of wetlands on-site. If the applicant is proposing further construction activities on-site they are encouraged to apply for a Verification type Letter of Interpretation from this office. This type of Letter of Interpretation will verify the extent of wetlands on the property and determine the resource value of those wetlands.
15. This authorization for a Freshwater Wetlands permit is valid for a term not to exceed five years from the date of this permit. If the permittee wishes to continue an activity covered by the permit after the expiration date of the permit, the permittee must apply for and obtain a permit extension or a new permit, prior to the permit's expiration. If the term of the authorization exceeds the expiration date of the general permit issued by rule, and the permit upon which the authorization is based is modified by rule to include more stringent standards or conditions, or is not reissued, the applicant must comply with the requirements of the new regulations by applying for a new General Permit authorization or an Individual permit.

SPECIAL CONDITIONS:

1. 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.
2. The applicant shall adhere to the maintenance plan for the stormwater management measures incorporated into the design of the major development in accordance with N.J.A.C. 7:8-5.8 and the guidelines of the New Jersey Stormwater Best Management Practices Manual.
3. The Department has determined that this project meets the requirements of the Stormwater Management rules at N.J.A.C. 7:8. Any future expansion or alteration of the approved stormwater management system, which would affect water quality, increase the rate or volume of stormwater leaving the site, affect the infiltration capacity on the site, or alter the approved low impact site design, shall be reviewed and approved by the Department prior to construction. This includes any proposed changes to the discharge characteristics of any basin, the construction of new inlets or pipes that tie into the storm sewer network and/or the replacement of existing inlets or pipes with structures of different capacity.

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 or designee 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 of any unanticipated adverse effects on the environment not described in the application or in the conditions of the permit. The Department may, upon discovery of such unanticipated adverse effects, and upon the failure of the permittee to submit a report thereon, notify the permittee of its intent to suspend the permit.
7. The permittee shall immediately inform the Department by telephone at (877) 927-6337 (WARN DEP hotline) of any noncompliance that may endanger public health, safety, and welfare, or the environment. 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:
 - i. A description of the noncompliance and its cause;
 - ii. The period of noncompliance, including exact dates and times;
 - iii. If the noncompliance has not been corrected, the anticipated length of time it is expected to continue; and
 - iv. The steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
8. Any noncompliance with a permit constitutes a violation of this chapter and is grounds for enforcement action, as well as, in the appropriate case, suspension and/or termination of the permit.
9. 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.
10. 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.
11. 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.
12. The issuance of a permit does not relinquish public rights to access and use tidal waterways and their shores.

13. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:
 - i. Enter upon the permittee's premises where a regulated activity, project, or development is located or conducted, or where records must be kept under the conditions of the permit;
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
 - iii. 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; and
 - iv. Sample or monitor at reasonable times, for the purposes of assuring compliance or as otherwise authorized by the Federal Act, by the Freshwater Wetlands Protection Act, or by any rule or order issued pursuant thereto, any substances or parameters at any location.
14. 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, project, or development is being undertaken. Upon completion of the regulated activity, project, or development, 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.
15. The permittee and its contractors and subcontractors shall comply with all conditions, site plans, and supporting documents approved by the permit.
16. All conditions, site plans, and supporting documents approved by a permit shall remain in full force and effect, so long as the regulated activity, project, or development, or any portion thereof, is in existence, unless the permit is modified pursuant to the rules governing the herein approved permits.
17. The permittee shall perform any mitigation required under the permit in accordance with the rules governing the herein approved permits.
18. 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.
19. Any permit condition that does not establish a specific timeframe within which the condition must be satisfied (for example, prior to commencement of construction) shall be satisfied within six months of the effective date of the permit.
20. 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.

21. The permittee shall provide monitoring results to the Department at the intervals specified in the permit.
22. A permit shall be transferred to another person only in accordance with the rules governing the herein approved permits.
23. A permit can be modified, suspended, or terminated by the Department for cause.
24. 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.
25. 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.
26. The permittee shall submit written notification to the Bureau of Coastal and Land Use Compliance and Enforcement, 401 East State Street, 4th Floor, PO Box 420, Mail Code 401-04C, Trenton, NJ 08625, at least three working days prior to the commencement of regulated activities.
27. 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 listed on page one of this permit.

APPROVED PLAN(S):

The drawings hereby approved consist of nine (9) sheets prepared by Neglia Engineering Associates, dated February 21, 2020, last revised May 11, 2020, unless otherwise noted, entitled:

“SNYDER PARK IMPROVEMENTS BLOCK 1901 – LOT 1.02 TOWNSHIP OF BERKELEY HEIGHTS UNION COUNTY NEW JERSEY”

“SITE PLAN”, sheet no. 3.00,

“GRADING PLAN”, sheet no. 4.00, unrevised,

“DRAINAGE PLAN”, sheet no. 5.00, unrevised,

“SOIL EROSION & SEDIMENT CONTROL PLAN”, sheet no. 6.00,

“FRESHWATER WETLANDS PERMITTING PLAN”, sheet no. 8.00, last revised May 15, 2020

“FLOOD HAZARD AREA PERMITTING PLAN”, sheet no. 8.01, last revised May 15, 2020,

“MITIGATION PLAN”, sheet no. 8.02, last revised May 15, 2020, ~~as follows~~

“CONSTRUCTION DETAILS I”, sheet no. 9.00,

“CONSTRUCTION DETAILS II”, sheet no. 9.01, last revised May 15, 2020.

APPEAL OF DECISION:

Any person who is aggrieved by this decision may submit an adjudicatory hearing request within 30 calendar days after public notice of the decision is published in the DEP Bulletin (available at www.nj.gov/dep/bulletin). If a person submits the hearing request after this time, the Department shall

deny the request. The hearing request must include a completed copy of the Administrative Hearing Request Checklist (available at www.nj.gov/dep/landuse/forms.html). A person requesting an adjudicatory hearing shall submit the original hearing request to: NJDEP Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, Mail Code 401-04L, P.O. Box 402, 401 East State Street, 7th Floor, Trenton, NJ 08625-0402. Additionally, a copy of the hearing request shall be submitted to the Director of the Division of Land Use Regulation at the address listed on page one of this permit. In addition to your hearing request, you may file a request with the Office of Dispute Resolution to engage in alternative dispute resolution. Please see www.nj.gov/dep/odr for more information on this process.

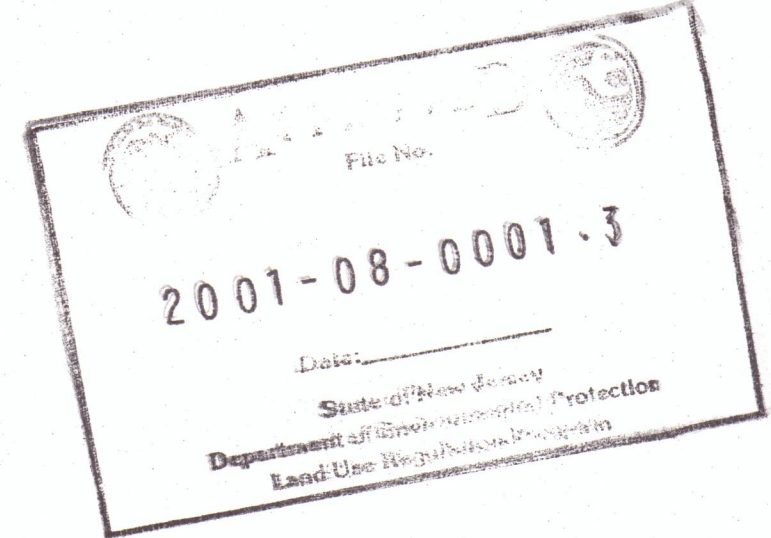
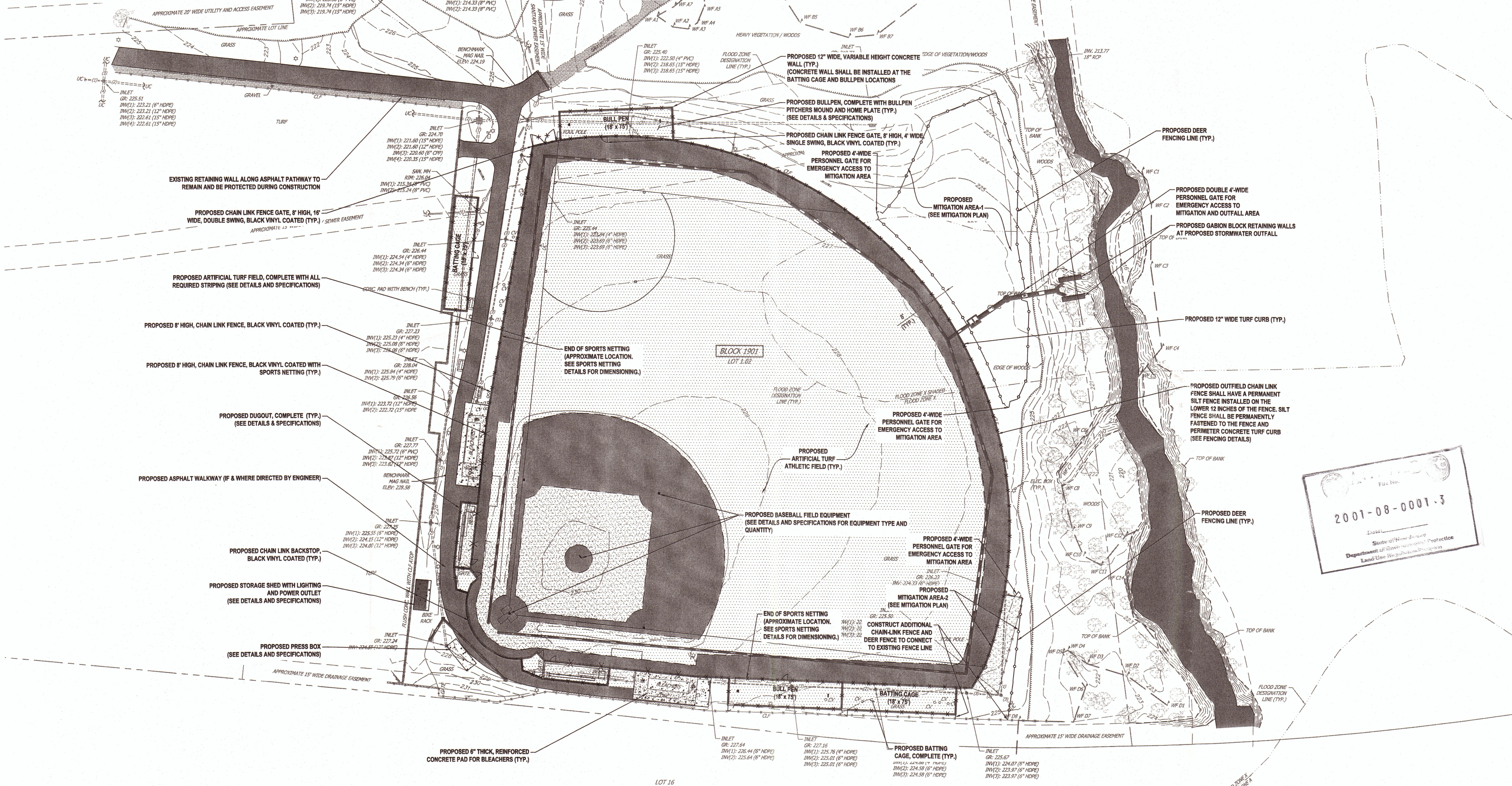
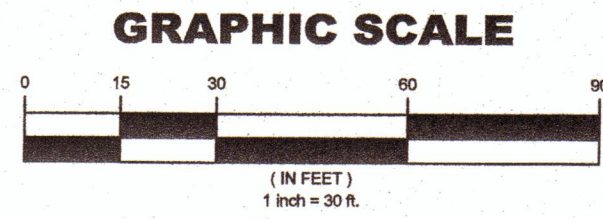
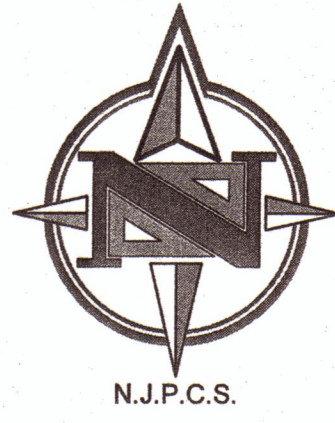
If you need clarification on any section of this permit or conditions, please contact the Division of Land Use Regulation's Technical Support Call Center at (609) 777-0454.

Approved By:



Vincent J. Mazzei, Jr., P.E., Manager
Bureau of Inland Regulation
Division of Land Use Regulation

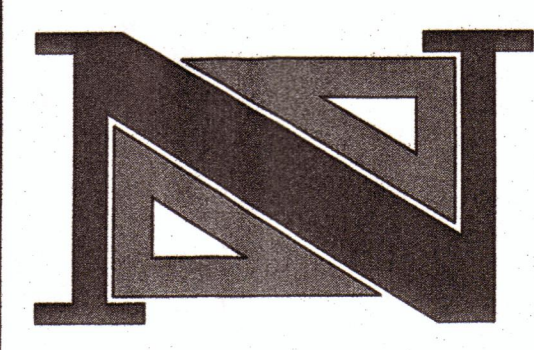
cc: Municipal Clerk, Berkeley Heights Township
Municipal Construction Official, Berkeley Heights Township
Agent (original) – Thomas Solfaro



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

NO.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED
1	2020-05-06	REVISED PER NJDEP COMMENTS	E.M.J.	E.M.J.	E.M.J.
2	2020-05-11	REVISED PER NJDEP COMMENTS	E.M.J.	E.M.J.	E.M.J.



DAVID R. ATKINSON, P.E., C.M.E.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 45509

THOMAS R. SOLFARO, P.E., C.M.E.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 38604

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
 LYNDHURST, NEW JERSEY
 TEL: 201-939-8805 FAX: 201-939-0848 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 38604

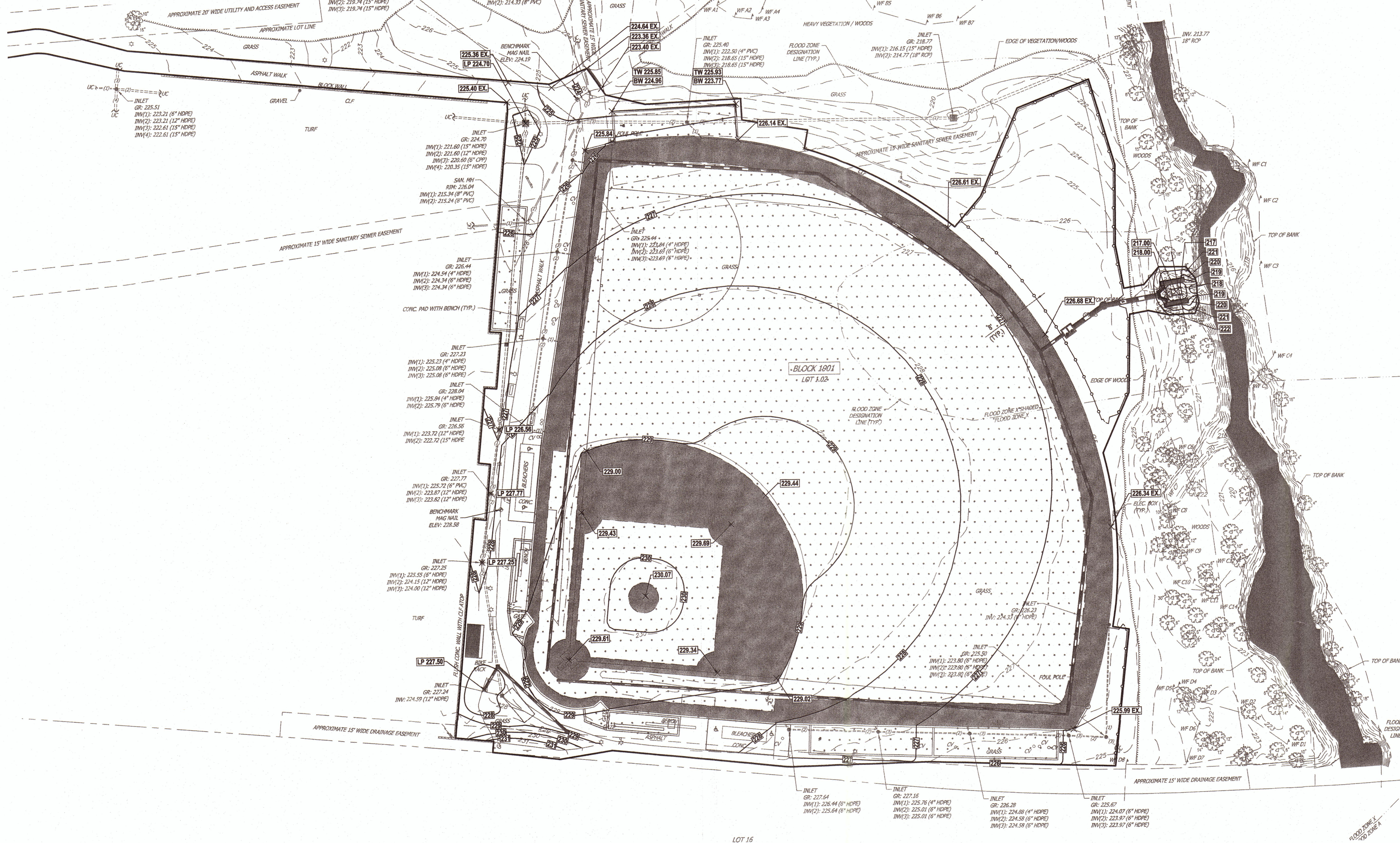
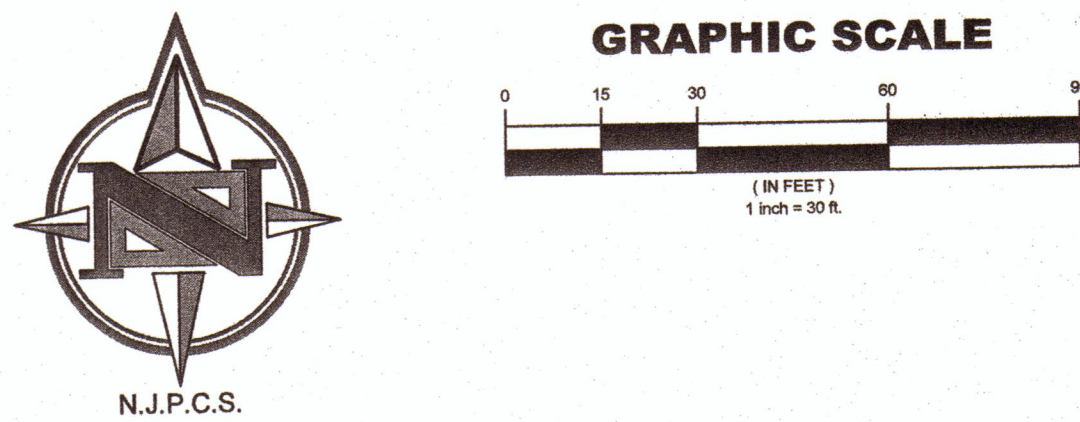
PROFESSIONAL LAND SURVEYOR
 N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER
 N.J. LICENSE NO. 33L00569800

SITE PLAN
SNYDER PARK IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

UNIOCTY19.012
 SHEET NO. 3.00
 DATE: FEBRUARY 21, 2020

in:\union county\uniocty19.012\snnyder park\uniocty19.012.dwg, Plot Date: Friday, May 22, 2020, 10:26:03 AM



File No.

 2001-08-0001-3

 Date: _____

 State of New Jersey

 Department of Environmental Protection

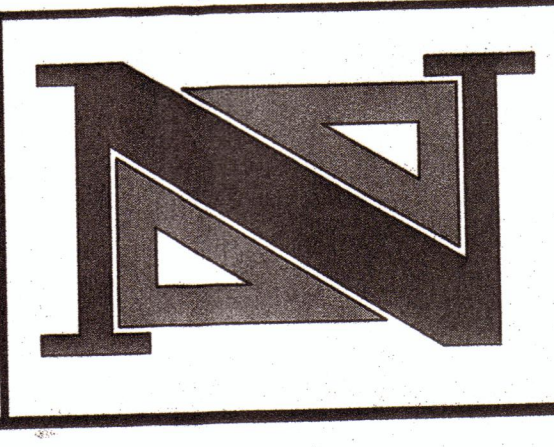
 Land Use Regulation Program

m:\united_county\mch\2001\2001-08-0001-3\2001-08-0001-3.dwg Plot Date: Tuesday, May 28, 2020 8:59:10 AM

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS		DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION		



DAVID R. ATKINSON, P.E., C.M.E.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 144506

THOMAS R. SOLFARO, P.E., C.M.E.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 144507

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
 TEL: 201-939-8805
 NEW JERSEY
 LYNDHURST
 FAX: 201-939-0848
 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 38904

PROFESSIONAL LAND SURVEYOR
 N.J. LICENSE NO. 38904

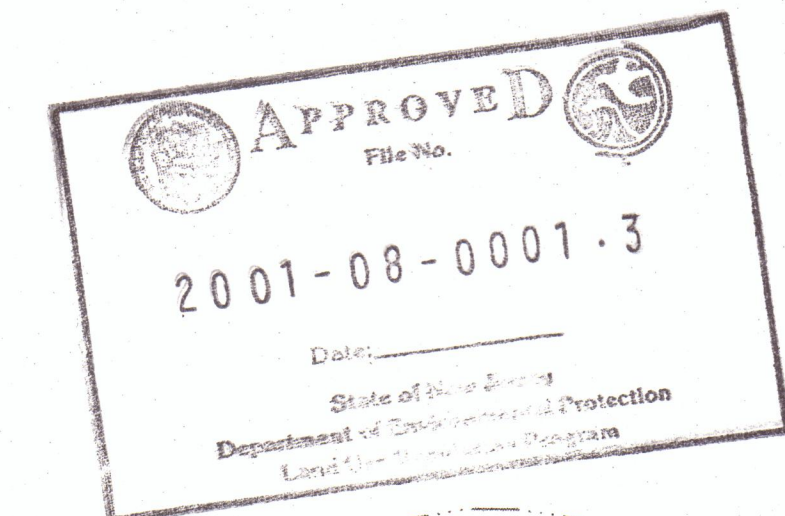
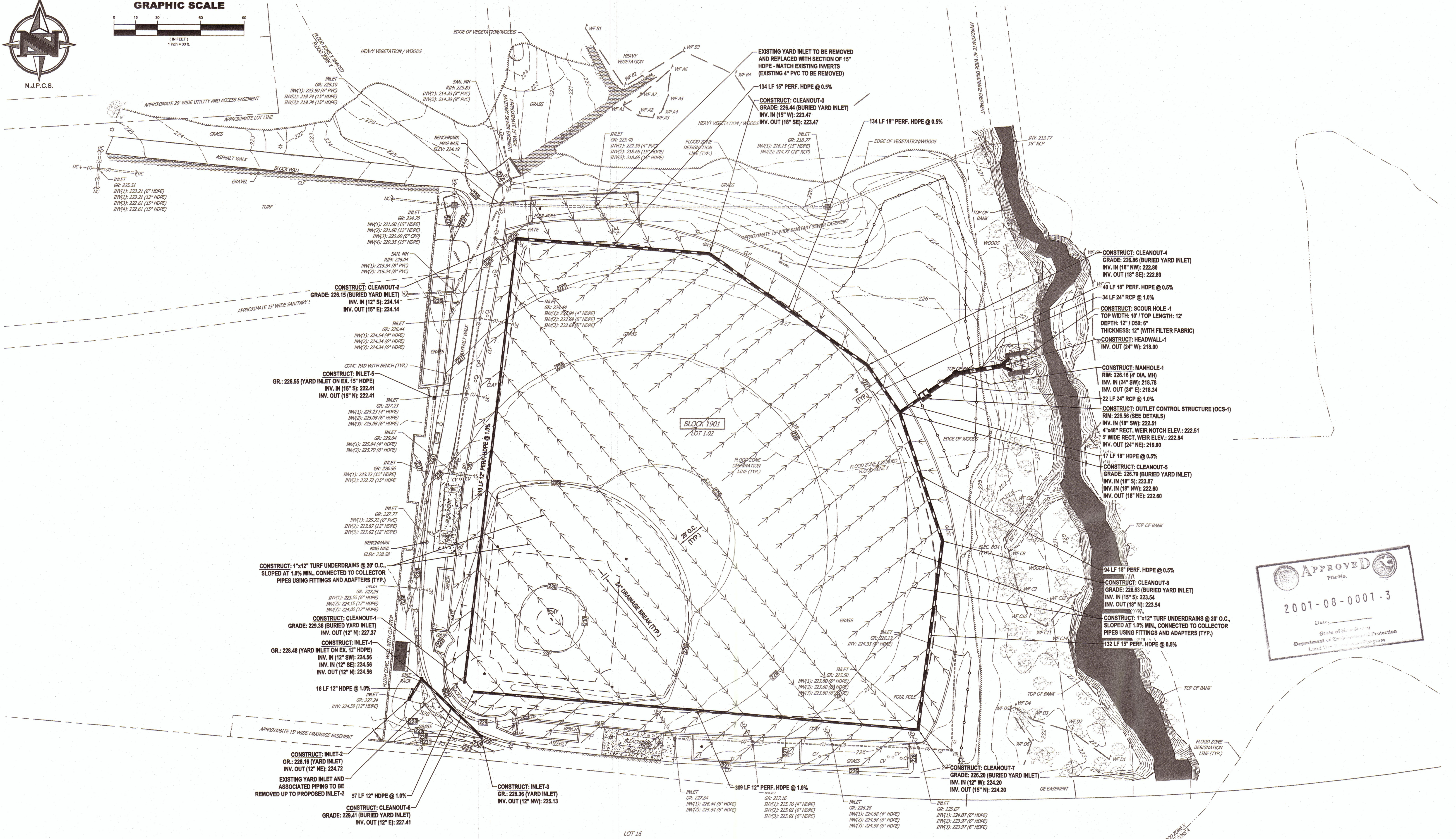
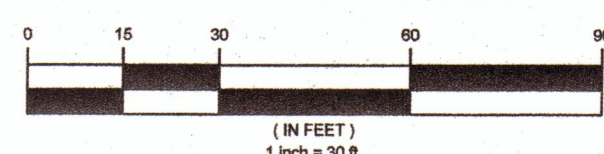
PROFESSIONAL PLANNER
 N.J. LICENSE NO. 33LJ0568800

GRADING PLAN
SNYDER PARK IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DRAWN BY: E.M.J./K.O. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY19.012 SHEET NO.: 4.00
 DESIGNED BY: E.M.J. SCALE: 1"=30' DATE: FEBRUARY 21, 2020



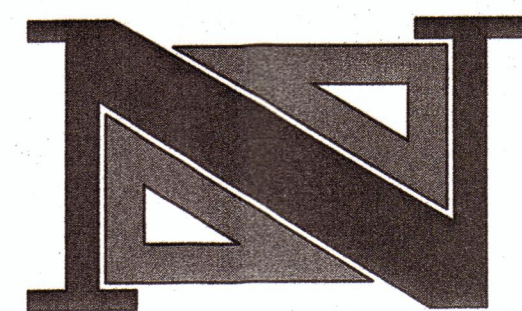
GRAPHIC SCALE



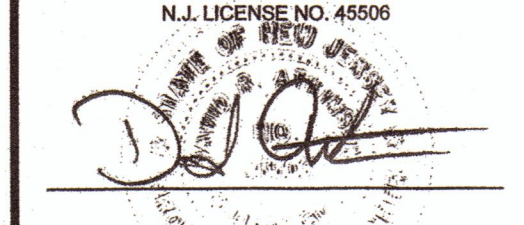
CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS		DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION		



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 46509



THOMAS R. SOLEFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 46509



A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
 TEL: 201-939-8805
 LYNDHURST, NEW JERSEY
 FAX: 201-939-0846
 E-MAIL: NEA@NEGLIAENGINEERING.COM

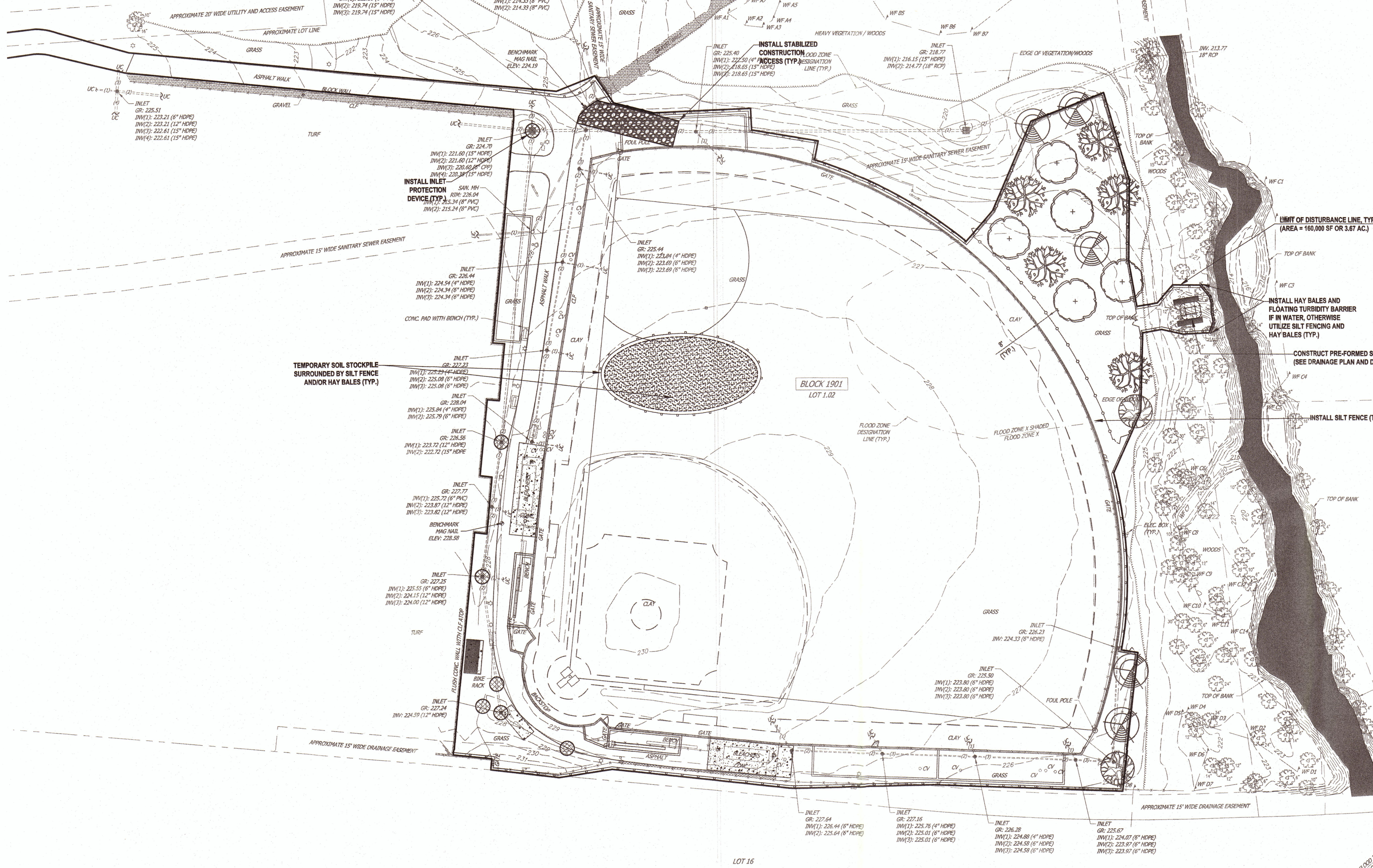
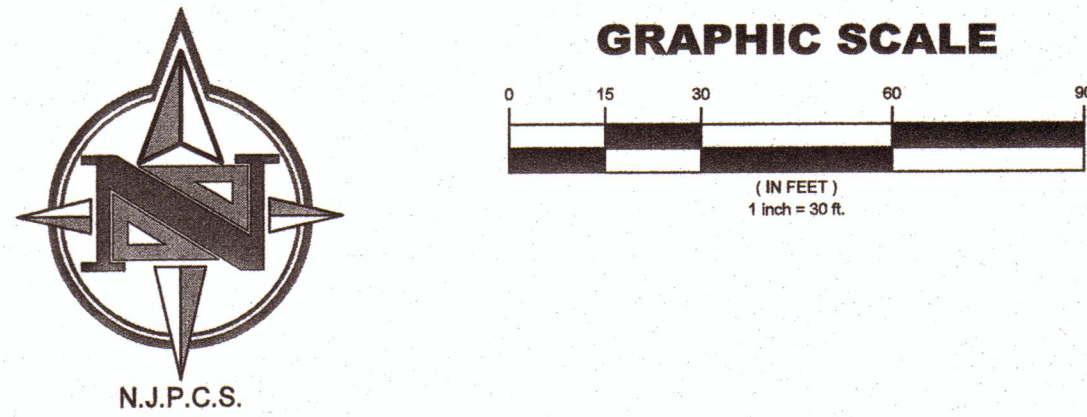
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR
 N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER
 N.J. LICENSE NO. 33L00068800

DRAINAGE PLAN
SNYDER PARK IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DESIGNED BY: E.M.J. SCALE: 1"=30' SHEET NO.: 5.00
 DRAWN BY: E.M.J. FIELD BOOK NO.: PROJECT NO.: UNIOCTY19.012 DATE: FEBRUARY 21, 2020



PERMANENT STABILIZATION NOTES:

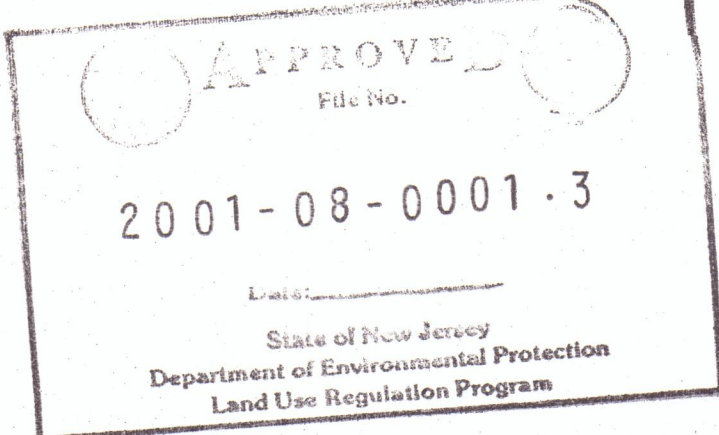
1. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE.
2. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES.
3. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

SOIL DECOMPACTION NOTES

AS DETERMINED BY THE STATE POLICY MAP, THE PROJECT AREA FALLS WITHIN THE METROPOLITAN PLANNING AREA (PA1). UNDER EXISTING CONDITIONS, THE SITE IS NOT COVERED IN WOODY VEGETATION NOR REGROWTH, EXCEPT WHERE INDICATED HEREON. IN ACCORDANCE WITH NEW JERSEY STANDARD FOR LAND GRADING (REVISED 2017), NON-WOODY VEGETATED PA1 AREAS FALL UNDER THE SOIL COMPACTION EXEMPTION LIST AS AN "URBAN DEVELOPMENT" AND IS DEFINED BY NJDEP AS "PREVIOUSLY DEVELOPED".

SOIL EROSION & SEDIMENT CONTROL LEGEND

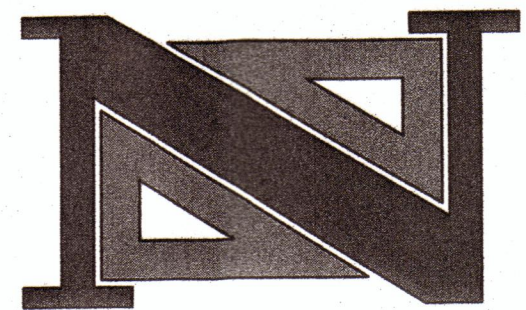
	LIMIT OF SOIL DISTURBANCE
	SILT FENCE LINE
	FLOATING TURBIDITY BARRIER LINE
	INLET PROTECTION FOR PROPOSED INLET
	SOIL STOCKPILE AREA
	STABILIZED CONSTRUCTION ACCESS PAD



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

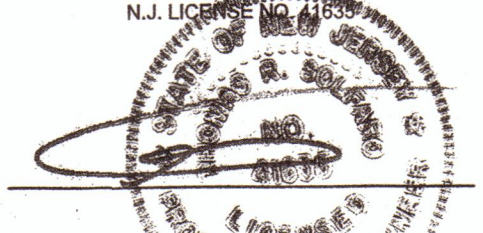
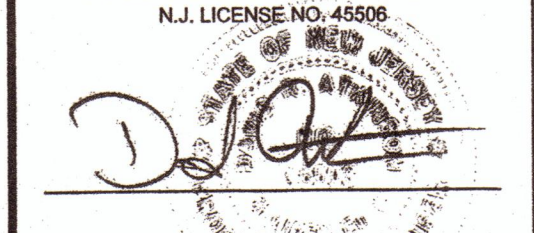
CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS				NO.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED
	1	2020-05-11	REVISED PER NJDEP COMMENTS				E.M.J.	E.M.J.	E.M.J.



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. AS508

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. AS508



A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8806 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 38904

PROFESSIONAL LAND SURVEYOR
N.J. LICENSE NO. 38904

PROFESSIONAL PLANNER
N.J. LICENSE NO. 38U0058600

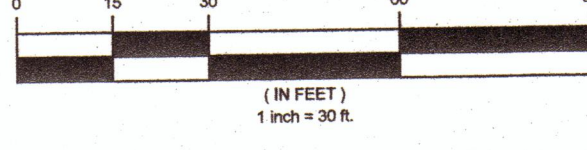
SOIL EROSION & SEDIMENT CONTROL PLAN
SNYDER PARK IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DESIGNED BY: E.M.J./T.R.S. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY19.012 SHEET NO.: 6.00
FIELD BOOK NO.: SCALE: 1"=30' DATE: FEBRUARY 21, 2020

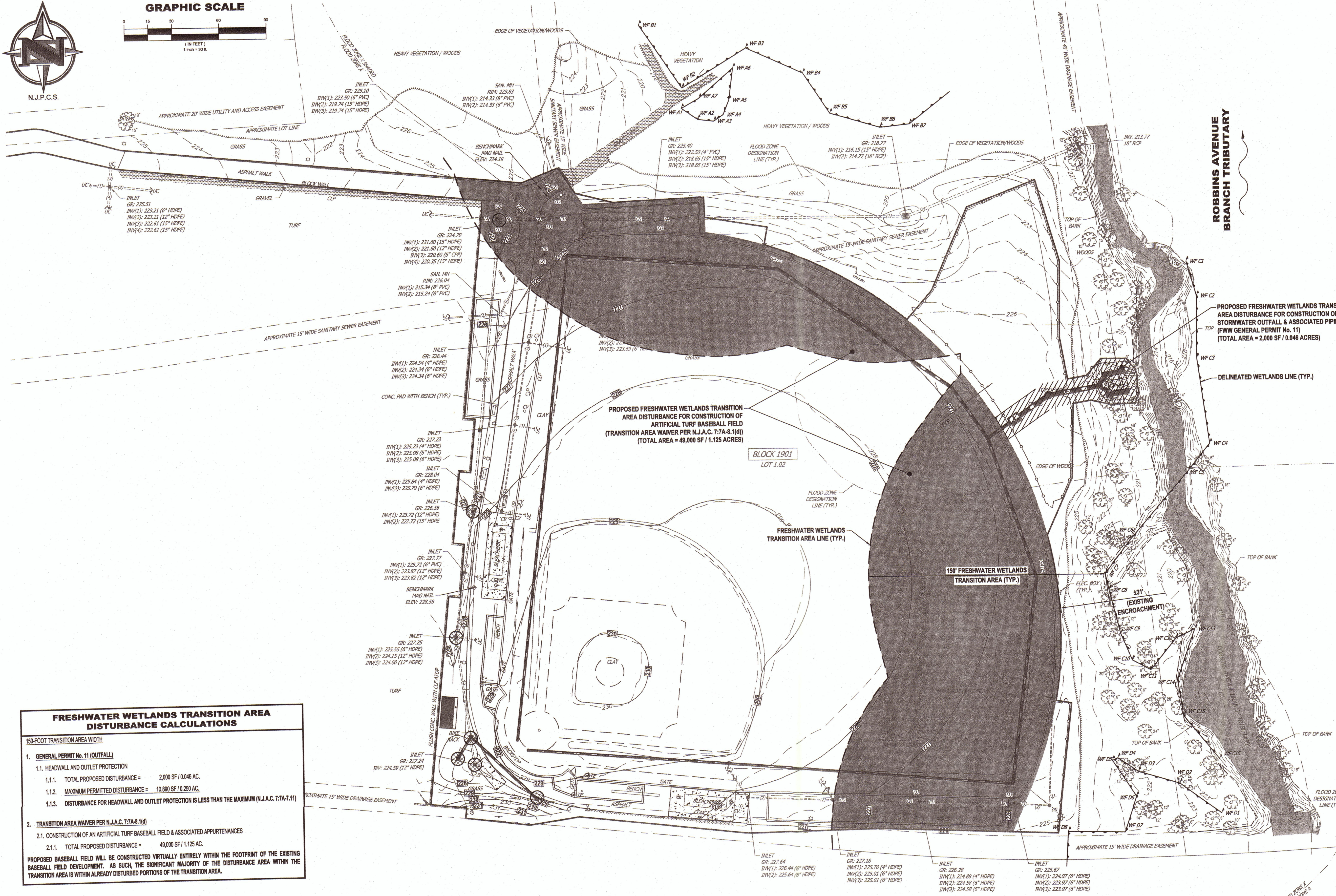
C:\Users\emj\OneDrive\Documents\2020\11\14\1.01\AM\1901\1901_1.02_SnyderParkTurk\1901_1.02_SnyderParkTurk.dwg, Friday, May 22, 2020 11:41:51 AM



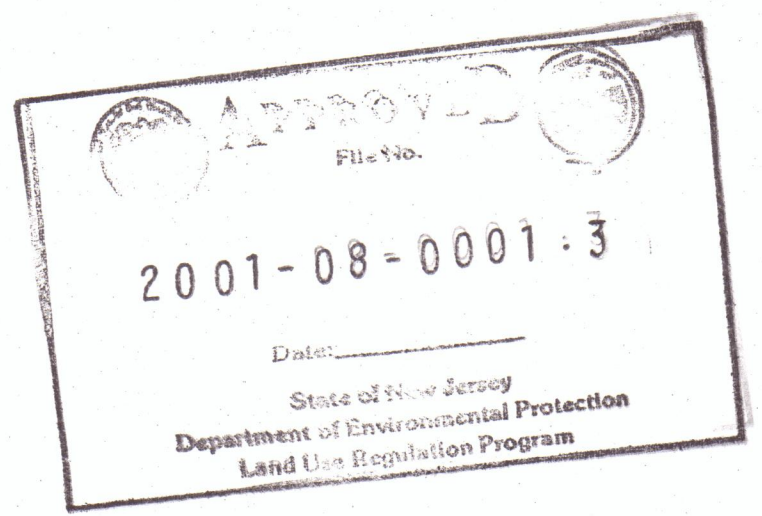
GRAPHIC SCALE



PERMITTING PLAN LEGEND	
	LIMIT OF DISTURBANCE LINE
	WETLANDS DELINEATION LINE
	TRANSITION AREA BUFFER LINE
	TRANSITION AREA DISTURBANCE (UNDER TRANSITION AREA WAIVER PER N.J.A.C. 7:7A-8.1(d))
	TRANSITION AREA DISTURBANCE FOR OUTFALL CONSTRUCTION (UNDER GENERAL PERMIT No. 11)
	PROPERTY LINE



FRESHWATER WETLANDS TRANSITION AREA DISTURBANCE CALCULATIONS	
150-FOOT TRANSITION AREA WIDTH	
1. GENERAL PERMIT No. 11 (OUTFALL)	
1.1. HEADWALL AND OUTFALL PROTECTION	
1.1.1. TOTAL PROPOSED DISTURBANCE =	2,000 SF / 0.046 AC.
1.1.2. MAXIMUM PERMITTED DISTURBANCE =	10,800 SF / 0.250 AC.
1.1.3. DISTURBANCE FOR HEADWALL AND OUTFALL PROTECTION IS LESS THAN THE MAXIMUM (N.J.A.C. 7:7A-7.11)	
2. TRANSITION AREA WAIVER PER N.J.A.C. 7:7A-8.1(d)	
2.1. CONSTRUCTION OF AN ARTIFICIAL TURF BASEBALL FIELD & ASSOCIATED APPURTENANCES	
2.1.1. TOTAL PROPOSED DISTURBANCE =	49,000 SF / 1.125 AC.
PROPOSED BASEBALL FIELD WILL BE CONSTRUCTED VIRTUALLY ENTIRELY WITHIN THE FOOTPRINT OF THE EXISTING BASEBALL FIELD DEVELOPMENT. AS SUCH, THE SIGNIFICANT MAJORITY OF THE DISTURBANCE AREA WITHIN THE TRANSITION AREA IS WITHIN ALREADY DISTURBED PORTIONS OF THE TRANSITION AREA.	

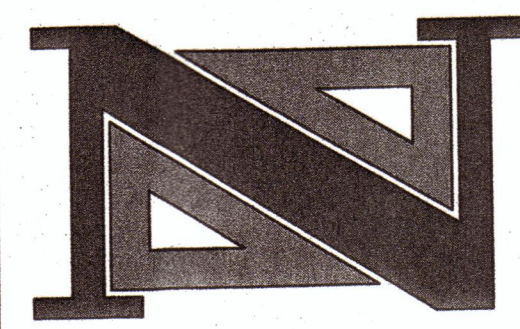


C:\projects\snnyder\2020\0515\20200515.dwg Plot Date: Thursday, May 28, 2020 3:06:11 PM

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA2792700

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION	E.M.J.	E.M.J.	E.M.J.
1	2020-05-15	REVISED PER NIDEP COMMENTS			



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOEFARO, P.E., C.M.E.
PROFESSIONAL LAND SURVEYOR
N.J. LICENSE NO. 38804

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 38904

PROFESSIONAL LAND SURVEYOR
N.J. LICENSE NO. 38804

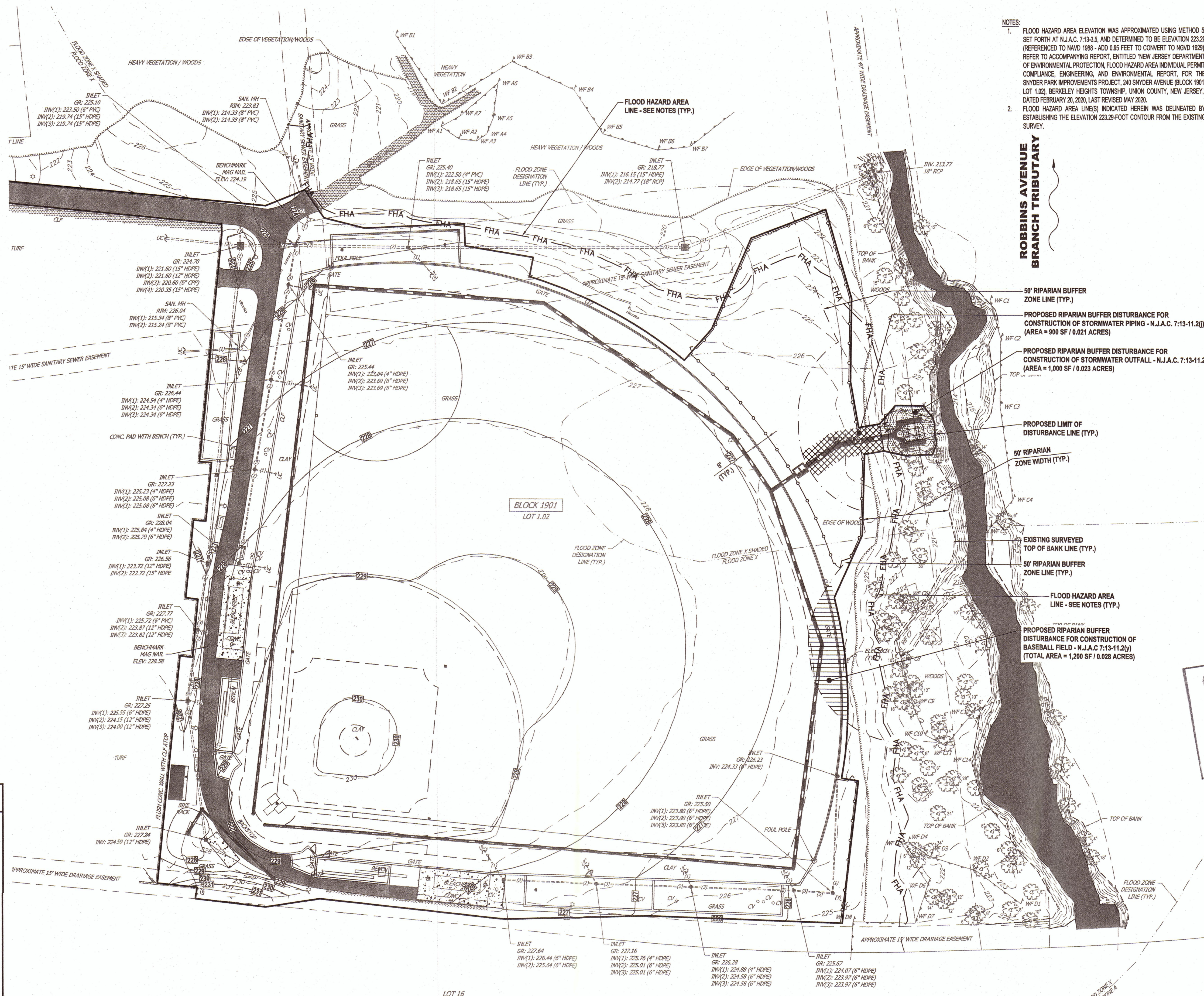
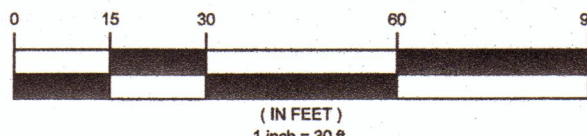
PROFESSIONAL PLANNER
N.J. LICENSE NO. 33L00056800

FRESHWATER WETLANDS PERMITTING PLAN
SNYDER PARK IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DESIGNED BY: E.M.J. CHECKED BY: E.M.J. PROJECT NO: UNIOCTY19.012 SHEET NO: 8.00
FIELD BOOK NO: SCALE: 1" = 30' DATE: FEBRUARY 21, 2020



GRAPHIC SCALE

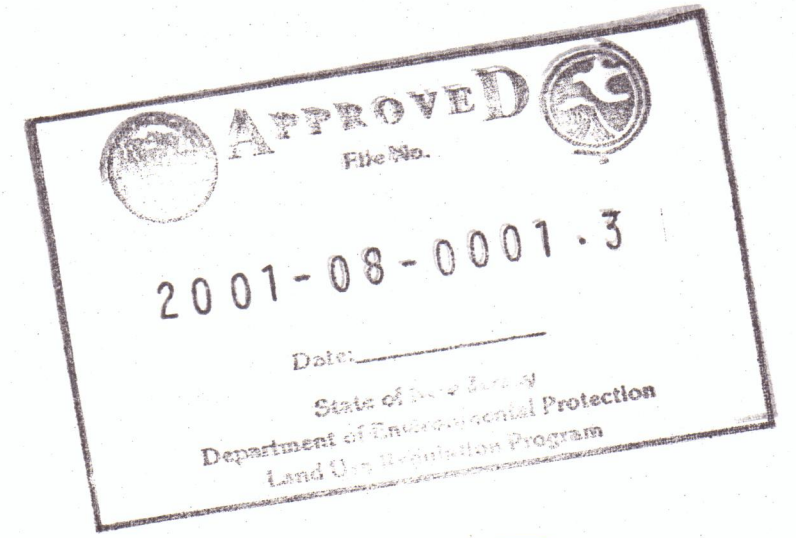


PERMITTING PLAN LEGEND	
	LIMIT OF DISTURBANCE LINE
	SURVEYED TOP OF BANK LINE
	RIPARIAN BUFFER LINE
	FLOOD HAZARD AREA LINE (SEE NOTES)
	RIPARIAN BUFFER DISTURBANCE (FOR STORMWATER OUTFALL PIPING)
	RIPARIAN BUFFER DISTURBANCE (FOR HEADWALL & OUTLET PROTECTION)
	RIPARIAN BUFFER DISTURBANCE (FOR BASEBALL FIELD)
	PROPERTY LINE

NOTES:
 1. FLOOD HAZARD AREA ELEVATION WAS APPROXIMATED USING METHOD 5, SET FORTH AT N.J.A.C. 7:13-3.5, AND DETERMINED TO BE ELEVATION 223.29 (REFERENCED TO NAVD 1988 - ADD 0.95 FEET TO CONVERT TO NGVD 1929). REFER TO ACCOMPANYING REPORT, ENTITLED "NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, FLOOD HAZARD AREA INDIVIDUAL PERMIT COMPLIANCE, ENGINEERING, AND ENVIRONMENTAL REPORT, FOR THE SNYDER PARK IMPROVEMENTS PROJECT, 240 SNYDER AVENUE (BLOCK 1901, LOT 1.02), BERKELEY HEIGHTS TOWNSHIP, UNION COUNTY, NEW JERSEY," DATED FEBRUARY 20, 2020, LAST REVISED MAY 2020.
 2. FLOOD HAZARD AREA LINE(S) INDICATED HEREIN WAS DELINEATED BY ESTABLISHING THE ELEVATION 223.29-FOOT CONTOUR FROM THE EXISTING SURVEY.

ROBBINGS AVENUE BRANCH TRIBUTARY

- 50' RIPARIAN BUFFER ZONE LINE (TYP.)
- PROPOSED RIPARIAN BUFFER DISTURBANCE FOR CONSTRUCTION OF STORMWATER PIPING - N.J.A.C. 7:13-11.2(i) (AREA = 900 SF / 0.021 ACRES)
- PROPOSED RIPARIAN BUFFER DISTURBANCE FOR CONSTRUCTION OF STORMWATER OUTFALL - N.J.A.C. 7:13-11.2(j) (AREA = 1,000 SF / 0.023 ACRES)
- PROPOSED LIMIT OF DISTURBANCE LINE (TYP.)
- 50' RIPARIAN ZONE WIDTH (TYP.)
- EXISTING SURVEYED TOP OF BANK LINE (TYP.)
- 50' RIPARIAN BUFFER ZONE LINE (TYP.)
- FLOOD HAZARD AREA LINE - SEE NOTES (TYP.)
- PROPOSED RIPARIAN BUFFER DISTURBANCE FOR CONSTRUCTION OF BASEBALL FIELD - N.J.A.C. 7:13-11.2(y) (TOTAL AREA = 1,200 SF / 0.028 ACRES)

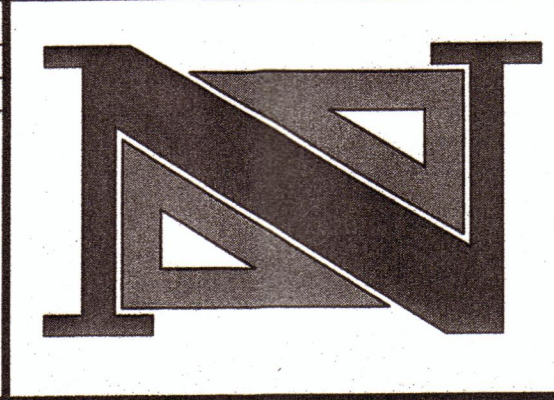


RIPARIAN ZONE DISTURBANCE CALCULATIONS	
FHA INDIVIDUAL PERMIT - 50-FOOT RIPARIAN ZONE	
1. STORMWATER DISCHARGE	
1.1. HEADWALL AND OUTLET PROTECTION	
1.1.1.	TOTAL PROPOSED DISTURBANCE = 1,000 SF / 0.023 AC.
1.1.2.	MAXIMUM PERMITTED DISTURBANCE = 2,000 SF / 0.046 AC.
1.1.3.	DISTURBANCE FOR HEADWALL AND OUTLET PROTECTION IS LESS THAN THE MAXIMUM (N.J.A.C. 7:13-11.2(i))
1.2. STORMWATER PIPE	
1.2.1.	TOTAL PROPOSED DISTURBANCE = 900 SF / 0.021 AC.
1.2.2.	MAXIMUM PERMITTED DISTURBANCE = 1,000 SF / 0.023 AC.
1.2.3.	DISTURBANCE FOR STORMWATER PIPE IS LESS THAN THE MAXIMUM (N.J.A.C. 7:13-11.2(j))
2. REGULATED ACTIVITY NOT LISTED IN TABLE 11.2	
2.1. CONSTRUCTION OF AN ARTIFICIAL TURF BASEBALL FIELD & ASSOCIATED APPURTENANCES	
2.1.1.	TOTAL PROPOSED DISTURBANCE = 1,200 SF / 0.028 AC.
2.1.2.	MAXIMUM PERMITTED DISTURBANCE = 10,880 SF / 0.250 AC.
2.1.3.	DISTURBANCE FOR BASEBALL FIELD IS LESS THAN THE MAXIMUM (N.J.A.C. 7:13-11.2(y))

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION	E.M.J.	E.M.J.	E.M.J.
1	2020-05-15	REVISED PER NJDEP COMMENTS			



DAVID R. ATKINSON, P.E., C.M.E.
 PROFESSIONAL ENGINEER

THOMAS R. SOLFARO, P.E., C.M.E.
 PROFESSIONAL ENGINEER

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
 LYNDHURST, NEW JERSEY
 TEL: 201-939-8805 FAX: 201-939-0846
 E-MAIL: NEA@NEGLIAENGINEERING.COM

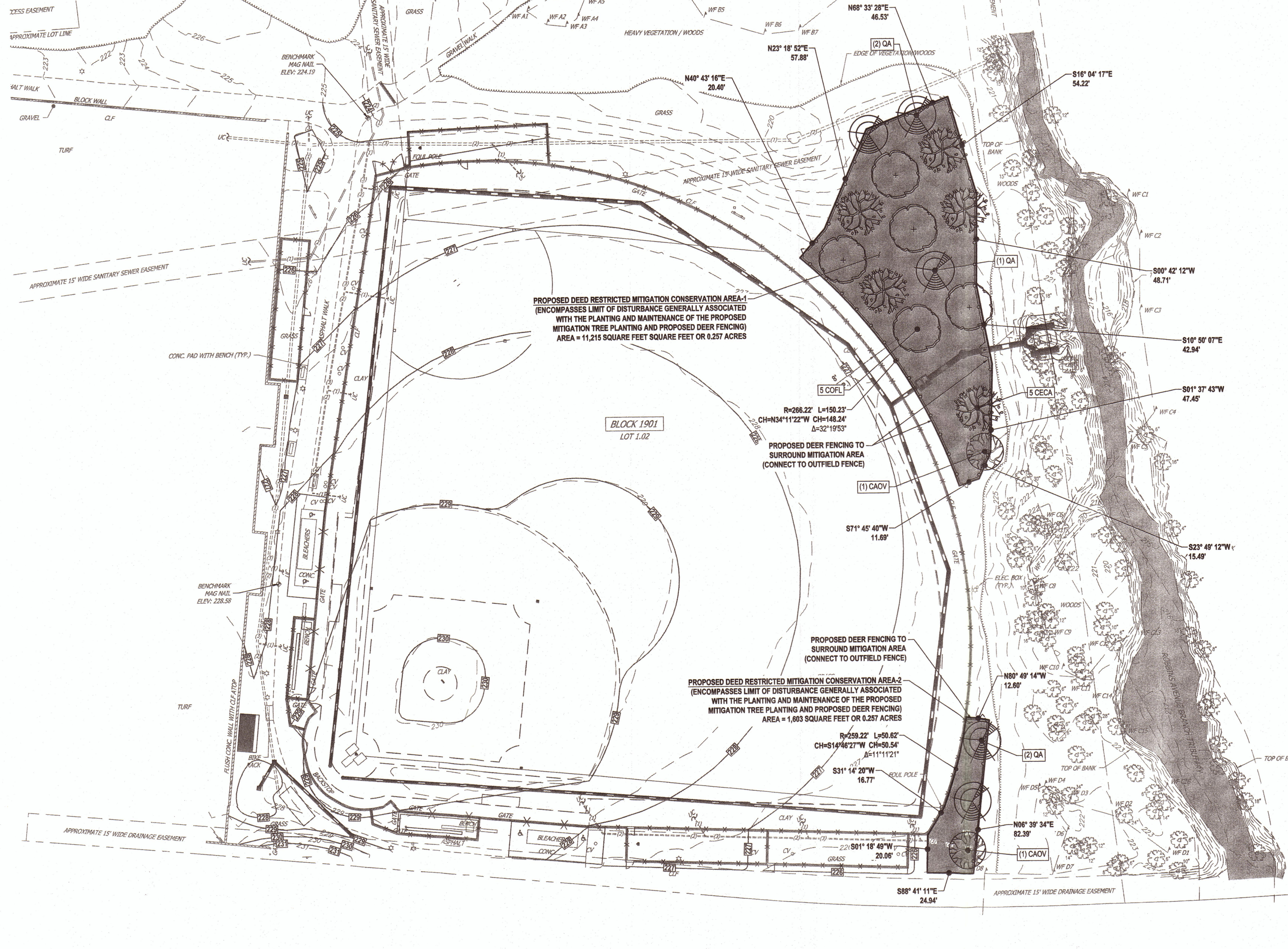
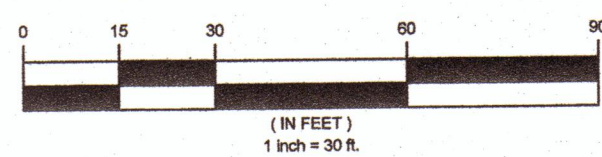
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
 PROFESSIONAL PLANNER N.J. LICENSE NO. 33LJ0058600

FLOOD HAZARD AREA PERMITTING PLAN
SNYDER PARK IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DRAWN BY: E.M.J./K.O. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY19.012 SHEET NO.: 8.01
 DESIGNED BY: E.M.J. SCALE: 1" = 30' DATE: FEBRUARY 21, 2020
 FIELD BOOK NO.: PAGE:



GRAPHIC SCALE



MITIGATION PLANTING LIST & SEED MIX						
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	COND	REMARKS
ORNAMENTAL TREES						
COFL	5	CORNUS FLORIDA	NATIVE DOGWOOD	8' - 10' HEIGHT	B & B	DECIDUOUS
CECA	5	CERCIS CANADENSIS	EASTERN REDBUD	8' - 10' HEIGHT	B & B	DECIDUOUS
SHADE TREES						
CAOV	2	CARYA OVATA	SHAGBARK HICKORY	3" - 3 1/2" CALIPER	B & B	DECIDUOUS
QA	5	QUERCUS ALBA	WHITE OAK		B & B	DECIDUOUS
SEED MIX (NATIVE SEED MIX - SUITABLE FOR RIPARIAN ZONES, ERNST SEED MIX, OR APPROVED EQUIVALENT)						
25% KENTUCKY BLUE GRASS						
25% PERENNIAL RYE GRASS						
50% TURF-TYPE TALL FESCUE						

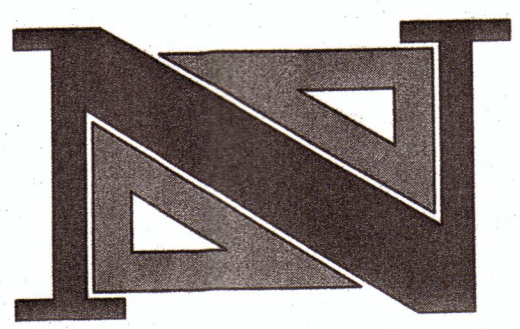


PROPOSED DEED RESTRICTED MITIGATION CONSERVATION AREAS SHALL BE FILED WITH THE UNION COUNTY CLERK'S OFFICE UPON RECEIPT OF PERMIT APPROVAL.

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION	E.M.J.	E.M.J.	E.M.J.
1	2020-05-15	REVISED PER NIDEP COMMENTS			



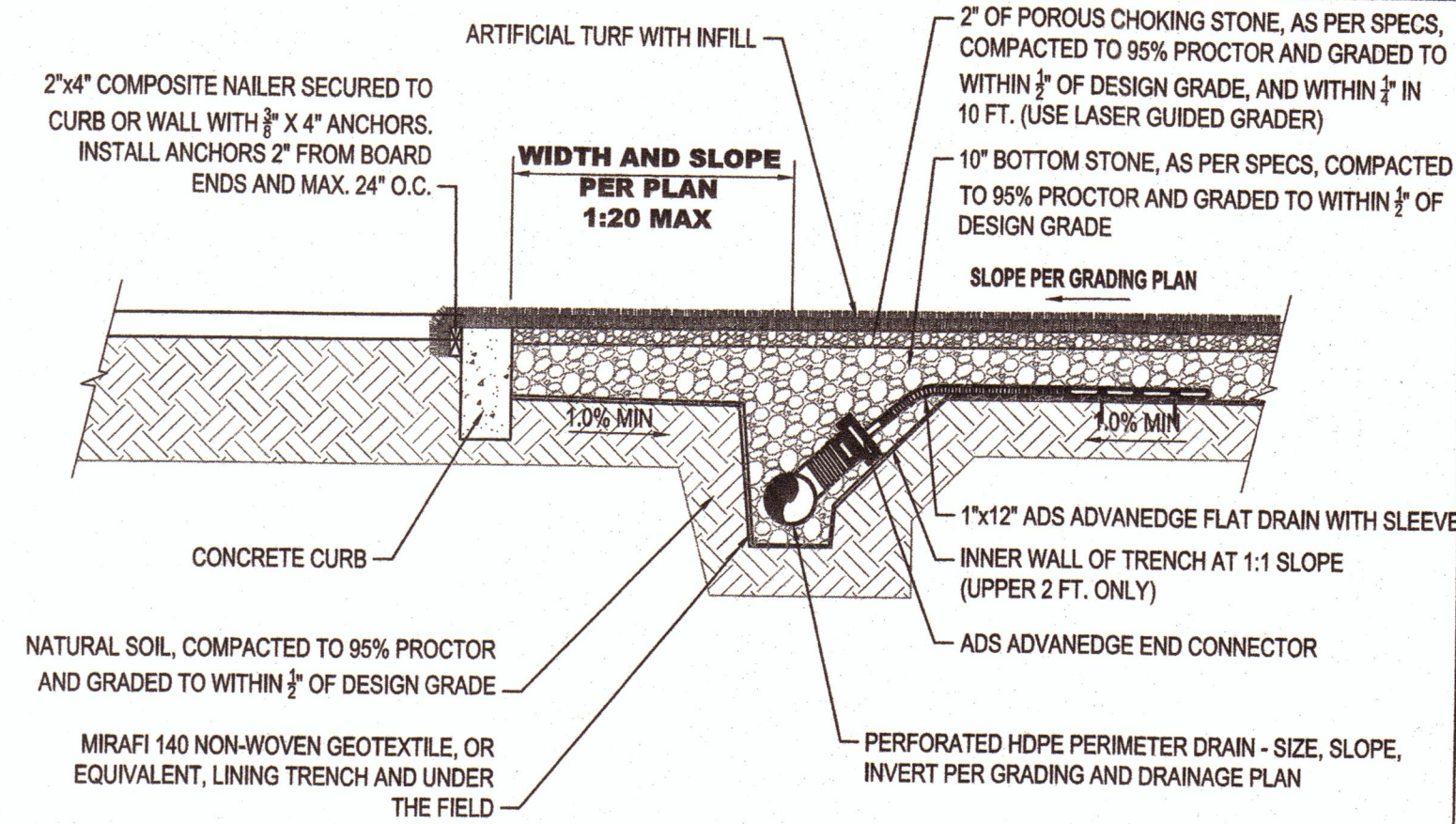
RAYMOND M. MILCSIK, L.L.A.
 LICENSED LANDSCAPE ARCHITECT
 N.J. LICENSE NO. 21745

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
 LYNDHURST, NEW JERSEY
 TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
 PROFESSIONAL PLANNER N.J. LICENSE NO. 33L0059800

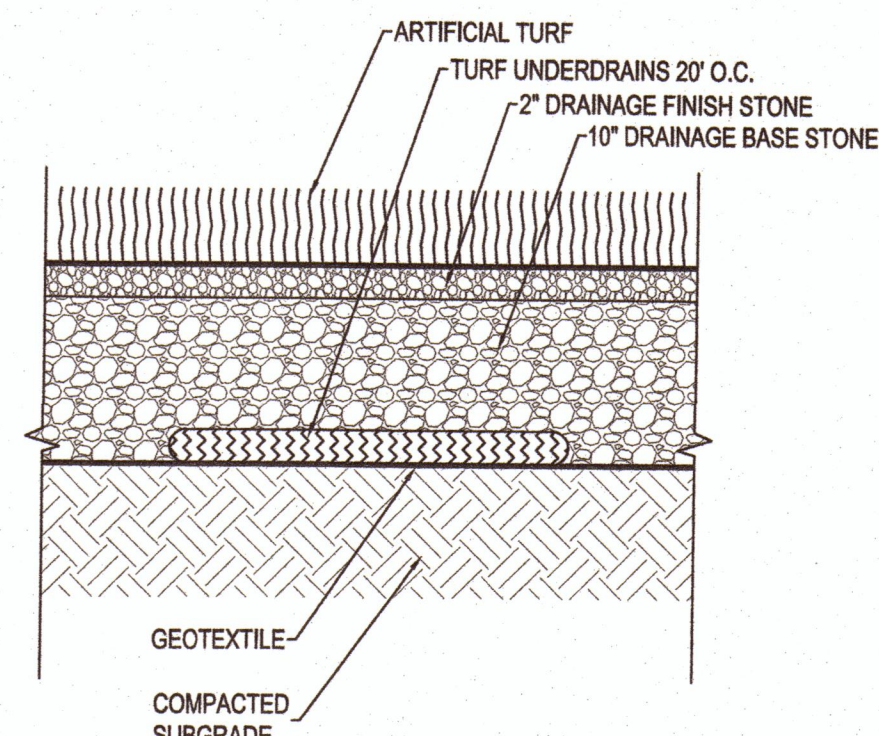
MITIGATION PLAN
SNYDER PARK IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY NEW JERSEY

DATE: FEBRUARY 21, 2020
 PROJECT NO: UNIOCTY19.012
 SHEET NO: 8.02

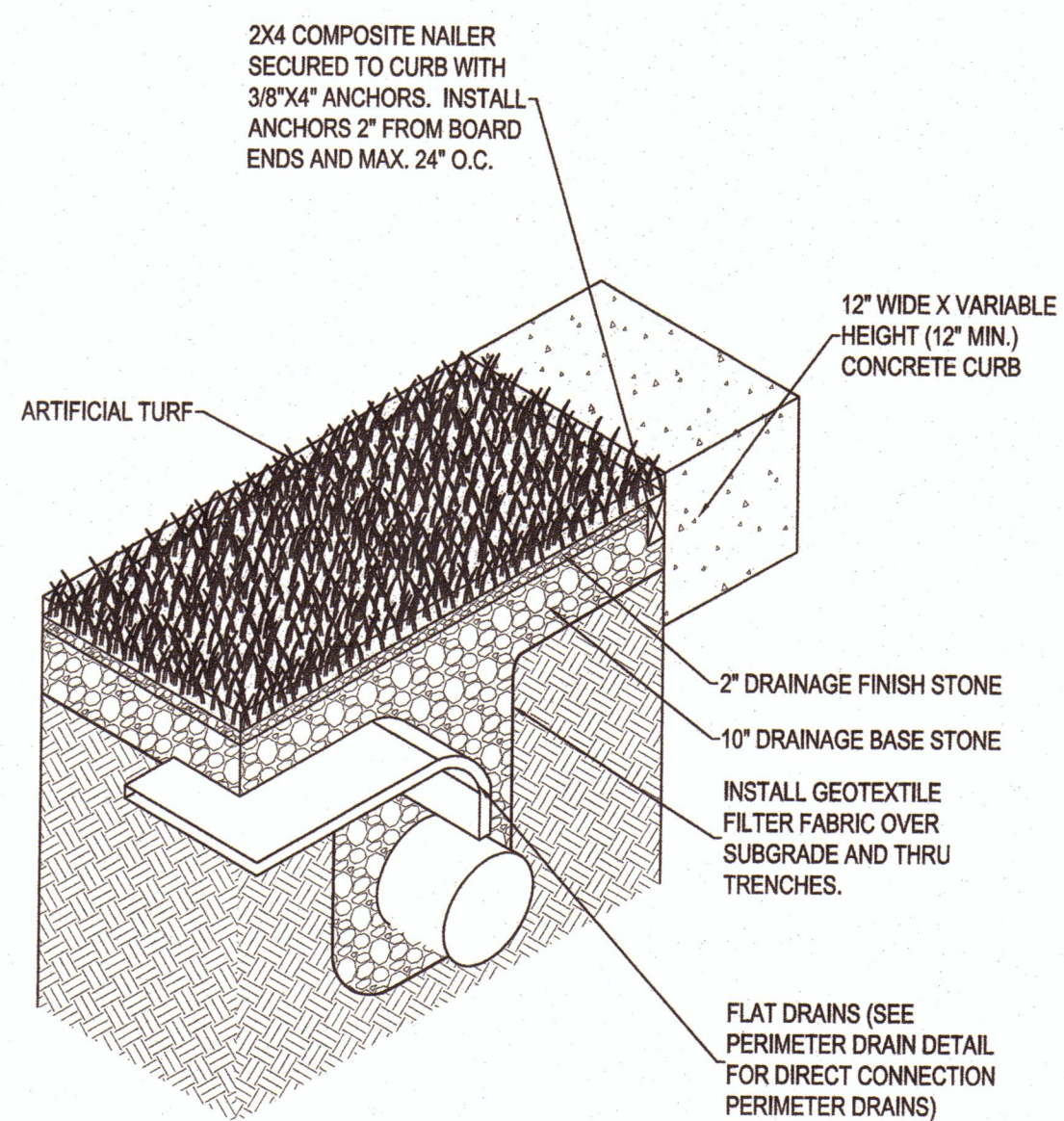


ARTIFICIAL TURF PERIMETER DRAIN

NOT TO SCALE

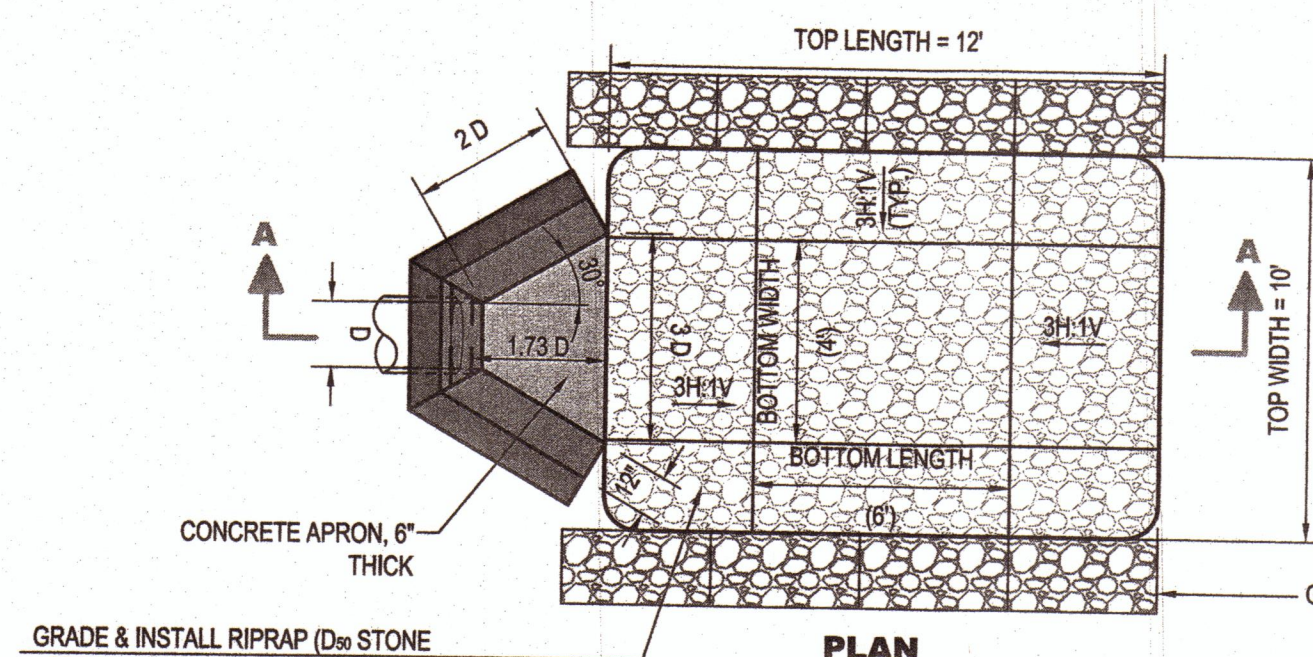


NOTE:
1. TURF UNDERDRAINS SHALL BE 1" x 12" FLAT ADS ADVANEDGE OR APPROVED EQUAL.

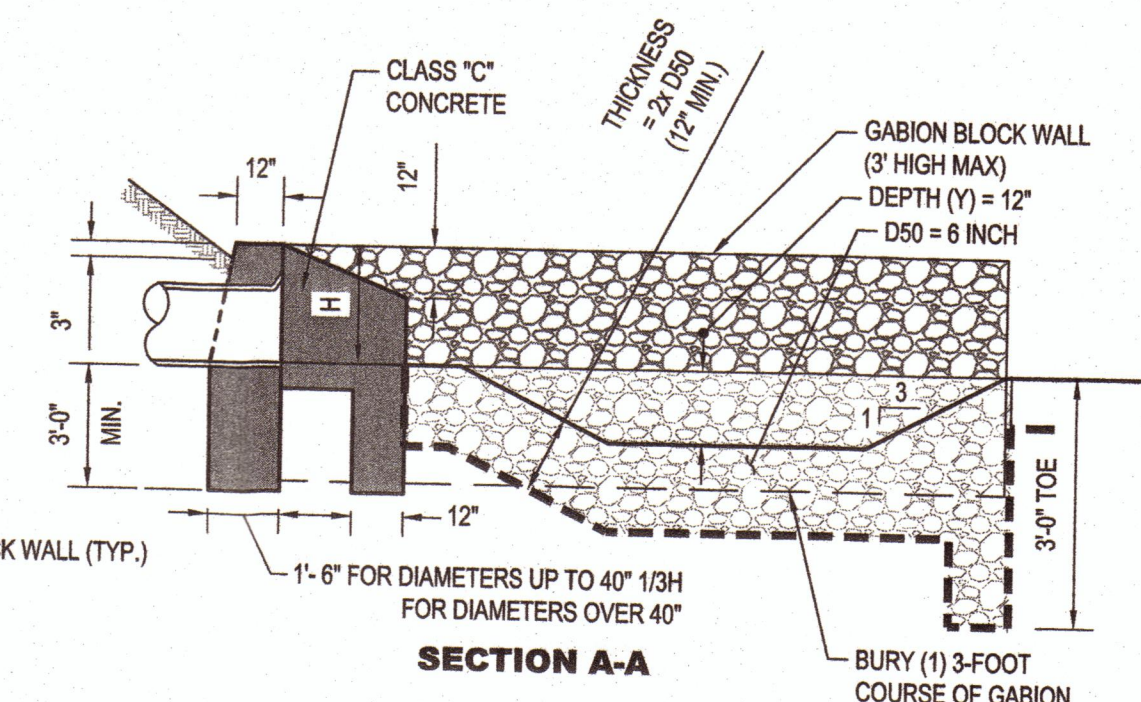


TURF UNDERDRAIN

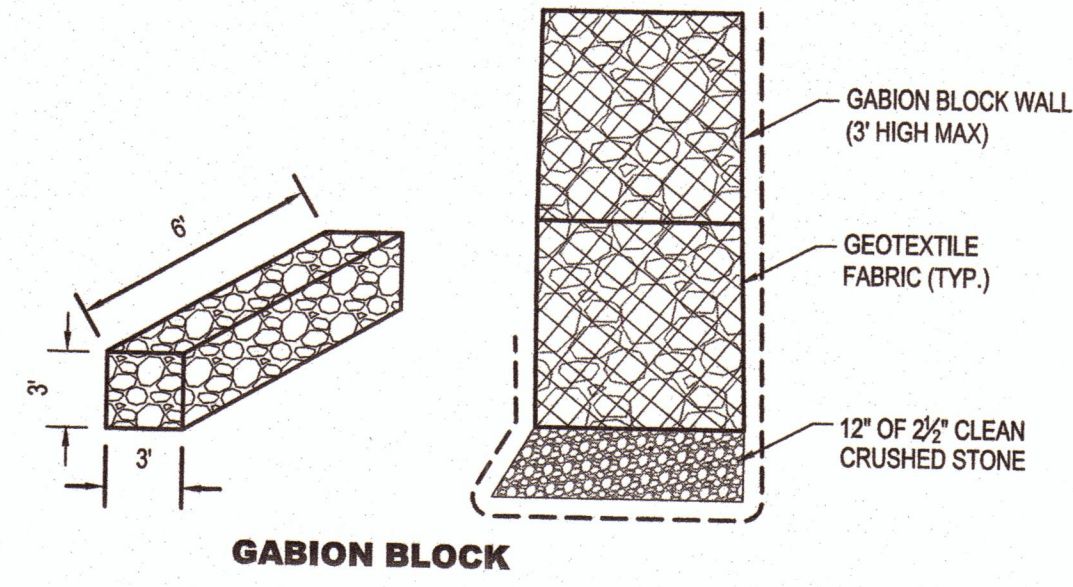
NOT TO SCALE



GRADE & INSTALL RIPRAP (D₅₀ STONE - SEE PLAN) WITH FILTER FABRIC, AROUND HEADWALL. SLOPE TO BE STABILIZED & SEEDED.



SECTION A-A



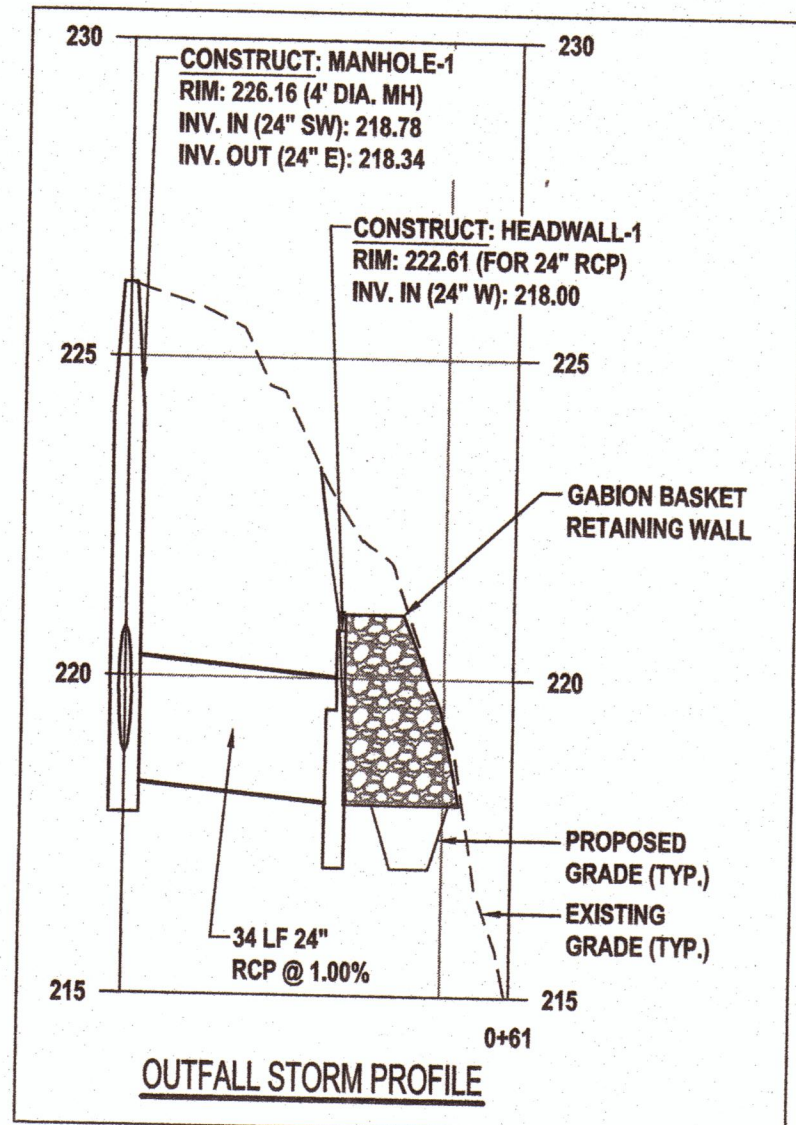
GABION BLOCK

- NOTES:
- CONTRACTOR TO INSTALL GEOTEXTILE FABRIC BETWEEN GABION WALL AND SOIL BACKFILL TO PREVENT SOIL MOVEMENT THROUGH THE BASKETS.
 - CONTRACTOR TO PROVIDE GABION WIRE BASKETS THAT CONFORM TO THE DIMENSIONS SHOWN ON THE PLANS WITHIN A TOLERANCE OF 5 PERCENT. USE WIRE MESH THAT IS GALVANIZED STEEL WIRE NO. 12 GAUGE AND TENSILE STRENGTH BETWEEN 60,000 AND 80,000 PSI.
 - GABION WIRE BASKETS ARE TO CONFORM TO NJDOT STANDARD ROADWAY CONSTRUCTION SPECIFICATIONS 2019, LATEST REVISED.

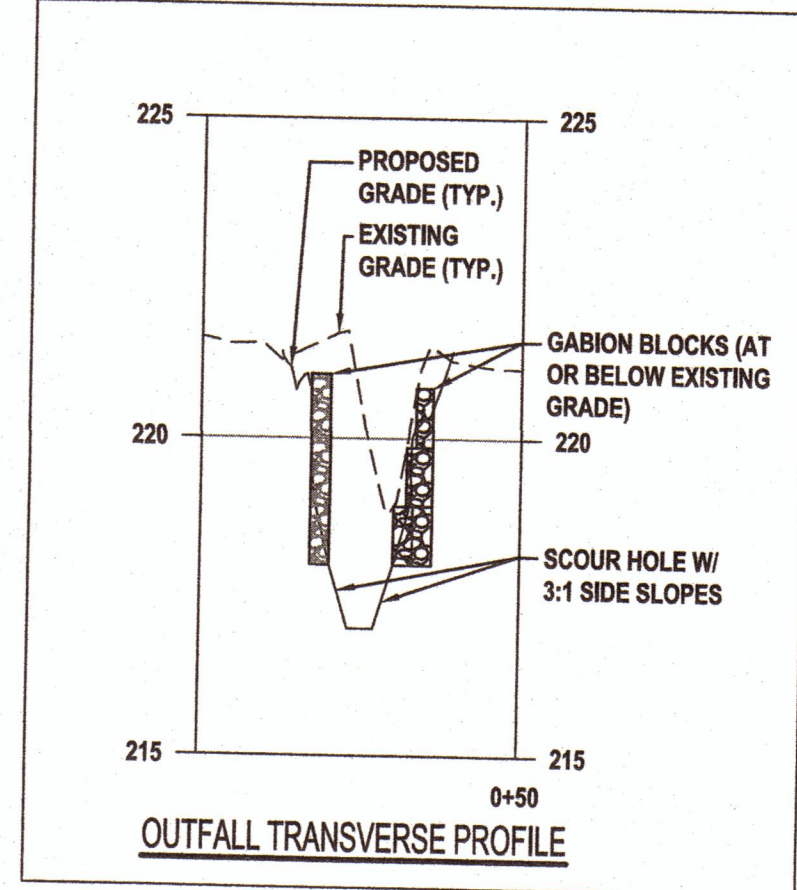
- CONDUIT OUTLET PROTECTION AND RIPRAP NOTES:
- FIFTY PERCENT BY WEIGHT OF THE RIPRAP MIXTURE SHALL BE SMALLER THAN THE MEDIAN SIZE STONE DESIGNATED AS D₅₀. THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 1.5 TIMES THE D₅₀ SIZE. THE RIPRAP SHALL BE REASONABLY WELL GRADED.
 - THE THICKNESS OF RIPRAP LINING SHALL BE AT LEAST TWO TIMES THE D₅₀ STONE SIZE WITH THE USE OF A GEOTEXTILE FILTER LAYER, MIRAFI 140N OR EQUAL.
 - THE WIDTH OF THE APRON AT THE CULVERT OUTLET SHALL BE AT LEAST 3 TIMES THE CULVERT WIDTH.
 - WHERE THERE IS A WELL-DEFINED CHANNEL DOWNSTREAM OF THE APRON, THE BOTTOM WIDTH OF THE APRON SHALL BE AT LEAST EQUAL TO THE BOTTOM WIDTH OF THE CHANNEL; AND THE STRUCTURAL LINING SHALL EXTEND AT LEAST ONE FOOT ABOVE THE TAILWATER ELEVATION BUT NO LOWER THAN TWO-THIRDS OF THE VERTICAL CONDUIT DIMENSION ABOVE THE CONDUIT INVERT.
 - THE SIDE SLOPES SHALL BE 3:1 OR FLATTER.
 - THE BOTTOM GRADE SHALL BE 0.0% (LEVEL).
 - THERE SHALL BE NO OVER FALL AT THE END OF THE APRON OR AT THE END OF THE CULVERT.
 - NO BENDS OR CURVES AT THE INTERSECTION OF THE CONDUIT AND THE RIP RAP APRON WILL BE PERMITTED.
 - PLASTIC-COATED WIRE MESH STONE-FILLED BASKETS OR MATTRESSES OR CONCRETE REVETMENT BLOCKS MAY BE SUBSTITUTED FOR RIPRAP IF THE D₅₀ SIZE CALCULATED ABOVE IS LESS THAN OR EQUAL TO THE THICKNESS OF THE WIRE MESH STRUCTURES OR CONCRETE REVETMENT BLOCKS. DESIGN LIFE OF THE WIRE MESH STRUCTURES IS ESTIMATED TO BE TEN (10) YEARS (MINIMUM). WIRE MESH BASKETS SHALL BE FILLED WITH 4" TO 7" ANGULAR SHAPED ROCK. ENGINEERING DESIGN REQUIRED FOR ANY SUBSTITUTIONS.
 - PERFORMED SCOUR HOLES MAY BE UTILIZED, IN ACCORDANCE WITH NJ EROSION CONTROL STANDARDS WHERE CONDITIONS DICTATE THE IMPRACTICAL USE OF FLAT APRONS. THE USE OF SCOUR HOLES SHALL COMPLY WITH COUNTY OR LOCAL ORDINANCES WHICH WOULD RESTRICT THE USE OF SUCH DEVICES DUE TO POSSIBLE PROBLEMS WITH MOSQUITO BREEDING. ENGINEERING DESIGN REQUIRED FOR ANY SUBSTITUTIONS.

PIPE SIZE	HEADWALL IN CUBIC YARDS		APRONS IN CUBIC YARDS
	COR.METAL	REIN. CONC.	
12"	1.4	1.3	0.2
15"	1.7	1.5	0.3
18"	2.1	2.1	0.3
21"	2.5	2.5	0.4
24"	3.3	3.4	0.5
30"	3.7	3.9	0.7
36"	4.7	4.8	0.9
42"	5.9	6.3	1.2
48"	7.8	8.4	1.5
54"	9.7	10.7	1.8
60"	12.2	13.3	2.1
66"	15.0	16.4	2.5
72"	18.1	19.9	3.0

- NOTES:
- ALL EDGES TO BE CHAMFERED 1".
 - CONCRETE TO BE N.J.D.O.T., CLASS "C".
 - APRONS TO BE 6" THICK CONCRETE, FLAT AT OUTLET END, DISHED AT INLET END.
 - EXPOSED PORTIONS OF WALL TO BE RUBBED AND FLOATED.
 - FOR ARCH PIPE, THE SPAN SHALL BE SUBSTITUTED FOR D.



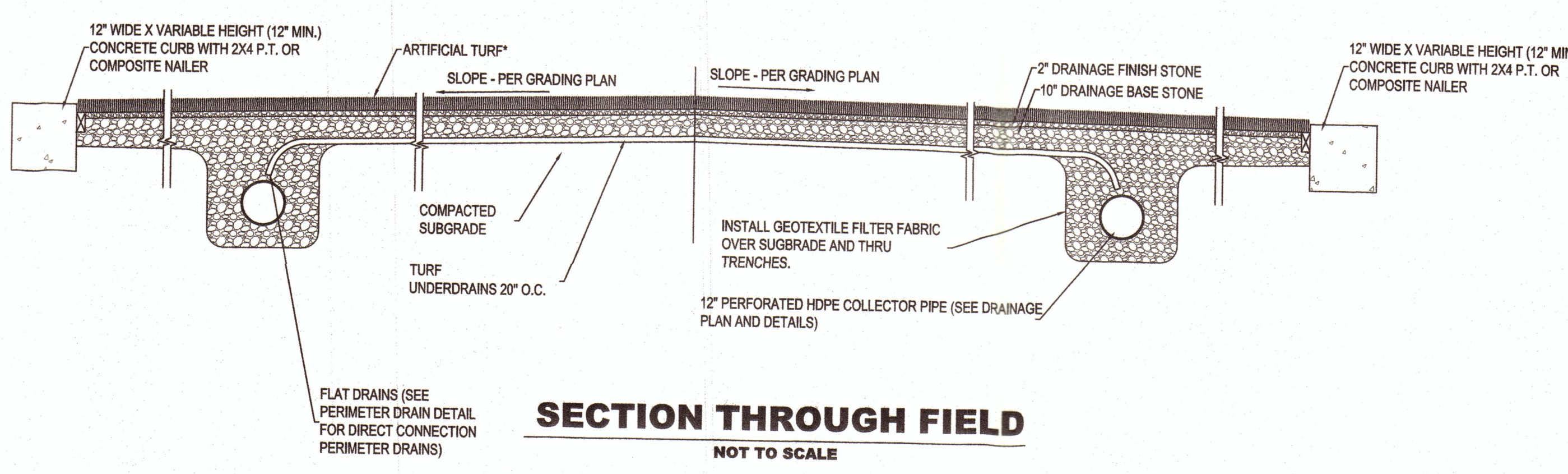
OUTFALL STORM PROFILE



OUTFALL TRANSVERSE PROFILE

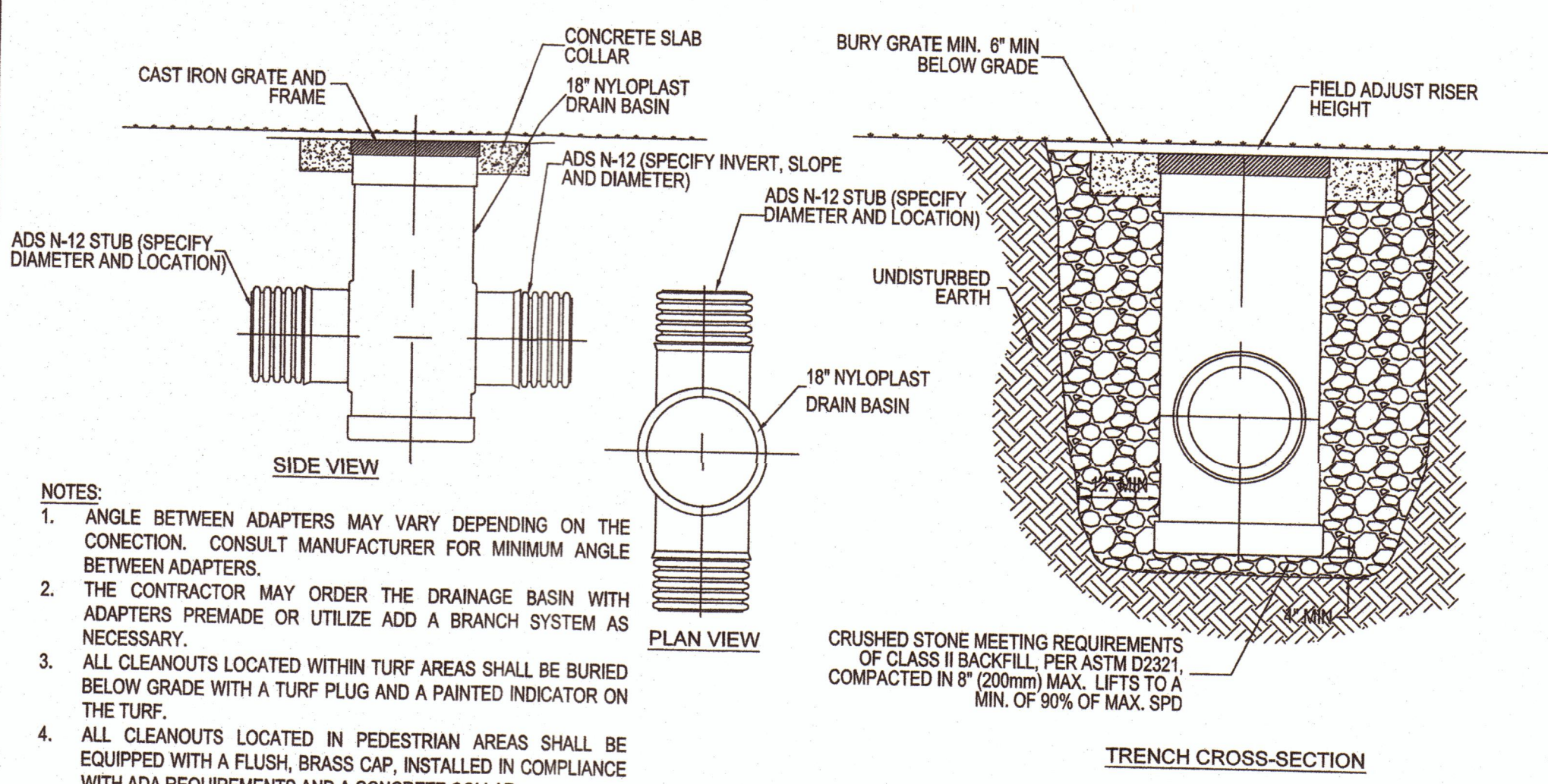
PROPOSED STORMWATER OUTFALL

NOT TO SCALE



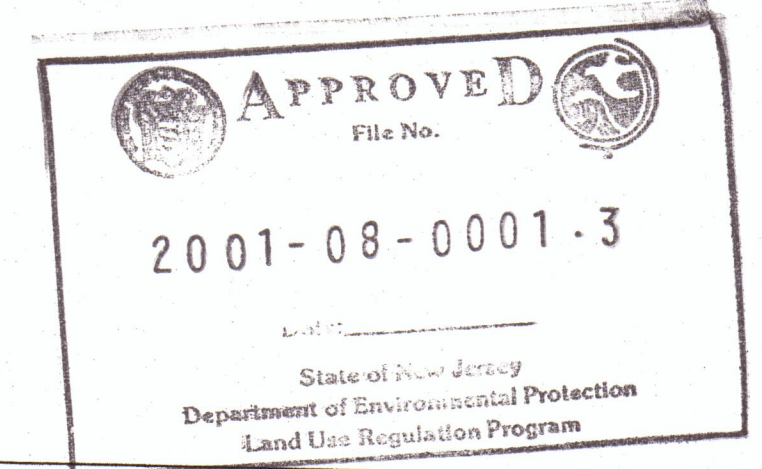
SECTION THROUGH FIELD

NOT TO SCALE



- NOTES:
- ANGLE BETWEEN ADAPTERS MAY VARY DEPENDING ON THE CONNECTION. CONSULT MANUFACTURER FOR MINIMUM ANGLE BETWEEN ADAPTERS.
 - THE CONTRACTOR MAY ORDER THE DRAINAGE BASIN WITH ADAPTERS PREMADE OR UTILIZE ADD A BRANCH SYSTEM AS NECESSARY.
 - ALL CLEANOUTS LOCATED WITHIN TURF AREAS SHALL BE BURIED BELOW GRADE WITH A TURF PLUG AND A PAINTED INDICATOR ON THE TURF.
 - ALL CLEANOUTS LOCATED IN PEDESTRIAN AREAS SHALL BE EQUIPPED WITH A FLUSH BRASS CAP, INSTALLED IN COMPLIANCE WITH ADA REQUIREMENTS AND A CONCRETE COLLAR.

RISER/BURIED CLEANOUT W/ACCESS FRAME DETAIL



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

NO.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED
1	2020-05-15	REVISED PER N/DEP COMMENTS	EMJ	EMJ	EMJ

DAVID R. ATKINSON, P.E., C.M.E. PROFESSIONAL ENGINEER
 THOMAS R. SOLFARO, P.E., C.M.E. PROFESSIONAL LAND SURVEYOR

NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE, LYNDHURST, NEW JERSEY
 MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER, PROFESSIONAL LAND SURVEYOR, PROFESSIONAL PLANNER

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000
CONSTRUCTION DETAILS II
SNYDER PARK IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
 NEW JERSEY
 UNIOCTY19.012 9.01

SNYDER AVENUE TURF FIELD IMPROVEMENTS

BLOCK 1901, LOT 1.02 (SNYDER PARK)
 TOWNSHIP OF BERKELEY HEIGHTS, UNION COUNTY, NEW JERSEY
 SEPTEMBER, 2020

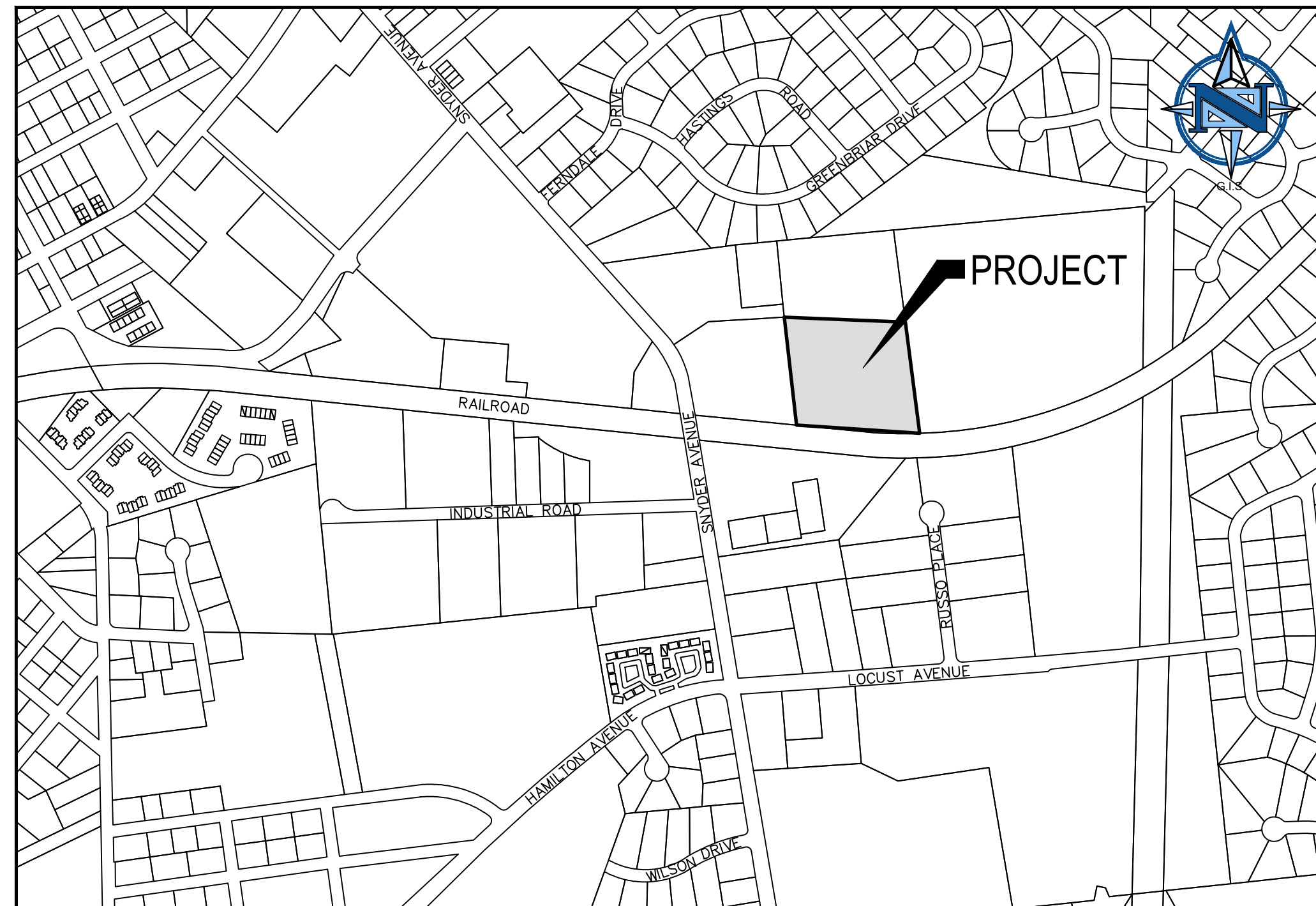


COUNTY OF UNION
 10 ELIZABETHTOWN PLAZA, ELIZABETH, NEW JERSEY 07207
 PHONE: (908) 527-4000

FREEHOLDERS

ALEXANDER MIRABELLA, CHAIRMAN
 ANGELA R. GARRETSON
 SERGIO GRANADOS
 CHRISTOPHER HUDAK

BETTE JANE KOWALSKI
 KIMBERLY PALMIERI-MOUED
 ANDREA STATEN
 REBECCA WILLIAMS



KEY MAP
 SCALE: 1" = 500'
 SOURCE: UNION COUNTY G.I.S. DATA

PERMITTING & CONSTRUCTION TIMING NOTES	
THIS PROJECT HAS RECEIVED APPROVAL OF LAND USE PERMITTING FROM THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NJDEP). THE PERMITS LISTED BELOW HAVE BEEN APPLIED FOR AND APPROVED BY THE NJDEP:	
<ol style="list-style-type: none"> FLOOD HAZARD AREA INDIVIDUAL PERMIT (No. 2001-08-0001.3 LUP 200001) - APPROVED MAY 29, 2020, EXPIRES MAY 28, 2025 FRESHWATER WETLANDS GENERAL PERMIT No. 11 (No. 2001-08-0001.3 LUP 200001) - APPROVED MAY 29, 2020, EXPIRES MAY 28, 2025 FRESHWATER WETLANDS TRANSITION AREA SPECIAL ACTIVITY WAIVER (No. 2001-08-0001.3 LUP 200001) - APPROVED MAY 29, 2020, EXPIRES MAY 28, 2025 	
THIS PROJECT IS SUBJECT TO CONSTRUCTION TIMING RESTRICTIONS IMPOSED BY THE NJDEP, AS FOLLOWS:	
<ul style="list-style-type: none"> SPECIAL CAUTION SHALL BE TAKEN TO PROTECT GENERAL GAME FISHERIES WITHIN THE NEARBY ROBBINS AVENUE BROOK BETWEEN MAY 1 THROUGH JULY 31 OF EACH YEAR. CLEARING OF TREES 5 INCHES DIAMETER AT BREAST HEIGHT OR GREATER MAY NOT OCCUR IN REGULATED ON SITE AREAS FROM APRIL 1 TO SEPTEMBER 30. 	
THE OWNER WILL PROVIDE AN APPROVAL FROM THE SOMERSET-UNION SOIL CONSERVATION DISTRICT (SUSCD) FOR SOIL EROSION AND SEDIMENT CONTROL PLAN CERTIFICATION:	
<ol style="list-style-type: none"> SOIL EROSION AND SEDIMENT CONTROL PLAN CERTIFICATION, BY THE SUSCD (No. XXXXXX), DATED XX XX, 2020. 	
THE OWNER WILL PROVIDE AN APPROVAL FROM THE NJDEP, BUREAU OF NONPOINT POLLUTION CONTROL, WATER POLLUTION MANAGEMENT ELEMENT, FOR AN AUTHORIZATION TO DISCHARGE STORMWATER DURING CONSTRUCTION:	
<ol style="list-style-type: none"> AUTHORIZATION TO DISCHARGE, 5G3 - CONSTRUCTION ACTIVITY STORMWATER GENERAL PERMIT, PI ID No.: XXXXXX; NJPDES No.: XXXXXXXX, ISSUANCE DATE/EFFECTIVE DATE OF AUTHORIZATION: XX XX, 2020. 	
THE CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL CONDITIONS AND REGULATIONS OF THE APPROVED PERMITS. A COPY OF THE APPROVED PERMITS, AND ASSOCIATED CONDITIONS, HAS BEEN PROVIDED IN THE CONSTRUCTION DOCUMENTS, AND MUST REMAIN ON-SITE AT ALL TIMES.	

UTILITY COMPANY CONTACTS	
COMPANY	ADDRESS
P.S.E. & G. - GAS	472 WESTEN CANAL ROAD SOMERSET, NJ (732) 764 - 3067
ELIZABETH GAS COMPANY	520 GREEN LANE UNION, NJ (908) 662 - 8321
J.C.P. & L.	P.O. BOX 1911 MORRISTOWN, NJ (973) 401 - 8521
P.S.E. & G. - ELECTRIC	80 PARK PLAZA T-12 NEWARK, NJ (973) 297 - 2128
NEW JERSEY AMERICAN WATER	1341 NORTH AVENUE PLAINFIELD, NJ (973) 564 - 5701
VERIZON	175 WESTMAIN STREET FREEHOLD, NJ (732) 357 - 2313

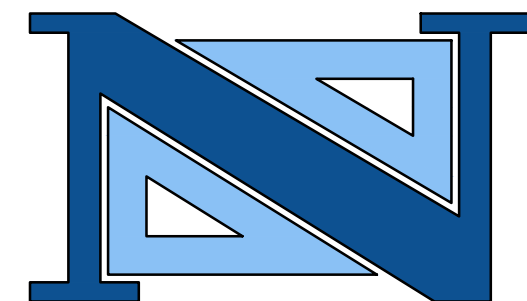
SHEET INDEX	
DRAWING NO.	DRAWING TITLE
1.00	COVER SHEET / KEY MAP
1.01	GENERAL NOTES & ESTIMATE OF QUANTITIES
2.00	EXISTING CONDITIONS & DEMOLITION PLAN
3.00	SITE PLAN
4.00	GRADING PLAN
5.00	DRAINAGE PLAN
6.00	SOIL EROSION & SEDIMENT CONTROL PLAN
7.00	SOIL EROSION & SEDIMENT CONTROL DETAILS
8.00	FRESHWATER WETLANDS PERMITTING PLAN
8.01	FLOOD HAZARD AREA PERMITTING PLAN
8.02	MITIGATION PLAN
9.00-9.06	CONSTRUCTION DETAILS



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			
NO.	DATE	DESCRIPTION	



DAVID R. ATKINSON, P.E., C.M.E.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 41635

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
 TEL: 201-939-8805
 LYNDHURST, NEW JERSEY
 FAX: 201-939-0846
 E-MAIL: NEA@NEGLIAENGINEERING.COM
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
 PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569890

COVER SHEET
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DRAWN BY: E.M.J./K.O.	CHECKED BY: E.M.J.	PROJECT NO.: UNIOCTY19.012	SHEET NO.: 1.00
DESIGNED BY: E.M.J.	SCALE: N.T.S.	DATE: SEPTEMBER 23, 2020	
FIELD BOOK NO.:	PAGE:		

m:\union-county\snycv19.012 Snyder park turf field\1901_01.dwg, Thursday, September 24, 2020, 10:07:03 PM

GENERAL NOTES:

A. LEGAL

- A1. THE MOST CURRENT EDITIONS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STANDARD INPUTS, AND STANDARD DETAILS AS PUBLISHED BY THE NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT), THE PLANS, TECHNICAL SPECIFICATIONS, ADVERTISEMENT, CONTRACTOR'S PROPOSAL, AND INCLUDING BUT NOT LIMITED TO THE AMENDMENTS CONTAINED HEREINAFTER SHALL COMPRISE THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL READ AND UNDERSTAND THE PROJECT SPECIFICATIONS PRIOR TO CONSTRUCTION. THE MUNICIPALITY IS UNDER THE JURISDICTION OF THE STATE CENTRAL LAW AND THE GOVERNMENT.
- A2. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCIES BETWEEN THESE PLANS AND THE ACTUAL CONDITIONS AT THE SITE SHALL BE IMMEDIATELY REPORTED TO THE PROFESSIONAL ENGINEER.
- A3. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES, ORDERS AND REGULATIONS RELATING TO THE PERFORMANCE OF THE WORK, THE PROTECTION OF ADJACENT PROPERTY AND THE MAINTENANCE OF PASSAGEWAYS.
- A4. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE SAFETY REQUIREMENTS AS OUTLINED IN THE GENERAL CONDITIONS OF THE CONSTRUCTION SPECIFICATIONS. NEITHER THE ENGINEER NOR THE OWNER SHALL BE HELD RESPONSIBILITY AND/OR LIABLE FOR THE SAFETY OF THE WORK SITE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A SAFE WORK SITE AT ALL TIMES.
- A5. THE CONTRACTOR IS RESPONSIBLE TO OBEY ALL THE SAFETY AND HEALTH REGULATIONS. THE OWNER ASSUMES NO RESPONSIBILITY FOR THE HEALTH AND SAFETY OF THE WORK PERFORMED.

B. SITE CLEARING AND CONSTRUCTION

- B1. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED LOCAL, COUNTY, STATE, FEDERAL OPENING PERMITS AND SHALL BARE THE COST OF ALL ACCOMPANYING FEES. ALL PERMITS MUST BE SECURED PRIOR TO THE COMMENCEMENT OF WORK.
- B2. WHENEVER A QUESTION ARISES REGARDING THE SPECIFICATIONS OR DRAWINGS OR ANY SUPPLEMENTARY DRAWINGS OR INSTRUCTIONS OF THE FIELD ENGINEER, SAME SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN.
- B3. ONE COPY OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS FURNISHED TO THE CONTRACTOR MUST BE KEPT ON THE PROJECT SITE. ALL WORK AND MATERIALS NECESSARY FOR THE COMPLETION OF THE WORK ACCORDING TO THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS, SHALL BE FURNISHED, PERFORMED AND DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND PLANS. ANY CONFLICT OR INCONSISTENCY BETWEEN THE PLANS AND SPECIFICATIONS OR ANY DISCREPANCY BETWEEN THE FIGURES AND SCALE OF DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER, WHOSE DECISION THEREON SHALL BE FINAL. THE DECISION OF THE ENGINEER AS TO WHICH SPECIFICATION WILL GOVERN WILL BE FINAL.
- B4. THE CONTRACTOR IS RESPONSIBLE TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALL PROPOSED FIELD CHANGES MUST BE APPROVED IN WRITING BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN (PROJECT MANAGER, PE) PRIOR TO THE CONSTRUCTION OF ANY FIELD CHANGES.
- B5. ALL INFORMATION SHOWN OR NOTED FOR EXISTING FACILITIES, GRADES, ROADWAYS AND MATERIALS IS APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL INFORMATION WHICH MAY AFFECT HIS WORK.
- B6. ALL DISTURBED SHRUBS, FENCING, WALKWAYS, SIGNS, MAILBOXES, DRIVEWAYS, ETC., SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND TO THE SATISFACTION OF THE ENGINEER AND/OR THE OWNER. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS RESTORATION WORK UNLESS SAME IS CLEARLY SPECIFIED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL TAKE PRUDENT MEASURES TO PROTECT ALL EXISTING PROPERTY EVIDENCE (MONUMENTS, IRON PIPE, PINS, ETC.) DURING CONSTRUCTION.
- B7. ALL PROPERTY CORNERS OR MONUMENTS REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY A NJ LICENSED LAND SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
- B8. RECONSTRUCTED CURB SHALL BE INSTALLED TO MATCH EXISTING CURB ELEVATIONS AND ALIGNMENT UNLESS OTHERWISE SPECIFIED ON GRADING PLANS, PROFILES OR CROSS SECTIONS. SEPARATE PAYMENT WILL NOT BE MADE FOR REMOVAL OF EXISTING CURB IN RECONSTRUCTED AREAS. PAYMENT FOR THE REMOVAL OF EXISTING CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CURB LINE ITEM.
- B9. THE CONTRACTOR SHALL SAWCUT AND REPAIR THE PAVEMENT ADJACENT TO NEWLY CONSTRUCTED CURB PRIOR TO PROCEEDING ON TO SUBSEQUENT STAGES OF WORK. CURB TRENCHES WILL NOT BE LEFT OPEN OVERNIGHT IN AREAS WHERE THE ROADWAY IS TO BE OPENED TO TRAFFIC. NO SEPARATE PAYMENT WILL BE GIVEN FOR SUCH SAID SAWCUTTING AND RESTORATION. THE COST OF WHICH SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CURB LINE ITEM.
- B10. ALL ASPHALT MATERIAL REMOVED FROM THE PROJECT MUST BE TRANSPORTED TO AN APPROVED RECYCLING CENTER AND THE TONNAGE CERTIFIED TO THE OWNER. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK BUT SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROPOSAL.
- B11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL EXCESS MATERIALS EXCAVATED, WHATEVER NATURE, AT HIS OWN EXPENSE. THE OWNER IS NOT OBLIGATED TO SUPPLY A DISPOSAL SITE. THE CONTRACTOR MUST NOT DEPOSIT THE EXCESS MATERIALS WITHIN THE MUNICIPAL LIMITS WITHOUT EXPRESS PERMISSION OF THE PROFESSIONAL ENGINEER. EXCAVATED MATERIAL MAY NOT BE STORED ON SITE AND SHALL BE REMOVED AT THE END OF EACH DAY.
- B12. ALL EXCAVATED MATERIALS ARE TO BE DISPOSED OF IN ACCORDANCE WITH APPROVED NJDOT/NJDEP METHODS AND MEANS, OR TRANSPORTED AT THE DIRECTION OF THE OWNER.
- B13. ALL DISTURBED AREAS OUTSIDE THE PROJECT LIMITS OR NOT INTENDED TO BE INCLUDED IN THIS PROJECT, SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, AND TO THE SATISFACTION OF THE OWNER. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS RESTORATION, UNLESS SPECIFIED ELSEWHERE.
- B14. THE CONTRACTOR MUST PROVIDE A SMOOTH SAWCUT EDGE IN ALL CASES WHERE PROPOSED PAVEMENT OF WHATEVER NATURE, CONCRETE CURBS OR CONCRETE SIDEWALKS ABUT EXISTING PAVEMENTS, CURBS OR SIDEWALKS. NO SEPARATE PAYMENT WILL BE MADE FOR SAWCUTTING. THE COST SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROPOSAL.
- B15. THE CONTRACTOR MAY DISCOVER THAT EXISTING ROADWAY MAY CONTAIN EXISTING CONCRETE BASE OR COBBLE STONE AND SHALL MAKE ALL NECESSARY REQUIREMENTS FOR ITS REMOVAL WHERE REQUIRED. THE COST FOR THIS WORK SHALL BE INCLUDED IN VARIOUS BID ITEMS.
- B16. THE REPLACEMENT OF ANY SIDEWALK WITHIN THE PROJECT AREA MAY REQUIRE THAT SIDEWALK SLABS BE SAWCUT FROM THE SURROUNDING CONCRETE WALK. NO SPECIFIC PAYMENT FOR SAW CUTTING WILL BE MADE AND THEREFORE SHALL BE INCLUDED UNDER PRICES BID FOR CONCRETE SIDEWALK/PADS ITEMS IN THE PROPOSAL.
- B17. NO CONSTRUCTION, MAINTENANCE OR UTILITY WORK ON, UNDER OR ABOVE THE PROJECT ROAD THAT WILL OBSTRUCT, INTERFERE WITH AND/OR DETOUR TRAFFIC ON THE ROAD, SHALL BE PERFORMED BEFORE THE HOUR OF 9:00 AM OR AFTER 4:00 PM. THE CONTRACTOR'S WORK HOURS SHALL CONFORM TO LOCAL ORDINANCE REQUIREMENTS.
- B18. ALL TRENCHES IN THE EXISTING PAVEMENT SHALL BE SAW CUT. NO SEPARATE PAYMENT WILL BE MADE FOR SAW CUTTING AND THE COST THEREOF SHALL BE INCLUDED UNDER PRICES BID FOR VARIOUS ITEMS IN THE PROPOSAL.
- B19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION AND MAINTENANCE OF ALL ACCESS DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- B20. ALL SEDIMENT AND SOIL EROSION CONTROL PRACTICES ARE TO BE INSTALLED IN CONFORMANCE WITH SOIL CONSERVATION DISTRICT STANDARDS PRIOR TO ANY MAJOR SOIL DISTURBANCES. ALL WORK SHALL BE COMPLETED IN PROPER SEQUENCE AND ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- B21. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES DURING CONSTRUCTION.
- B22. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO MAINTAIN DUST CONTROL AS REQUIRED OR DIRECTED BY THE PROFESSIONAL ENGINEER. ALL VEHICLES SHALL BE CLEAN AND ALL ROADWAYS SHALL BE MAINTAINED AS DIRECTED BY THE FIELD ENGINEER.
- B23. CONTRACTOR SHALL KEEP THE SITE CLEAN AT ALL TIMES AND SWEEP THE STREET AT THE END OF EACH WORK DAY.

B. SITE CLEARING AND CONSTRUCTION/CONT.

- B24. ALL MATERIAL ENCOUNTERED WITHIN THE WORK ZONE AREA THAT MUST BE REMOVED TO CONSTRUCT THE PROJECT AS DIRECTED BY THE FIELD ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLEARING SITE. THIS IS INCLUSIVE OF BUT NOT LIMITED TO THE REMOVAL OF ALL CURBED EDGING AND CONCRETE GUTTER.
- B25. ALL TREES ARE TO BE SAVED AND PROTECTED FROM HARM DURING CONSTRUCTION WITH THE EXCEPTION OF THE TREES MARKED WITH AN X ON THE CONSTRUCTION PLANS. IF ANY TREES ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT AS DETERMINED BY THE COUNTY.
- B26. ALL TREES TO BE REMOVED SHALL BE MARKED BY THE CONTRACTOR AND APPROVED BY THE OWNER BEFORE ANY TREE REMOVAL COMMENCES. EACH TREE DESIGNATED FOR REMOVAL SHALL BE COMPLETELY REMOVED, EXCEPT FOR STUMPS THAT CANNOT BE REMOVED BY GRUBBING WHICH SHALL BE GRINDED TO TWELVE (12) INCHES BELOW THE EXISTING GROUND SURFACE.
- B27. THE CONTRACTOR SHALL INSTALL PROTECTIVE BLOCKING, BRACING OR SHEETING TO SUPPORT ANY EXPOSED GAS, WATER, SANITARY, TELECOMMUNICATIONS, OR ELECTRIC UTILITIES IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S REGULATIONS.
- B28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAPERING PROPOSED WORK TO MEET EXISTING CONDITIONS IN A UNIFORM MANNER.

C. UTILITY PERMITS

- C1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITIES LOCATED AND PHYSICALLY MARKED OUT WITHIN THE LIMITS OF THE PROJECT (CALL 1-800-372-1000). THE CONTRACTOR SHALL PROVIDE TEST HOLES IN AREAS OF POSSIBLE CONFLICT TO VERIFY THE DEPTH AND LOCATION OF THE UTILITY. NO SEPARATE PAYMENT SHALL BE MADE FOR DELAYS THAT MAY BE NECESSARY TO RELOCATE UTILITIES OR THE PROPOSED LOCATION OF UNDERGROUND UTILITIES. NO SEPARATE PAYMENT WILL BE MADE FOR TEST PITS BUT THE COST SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROPOSAL.
- C2. LOCATION AND DEPTH OF EXISTING UTILITIES ARE ONLY INDICATED TO BRING ATTENTION TO POSSIBLE CONFLICTS. ANY DAMAGE TO UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ALL COSTS FOR REPAIRS SHALL BE BORNE BY THE CONTRACTOR.
- C3. ANY DAMAGE TO UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ALL COSTS FOR REPAIR SHALL BE BORNE BY THE CONTRACTOR. ALL DISTURBED OR DAMAGED WALKWAYS, SIGNS, CURBING, TREES, HYDRANTS, UTILITIES, PAVED SURFACES, DRIVEWAYS, BUILDING FACADES, ETC. SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER. NO SEPARATE PAYMENT WILL BE MADE FOR THIS RESTORATION UNLESS SPECIFIED ELSEWHERE IN THE CONTRACT.
- C4. THE LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXACT LOCATIONS OF THE UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- C5. ALL GAS AND WATER VALVES AND VARIOUS MANHOLES TO REMAIN SHALL BE RESET TO FINISH GRADE.
- C6. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE PUBLIC UTILITY COMPANIES. ELECTRIC, TELEPHONE, GAS & CABLE UTILITY MANHOLE CASTINGS AND VALVE BOX COVERS SHALL BE RESET BY THE RESPECTIVE UTILITY COMPANIES.
- C7. PRIVATE UTILITY COMPANIES MUST BE CONTACTED BY THE CONTRACTOR SO THAT PRIVATELY OWNED CASTINGS WILL BE RESET AS REQUIRED.
- C8. WATER SERVICE VALVE BOXES, GAS SERVICE VALVE BOXES, JUNCTION BOXES, ELECTRIC BOXES, BASEMENT VAULT DOORS AND ALL OTHER APURTANCES LOCATED IN THE SIDEWALK AREA SHALL BE RESET TO THE NEW SIDEWALK ELEVATION. THE COST FOR RESETTING ANY AND ALL OF THESE CASTINGS SHALL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED IN THE VARIOUS CONCRETE SIDEWALK LINE ITEMS IN THE PROPOSAL.
- C9. THE CONTRACTOR IS RESPONSIBLE FOR ACCURATELY LOCATING EXISTING TRAFFIC SIGNAL LOOP DETECTOR AND LEADS. THE CONTRACTOR WILL ONLY BE COMPENSATED FOR THE REPLACEMENT OF LOOP DETECTORS AND LEADS WHICH HAVE BEEN REMOVED AT THE DIRECTION OF THE PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL NOT REMOVE LOOP DETECTORS AND LEADS UNLESS HE IS DIRECTED TO DO SO BY THE PROFESSIONAL ENGINEER.
- C10. TRENCHES SHALL BE BACKFILLED WITHOUT DELAY. OPEN EXCAVATIONS SHALL BE KEPT TO A MINIMUM AND MADE SAFE AT ALL TIMES. ALL TRENCHES SHALL BE ADEQUATELY COMPACTED BY APPROVED METHODS AND WITH MATERIALS APPROVED BY THE FIELD ENGINEER. ANY TRENCH SETTLEMENT SHALL BE IMMEDIATELY BROUGHT TO GRADE AND TEMPORARY PAVING SHALL BE PLACED WHERE REQUIRED. NO TRENCH (INCLUDING CURBS) SHALL BE LEFT OPEN OVERNIGHT.
- C11. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY RAMPS AROUND ALL EXPOSED UTILITY CASTINGS, BOTH PUBLIC AND PRIVATE WHICH HAVE BEEN UNCOVERED DURING CONSTRUCTION.

D. DRAINAGE

- D1. THE CONTRACTOR IS RESPONSIBLE TO CLEAN AND MAINTAIN ALL EXISTING DRAINAGE STRUCTURES PRIOR TO THE START OF CONSTRUCTION WITHIN THE PROJECT LIMITS.
- D2. ALL EXISTING STORM SEWER PIPES WITHIN PROJECT LIMITS MUST BE CLEANED BY THE CONTRACTOR AFTER COMPLETION OF CONSTRUCTION. THE COST FOR CLEANING SHALL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED IN THE VARIOUS DRAINAGE ITEMS IN THE PROPOSAL.
- D3. ALL ROOF LEADERS AND CURB DRAINS ARE TO REMAIN FREE FLOWING, DURING CONSTRUCTION.
- D4. ALL ROOF DRAIN PIPES IN CURB/SIDEWALK AREA TO BE MAINTAINED AND RECONNECTED, AND SHALL BE EXTENDED UNDER THE SIDEWALK AND THROUGH THE CURB.
- D5. ALL INLETS, MANHOLES AND VAULT CASTINGS TO BE RESET SHALL BE RESET TO THE PROPOSED FINISHED GRADE AS DIRECTED BY THE FIELD ENGINEER. THESE CASTINGS MUST BE RESET FLUSH TO THE PROPOSED GRADE AND THE NEW PAVEMENT SHALL NOT BE MOUNDDED UP OR FEATHERED DOWN TO MEET THESE CASTINGS. ALL CASTINGS RESET TO THE IMPROPER GRADE OR NOT TO THE SATISFACTION OF THE FIELD ENGINEER SHALL BE RESET TO THE NEW GRADE AT NO ADDITIONAL EXPENSE TO THE OWNER.
- D6. EXISTING GRATES ARE THE PROPERTY OF THE MUNICIPALITY OR UTILITY AUTHORITY AND WILL BE DELIVERED. AT NO ADDITIONAL COST TO THE OWNER, TO THE LOCAL DEPARTMENT OF PUBLIC WORKS OR UTILITY AUTHORITY YARD. PAYMENT WILL NOT BE MADE FOR NEW GRATES UNLESS THE EXISTING GRATES ARE RETURNED TO THE OWNER.
- D7. ALL OPEN DRAINAGE EXCAVATIONS SHALL BE BACKFILLED AT THE END OF EACH DAY AND PROTECTED FROM PEDESTRIAN AND VEHICULAR TRAFFIC.
- D8. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE DURING AND AFTER CONSTRUCTION. IF A SITUATION ARISES WHERE WATER WILL POND AT A PARTICULAR LOCATION, THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN MUST BE NOTIFIED IMMEDIATELY IN ORDER TO MAKE CORRECTIVE MEASURES IN WRITING.
- D9. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING THAT ALL PROPOSED STORM SEWER CONNECTIONS ARE TO THE EXISTING STORM SEWER SYSTEMS.

E. TRAFFIC CONTROL

- E1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF TRAFFIC CONTROL MEASURES.
- E2. MAINTENANCE AND PROTECTION OF PEDESTRIAN TRAFFIC CONTROL MUST CONFORM TO NJDOT AND MUTCD STANDARDS ALONG WITH THE REQUIREMENTS OF THE MUNICIPALITY. POLICE TRAFFIC DIRECTORS SHALL BE COORDINATED WITH THE MUNICIPALITY, AS NEEDED.
- E3. THE CONTRACTOR SHALL BE RESPONSIBLE TO PREPARE A DETOUR PLAN AS NEEDED OR REQUIRED BY THE OWNER AND/OR LOCAL POLICE DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO STARTING WORK.

F. SIGNS

- F1. ANY SIGNS LOCATED WITHIN THE SIDEWALK AREAS SHOULD BE RESET/RELOCATED IN ACCORDANCE WITH THE STANDARD NJDOT STANDARD DETAILS. SEPARATE PAYMENT WILL NOT BE MADE FOR RESETTING OBJECTS LOCATED IN THE SIDEWALK. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE REPLACEMENT OF SIDEWALKS, UNLESS PAYMENT FOR SUCH WORK IS SPECIFIED IN THE PROPOSAL.
- F2. THE CONTRACTOR SHALL RELOCATE/RESET SIGNS AS SHOWN ON THE PLANS OR DIRECTED BY THE PROFESSIONAL ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK BUT THE COST SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROPOSAL.
- F3. SIGNS FOR PARKING PROHIBITION MUST BE POSTED AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE, OBTAIN AND PLACE SIGNS AS DIRECTED BY THE OWNER.

G. SURVEY

- G1. LAYOUT OF ALL WORK SHALL BE ADJUSTED IN THE FIELD TO MEET SITE CONDITIONS AS APPROVED IN WRITING BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN.
- G2. THE CONTRACTOR IS RESPONSIBLE TO LAYOUT ALL NEW WORK PRIOR TO CONSTRUCTION FOR FIELD ENGINEER'S APPROVAL. ANY LOCATIONS NOT APPROVED BY THE FIELD ENGINEER AND INSTALLED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED AS PER THE FIELD ENGINEER'S INSTRUCTIONS AT NO ADDITIONAL COST TO THE OWNER.
- G3. ALL LAYOUT WORK SHALL BE DONE BY A NEW JERSEY LICENSED LAND SURVEYOR.
- G4. ALL EXISTING LOCATIONS TAKEN FROM A SURVEY PREPARED BY NEGLIA ENGINEERING ASSOCIATES.

H. TREES

- H1. CONTRACTOR MUST RETAIN A CERTIFIED TREE EXPERT FOR TREE EVALUATION WHERE NECESSARY. NO ADDITIONAL PAYMENT WILL BE MADE FOR TREE EXPERT; PRICE TO BE INCLUDED IN SITE CLEARING.
- H2. ALL TREES THAT HAVE ROOTS THAT ENROACH INTO THE PROPOSED CURBS OR PAVEMENT AND ARE TO BE SAVED SHALL BE EVALUATED BY THE CONTRACTOR'S CERTIFIED TREE EXPERT. ALL EVALUATIONS SHALL BE IN WRITING AND SHALL ACCURATELY IDENTIFY THE TREE IN QUESTION BY STATION AND OFFSET (LEFT OR RIGHT). ALL EVALUATIONS SHALL BE SUBMITTED TO THE PROFESSIONAL ENGINEER FOR REVIEW AND CONSULTATION WITH THE MUNICIPALITIES TREE EXPERTS PRIOR TO CUTTING ANY ROOTS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK BUT THE COST THEREOF SHALL BE INCLUDED IN THE CLEARING SITE ITEM.
- H3. TREES THAT ARE TO BE SAVED, WHERE IT IS DETERMINED THAT ROOT CUTTING MAY SEVERELY DAMAGE THE TREE, SHALL HAVE A CURB BREAK AND STEEL CURB FACE PLATES INSTALLED AS SHOWN ON THE DETAILS.
- H4. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY EVALUATION OF ALL TREES AND THERE WILL NOT BE CHANGE ORDERS FOR DELAYS RESULTING FROM ROOT CUTTING.
- H5. IN AREAS WHERE THE ROOTS ENROACH INTO THE CURB LINE, THE FULL PAVEMENT SECTION SHALL BE REMOVED PRIOR TO REMOVING THE CURB. THEN THE EXISTING CURB SHALL BE REMOVED BY PULLING IT AWAY FROM THE TREE TOWARDS THE ROADWAY TO MINIMIZE ROOT DAMAGE DURING THE REMOVAL OF THE EXISTING CURB. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THEREOF SHALL BE INCLUDED IN THE CLEARING SITE LINE ITEM.

J. ADA REQUIREMENTS

- J1. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR COMPLYING WITH NJDOT AND ADA REQUIREMENTS RELATED TO THE INSTALLATION OF HANDICAP ACCESSIBLE RAMPS AND THE ASSOCIATED SLOPES. THE RAMPS AND ALIGNMENTS ILLUSTRATED ON THESE PLANS SHALL BE USED FOR SCHEMATIC PURPOSES ONLY. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROPER CONSTRUCTION AND ALIGNMENT IN THE FIELD.
- J2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE PROPOSED DROP CURB RAMPS MEET CURRENT NJDOT AND ADA STANDARDS. THOSE RAMPS THAT DO NOT MEET STANDARDS, ONCE CONSTRUCTED, SHALL BE REPLACED TO MEET SAID STANDARDS AT NO ADDITIONAL COST TO THE OWNER.
- J3. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXTENT OF IMPROVEMENTS REQUIRED FOR THOSE RAMP LOCATIONS IDENTIFIED AND COMPLETING SAID WORK TO ENSURE RAMPS ARE IN CONFORMANCE WITH CURRENT NJDOT AND ADA STANDARDS.
- J4. CONTRACTOR SHALL NOT BEGIN SITE CLEARING OPERATIONS ON A RAMP UNTIL HE VERIFIES THAT RAMP CAN BE CONSTRUCTED TO COMPLY WITH APPLICABLE STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORRECTIONS TO A RAMP SHOULD HE PROCEED WITH DEMOLITION PRIOR TO CONFIRMATION OF CONSTRUCTABILITY AT NO ADDITIONAL COST TO THE OWNER.

ESTIMATE OF QUANTITIES			
ITEM NO	DESCRIPTION	APPROX. QTY	UNIT
SITE PREPARATION			
1	Mobilization and Demobilization	1	L.S.
2	Site Clearing and Demolition	1	L.S.
3	Construction Layout	1	L.S.
4	Soil Erosion and Sediment Control Devices	1	L.S.
5	Earthwork	1	L.S.
6	Test Pits (If & Where Directed)	200	C.Y.
7	Maintenance and Protection of Traffic	1	L.S.

STORMWATER CONVEYANCE IMPROVEMENTS

8	Pipe, HDPE, 12", Perforated	619	L.F.
9	Pipe, HDPE, 12"	73	L.F.
10	Pipe, HDPE, 15", Perforated	266	L.F.
11	Pipe, HDPE, 15"	10	L.F.
12	Pipe, HDPE, 18", Perforated	268	L.F.
13	Pipe, HDPE, 18"	17	L.F.
14	Pipe, RCP, 24"	56	L.F.
15	1'x12" Turf Underdrain	5,460	L.F.
16	Outlet Control Structure, Complete	1	Unit
17	Manhole, 4' Diameter	1	Unit
18	Stormwater Outfall, Complete	1	Unit
19	Yard Inlet	4	Unit
20	Cleanout, Yard Inlet, Buried	8	Unit

SITE IMPROVEMENTS

21	Synthetic Turf Base	12,450	S.Y.
22	Fence, Chain-Link, Black Vinyl-Coated, 8' High	1,405	L.F.
23	Fence, Chain-Link, Black Vinyl-Coated, With Sports Netting, 40' High	260	L.F.
24	Gate, Chain-Link, Black Vinyl-Coated, 8' High, 16' Wide	1	Unit
25	Gate, Chain-Link, Black Vinyl-Coated, 8' High, 4' Wide	10	Unit
26	Baseball Backstop, 62' Wide	1	Unit
27	Deer Fencing, 8' High	570	L.F.
28	4' Wide Personnel Gate (Deer Fencing)	5	Unit
29	12" Wide Turf Curb	1,625	L.F.
30	12" Wide Turf Curb, Variable Height	115	L.F.
31	Outfield Fence Windscreen	570	L.F.
32	Outfield Distance Banner	4	Unit
33	Foul Pole, 20'	2	Unit
34	Batting Cage, Complete	2	Unit
35	Dugout Shelter, on 6" Reinforced Concrete Pad	2	Unit
36	Player Bench, 30'	2	Unit
37	Dugout Storage Unit	2	Unit
38	Portable Pitching Mound (Field)	1	Unit
39	Portable Pitching Mound (Bullpen)	2	Unit
40	Portable Bases and Home Plate, 1 Set	1	Unit
41	Permanent Bases and Home Plate, 1 Set	1	Unit
42	Batters Mat (Batting Cage)	2	Unit
43	Bleacher, 5 Row, 45' Wide, on 6" Reinforced Concrete Pad	2	Unit
44	Press Box, on 6" Reinforced Concrete Pad	1	Unit
45	Storage Shed, on 6" Reinforced Concrete Pad	1	Unit
46	Scoreboard, Complete	1	Unit
47	Trash Receptacle, on 6" Reinforced Concrete Pad	2	Unit
48	Asphalt Pathway (4" Base Course, 2" Surface Course)	975	S.Y.

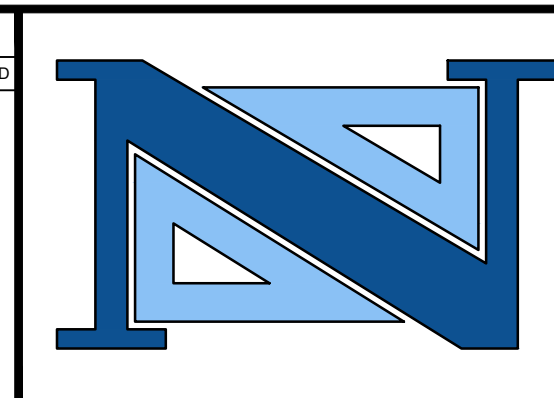
LANDSCAPING IMPROVEMENTS AND SITE RESTORATION

49	Native Dogwood, Cornus Florida, 8'-10' High	5	Unit
50	Eastern Redbud, Cercis Canadensis, 8'-10' High	5	Unit
51	Shagbark Hickory, Carya Ovata, 3"-3.5" Caliper	2	Unit
52	White Oak, Quercus Alba	5	Unit
53	Topsoil and Hydroseed	2,400	S.Y.
54	Final Cleanup and Site Restoration	1	L.S.

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS				
NO.	DATE	DESCRIPTION	DRAWN	DESIGNED



DAVID R. ATKINSON, P.E., C.M.E.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 41635

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
 TEL: 201-939-8805
 LYNDHURST, NEW JERSEY
 FAX: 201-939-0846
 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER
 N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR
 N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER
 N.J. LICENSE NO. 33L00569800

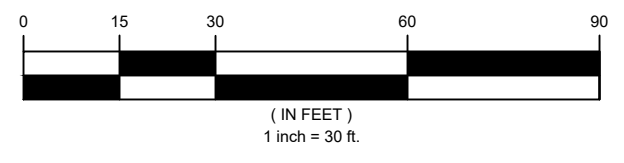
GENERAL NOTES AND QUANTITIES TABLE
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DRAWN BY: E.M.J./K.O.	CHECKED BY: E.M.J.	PROJECT NO.:	SHEET NO.:
DESIGNED BY: E.M.J.	SCALE: N.T.S.	UNIOCTY19.012	1.01
FIELD BOOK NO.:	PAGE:	DATE: SEPTEMBER 23, 2020	

m:\union county\uniocty19.012 Snyder park turf field\plans\ final\general notes and quantities.dwg, Plotted: Thursday, September 24, 2020, 10:17:37 AM



GRAPHIC SCALE



DEMOLITION LEGEND

- CONTRACT / DEMOLITION LIMIT LINE
- DEMOLITION OF LINEAR FEATURE
- EXISTING FEATURE TO BE COMPLETELY REMOVED
- TREE REMOVAL

SOIL DECOMPACTION NOTES

AS DETERMINED BY THE STATE POLICY MAP, THE PROJECT AREA FALLS WITHIN THE METROPOLITAN PLANNING AREA (PA1). UNDER EXISTING CONDITIONS, THE SITE IS NOT COVERED IN WOODY VEGETATION NOR REGROWTH. IN ACCORDANCE WITH NEW JERSEY STANDARD FOR LAND GRADING (REVISED 2017), NON-WOODY VEGETATED PA1 AREAS FALL UNDER THE SOIL COMPACTION EXEMPTION LIST AS AN "URBAN DEVELOPMENT" AND IS DEFINED BY NJDEP AS "PREVIOUSLY DEVELOPED".

NOTES

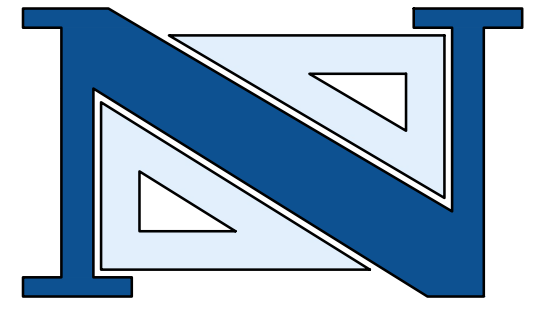
1. CONTRACTOR SHALL FURNISH AND INSTALL 8' - HIGH TEMPORARY CONSTRUCTION FENCE AROUND ENTIRE WORK ZONE. FENCE LAYOUT TO BE SUBMITTED TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL VERIFY EXISTING IRRIGATION SYSTEM LOCATIONS AND REMOVE AS NECESSARY FOR COMPLETION. CONTRACTOR SHALL CONFIRM THAT REMOVAL OF THE IRRIGATION SYSTEM SHALL NOT IMPACT ANY AREAS SURROUNDING THE PROPOSED FIELD.
3. THE CONTRACTOR IS RESPONSIBLE TO CREATE A CONSTRUCTION ACCESS ROAD FOR USE DURING THE DURATION OF THE PROJECT IN A LOCATION AS APPROVED BY THE OWNER AND/OR ENGINEER. NO SEPARATE PAYMENT WILL BE MADE. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ALL DISTURBED AREAS WITHIN AND OUTSIDE OF THE PROJECT LIMITS TO IN-KIND CONDITION OR AS REQUIRED BY THE OWNER AND/OR ENGINEER.
4. THE CONTRACTOR SHALL NOTE THAT ALL TEMPORARY PROTECTIVE MEASURES AND ACCESS ROADS SHALL BE LEFT IN PLACE FOR THE TURF INSTALLATION WORK WHICH IS TO BE PERFORMED BY OTHERS. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ALL TEMPORARY MEASURES AND ACCESS ROAD AT COMPLETION OF THE TURF INSTALLATION AND/OR COMPLETION OF SITE WORK (WHICHEVER IS LATER). NO SEPARATE PAYMENT WILL BE MADE.
5. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES, DRAINAGE TO REMAIN THROUGH DURATION OF CONSTRUCTION.
6. EXISTING CONDUIT TO BE PROTECTED.
7. THE EASTERN PORTION OF THE SITE CONTAINS ENVIRONMENTALLY SENSITIVE AREAS AND THE CONTRACTOR MUST PROTECT THOSE AREAS. DISTURBANCE IS LIMITED TO AREAS NOTED ON THE PERMIT.



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS		DESIGNED	CHECKED
NO.	DATE	DESCRIPTION	



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

(Handwritten signatures of David R. Atkinson and Thomas R. Solfaro)

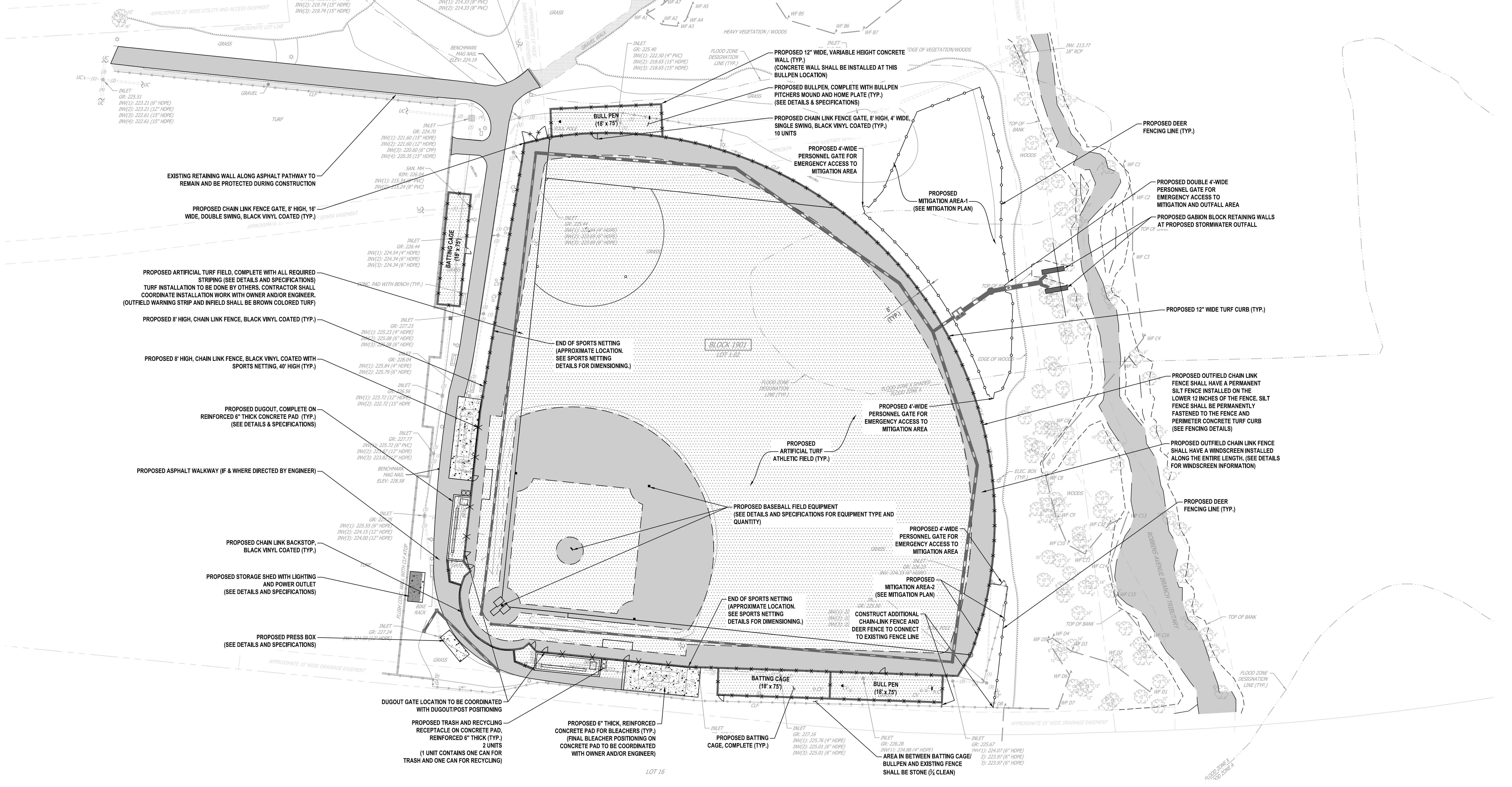
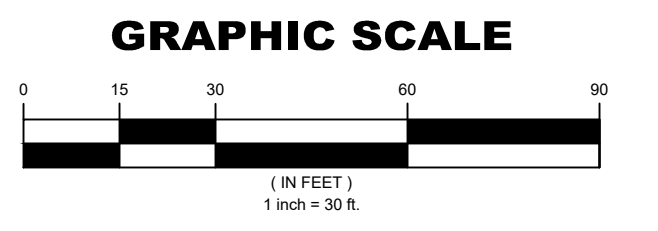
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 38100569800

EXISTING CONDITIONS & DEMOLITION PLAN
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DESIGNED BY: E.M.J./K.O. CHECKED BY: E.M.J. PROJECT NO: UNIOCTY19.012 SHEET NO: 2.00
SCALE: 1"=30' DATE: SEPTEMBER 23, 2020
FIELD BOOK NO: PAGE

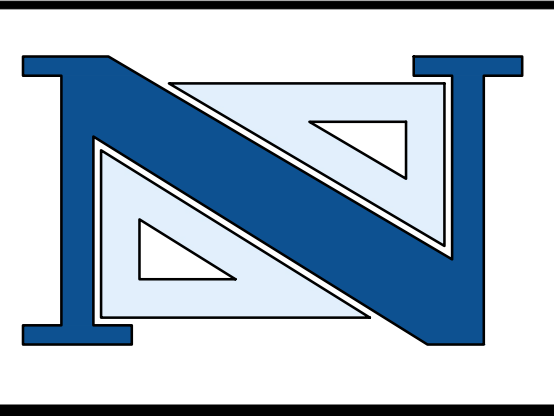
m:\uniocty19\uniocty19.012 Snyder park turf field\uniocty19.dwg, Plotted: Thursday, September 24, 2020 9:30:32 AM



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS		DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION	E.M.J.	E.M.J.
1	2020-05-05	REVISED PER NDEP COMMENTS	E.M.J.	E.M.J.
2	2020-05-11	REVISED PER NDEP COMMENTS	E.M.J.	E.M.J.



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

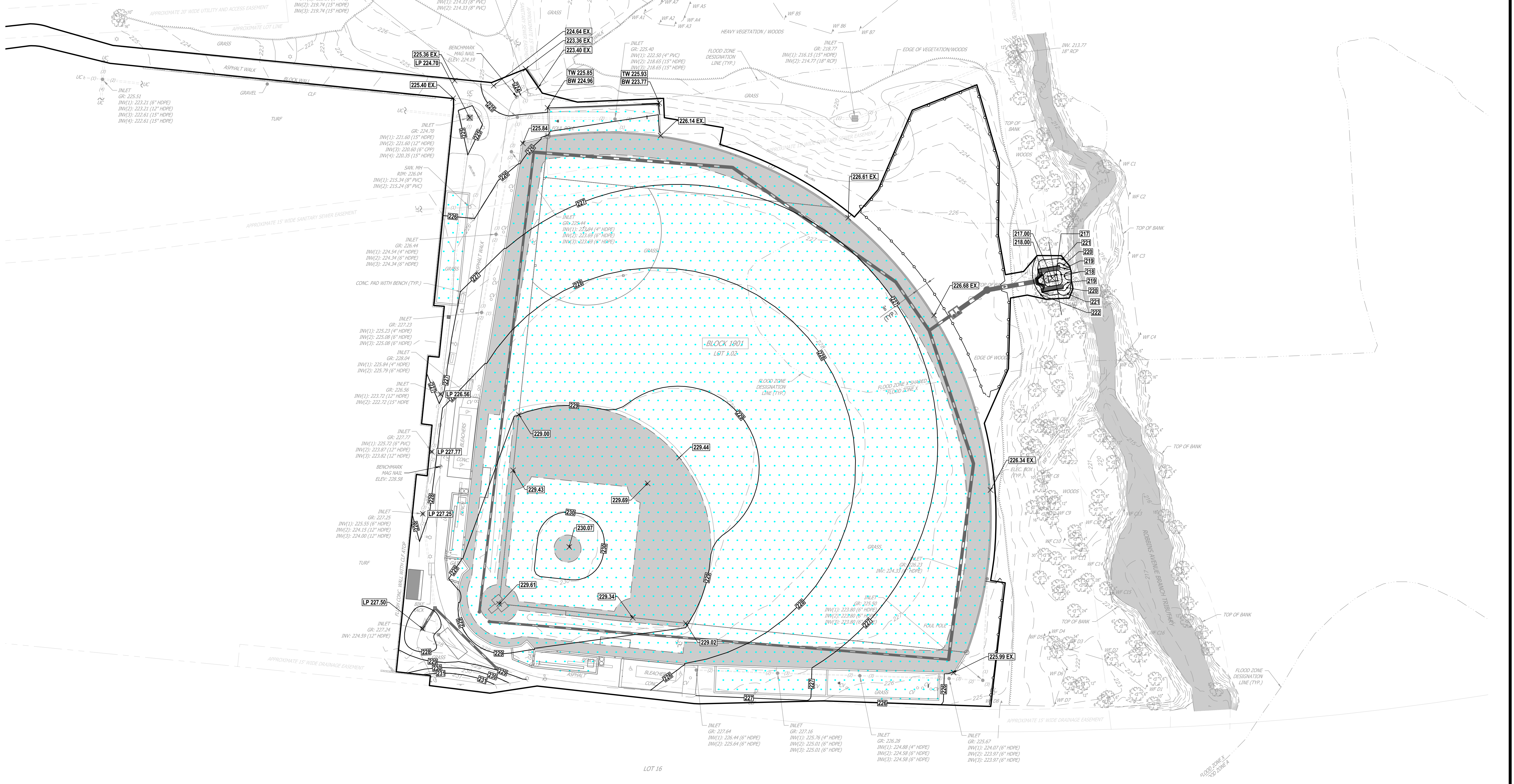
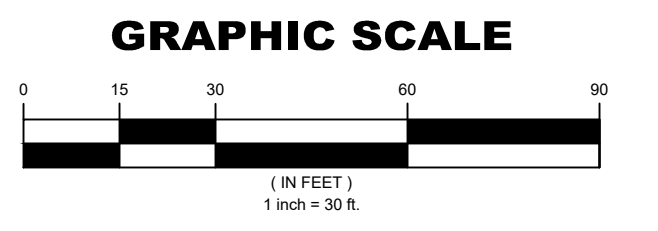
A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 33L00569800

SITE PLAN
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DESIGNED BY: E.M.J. / K.O. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY19.012 SHEET NO.: 3.00
SCALE: 1"=30' DATE: SEPTEMBER 23, 2020
FIELD BOOK NO.: PAGE:

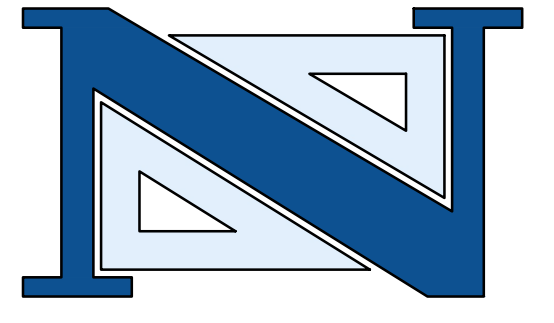
m:\uniocty19\012 Snyder Ave Turf Field Improvements.dwg, Plotwed, Thursday, September 24, 2020 9:46:41 AM



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION			



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

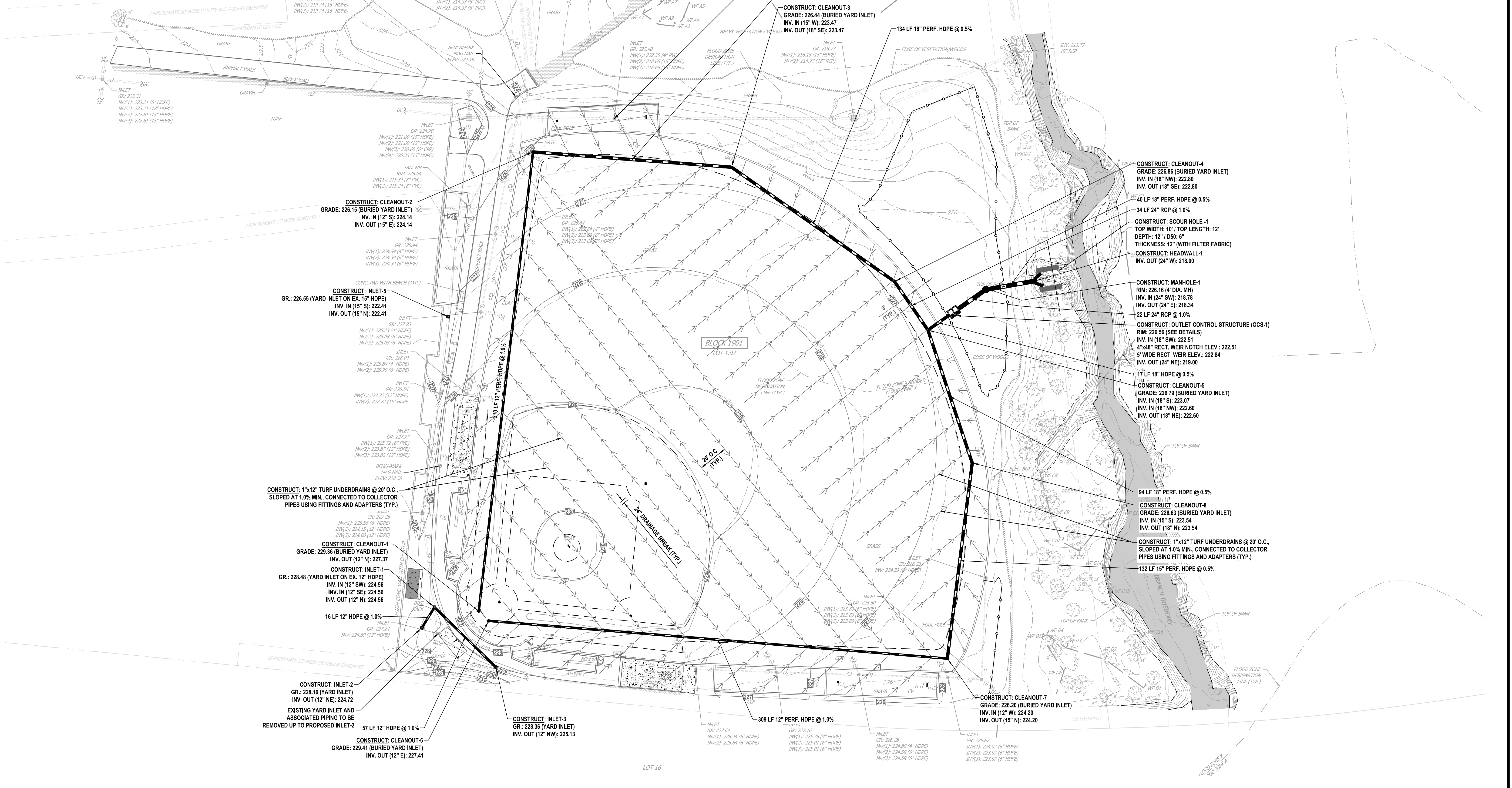
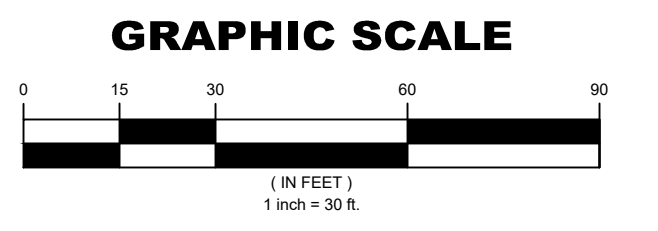
A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
 LYNDHURST, NEW JERSEY
 TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
 PROFESSIONAL PLANNER N.J. LICENSE NO. 38100569800

GRADING PLAN
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DESIGNED BY: E.M.J. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY19.012 SHEET NO.: 4.00
 SCALE: 1"=30' FIELD BOOK NO.: DATE: SEPTEMBER 23, 2020

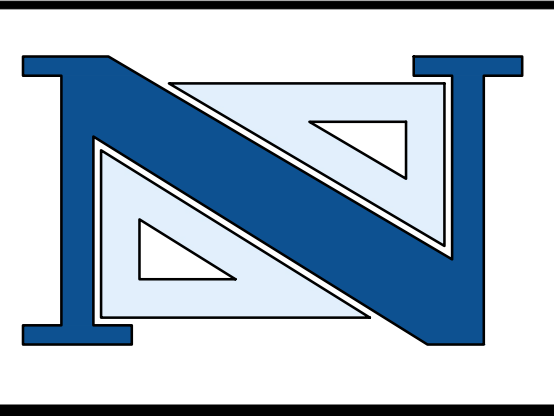
m:\uniocty19\uniocty19.012 Snyder park turf field\grad\grad.dwg, PlotNo: W0202019, September 23, 2020, 7:46:20 PM



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS		DESIGNED	CHECKED
NO.	DATE	DESCRIPTION	



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST
NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 33L00569800

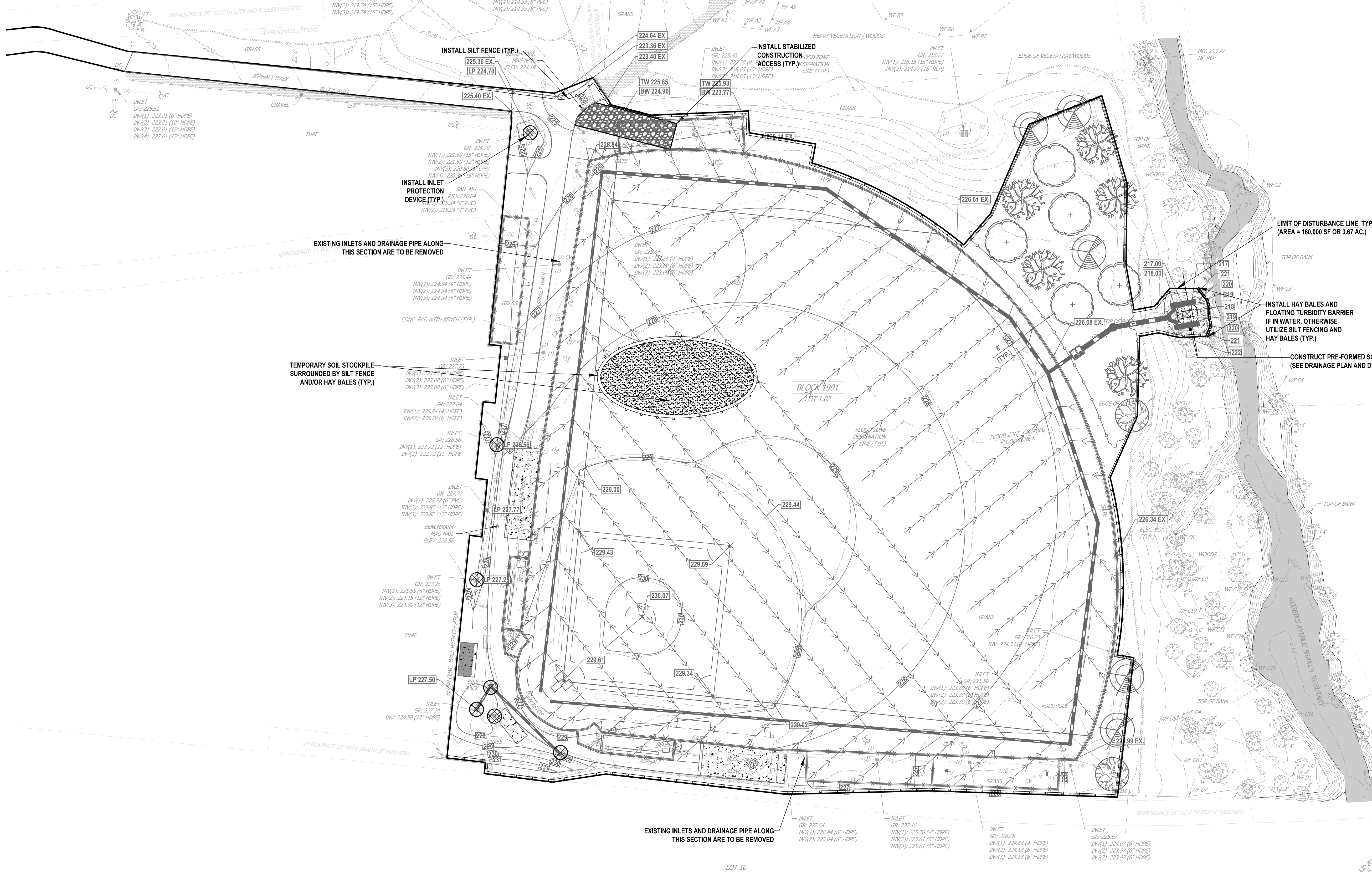
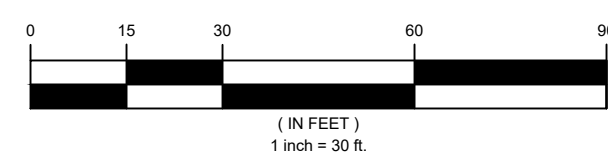
DRAINAGE PLAN
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DESIGNED BY: E.M.J. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY19.012 SHEET NO.: 5.00
SCALE: 1"=30' DATE: SEPTEMBER 23, 2020
FIELD BOOK NO.: PAGE:

m:\uniocty19\uniocty19.012 Snyder Ave Turf Field Improvements.dwg Plot Date: Wednesday, September 23, 2020 7:48:53 PM

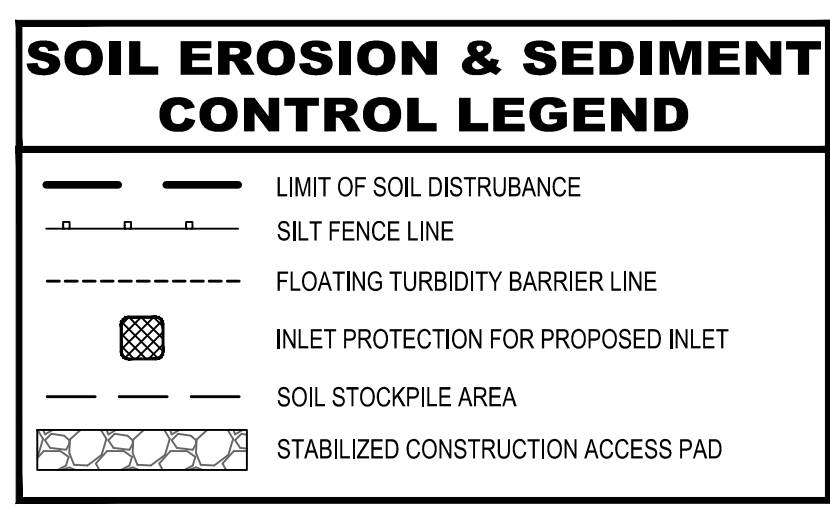


GRAPHIC SCALE



PERMANENT STABILIZATION NOTES
1. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE.
2. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES.
3. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

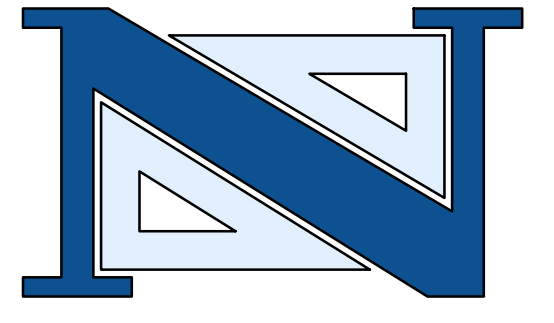
SOIL DECOMPACTION NOTES
AS DETERMINED BY THE STATE POLICY MAP, THE PROJECT AREA FALLS WITHIN THE METROPOLITAN PLANNING AREA (PA1). UNDER EXISTING CONDITIONS, THE SITE IS NOT COVERED IN WOODY VEGETATION NOR REGROWTH, EXCEPT WHERE INDICATED HEREON. IN ACCORDANCE WITH NEW JERSEY STANDARD FOR LAND GRADING (REVISED 2017), NON-WOODY VEGETATED PA1 AREAS FALL UNDER THE SOIL COMPACTION EXEMPTION LIST AS AN "URBAN DEVELOPMENT" AND IS DEFINED BY NJDEP AS "PREVIOUSLY DEVELOPED".



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION	E.M.J.	E.M.J.	E.M.J.
1	2020-05-11	REVISED PER NJDEP COMMENTS			



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 38100569800

SOIL EROSION & SEDIMENT CONTROL PLAN
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DRAWN BY: E.M.J./K.O. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY19.012 SHEET NO.: 6.00
DESIGNED BY: E.M.J. SCALE: 1"=30' DATE: SEPTEMBER 23, 2020
FIELD BOOK NO.: PAGE:

m:\uniocty19\uniocty19.012 Snyder turf field improvements.dwg Plotfile: Wednesday, September 23, 2020 9:34:08 PM

SOMERSET-UNION COUNTIES SOIL CONSERVATION DISTRICT SOIL EROSION & SEDIMENT CONTROL NOTES

- 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.
- 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.
- 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.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NJ STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
- 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.
- 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.
- ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (I.E.: SLOPES GREATER THAN 3:1).
- TRAFFIC CONTROL STANDARDS REQUIRE THE INSTALLATION OF A 50'X30'X6"PAD OF 1 1/2" OR 2" STONE, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.
- THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING 48 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY.
- 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.
- IN THAT N.J.S.A. 15:24-39 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.
- CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
- 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 RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT NJ STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.
- THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.
- MULCHING TO THE NJ STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONALS ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING.
- CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF CONSTRUCTION PROJECT.
- 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 SOIL CONSERVATION DISTRICT.
- 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, HYDRO-MULCH SHOULD BE APPLIED AT A RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE NJ STANDARDS.

INLET PROTECTION STANDARDS**DEFINITION**

A TEMPORARY BARRIER AND SETTLING FACILITY INSTALLED AT A STORM SEWER INLET.

PURPOSE

THE PURPOSE OF STORM SEWER INLET PROTECTION IS TO INTERCEPT AND RETAIN SEDIMENT, THUS PREVENTING THE ENTRANCE OF SEDIMENT INTO THE STORM SEWER SYSTEM.

CONDITIONS WHERE PRACTICE APPLIES

- CONTRIBUTING DRAINAGE AREA IS 3 ACRES OR LESS.
- A STORM SEWER OR THE OUTLET CHANNEL OF A STORM SEWER NEEDS PROTECTION FROM SEDIMENT.
- TRAFFIC WILL NOT DESTROY OR CAUSE CONSTANT MAINTENANCE OF THE STORM SEWER INLET PROTECTION.
- A TRAFFIC HAZARD WILL NOT BE CREATED.
- A FLOODING PROBLEM WILL NOT BE CREATED.

WATER QUALITY ENHANCEMENT

THE PRIMARY BENEFIT TO WATER QUALITY IS REMOVAL OF SEDIMENT FROM STORMWATER RUNOFF PRIOR TO ENTERING THE STORM SEWER SYSTEM. AS AN ADDED BENEFIT, OTHER FLOATABLE DEBRIS, SUCH AS VEGETATIVE MATTER AND LITTER, MAY ALSO BE FILTERED OUT OF THE RUNOFF.

DESIGN CRITERIA

THE FOLLOWING APPLIES TO ALL METHODS OF STORM SEWER INLET PROTECTION:

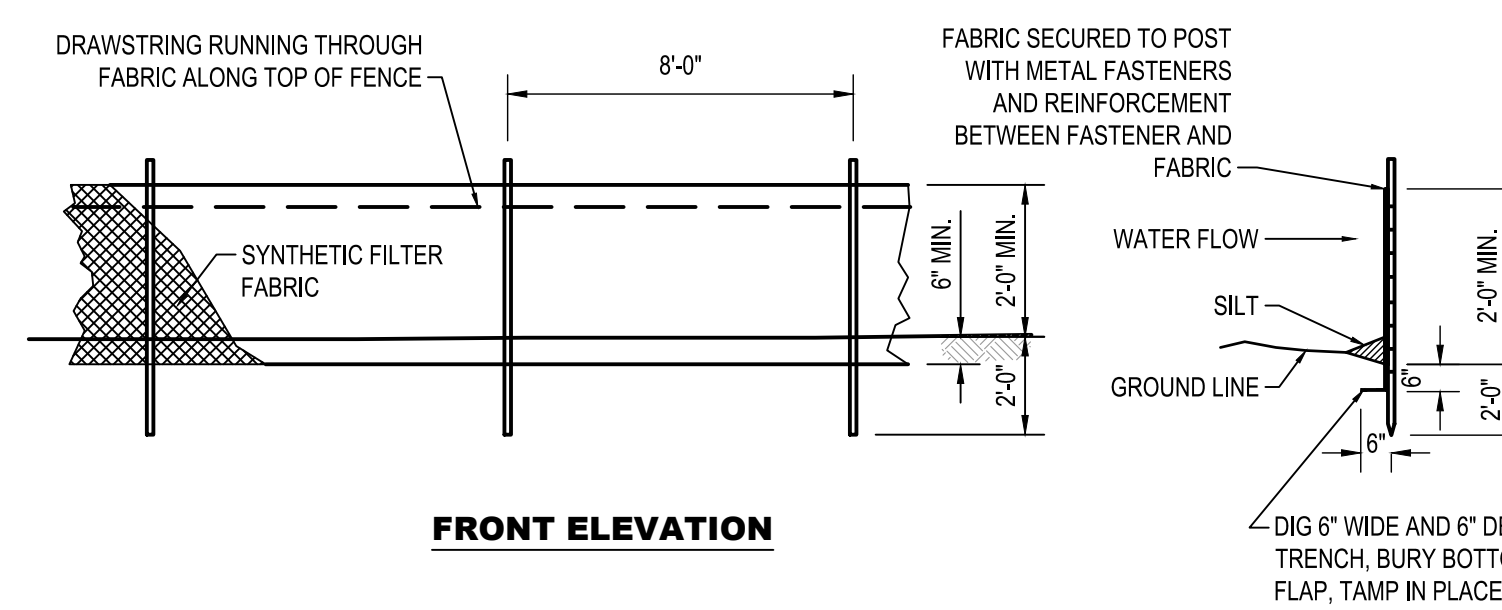
- MUST SLOW THE STORM WATER, PROVIDE THE COARSE SEDIMENT PARTICLES A CHANCE TO SETTLE, AND PROVIDE AN AREA TO RETAIN THE PARTICLES THAT HAVE SETTLED.
- IN ALL CASES, THE INLET PROTECTION SHOULD NOT COMPLETELY CLOSE OFF THE INLET.
- THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.

OTHER METHODS THAT ACCOMPLISH THE PURPOSE OF STORM SEWER INLET PROTECTION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.

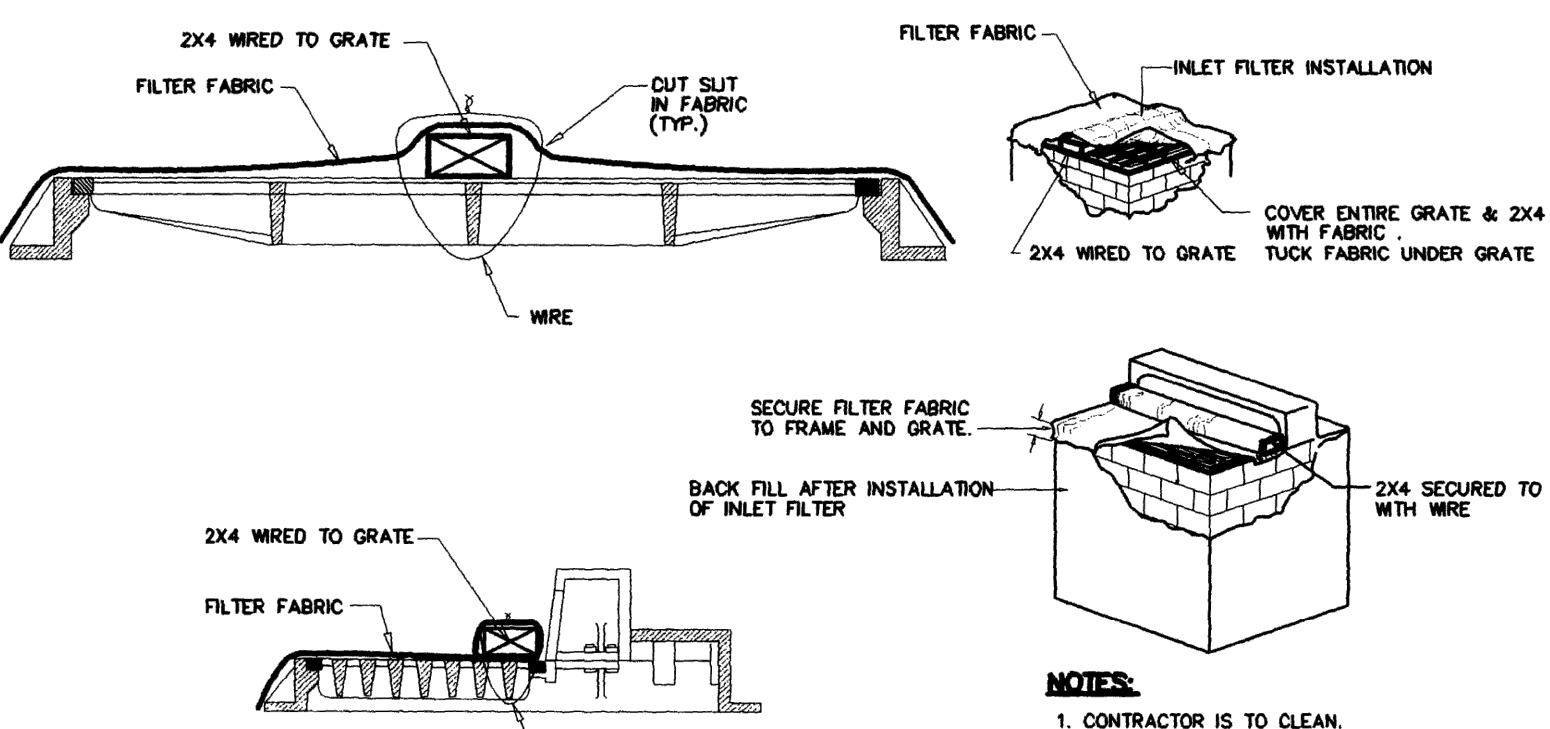
INSPECTIONS SHALL BE FREQUENT, MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARD THE INLET HAS BEEN STABILIZED.

DUST CONTROL NOTES**DEFINITION**
THE CONTROL OF DUST ON CONSTRUCTION SITES AND ROADS.**PURPOSE**
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON- AND OFF-SITE DAMAGE AND HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.**WHERE APPLICABLE**
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON- AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES ON ANY RESTRICTIONS.**WATER QUALITY ENHANCEMENT**
SEDIMENTS DEPOSITED AS "DUST" ARE OFTEN FINE COLLOIDAL MATERIAL WHICH IS EXTREMELY DIFFICULT TO REMOVE FROM WATER ONCE IT BECOMES SUSPENDED. USE OF THIS STANDARD WILL HELP TO CONTROL THE GENERATION OF DUST FROM CONSTRUCTION SITES AND SUBSEQUENT BLOWING AND DEPOSITION INTO LOCAL SURFACE WATER RESOURCES.**PLANNING CRITERIA**
THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:
MULCHES - SEE STANDARDS FOR STABILIZATION WITH MULCHES ONLY (p. 5-1).
VEGETATIVE COVER - SEE STANDARDS FOR: TEMPORARY VEGETATIVE COVER (p. 7-1), PERMANENT VEGETATIVE COVER (p. 4-1), AND PERMANENT STABILIZATION WITH SOD (p. 6-1).
SPRAY-ON ADHESIVES - ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

DUST CONTROL MATERIALS			
	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLON/ACRE
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300
POLYACRYLAMIDE (PAM) - SPRAY ON POLYACRYLAMIDE (PAM) - DRY SPREAD		APPLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS. MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS. SEE SEDIMENT BASIN STANDARD, p. 28-1.	
ACIDULATED SOY BEAN SOAP STICK	NONE	COARSE SPRAY	1,200

TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.**SPRINKLING** - SITE IS SPRINKLED UNTIL THE SURFACE IS WET.**BARRIERS** - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.**CALCIUM CHLORIDE** - SHALL BE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCUMULATION AROUND PLANTS.**STONE** - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.**INLET PROTECTION**

NOT TO SCALE



- NOTES:**
- CONTRACTOR IS TO INSPECT INLET FILTER AFTER EVERY STORM, AND CLEAN OR REPLACE AS REQUIRED.
 - CONTRACTOR IS TO REMOVE FABRIC AND MESH JUST PRIOR TO PAVING.
 - FILTER FABRIC SHALL BE "MIRAFI 700X" TYPE OR APPROVED EQUAL.
 - INLET FILTER SHALL FILTER RUNOFF FROM THE 1 YEAR 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO STORM SEWER SYSTEM.
 - CONTRACTOR TO PROVIDE EMERGENCY OVERFLOW OPENINGS AS REQUIRED BY LOCAL SOIL CONSERVATION DISTRICT STANDARDS.

INLET PROTECTION

NOT TO SCALE

SEEDING SPECIFICATIONS**TEMPORARY SEEDING**

TEMPORARY VEGETATIVE COVER SHALL CONSIST OF PERENNIAL RYEGRASS APPLIED UNIFORMLY AT A RATE OF 1.0 POUND PER 1,000 SQ. FT. (40 lbs./Ac.), IN ACCORDANCE WITH TABLE 7-2, PAGE 7-3. LIMESTONE (PULVERIZED DOLOMITIC EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDES) SHALL BE APPLIED AT THE RATE OF 45 lbs/1,000 SQ. FT. (1 TON/AC) IN ACCORDANCE WITH TABLE 7-1, PAGE 7.2. FERTILIZER (10-20-10 OR EQUIVALENT) AT THE RATE OF 11 lbs/1,000 SQ. FT. (500 lbs./Ac.) OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN, IN ACCORDANCE WITH PARAGRAPH 2A, PAGE 7-1.

MULCHING IS REQUIRED ON ALL SEEDING AND SHALL BE ACCOMPLISHED AS FOLLOWS:

- MULCH MATERIALS SHOULD BE UNROTTED SALT HAY, HAY, OR SMALL GRAIN STRAW AT A RATE OF 1-1/2 TO 2 TONS PER ACRE, OR 70 TO 90 POUNDS PER 1,000 SQUARE FOOT. MULCH BLOWERS SHOULD NOT GRIND OR CHOP THE MATERIAL.
- SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85 PERCENT OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FOOT SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.
- MULCH ANCHORING SHALL BE ACCOMPLISHED USING EITHER PEG AND TWINE, MULCH NETTING, MULCH-ANCHORING COULTER TOOL, OR LIQUID MULCH BINDERS, PER THE ACCOMPANYING "STABILIZATION WITH MULCH ONLY" SPECIFICATION. * OPTIMUM SEEDING DATES: 3/1 - 5/15 AND 8/15 - 10/1

PERMANENT SEEDING

- TOPSOIL TO BE PLACED TO A DEPTH OF 4 INCHES ON EXPOSED SOILS UPON COMPLETION OF FINAL GRADING.
- SEED IS TO BE UNIFORMLY APPLIED TO THE NORMAL DEPTH OF 1/4 INCH TO 1/2 INCH (EXCEPT HYDRO SEEDING), ZONE 6b SEED MIXTURE 17, AS SHOWN ON PAGE 4-12 IN THE SOIL EROSION STANDARDS. THE SEEDING RATE SHALL BE:

SEED MIXTURE	PLANTING RATE	
	LBS PER ACRE	LBS PER 1,000 SF
HARD FESCUE	120	2.7
CREeping FESCUE	30	0.7
PERENNIAL RYEGRASS	10	0.25

* OPTIMAL SEEDING DATES: 3/1 - 4/30 AND 8/15 - 10/15

- MULCHING WILL BE ACCOMPLISHED PER THE BELOW TEMPORARY SEEDING SPECIFICATION.

*MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR SOIL CAN BE IRRIGATED.

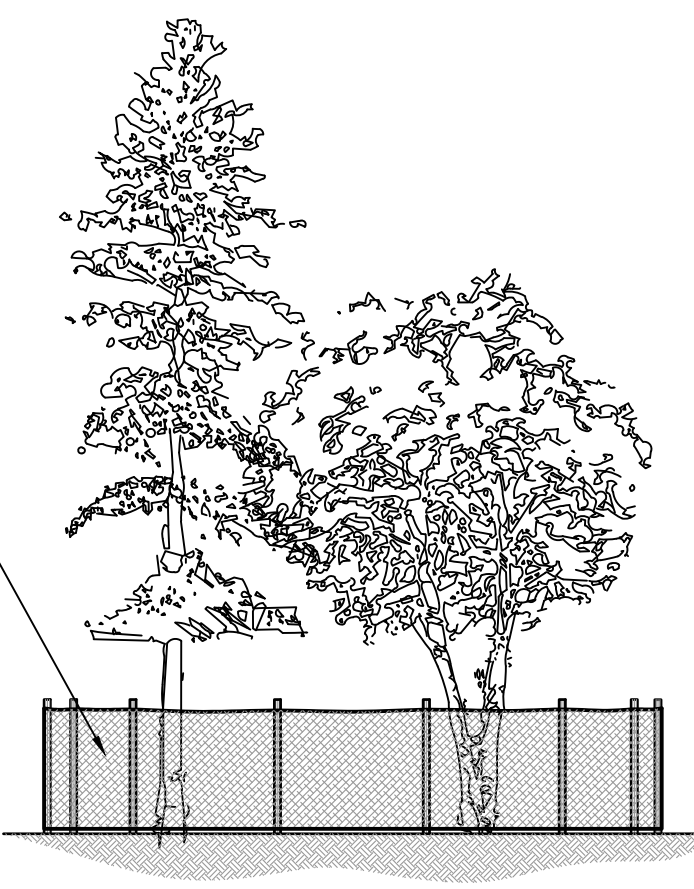
SOIL PREPARATION

SUITABLE EQUIPMENT WILL BE USED TO PREPARE A REASONABLE, UNIFORM, FINE SEED BED TO A MINIMUM DEPTH OF 4 INCHES.

APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET USING 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. LIME SHALL BE PULVERIZED DOLOMITIC LIMESTONE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES. THE FOLLOWING TABLE IS A GENERAL GUIDELINE FOR LIMESTONE APPLICATION RATES:

SOIL TEXTURE	TONS/ACRE	LBS./1000 SQ. FT.
CLAY, CLAY LOAM, & HIGHLY ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT.



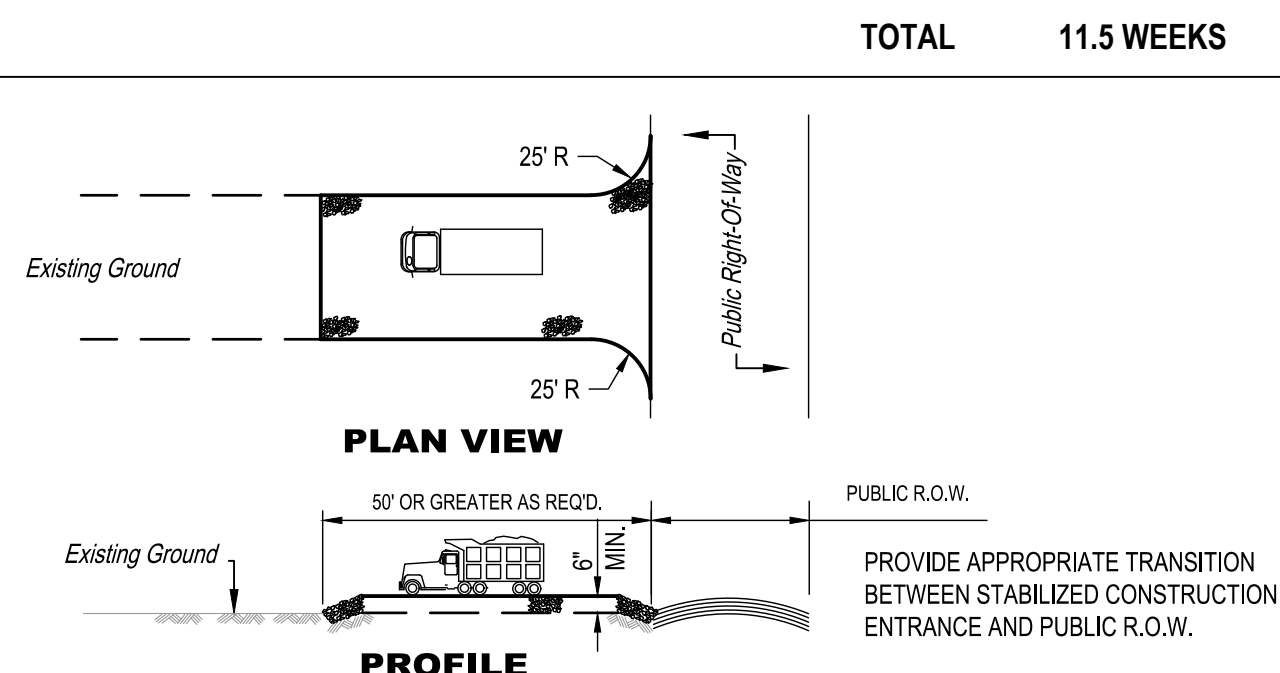
- NOTES:**
- CONSTRUCTION EQUIPMENT OF ANY KIND IS TO BE PROHIBITED FROM DRIVING AND/OR PARKING UNDER TREES. THE STOCKPILE OF CONSTRUCTION MATERIAL SHALL BE PROHIBITED FROM BEING STORED UNDER ANY TREES.

TREE PROTECTION

NOT TO SCALE

SEQUENCE OF CONSTRUCTION

- | | |
|--|-------------------|
| 1. INSTALL SILT FENCE & STABILIZED CONSTRUCTION ACCESS | (2 DAYS) |
| 2. DEMOLISH EXISTING ITEMS | (1 WEEK) |
| 3. INSTALL NEW DRAINAGE & INLET PROTECTION | (2 WEEKS) |
| 4. ROUGH GRADE SITE | (1 WEEK) |
| 5. CONSTRUCT ARTIFICIAL TURF SYSTEM PREP | (2 WEEKS) |
| 6. INSTALL FENCING & NETTING | (1 WEEK) |
| 7. INSTALL DUGOUTS, BATTING CAGES, & BULLPENS | (2 WEEKS) |
| 8. FINAL GRADING OF SITE, AND TOPSOILING & SEEDING | (1 WEEK) |
| 9. STABILIZATION OF SITE | (1 WEEK) |
| 10. REMOVE SOIL EROSION & SEDIMENT CONTROL DEVICES | (2 DAYS) |
| TOTAL | 11.5 WEEKS |



- NOTES:**
- PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATION(S) AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
 - STONE SIZE SHALL BE ASTM C-33, SIZE NO 2 OR 3, CRUSHED STONE.
 - THE THICKNESS OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL NOT BE LESS THAN 6".
 - THE WIDTH AT THE EXIST. PAVEMENT SHALL NOT BE LESS THAN THE FULL WIDTH OF POINTS OF INGRESS AND EGRESS.
 - THE STAB. CONST. ENT. SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W. PAVEMENT. THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT.
 - ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
 - APPROPRIATE TRANSITION BETWEEN STAB. CONST. ENT. & PUBLIC R.O.W. MUST BE PROVIDED.
 - THE RATIO OF STONE SIZE TO WIDTH MUST BE 9:27.

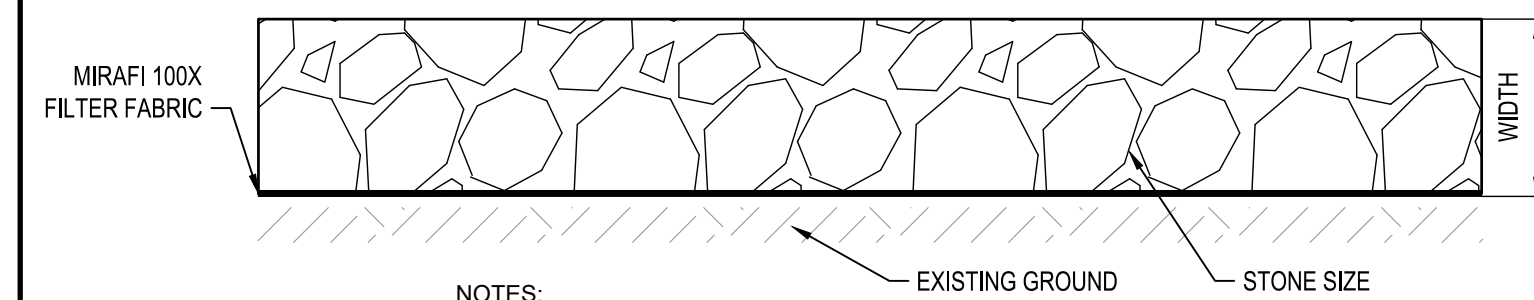
PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT.	100 FT.
2 TO 5%	100 FT.	200 FT.

ENTIRE SURFACE STABILIZED WITH FABRIC BASE COURSE*

* AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

STABILIZED CONSTRUCTION ACCESS

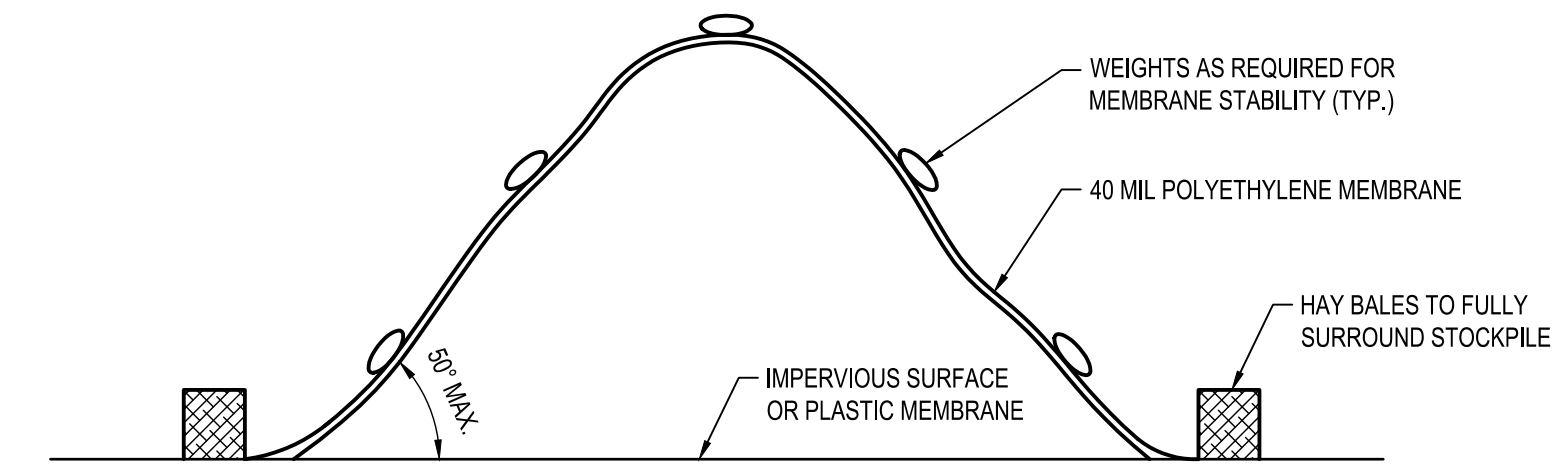
NOT TO SCALE



- NOTES:**
- APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC R.O.W. MUST BE PROVIDED.
 - THE RATIO OF STONE SIZE TO WIDTH MUST BE 9:27.

STABILIZED CONSTRUCTION PAD

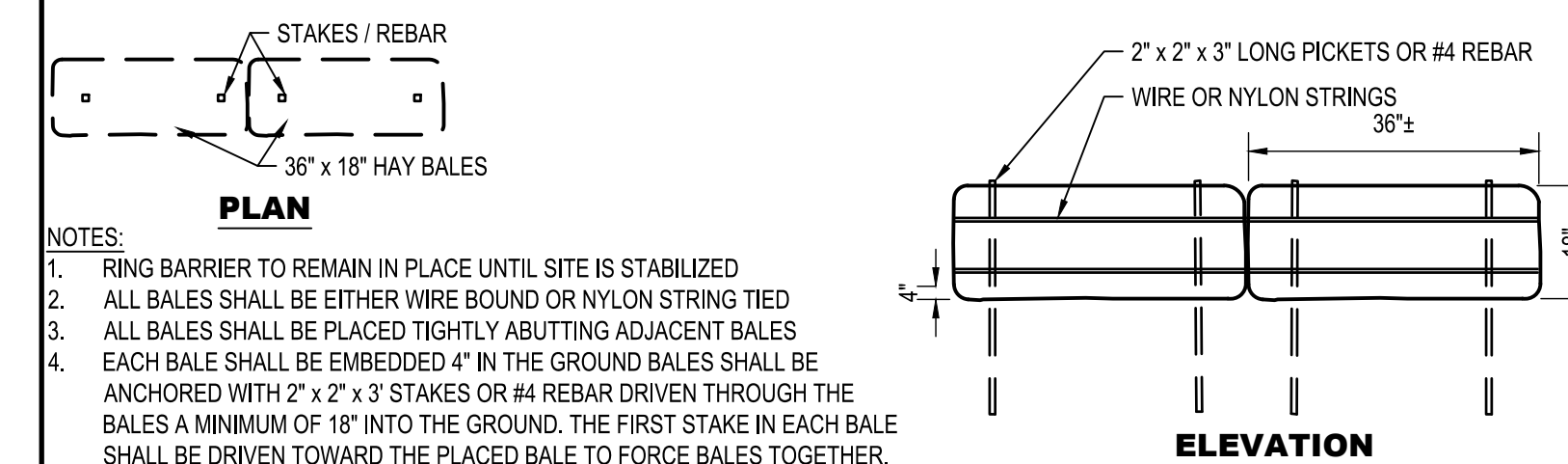
NOT TO SCALE



- NOTES:**
- FOR NON-CONTAMINATED SOIL, SURROUND STOCKPILE WITH SILT FENCE. NO COVER REQUIRED.

SOIL STOCKPILE

NOT TO SCALE

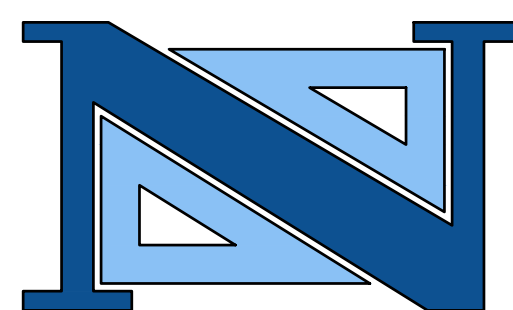


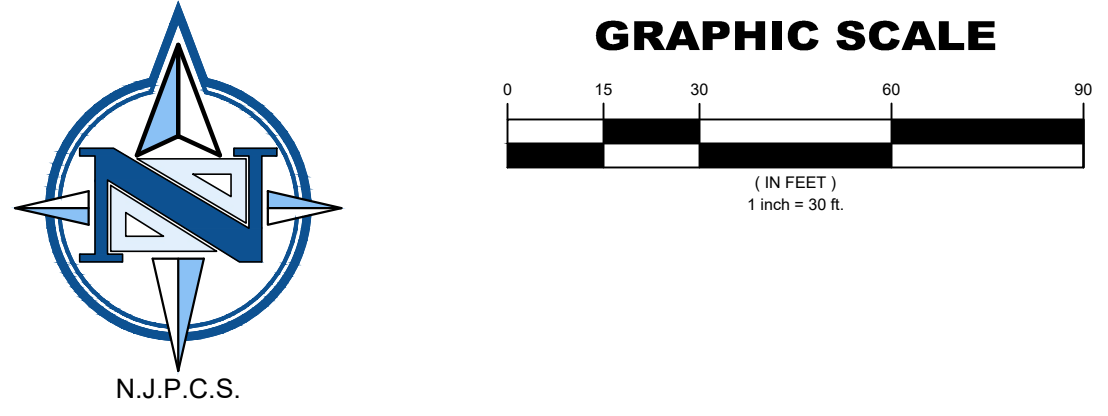
- NOTES:**
- RING BARRIER TO REMAIN IN PLACE UNTIL SITE IS STABILIZED.
 - ALL BALES SHALL BE EITHER WIRE BOUND OR NYLON STRING TIED.
 - ALL BALES SHALL BE PLACED TIGHTLY ADJUTING ADJACENT BALES.
 - EACH BALE SHALL BE EMBEDDED 4" IN THE GROUND. BALES SHALL BE ANCHORED WITH 2" X 2" X 3" STAKES OR #4 REBAR DRIVEN THROUGH THE BALES A MINIMUM OF 18" INTO THE GROUND. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PLACED BALE TO FORCE BALES TOGETHER.

HAY BALE

NOT TO SCALE

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

**DAVID R. ATKINSON, P.E., C.M.E.**
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506**THOMAS R. SOLFARO, P.E., C.M.E.**
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635**NEGLIA ENGINEERING ASSOCIATES**
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM**MICHAEL J. NEGLIA, P.E., P.L.S., P.P.**PROFESSIONAL ENGINEER
N.J. LICENSE NO. 38604PROFESSIONAL LAND SURVEYOR
N.J. LICENSE NO. 38604PROFESSIONAL PLANNER
N.J. LICENSE NO. 33L00598900**SOIL EROSION & SEDIMENT CONTROL DETAILS**
SNYDER PARK IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY NEW JERSEYDRAWN BY: E.M.J./K.O. CHECKED BY: E.M.J. PROJECT NO: UNIOCTY19.012 SHEET NO: 7.00
DESIGNED BY: E.M.J. SCALE: N.T.S. FIELD BOOK NO: [] DATE: FEBRUARY 21, 2020



PERMITTING PLAN LEGEND	
	LIMIT OF DISTURBANCE LINE
	WETLANDS DELINEATION LINE
	TRANSITION AREA BUFFER LINE
	TRANSITION AREA DISTURBANCE (UNDER TRANSITION AREA WAIVER PER N.J.A.C. 7:7A-8.1(d))
	TRANSITION AREA DISTURBANCE FOR OUTFALL CONSTRUCTION (UNDER GENERAL PERMIT No. 11)
	PROPERTY LINE

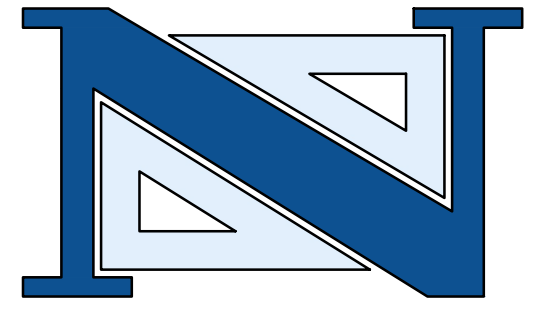


FRESHWATER WETLANDS TRANSITION AREA DISTURBANCE CALCULATIONS	
150-FOOT TRANSITION AREA WIDTH	
1. GENERAL PERMIT No. 11 (OUTFALL)	
1.1. HEADWALL AND OUTLET PROTECTION	
1.1.1. TOTAL PROPOSED DISTURBANCE =	2,000 SF / 0.046 AC.
1.1.2. MAXIMUM PERMITTED DISTURBANCE =	10,890 SF (0.250 AC.)
1.1.3. DISTURBANCE FOR HEADWALL AND OUTLET PROTECTION IS LESS THAN THE MAXIMUM (N.J.A.C. 7:7A-7.11)	
2. TRANSITION AREA WAIVER PER N.J.A.C. 7:7A-8.1(d)	
2.1. CONSTRUCTION OF AN ARTIFICIAL TURF BASEBALL FIELD & ASSOCIATED APPURTENANCES	
2.1.1. TOTAL PROPOSED DISTURBANCE =	49,000 SF / 1.125 AC.
PROPOSED BASEBALL FIELD WILL BE CONSTRUCTED VIRTUALLY ENTIRELY WITHIN THE FOOTPRINT OF THE EXISTING BASEBALL FIELD DEVELOPMENT. AS SUCH, THE SIGNIFICANT MAJORITY OF THE DISTURBANCE AREA WITHIN THE TRANSITION AREA IS WITHIN ALREADY DISTURBED PORTIONS OF THE TRANSITION AREA.	

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION	E.M.J.	E.M.J.	E.M.J.
1	2020-05-15	REVISED PER NJDEP COMMENTS			



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

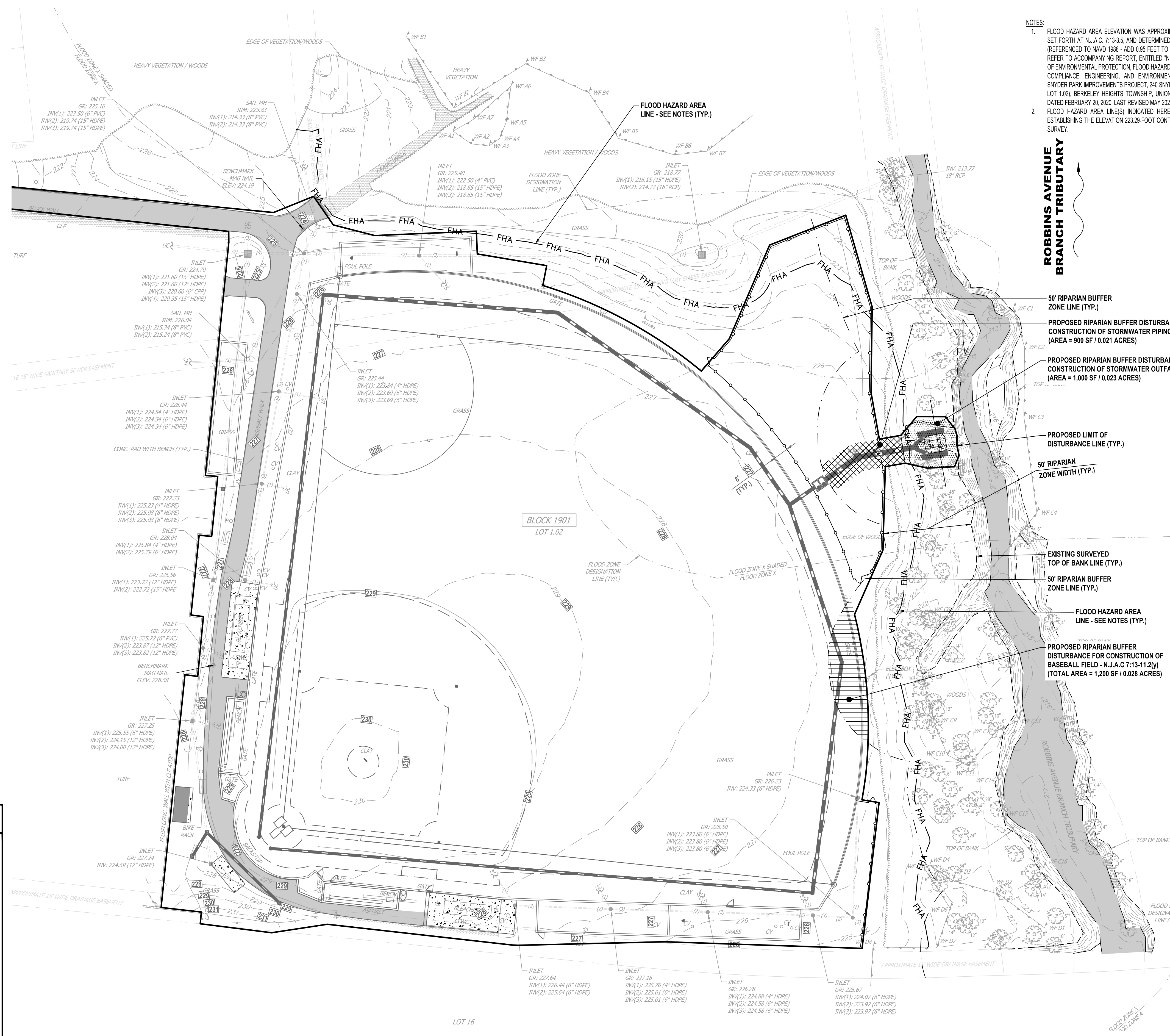
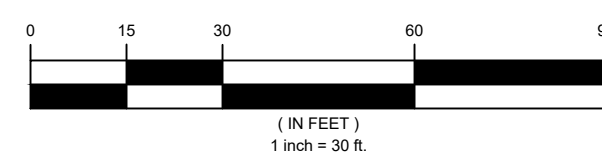
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 38100569800

FRESHWATER WETLANDS PERMITTING PLAN
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DRAWN BY: E.M.J./K.O. CHECKED BY: E.M.J. PROJECT NO: UNIOCTY19.012 SHEET NO: 8.00
DESIGNED BY: E.M.J. SCALE: 1" = 30' FIELD BOOK NO: PAGE DATE: SEPTEMBER 23, 2020



GRAPHIC SCALE



NOTES:

- FLOOD HAZARD AREA ELEVATION WAS APPROXIMATED USING METHOD 5, SET FORTH AT N.J.A.C. 7:13-3.5, AND DETERMINED TO BE ELEVATION 223.29 (REFERENCED TO NAVD 1988 - ADD 0.95 FEET TO CONVERT TO NGVD 1929). REFER TO ACCOMPANYING REPORT, ENTITLED "NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, FLOOD HAZARD AREA INDIVIDUAL PERMIT COMPLIANCE, ENGINEERING, AND ENVIRONMENTAL REPORT, FOR THE SNYDER PARK IMPROVEMENTS PROJECT, 240 SNYDER AVENUE (BLOCK 1901, LOT 1.02), BERKELEY HEIGHTS TOWNSHIP, UNION COUNTY, NEW JERSEY," DATED FEBRUARY 20, 2020, LAST REVISED MAY 2020.
- FLOOD HAZARD AREA LINE(S) INDICATED HEREIN WAS DELINEATED BY ESTABLISHING THE ELEVATION 223.29-FOOT CONTOUR FROM THE EXISTING SURVEY.

ROBBINS AVENUE BRANCH TRIBUTARY

PERMITTING PLAN LEGEND

---	LIMIT OF DISTURBANCE LINE
---	SURVEYED TOP OF BANK LINE
---	RIPARIAN BUFFER LINE
---	FLOOD HAZARD AREA LINE (SEE NOTES)
[Cross-hatched pattern]	RIPARIAN BUFFER DISTURBANCE (FOR STORMWATER OUTFALL PIPING)
[Diagonal line pattern]	RIPARIAN BUFFER DISTURBANCE (FOR HEADWALL & OUTLET PROTECTION)
[Horizontal line pattern]	RIPARIAN BUFFER DISTURBANCE (FOR BASEBALL FIELD)
---	PROPERTY LINE

- 50' RIPARIAN BUFFER ZONE LINE (TYP.)
- PROPOSED RIPARIAN BUFFER DISTURBANCE FOR CONSTRUCTION OF STORMWATER PIPING - N.J.A.C. 7:13-11.2(j) (AREA = 900 SF / 0.021 ACRES)
- PROPOSED RIPARIAN BUFFER DISTURBANCE FOR CONSTRUCTION OF STORMWATER OUTFALL - N.J.A.C. 7:13-11.2(j) (AREA = 1,000 SF / 0.023 ACRES)
- PROPOSED LIMIT OF DISTURBANCE LINE (TYP.)
- 50' RIPARIAN ZONE WIDTH (TYP.)
- EXISTING SURVEYED TOP OF BANK LINE (TYP.)
- 50' RIPARIAN BUFFER ZONE LINE (TYP.)
- FLOOD HAZARD AREA LINE - SEE NOTES (TYP.)
- PROPOSED RIPARIAN BUFFER DISTURBANCE FOR CONSTRUCTION OF BASEBALL FIELD - N.J.A.C. 7:13-11.2(y) (TOTAL AREA = 1,200 SF / 0.028 ACRES)

RIPARIAN ZONE DISTURBANCE CALCULATIONS

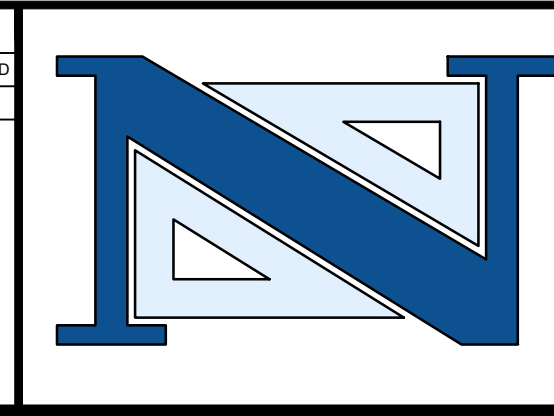
FHA INDIVIDUAL PERMIT - 50-FOOT RIPARIAN ZONE	
1. STORMWATER DISCHARGE	
1.1. HEADWALL AND OUTLET PROTECTION	
1.1.1. TOTAL PROPOSED DISTURBANCE =	1,000 SF / 0.023 AC.
1.1.2. MAXIMUM PERMITTED DISTURBANCE =	2,000 SF / 0.046 AC.
1.1.3. DISTURBANCE FOR HEADWALL AND OUTLET PROTECTION IS LESS THAN THE MAXIMUM (N.J.A.C. 7:13-11.2(j))	
1.2. STORMWATER PIPE	
1.2.1. TOTAL PROPOSED DISTURBANCE =	900 SF / 0.021 AC.
1.2.2. MAXIMUM PERMITTED DISTURBANCE =	1,000 SF / 0.023 AC.
1.2.3. DISTURBANCE FOR STORMWATER PIPE IS LESS THAN THE MAXIMUM (N.J.A.C. 7:13-11.2(j))	
2. REGULATED ACTIVITY NOT LISTED IN TABLE 11.2	
2.1. CONSTRUCTION OF AN ARTIFICIAL TURF BASEBALL FIELD & ASSOCIATED APPURTENANCES	
2.1.1. TOTAL PROPOSED DISTURBANCE =	1,200 SF / 0.028 AC.
2.1.2. MAXIMUM PERMITTED DISTURBANCE =	10,890 SF / 0.250 AC.
2.1.3. DISTURBANCE FOR BASEBALL FIELD IS LESS THAN THE MAXIMUM (N.J.A.C. 7:13-11.2(y))	

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

m:\unicon\county\uniocty19.012 Snyder park turf field\plan.dwg, Project: Wwastewater, September 23, 2020 9:53:53 PM

REVISIONS		
NO.	DATE	DESCRIPTION
1	2020-05-15	REVISED PER NJDEP COMMENTS



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

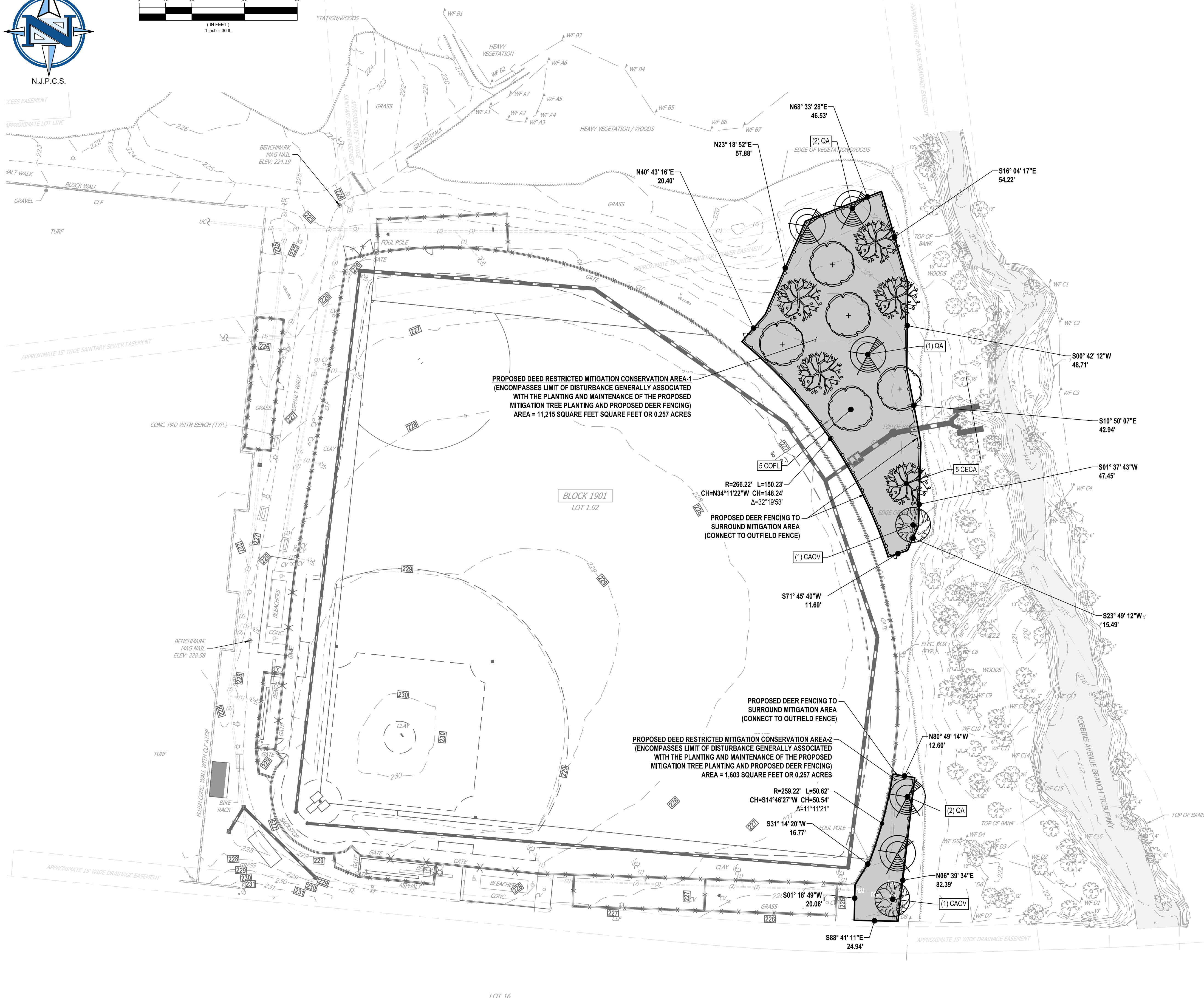
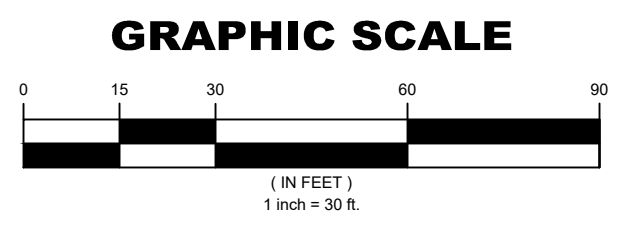
THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 38100569800

FLOOD HAZARD AREA PERMITTING PLAN
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DESIGNED BY: E.M.J. CHECKED BY: E.M.J. PROJECT NO: UNIOCTY19.012 SHEET NO: 8.01
SCALE: 1" = 30' DATE: SEPTEMBER 23, 2020
FIELD BOOK NO: PAGE:



MITIGATION PLANTING LIST & SEED MIX						
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	COND	REMARKS
ORNAMENTAL TREES						
COFL	5	CORNUS FLORIDA	NATIVE DOGWOOD	8' - 10' HEIGHT	B & B	DECIDUOUS
CECA	5	CERCIS CANADENSIS	EASTERN REDBUD	8' - 10' HEIGHT	B & B	DECIDUOUS
SHADE TREES						
CAOV	2	CARYA OVATA	SHAGBARK HICKORY	3" - 3 1/2" CALIPER	B & B	DECIDUOUS
QA	5	QUERCUS ALBA	WHITE OAK		B & B	DECIDUOUS
SEED MIX (NATIVE SEED MIX - SUITABLE FOR RIPARIAN ZONES, ERNST SEED MIX, OR APPROVED EQUIVALENT)						
25%	KENTUCKY BLUE GRASS					
25%	PERENNIAL RYE GRASS					
50%	TURF-TYPE TALL FESCUE					

PROPOSED DEED RESTRICTED MITIGATION CONSERVATION AREA-1
 (ENCOMPASSES LIMIT OF DISTURBANCE GENERALLY ASSOCIATED WITH THE PLANTING AND MAINTENANCE OF THE PROPOSED MITIGATION TREE PLANTING AND PROPOSED DEER FENCING)
 AREA = 11,215 SQUARE FEET OR 0.257 ACRES

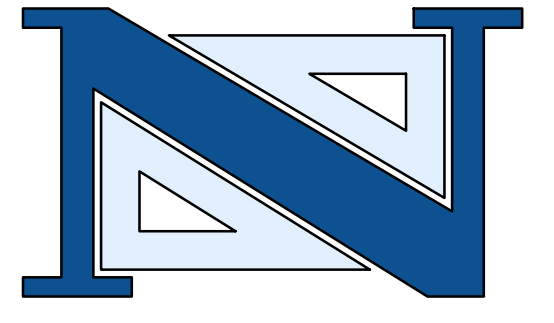
PROPOSED DEED RESTRICTED MITIGATION CONSERVATION AREA-2
 (ENCOMPASSES LIMIT OF DISTURBANCE GENERALLY ASSOCIATED WITH THE PLANTING AND MAINTENANCE OF THE PROPOSED MITIGATION TREE PLANTING AND PROPOSED DEER FENCING)
 AREA = 1,603 SQUARE FEET OR 0.257 ACRES

PROPOSED DEED RESTRICTED MITIGATION CONSERVATION AREAS SHALL BE FILED WITH THE UNION COUNTY CLERK'S OFFICE UPON RECEIPT OF PERMIT APPROVAL.

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS		DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION		
1	2020-05-15	REVISED PER NJDEP COMMENTS	E.M.J.	E.M.J.



RAYMOND M. MILCSIK, L.L.A.
 LICENSED LANDSCAPE ARCHITECT
 N.J. LICENSE NO. 21A500086200

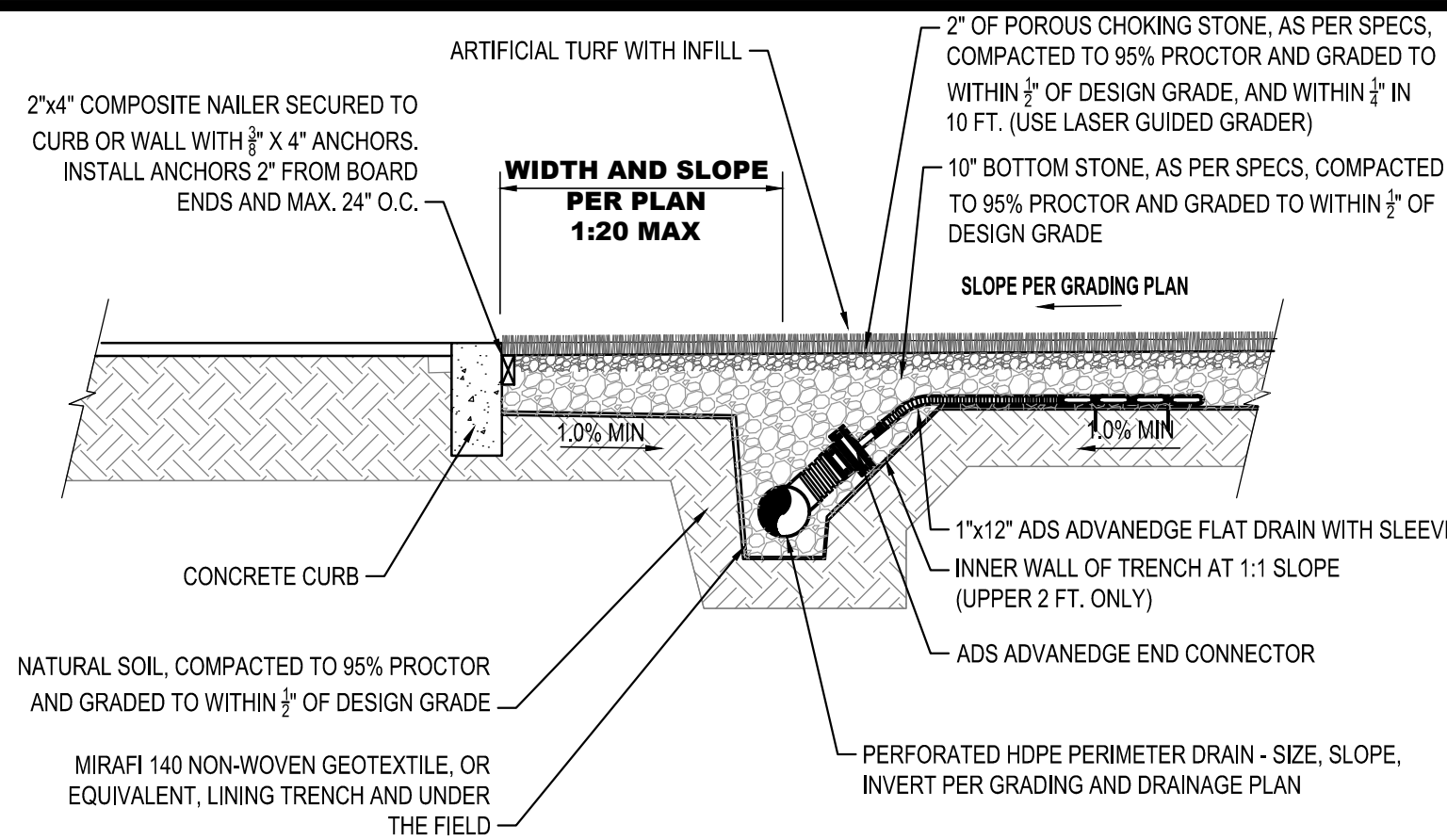
Raymond M. Milcsik

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
 LYNDHURST, NEW JERSEY
 TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
 PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
 PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
 PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100569800

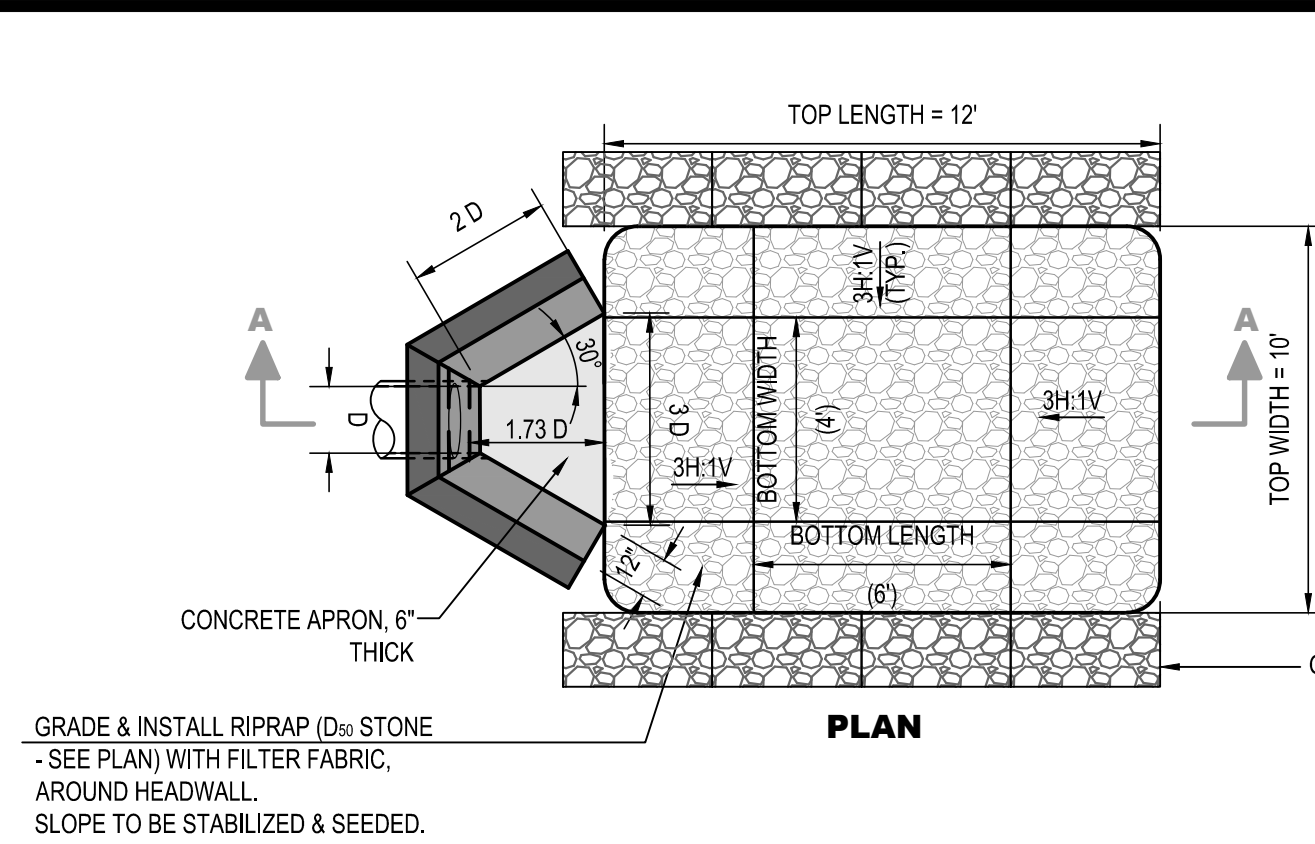
MITIGATION PLAN
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

PROJECT NO.: UNIOCTY19.012 SHEET NO.: 8.02
 DESIGNED BY: E.M.J. SCALE: 1" = 30' DATE: SEPTEMBER 23, 2020
 FIELD BOOK NO.: PAGE:



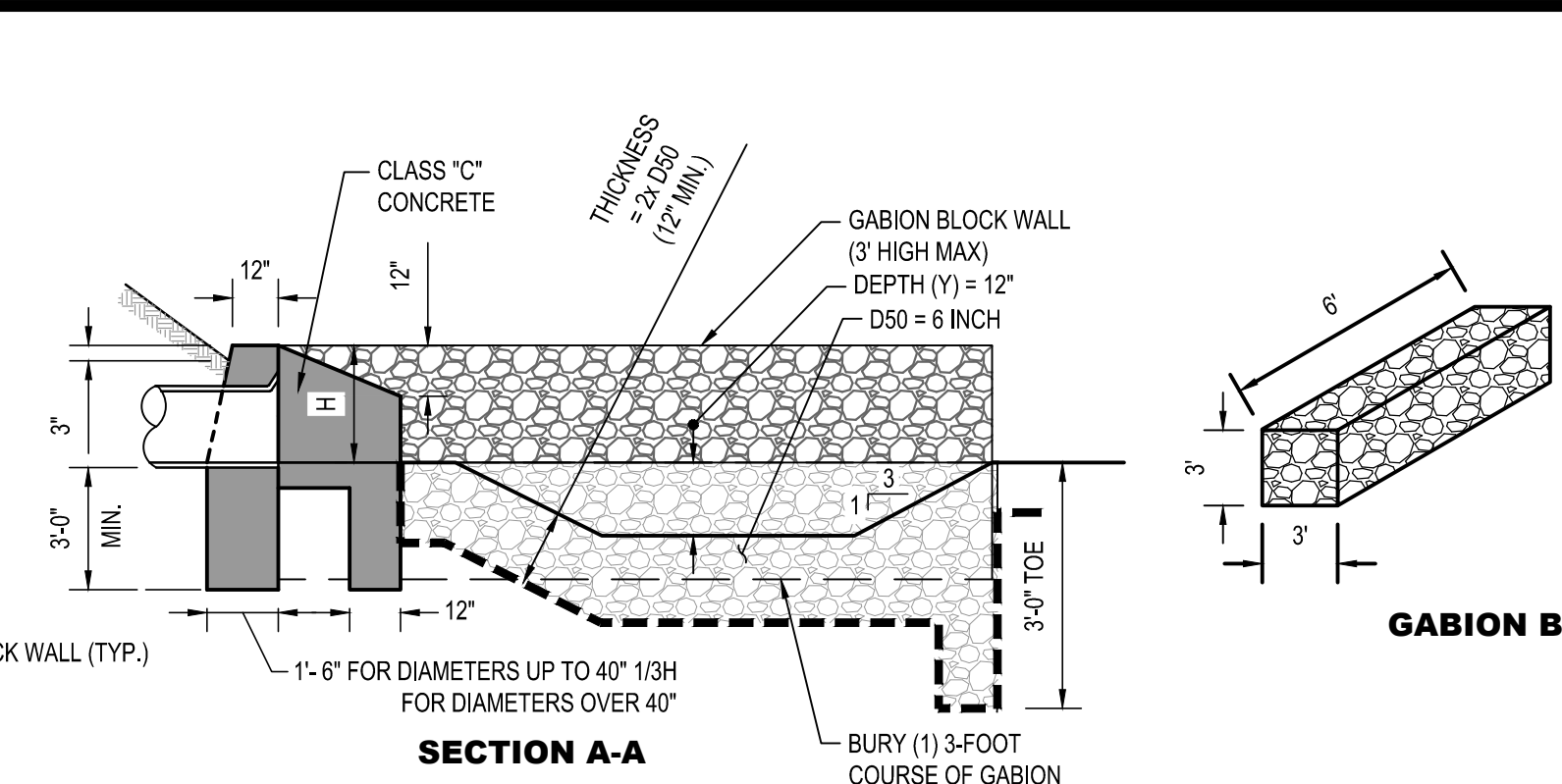
ARTIFICIAL TURF PERIMETER DRAIN

NOT TO SCALE

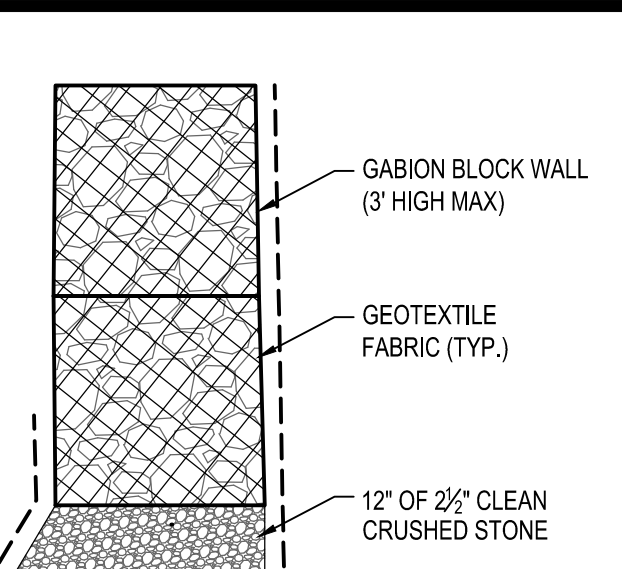


SCOUR HOLE DETAIL

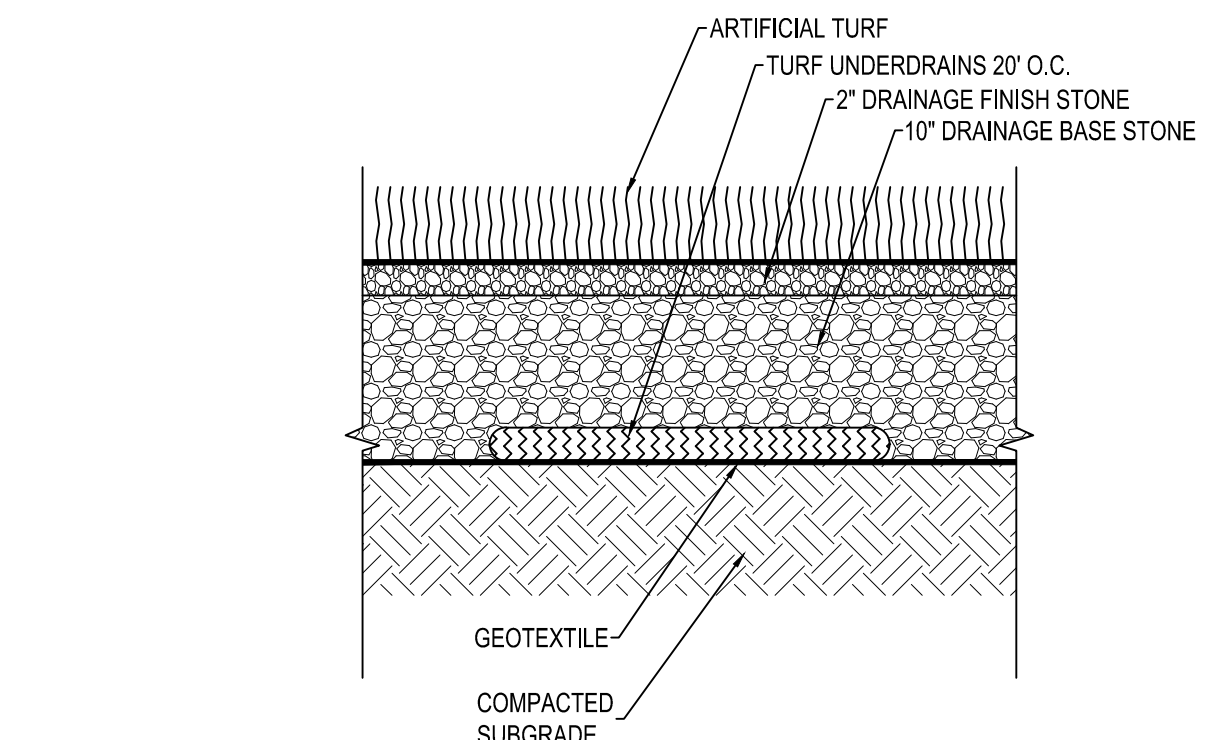
GRADE & INSTALL RIPRAP (D₅₀ STONE) - SEE PLAN WITH FILTER FABRIC, AROUND HEADWALL. SLOPE TO BE STABILIZED & SEEDED.



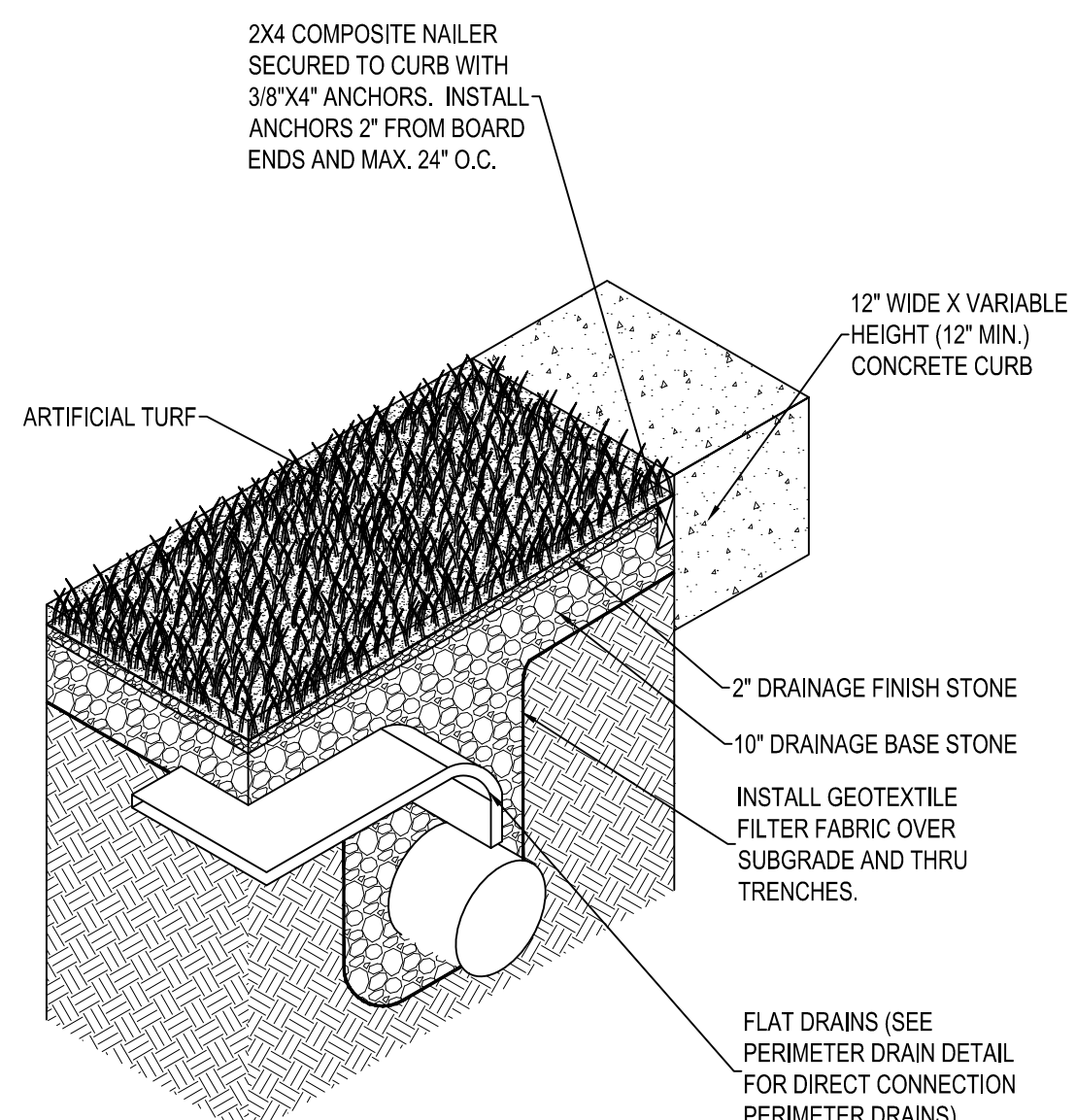
GABION BLOCK



- NOTES:**
- CONTRACTOR TO INSTALL GEOTEXTILE FABRIC BETWEEN GABION WALL AND SOIL BACKFILL TO PREVENT SOIL MOVEMENT THROUGH THE BASKETS.
 - CONTRACTOR TO PROVIDE GABION WIRE BASKETS THAT CONFORM TO THE DIMENSIONS SHOWN ON THE PLANS WITHIN A TOLERANCE OF 5 PERCENT. USE WIRE MESH THAT IS GALVANIZED STEEL WIRE NO. 12 GAUGE AND TENSILE STRENGTH BETWEEN 60,000 AND 80,000 PSI.
 - GABION WIRE BASKETS ARE TO CONFORM TO NJDOT STANDARD ROADWAY CONSTRUCTION SPECIFICATIONS 2019, LATEST REVISED.



NOTE:
1. TURF UNDERDRAINS SHALL BE 1" x 12" FLAT ADS ADVANEDGE OR APPROVED EQUAL.



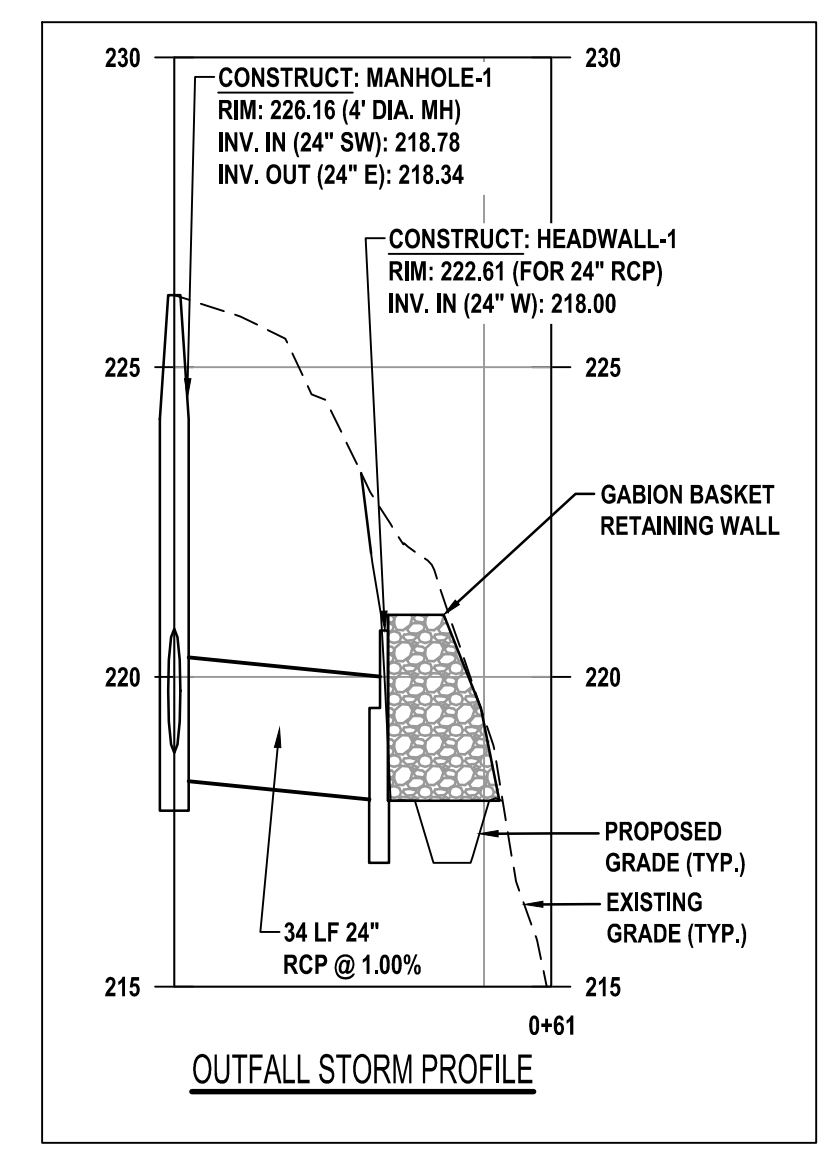
TURF UNDERDRAIN

NOT TO SCALE

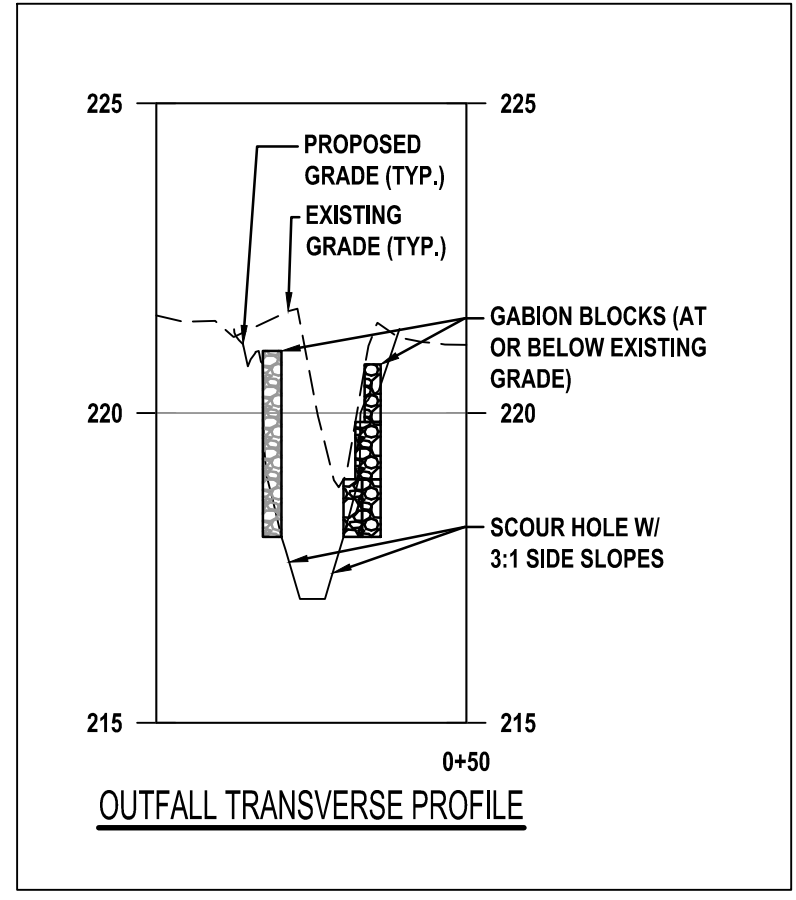
- CONDUIT OUTLET PROTECTION AND RIPRAP NOTES:**
- FIFTY PERCENT BY WEIGHT OF THE RIPRAP MIXTURE SHALL BE SMALLER THAN THE MEDIAN SIZE STONE DESIGNATED AS D50. THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE. THE RIPRAP SHALL BE REASONABLY WELL GRADED.
 - THE THICKNESS OF RIPRAP LINING SHALL BE AT LEAST TWO TIMES THE D50 STONE SIZE WITH THE USE OF A GEOTEXTILE FILTER LAYER, MIRAFI 140N OR EQUAL.
 - THE WIDTH OF THE APRON AT THE CULVERT OUTLET SHALL BE AT LEAST THREE TIMES THE CULVERT WIDTH.
 - WHERE THERE IS A WELL-DEFINED CHANNEL DOWNSTREAM OF THE APRON, THE BOTTOM WIDTH OF THE APRON SHALL BE AT LEAST EQUAL TO THE BOTTOM WIDTH OF THE CHANNEL, AND THE STRUCTURAL LINING SHALL EXTEND AT LEAST ONE FOOT ABOVE THE TAILWATER ELEVATION BUT NO LOWER THAN TWO-THIRDS OF THE VERTICAL CONDUIT DIMENSION ABOVE THE CONDUIT INVERT.
 - THE SIDE SLOPES SHALL BE 3:1 OR FLATTER.
 - THE BOTTOM GRADE SHALL BE 0.0% (LEVEL).
 - THERE SHALL BE NO OVER FALL AT THE END OF THE APRON OR AT THE END OF THE CULVERT.
 - NO BENDS OR CURVES AT THE INTERSECTION OF THE CONDUIT AND THE RIPRAP APRON WILL BE PERMITTED.
 - PLASTIC-COATED WIRE MESH STONE-FILLED BASKETS OR MATTRESSES OR CONCRETE REVEMENT BLOCKS MAY BE SUBSTITUTED FOR RIPRAP IF THE D50 SIZE CALCULATED ABOVE IS LESS THAN OR EQUAL TO THE THICKNESS OF THE WIRE MESH STRUCTURES OR CONCRETE REVEMENT BLOCKS. DESIGN LIFE OF THE WIRE MESH STRUCTURES IS ESTIMATED TO BE TEN (10) YEARS (MINIMUM). WIRE MESH BASKETS SHALL BE FILLED WITH 4" TO 7" ANGULAR SHAPED ROCK. ENGINEERING DESIGN REQUIRED FOR ANY SUBSTITUTIONS.
 - PERFORMED SCOUR HOLES MAY BE UTILIZED, IN ACCORDANCE WITH NJ EROSION CONTROL STANDARDS WHERE CONDITIONS DICTATE THE IMPRACTICAL USE OF FLAT APRONS. THE USE OF SCOUR HOLES SHALL COMPLY WITH COUNTY OR LOCAL ORDINANCES WHICH WOULD RESTRICT THE USE OF SUCH DEVICES DUE TO POSSIBLE PROBLEMS WITH MOSQUITO BREEDING. ENGINEERING DESIGN REQUIRED FOR ANY SUBSTITUTIONS.

PIPE SIZE	HEADWALL IN CUBIC YARDS		APRONS IN CUBIC YARDS	
	COR. METAL	REIN. CONC.	1.4 C.Y.	0.2 C.Y.
12"	1.4	1.7	0.2	0.2
15"	2.1	2.1	0.3	0.3
18"	2.3	2.5	0.4	0.4
24"	2.9	2.9	0.5	0.5
27"	3.2	3.4	0.6	0.6
30"	3.7	3.8	0.7	0.7
36"	4.7	4.8	0.9	0.9
42"	5.8	6.3	1.2	1.2
48"	7.5	8.4	1.5	1.5
54"	9.7	10.7	1.8	1.8
60"	12.2	13.4	2.1	2.1
66"	15.0	16.4	2.5	2.5
72"	18.1	19.9	3.0	3.0

- NOTES:**
- ALL EDGES TO BE CHAMFERED 1".
 - CONCRETE TO BE N.J.D.O.T., CLASS "C"
 - APRONS TO BE 6" THICK CONCRETE. FLAT AT OUTLET END, DISHED AT INLET END.
 - EXPOSED PORTIONS OF WALL TO BE RUBBED AND FLOATED.
 - FOR ARCH PIPE, THE SPAN SHALL BE SUBSTITUTED FOR D.



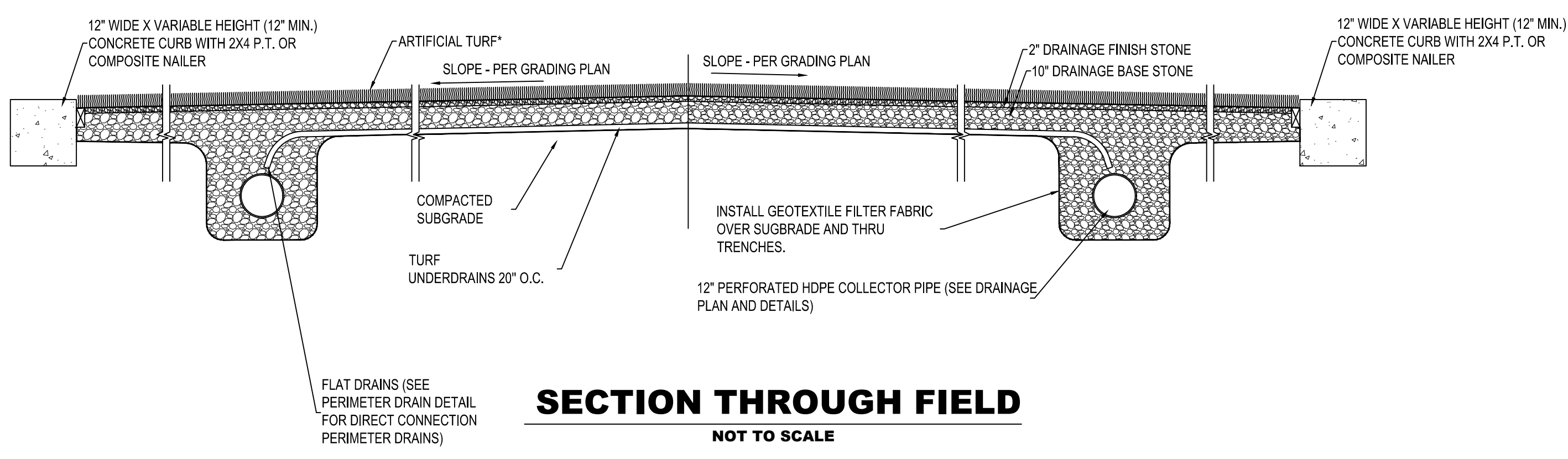
OUTFALL STORM PROFILE



OUTFALL TRANSVERSE PROFILE

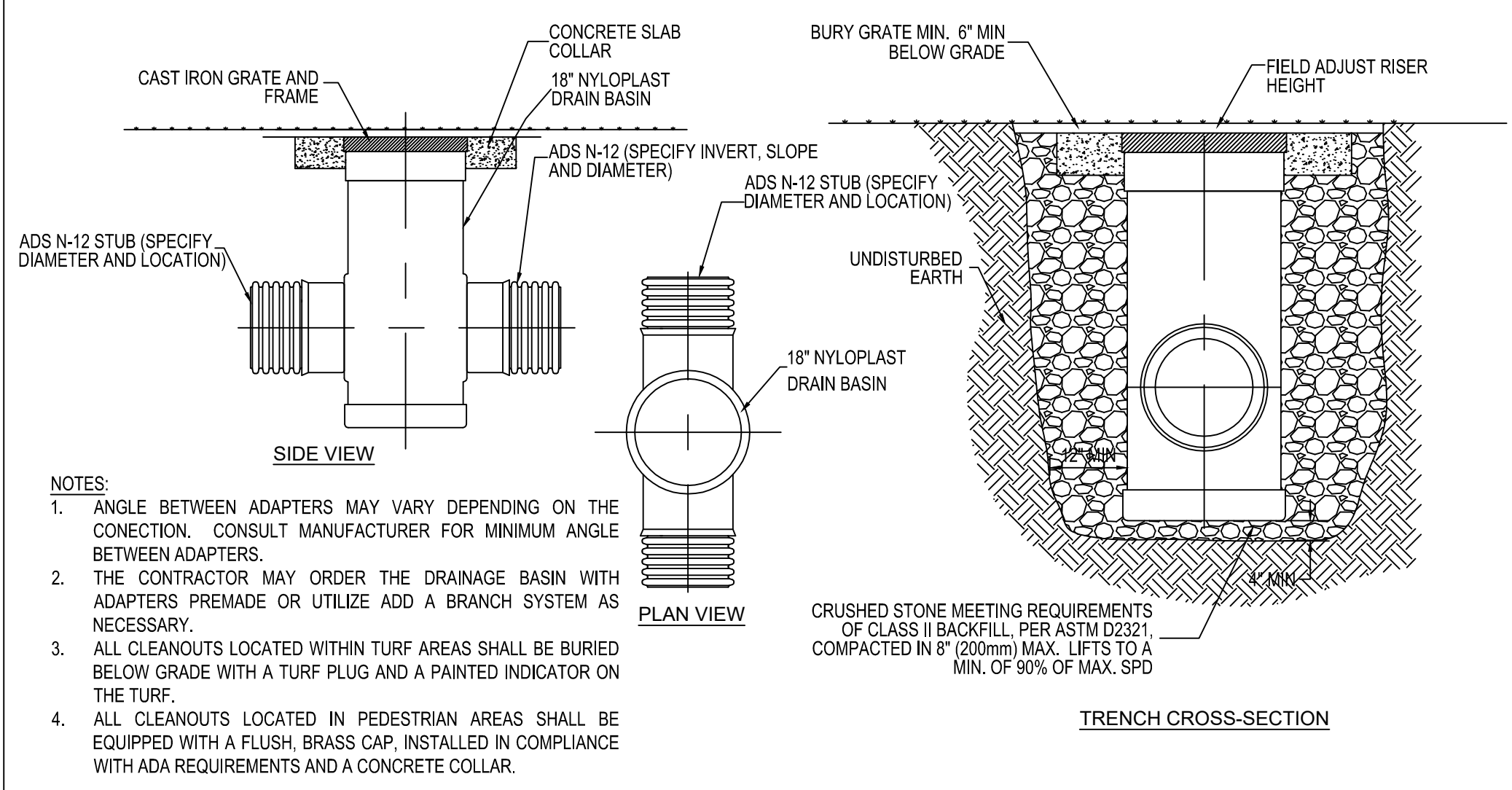
PROPOSED STORMWATER OUTFALL

NOT TO SCALE



SECTION THROUGH FIELD

NOT TO SCALE



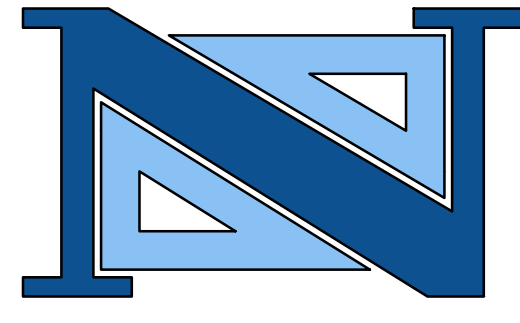
- NOTES:**
- ANGLE BETWEEN ADAPTERS MAY VARY DEPENDING ON THE CONNECTION. CONSULT MANUFACTURER FOR MINIMUM ANGLE BETWEEN ADAPTERS.
 - THE CONTRACTOR MAY ORDER THE DRAINAGE BASIN WITH ADAPTERS PREMADE OR UTILIZE ADD A BRANCH SYSTEM AS NECESSARY.
 - ALL CLEANOUTS LOCATED WITHIN TURF AREAS SHALL BE BURIED BELOW GRADE WITH A TURF PLUG AND A PAINTED INDICATOR ON THE TURF.
 - ALL CLEANOUTS LOCATED IN PEDESTRIAN AREAS SHALL BE EQUIPPED WITH A FLUSH, BRASS CAP, INSTALLED IN COMPLIANCE WITH ADA REQUIREMENTS AND A CONCRETE COLLAR.

RISER/BURIED CLEANOUT W/ACCESS FRAME DETAIL

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION	E.M.J.	E.M.J.	E.M.J.
1	2020-05-15	REVISED PER N.J.D.C.P. COMMENTS			



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

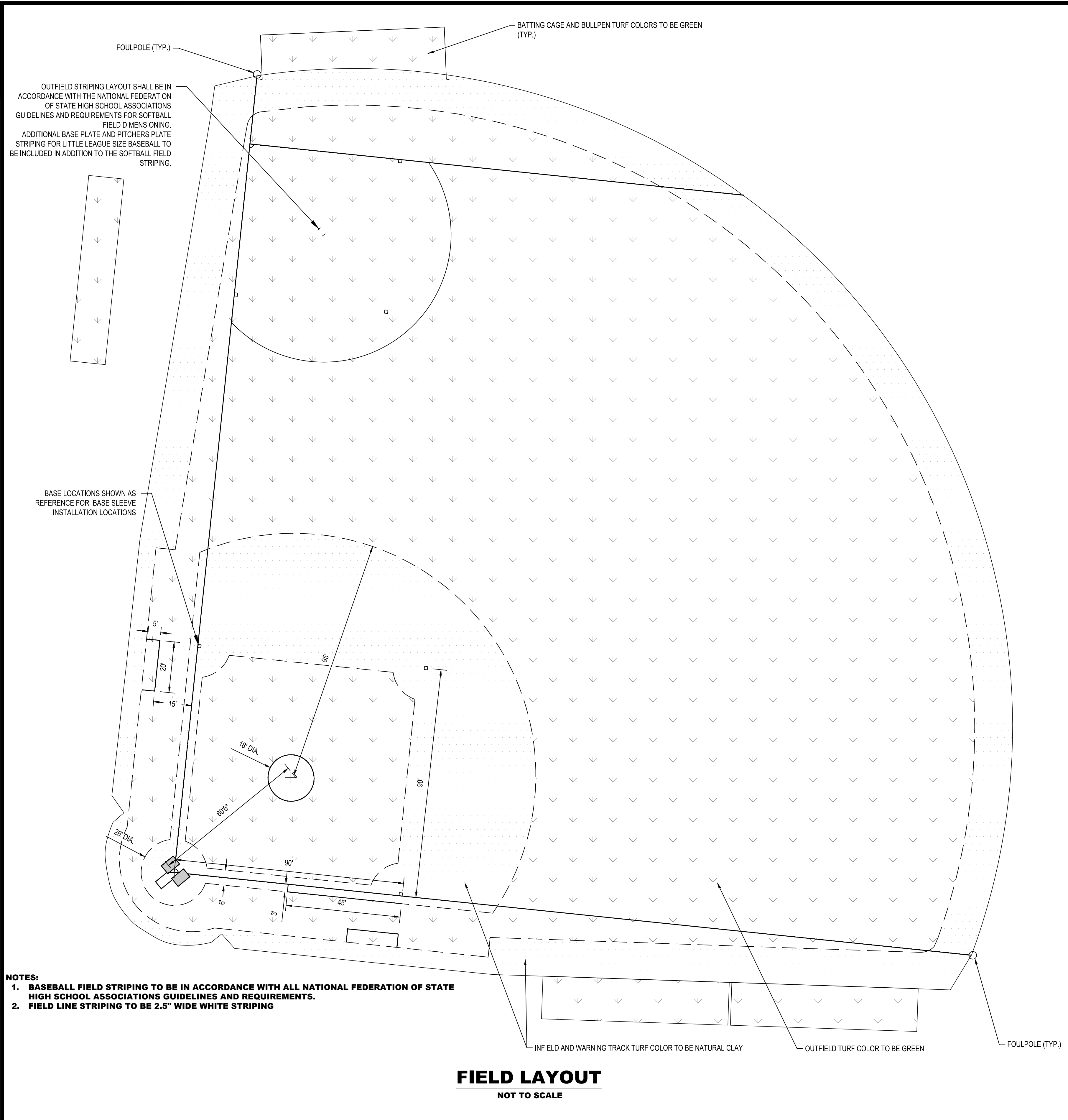
A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 33L100598900

CONSTRUCTION DETAILS II
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY NEW JERSEY

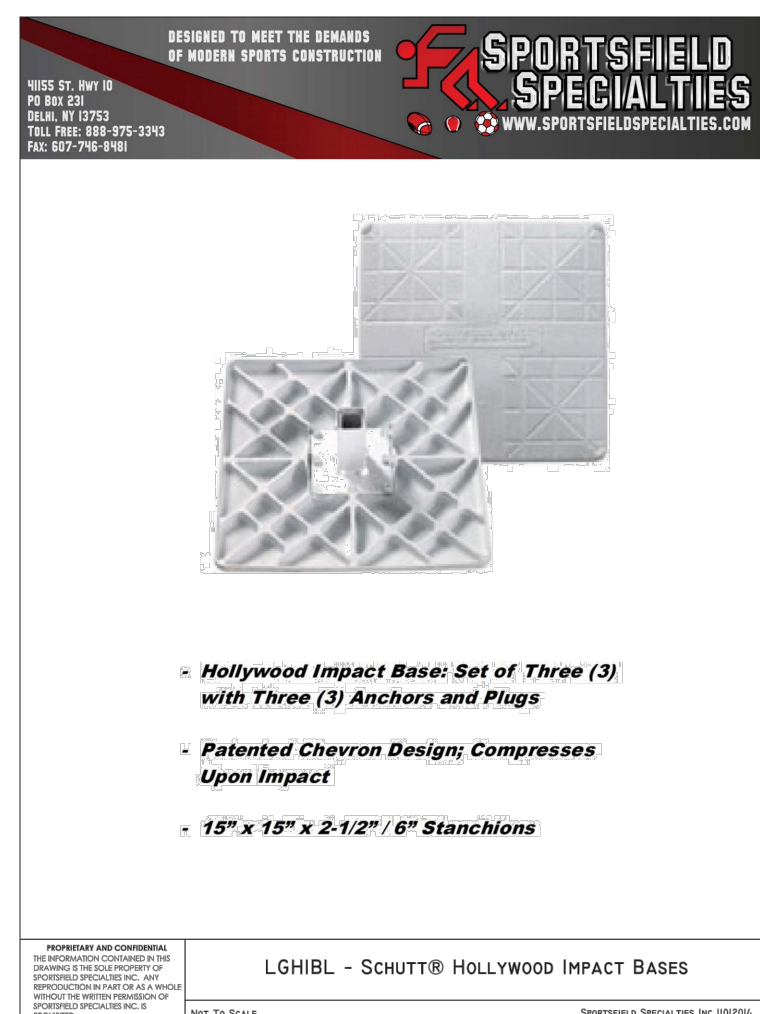
PROJECT NO: UNIOCTY19.012 SHEET NO: 9.01
DATE: SEPTEMBER 23, 2020

m:\uniocty19.012\snnyder.park.turf.improvements.dwg Plotted: Wednesday, September 23, 2020 10:55:32 PM



- NOTES:**
1. BASEBALL FIELD STRIPING TO BE IN ACCORDANCE WITH ALL NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS GUIDELINES AND REQUIREMENTS.
 2. FIELD LINE STRIPING TO BE 2.5" WIDE WHITE STRIPING

FIELD LAYOUT
NOT TO SCALE



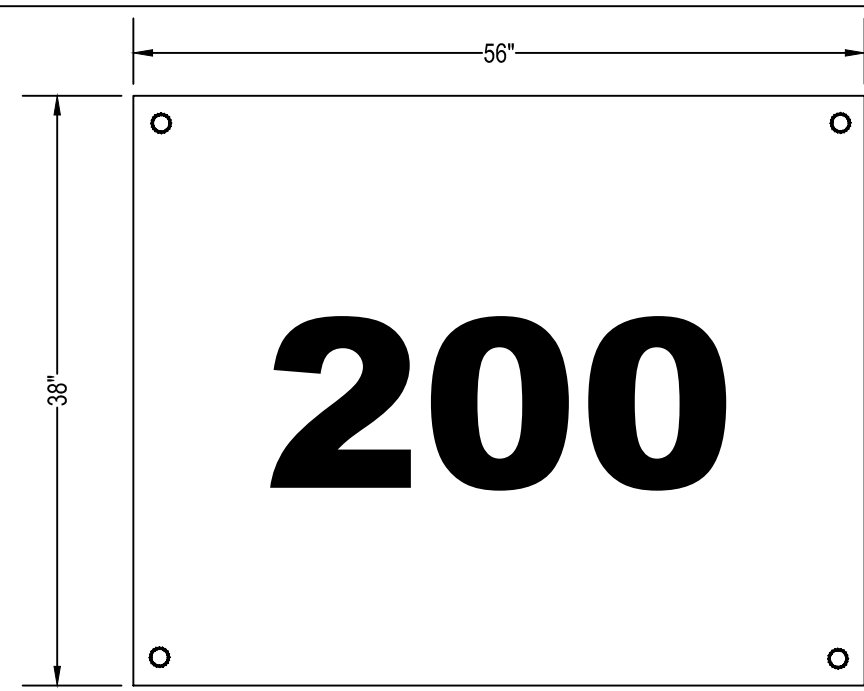
- NOTES:**
1. BASES SHALL BE MODEL# LGHIBL - SCHUTT HOLLYWOOD IMPACT BASES AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, DELHI, NY, 13753, OR APPROVED EQUAL.
 2. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

BASEBALL / SOFTBALL BASES
NOT TO SCALE



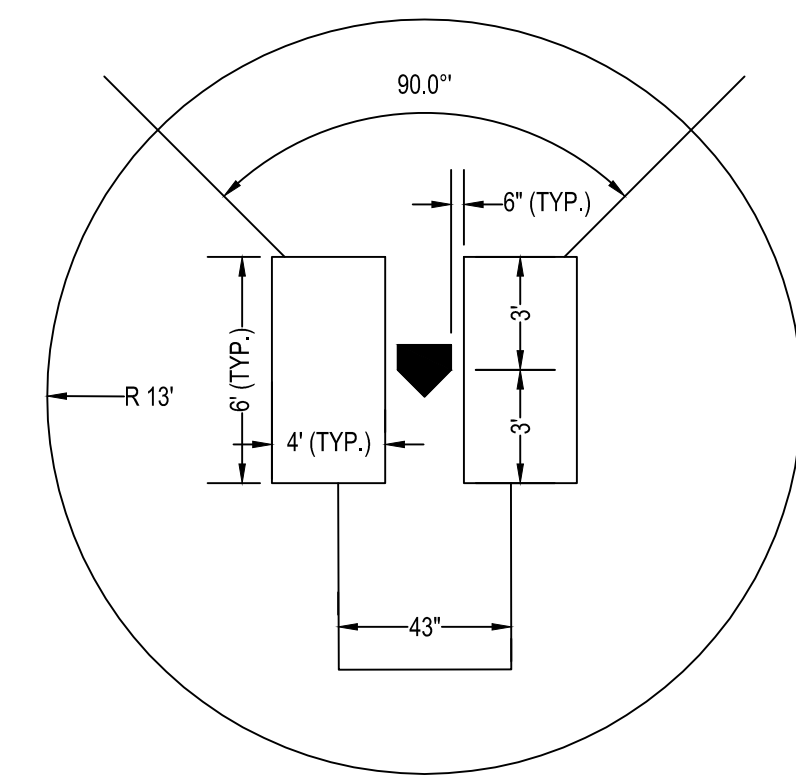
- NOTES:**
1. HOMEPLATE SHALL BE MODEL# LGSPHJM - SCHUTT HOLLYWOOD UNIVERSAL PRO STYLE HOMEPLATE AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, DELHI, NY, 13753, OR APPROVED EQUAL.
 2. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

HOMEPLATE
NOT TO SCALE



- NOTES:**
1. OUTFIELD DISTANCE MARKERS AS PER BEACON ATHLETICS OR APPROVED EQUAL (DISTANCE VARIES). CONTRACTOR SHALL PROVIDE OWNER WITH COLOR OPTIONS PRIOR TO ORDERING OF PRODUCT. DISTANCE OR MARKERS SHALL BE FIELD VERIFIED PRIOR TO ORDERING.
 2. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS.
 3. ONE (1) DISTANCE MARKER SHALL BE INSTALLED ADJACENT TO THE LEFT FIELD FOUL POLE, CENTER FIELD AND THE RIGHT FIELD FOUL POLE ON THE OUTFIELD FENCE.

OUTFIELD DISTANCE MARKERS
NOT TO SCALE



BASEBALL BATTER'S BOX
NOT TO SCALE

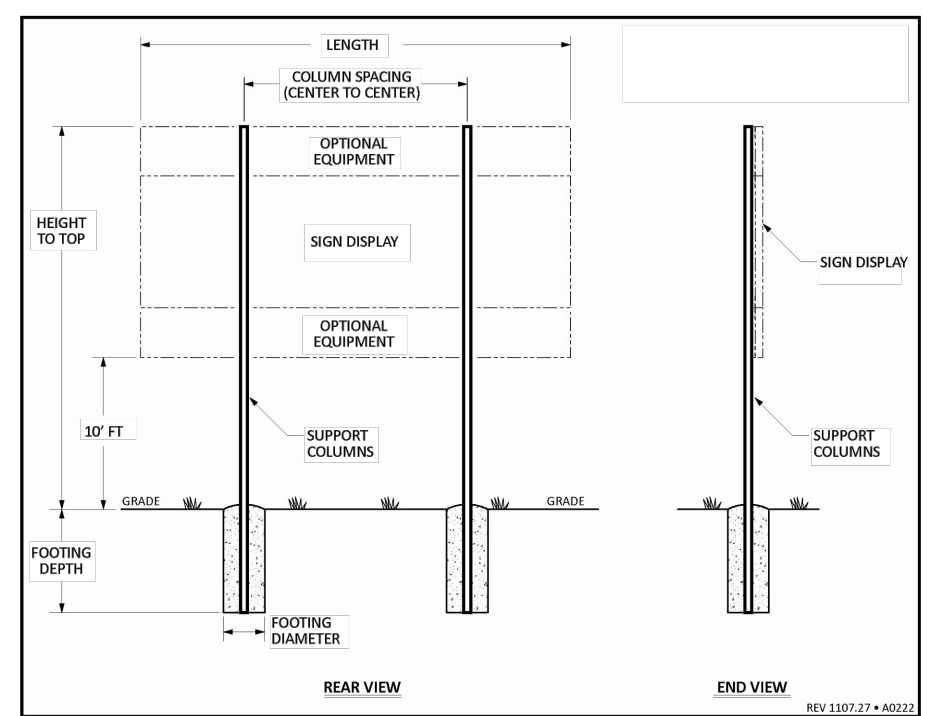


DIMENSIONS:

HEIGHT:	5'-6"	LENGTH:	14'-0"	DEPTH:	10"	WEIGHT:	500 lbs.
---------	-------	---------	--------	--------	-----	---------	----------

- NOTES:**
1. CONTRACTOR TO SUBMIT COLOR OPTIONS TO THE ENGINEER PRIOR TO CONSTRUCTION.
 2. SCOREBOARDS SHALL BE FAIR-PLAY MODEL# BA-7100-2, OR APPROVED EQUAL.
 3. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
 4. PADDING SHALL BE PROVIDED AT THE BOTTOM OF ALL SCOREBOARD STRUCTURES.
 5. FOUNDATIONS TO BE INSTALLED AS PER MANUFACTURER'S REQUIREMENTS.

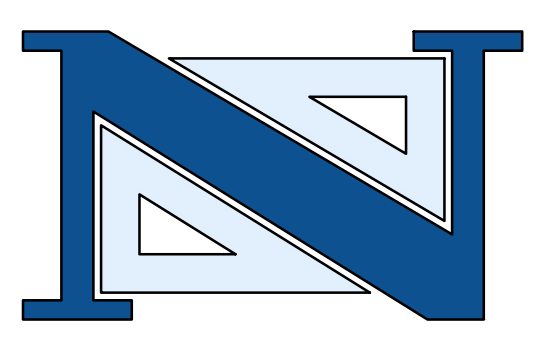
SCOREBOARD
NOT TO SCALE



- NOTES:**
1. COLUMN QUANTITY - 2
 2. COLUMN SPACING - 7'-0"
 3. HEIGHT TO TOP OF SCOREBOARD - 15'-16"
 4. COLUMN SIZE - W8x18
 5. FOOTING DIAMETER - 26"
 6. FOOTING DEPTH - 7'-0"
 7. CONTRACTOR TO CONFIRM ABOVE DIMENSIONS WITH MANUFACTURER. INSTALL PER MANUFACTURER SPECIFICATIONS.

TYPICAL SUPPORT COLUMN STRUCTURE

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION			



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR
N.J. LICENSE NO. 38604

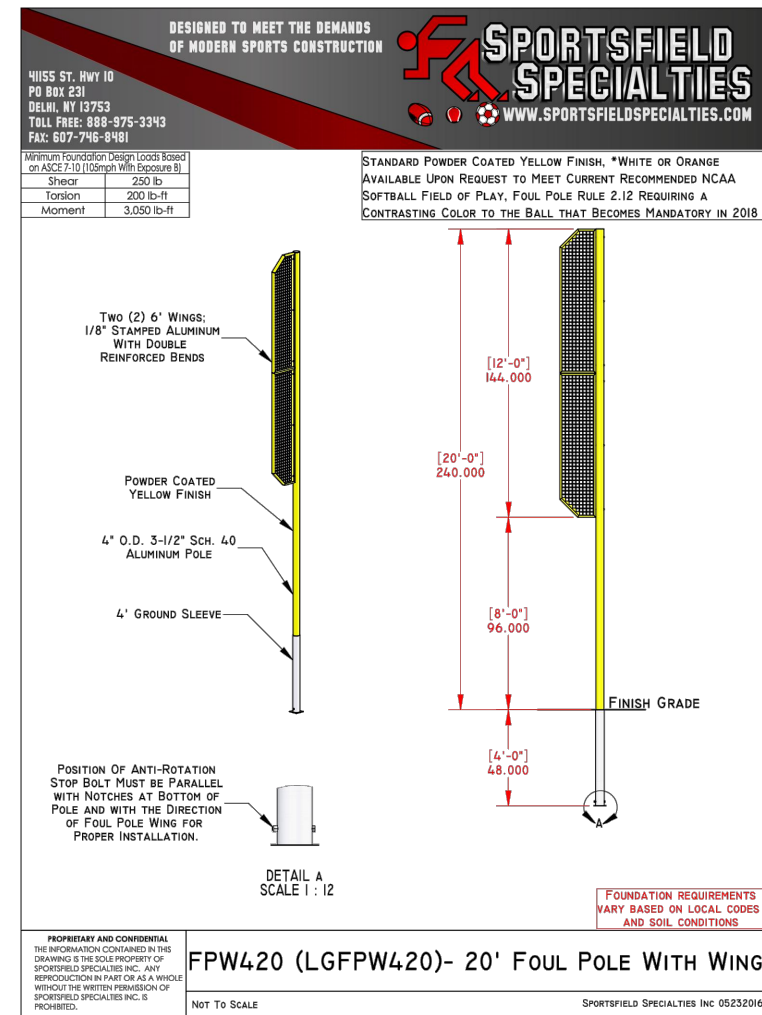
PROFESSIONAL PLANNER
N.J. LICENSE NO. 33100598900

CONSTRUCTION DETAILS III
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY NEW JERSEY

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

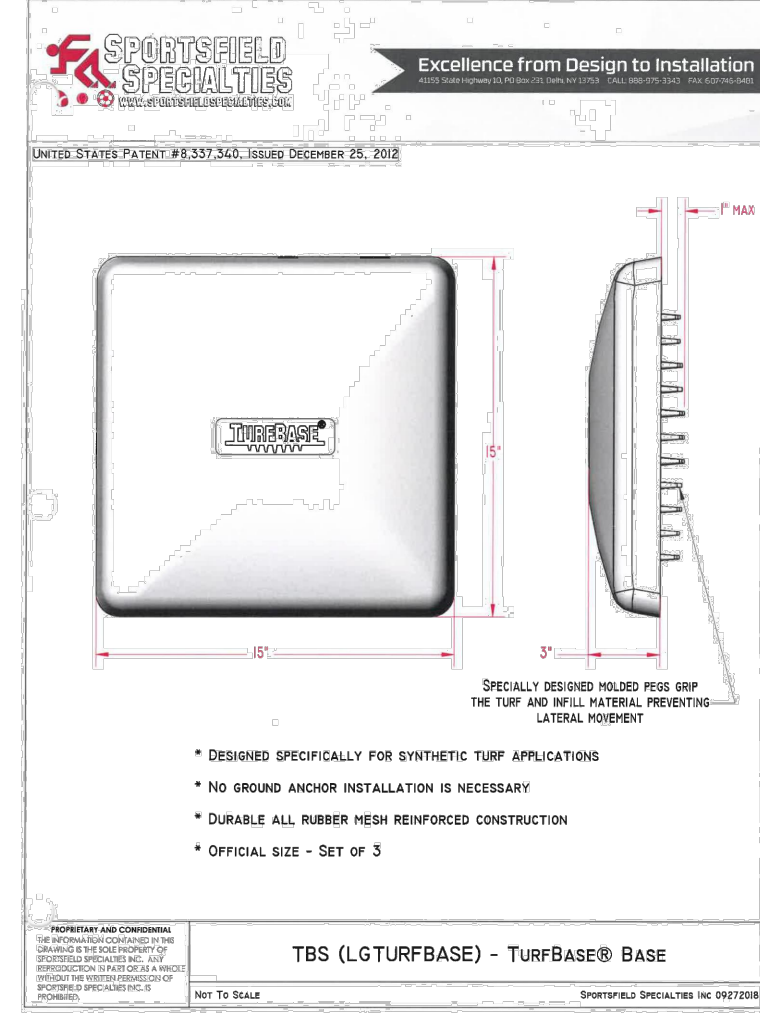
DRAWN BY: E.M.J./K.O. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY19.012 SHEET NO.: 9.02
DESIGNED BY: E.M.J. SCALE: N.T.S. FIELD BOOK NO.: DATE: SEPTEMBER 23, 2020

m:\uniocty19.012\snnyder park turf field\plans\ final\020124.dwg (p) 09/23/2020 11:08:35 PM



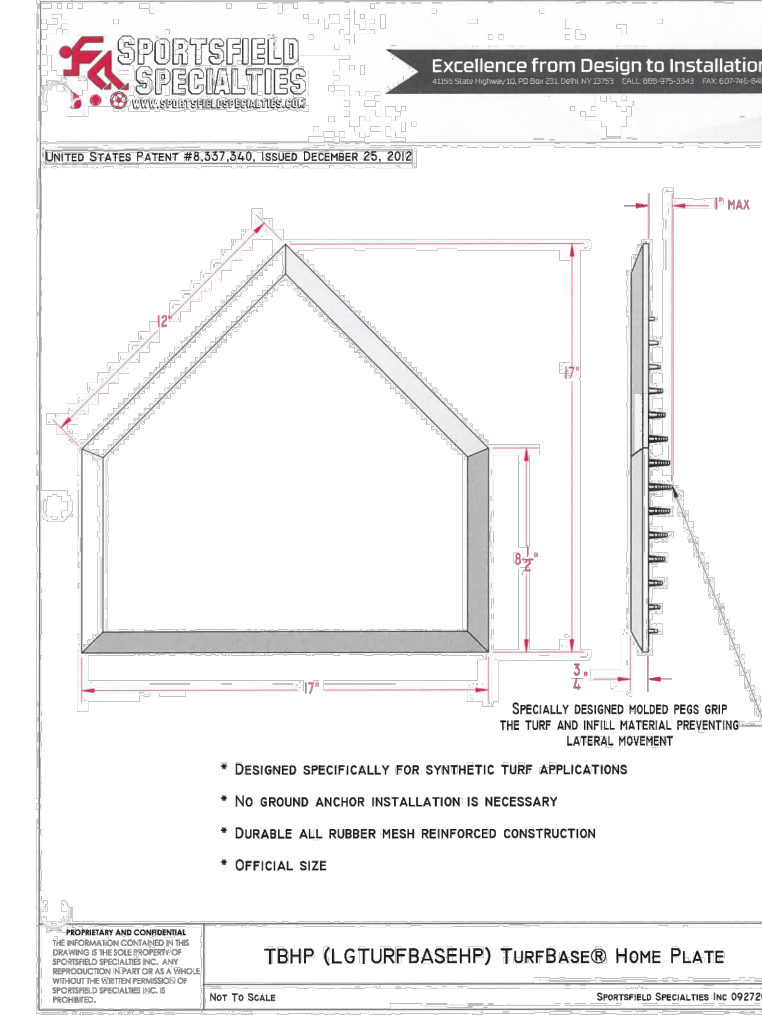
- NOTES:**
- FOUL POLES SHALL BE MODEL# LGFPW420 AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, DELHI, NY 13753, OR APPROVED EQUAL.
 - INSTALL PER MANUFACTURER'S SPECIFICATIONS.
 - TWO (2) FOUL POLES SHALL BE INSTALLED AT THE BASEBALL FIELD, AS INDICATED WITHIN THE PLANS.

FOUL POLES
NOT TO SCALE



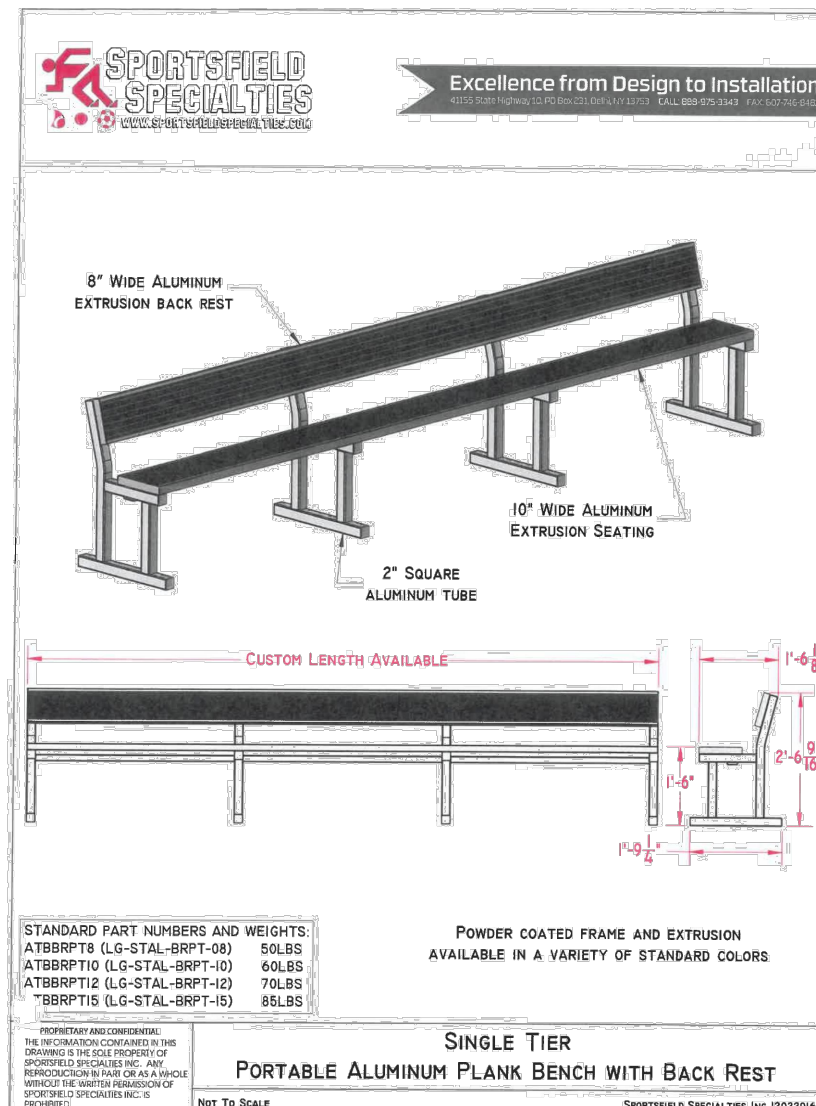
- NOTES:**
- PORTABLE BASES SHALL BE MODEL TBS (LGTURFBASE) MANUFACTURED BY: SPORTSFIELD SPECIALTIES OR APPROVED EQUAL.
 - PORTABLE BASES SHALL BE USED FOR PRACTICE FIELD. CONTRACTOR SHALL SUPPLY ONE SET OF BASES (3 TOTAL BASES)

BASEBALL / SOFTBALL BASES (PORTABLE)
NOT TO SCALE



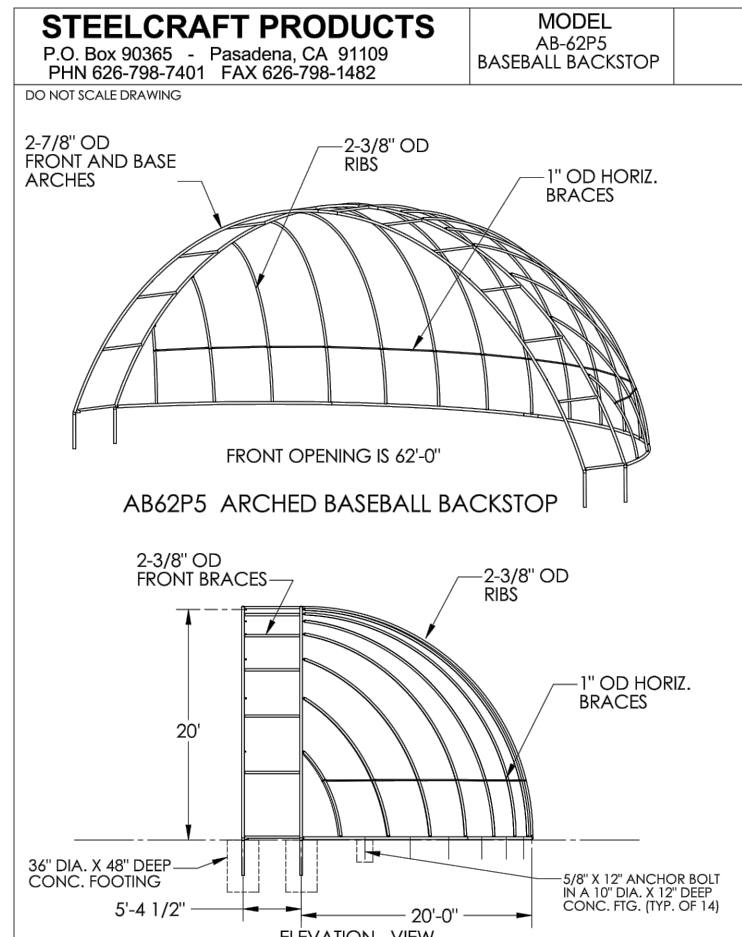
- NOTES:**
- PORTABLE HOMEPLATE SHALL BE MODEL TBHP (LGTURFBASEHP) MANUFACTURED BY: SPORTSFIELD SPECIALTIES OR APPROVED EQUAL.
 - PORTABLE HOMEPLATE SHALL BE USED FOR PRACTICE FIELD AND BULLPENS. CONTRACTOR SHALL SUPPLY THREE (3) PORTABLE HOME PLATES.

HOMEPLATE (PORTABLE)
NOT TO SCALE



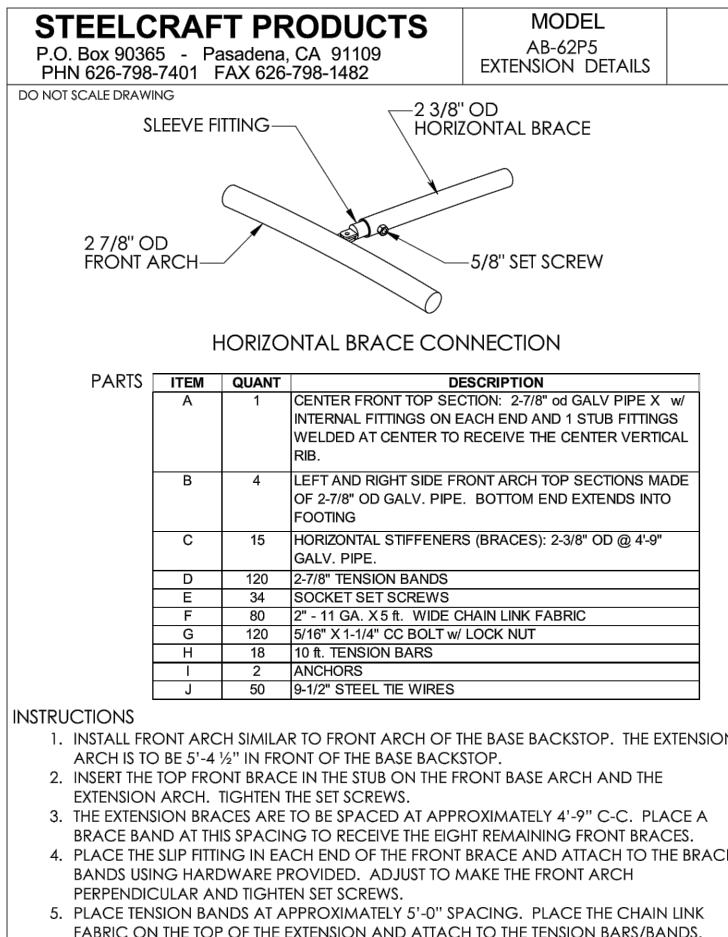
- NOTES:**
- DUGOUT BENCH SHALL BE MODEL SINGLE TIER - PORTABLE ALUMINUM PLANK BENCH WITH BACK REST AS MANUFACTURED BY: SPORTSFIELD SPECIALTIES OR APPROVED EQUAL.
 - BENCHES SHALL BE INSTALLED IN EACH DUGOUT. CONTRACTOR SHALL PROVIDE TWO (2) DUGOUT BENCHES.
 - CONTRACTOR SHALL SUBMIT COLOR OPTIONS TO THE OWNER PRIOR TO ORDERING OF MATERIALS.
 - BENCH LENGTH IN EACH DUGOUT SHALL BE THIRTY FEET (30').

DUGOUT BENCH
NOT TO SCALE



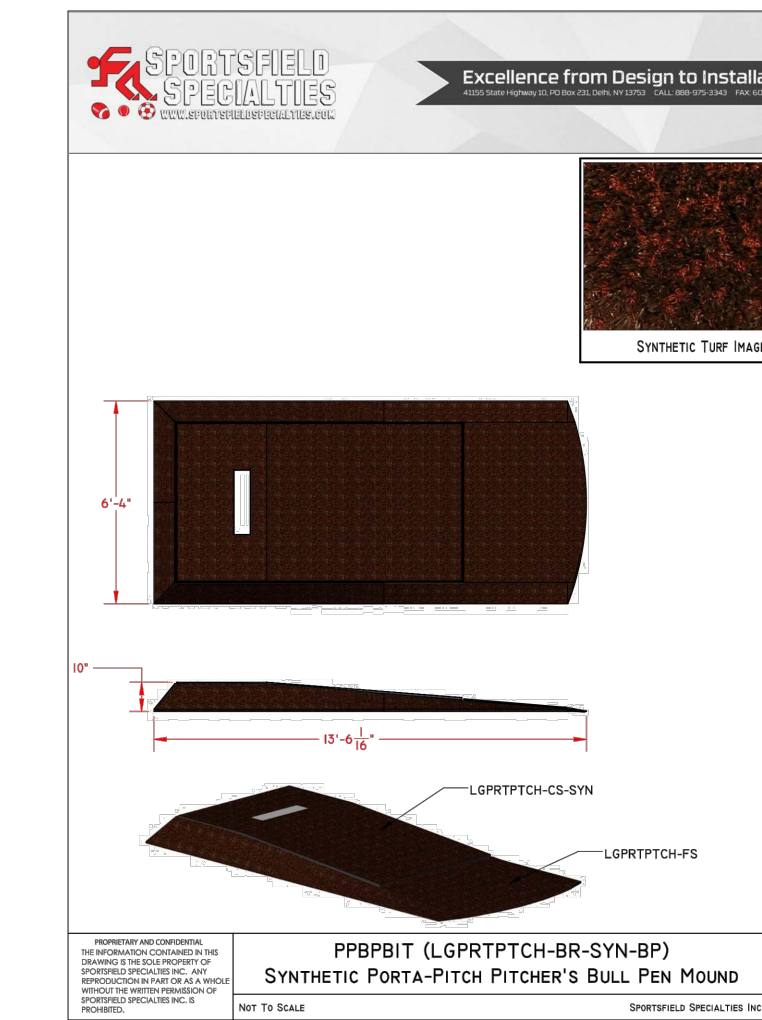
- NOTES:**
- BACKSTOP SHALL BE STEELCRAFT MODEL #AB62P5 AS MANUFACTURED BY: STEELCRAFT PRODUCTS, 1975 LINCOLN AVENUE, PASADENA, CALIFORNIA, 91103, OR APPROVED EQUAL.
 - INSTALL PER MANUFACTURER'S SPECIFICATIONS.

62' WIDE BACKSTOP
NOT TO SCALE



- NOTES:**
- PORTABLE PITCHING MOUND SHALL BE MODEL PPBIT (LGPRTPTCH-BR-SYN) MANUFACTURED BY: SPORTSFIELD SPECIALTIES OR APPROVED EQUAL.
 - CONTRACTOR SHALL SUPPLY ONE (1) PORTABLE PITCHING MOUND.

PORTABLE PITCHING MOUND
NOT TO SCALE



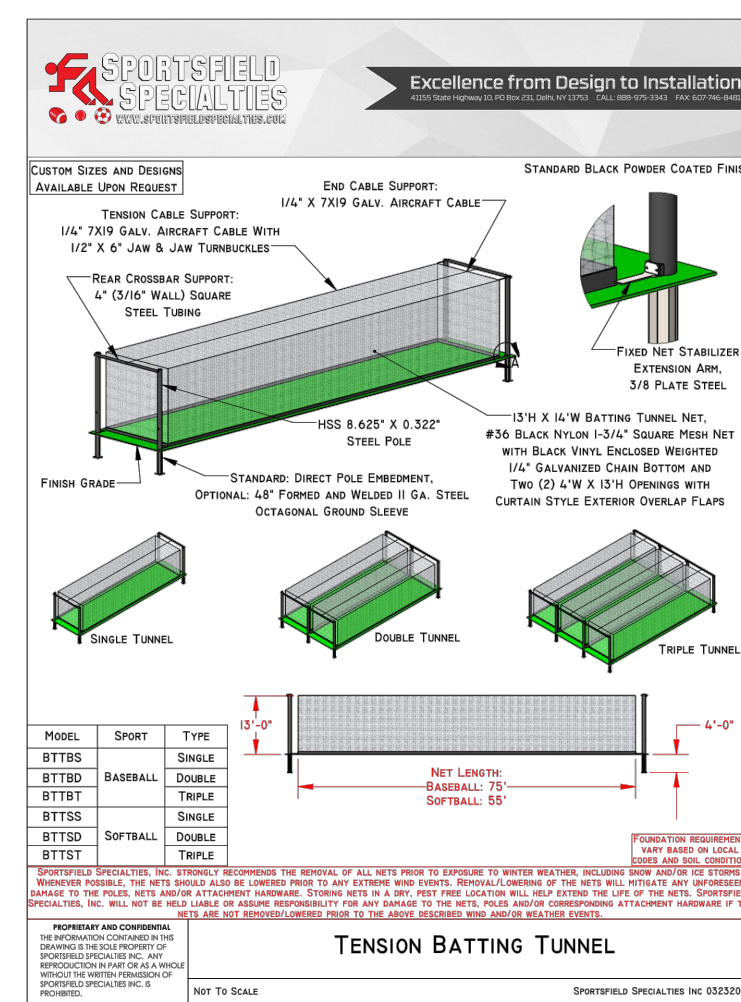
- NOTES:**
- BULLPEN PITCHERS MOUND SHALL BE MODEL PPBPIT (LGPRTPTCH-BR-SYN-BP) MANUFACTURED BY: SPORTSFIELD SPECIALTIES OR APPROVED EQUAL.
 - ONE BULLPEN PITCHERS MOUND SHALL BE INSTALLED IN EACH BULLPEN. CONTRACTOR SHALL SUPPLY TWO (2) BULLPEN PITCHERS MOUNDS.

BULLPEN PITCHERS MOUND
NOT TO SCALE



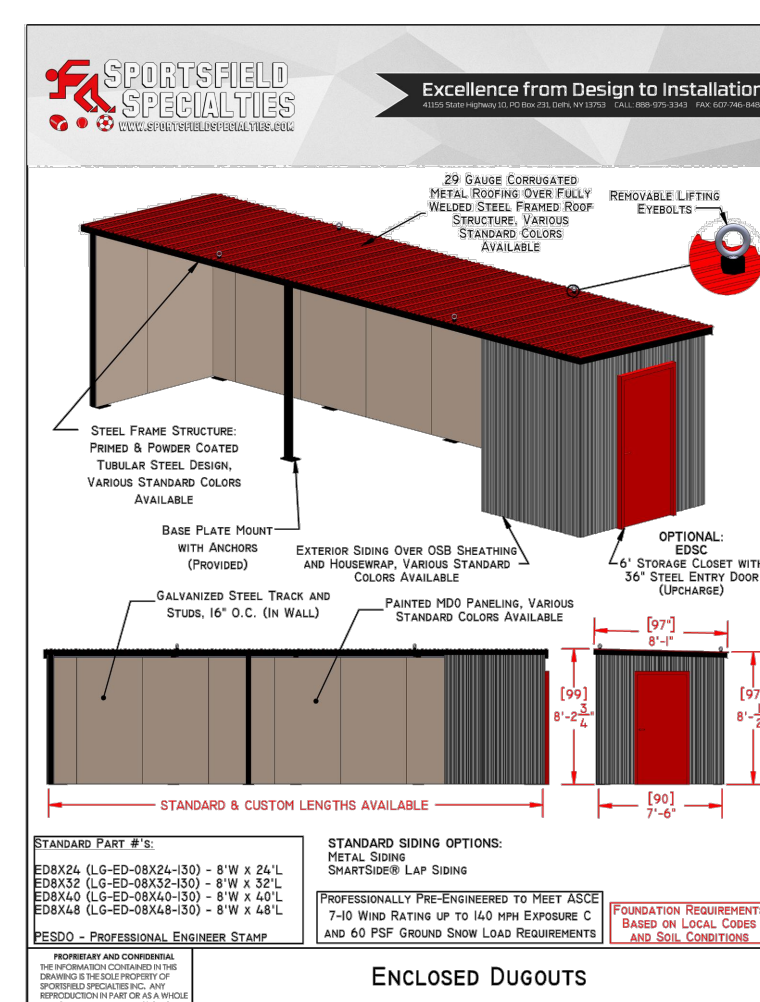
- NOTES:**
- PORTABLE HOME PLATE MAT SHALL BE MODEL #H0406 AS MANUFACTURED BY: TRUE PITCH INC., 501 1ST AVENUE SOUTH, ALTOONA, IOWA, 50009, OR APPROVED EQUAL.
 - EACH BATTING CAGE SHALL BE EQUIPPED WITH ONE (1) HOME PLATE MAT.

HOMEPLATE MAT FOR BATTING CAGES
NOT TO SCALE



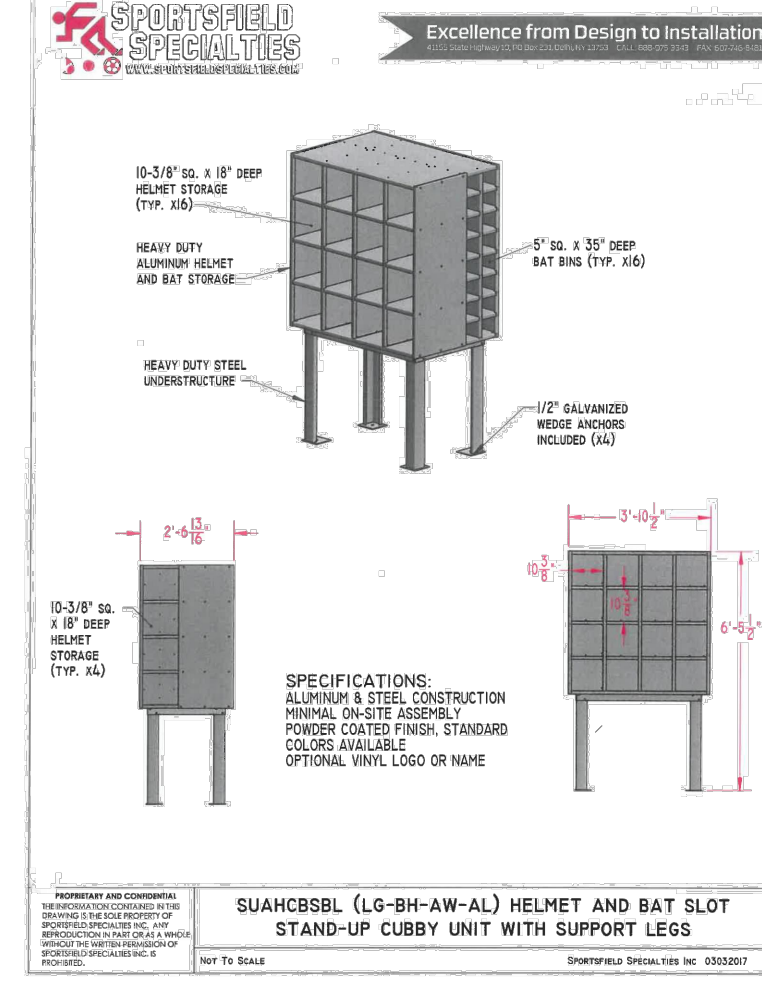
- NOTES:**
- BATTING CAGE SHALL BE MODEL BTBDD (LGBBTBDD) AS MANUFACTURED BY: SPORTSFIELD SPECIALTIES OR APPROVED EQUAL.
 - CONTRACTOR SHALL PROVIDE TWO (2) TENSION BATTING TUNNELS (SINGLE TUNNEL).
 - CONTRACTOR SHALL SUBMIT COLOR OPTIONS TO THE OWNER PRIOR TO ORDERING OF MATERIALS.
 - BATTING TUNNEL SHALL BE INSTALLED WITH THE OPTIONAL 48\"/>

BATTING CAGE
NOT TO SCALE



- NOTES:**
- DUGOUT SHALL BE MODEL ED8X40 (LG-ED-8X40-130) - 8'W X 40' AS MANUFACTURED BY: SPORTSFIELD SPECIALTIES OR APPROVED EQUAL.
 - CONTRACTOR SHALL PROVIDE TWO (2) DUGOUTS. EACH DUGOUT SHALL BE INSTALLED ON 6\"/>

DUGOUT
NOT TO SCALE



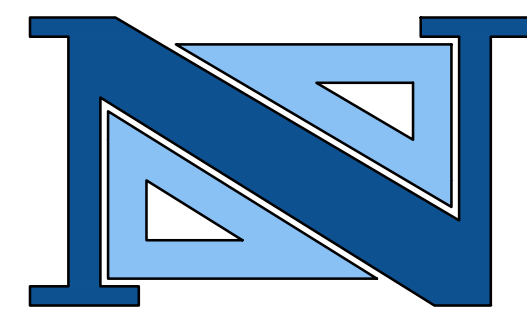
- NOTES:**
- DUGOUT CUBBY SHALL BE MODEL SU4HCBSBL (LG-BH-AW-AL) AS MANUFACTURED BY: SPORTSFIELD SPECIALTIES OR APPROVED EQUAL.
 - ONE CUBBY SHALL BE INSTALLED IN EACH DUGOUT. CONTRACTOR SHALL PROVIDE TWO (2) DUGOUT CUBBIES.
 - CONTRACTOR SHALL SUBMIT COLOR OPTIONS TO THE OWNER PRIOR TO ORDERING OF MATERIALS.
 - INSTALL PER MANUFACTURER'S SPECIFICATIONS.

DUGOUT CUBBY
NOT TO SCALE

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

NO.	DATE	REVISIONS DESCRIPTION	DRAWN	DESIGNED	CHECKED



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

[Signature]

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

[Signature]

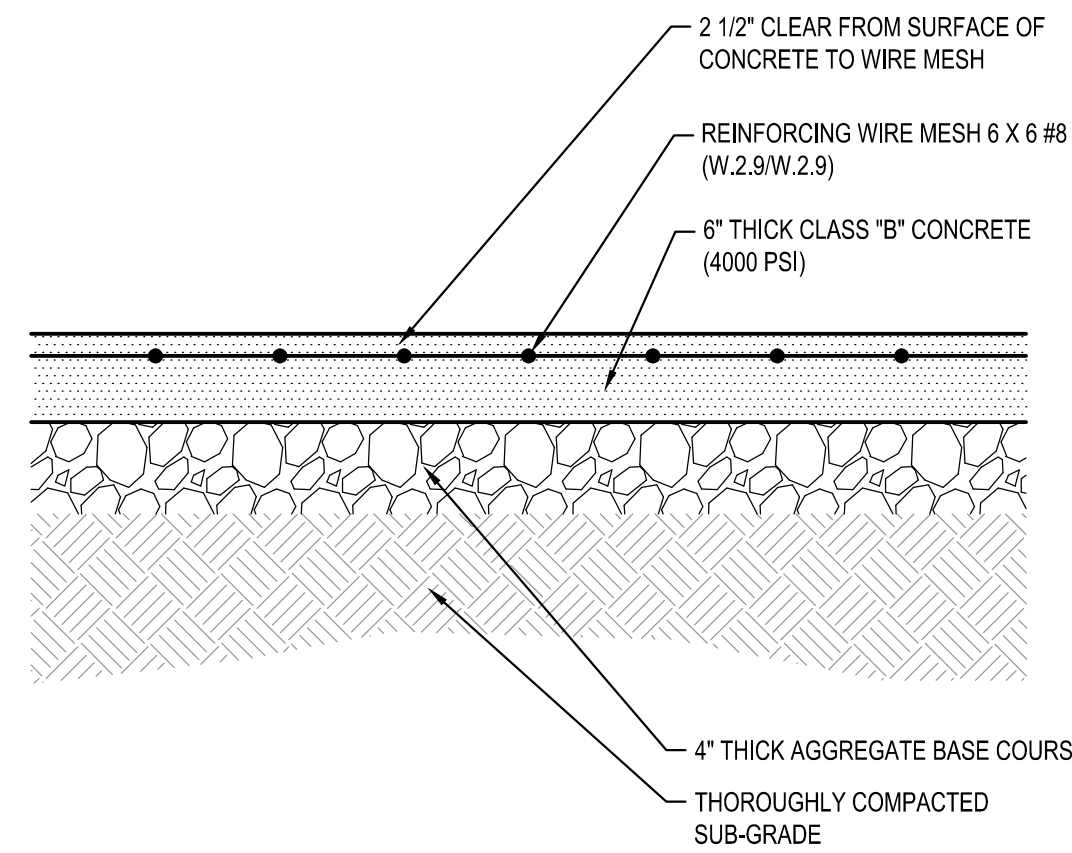
A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 33L00056900

CONSTRUCTION DETAILS IV
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY NEW JERSEY

DESIGNED BY: E.M.J. / K.O. CHECKED BY: E.M.J. PROJECT NO: UNIOCTY19.012 SHEET NO: 9.03
SCALE: N.T.S. FIELD BOOK NO.: DATE: SEPTEMBER 23, 2020

m:\uniocty19\012 Snyder Ave Turf Field\012.dwg Plot: Thursday, September 24, 2020 9:52:29 AM

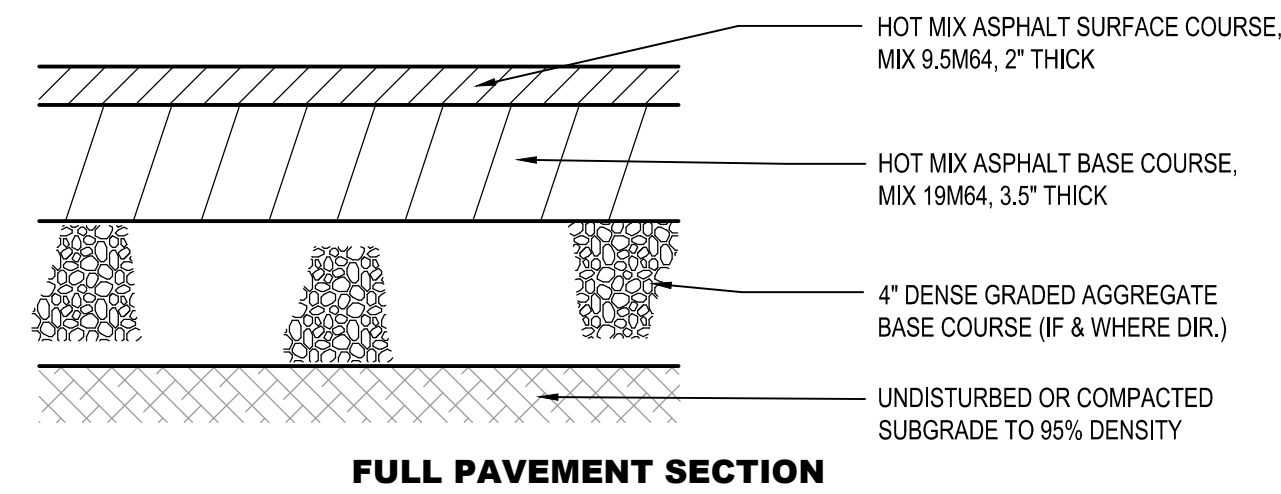


NOTES:

REINFORCED CONCRETE PAD, 6" THICK SHALL BE USED FOR PROPOSED DUGOUTS, PRESS BOX, TRASH RECEPTACLES AND STORAGE SHED INSTALLATION.

REINFORCED CONCRETE PAD, 6" THICK

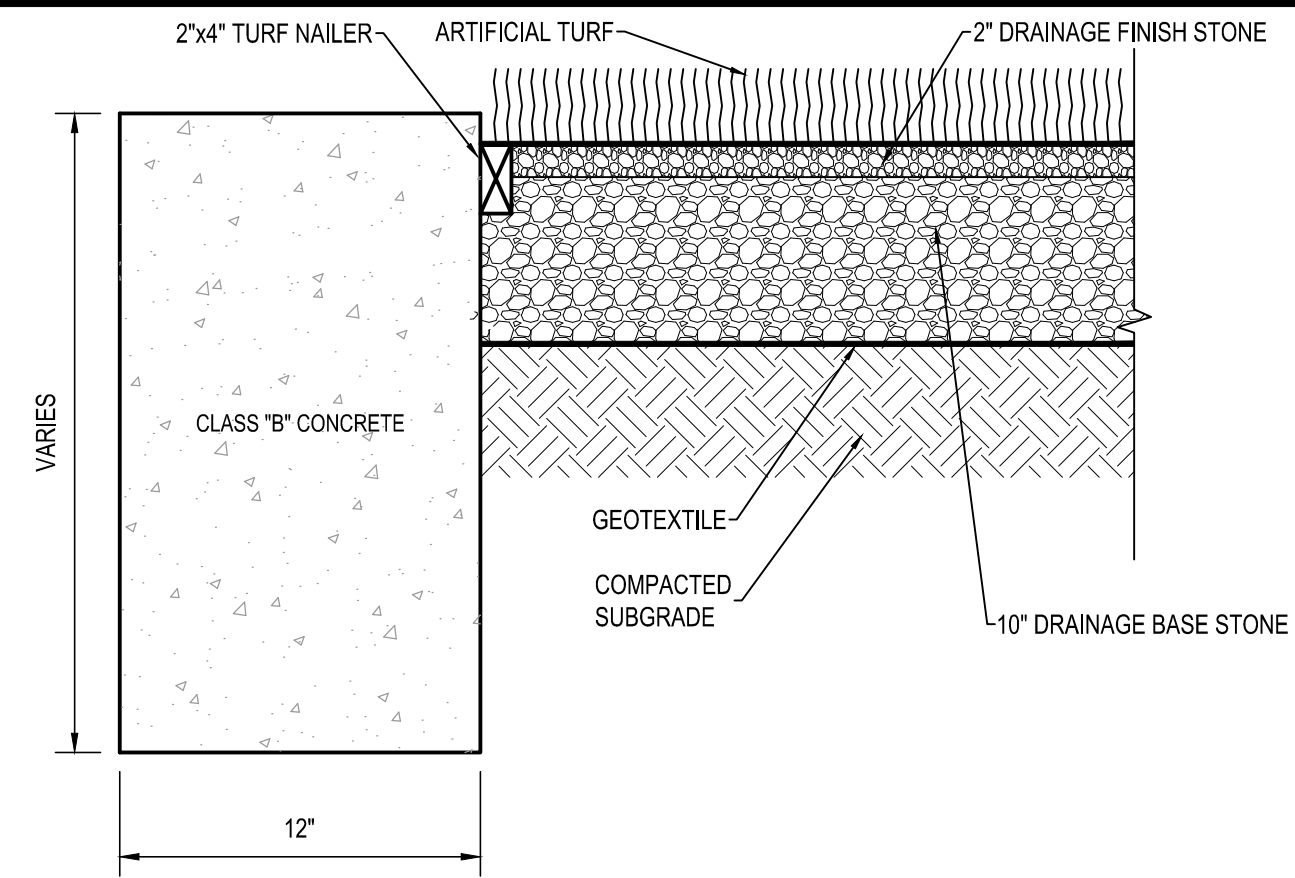
NOT TO SCALE



FULL PAVEMENT SECTION

ASPHALT WALKWAY

NOT TO SCALE



NOTES:

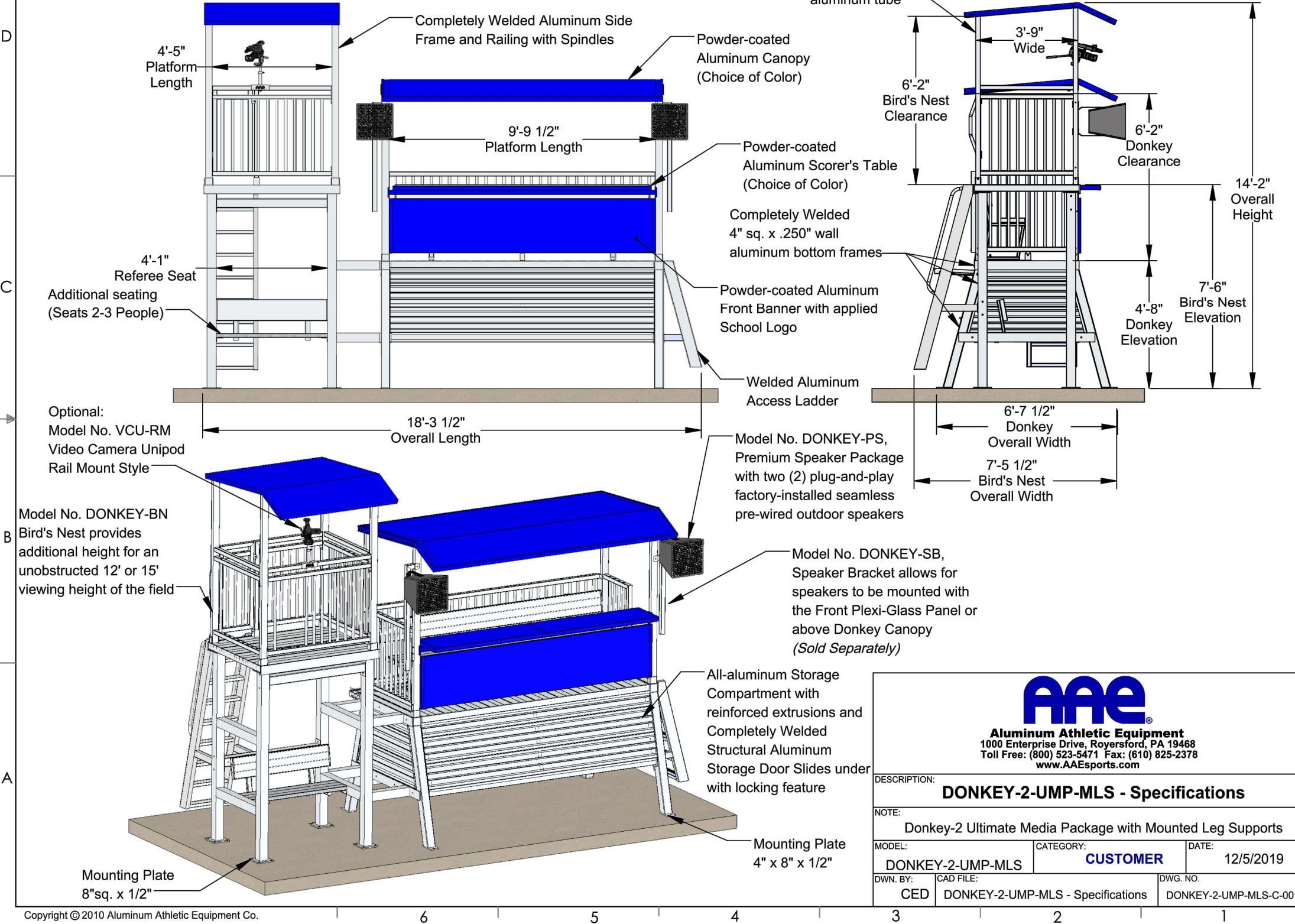
1. TYPICAL TURF CURB SHALL BE 12" HIGH.
2. TURF CURB SHALL BE AT VARIABLE HEIGHT AT THE NORTHEAST BULLPEN LOCATION. BURIED CURB DEPTH AT THIS LOCATION SHALL BE A MINIMUM OF 2'. FINAL CURB DEPTH TO BE COORDINATED WITH ENGINEER.

TURF CURB

NOT TO SCALE

DONKEY-2-UMP-MLS - Specifications

Donkey-2-UMP w/ Mounted Leg Supports



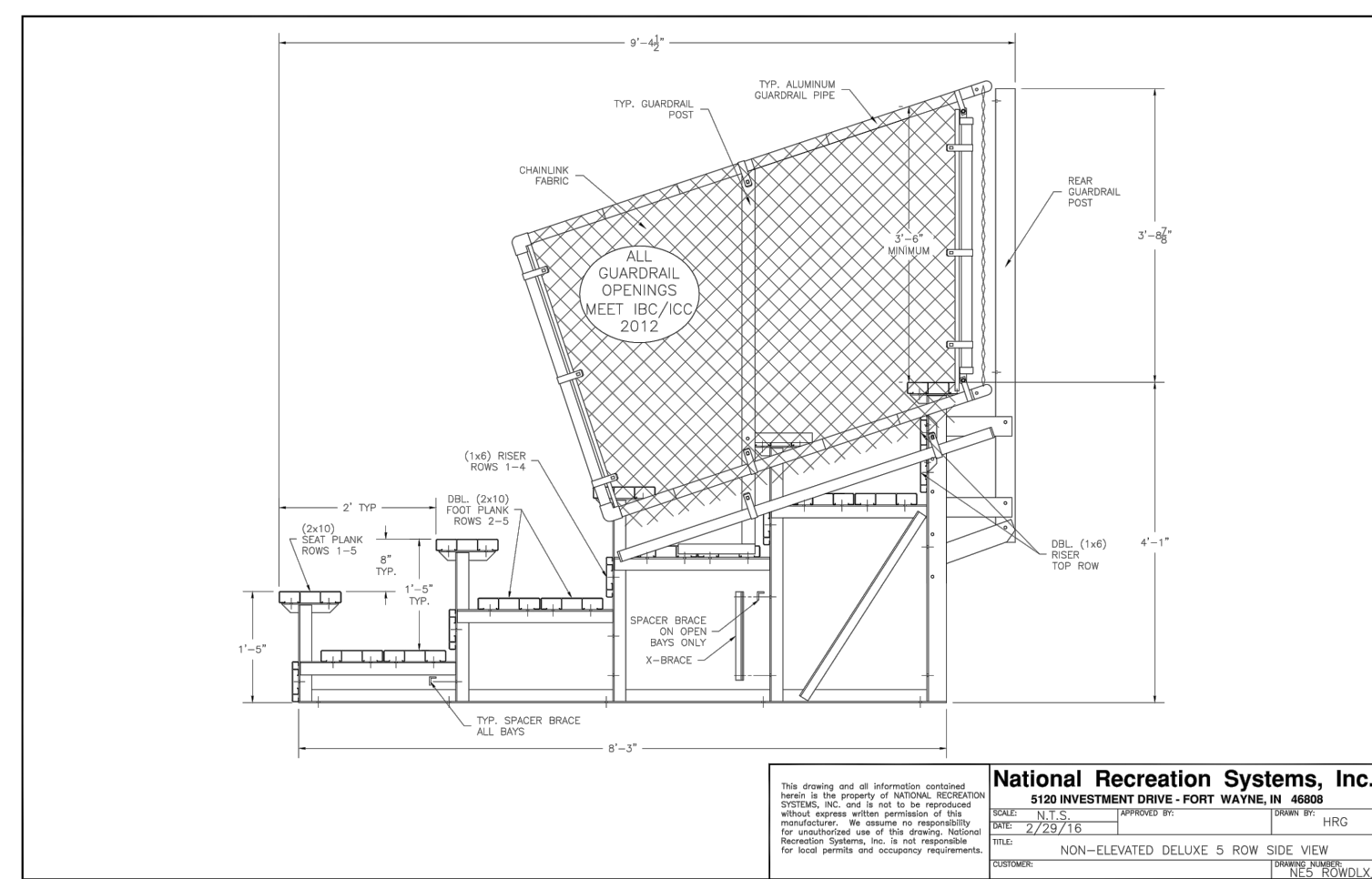
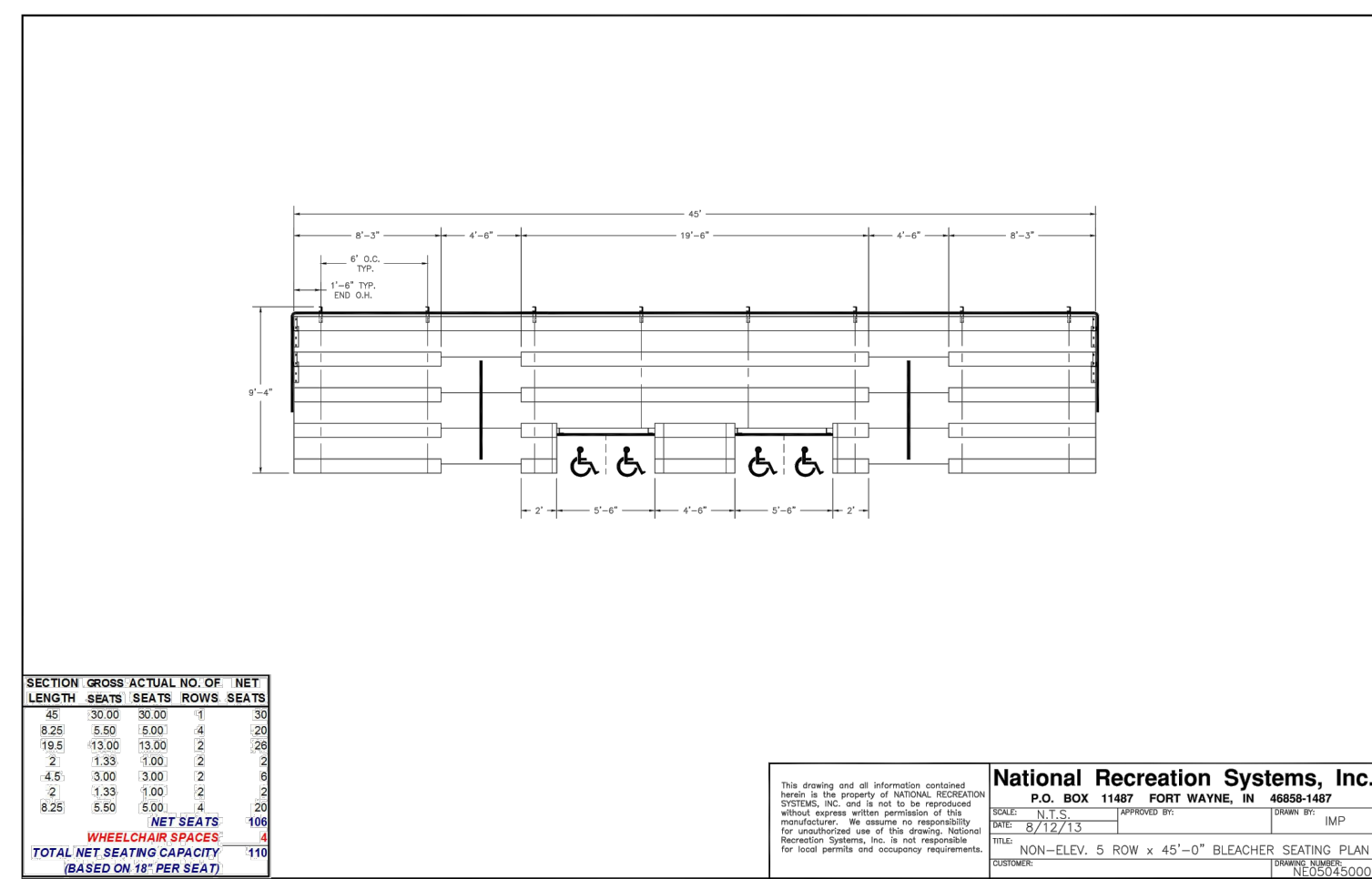
DONKEY-2-UMP-MLS - Specifications			
NOTE:	Donkey-2 Ultimate Media Package with Mounted Leg Supports		
MODEL:	DONKEY-2-UMP-MLS	CATEGORY:	CUSTOMER
DATE:	12/5/2019		
OWN. BY:	CEC	DATE FILE:	
DWG. NO.:	DONKEY-2-UMP-MLS-Specifications	DWG. NO.:	DONKEY-2-UMP-MLS-C-001

NOTES:

- PRESS BOX SHALL BE MODEL DONKEY-2-UMP-MLS WITH CONTOURED SEATING AS MANUFACTURED BY ALUMINUM ATHLETIC EQUIPMENT, OR APPROVED EQUAL.
- CONTRACTOR SHALL SUBMIT COLOR OPTIONS FOR THE OWNER TO APPROVE PRIOR TO ORDERING OF MATERIALS.
- REINFORCED CONCRETE PAD, 6" THICK SHALL BE 8' x 21'.

PRESS BOX

NOT TO SCALE



NOTES:

- BLEACHERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTALLATION GUIDELINES.
- CONCRETE PAD FOR BLEACHERS SHALL BE INSTALLED AS PER THE SPECIFICATIONS. CONCRETE PAD LOCATIONS AND DIMENSIONS SHALL BE AS SHOWN ON THE SITE PLAN.

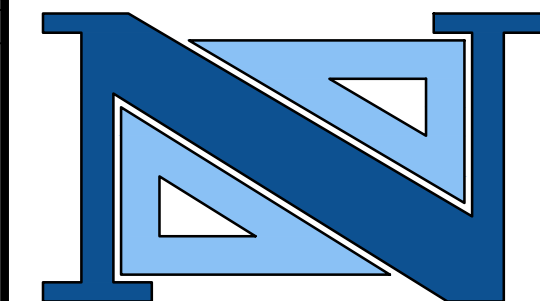
BLEACHERS

NOT TO SCALE

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION			



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

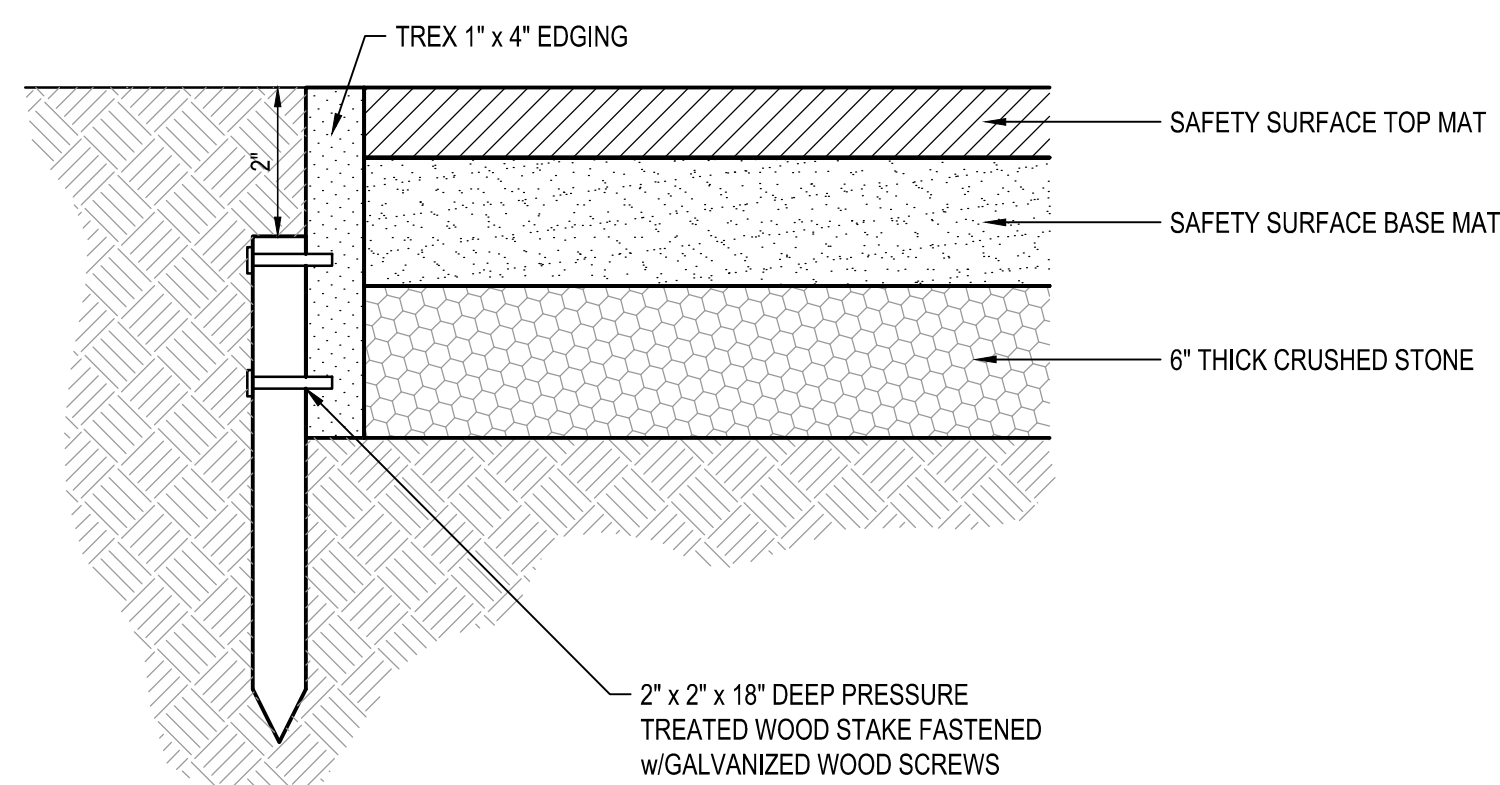
THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI00569800

CONSTRUCTION DETAILS V
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

DRAWN BY: E.M.J./K.O.	CHECKED BY: E.M.J.	PROJECT NO.:	SHEET NO.:
DESIGNED BY: E.M.J.	SCALE: N.T.S.	UNIOCTY19.012	9.04
FIELD BOOK NO.:	PAGE:	DATE: SEPTEMBER 23, 2020	

m:\uniocty19\uniocty19.012 (snyder park turf field) (snyder) final (p001) (snyder) 001 construction details.dwg (Plot) - Wednesday, September 23, 2020 11:58:40 PM



TREX FLEXIBLE EDGING INSTALLATION

NOT TO SCALE

TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 IN. OF GROWTH AND BUFFER ALL BRANCHES FROM THE WIRE.

TUCK ANY LOOSE ENDS OF THE WIRE OR CABLE INTO THE WIRE WRAP SO THAT NO SHARP WIRE ENDS ARE EXPOSED.

INSTALL THREE GUY WIRES PER TREE. SPACED EVENLY AROUND THE TRUNK.

WIRE OR CABLE SIZES SHALL BE AS FOLLOWS:
TREES UP TO 2.5 IN. CALIPER - 14 GAUGE
TREES 2.5 IN. TO 3 IN. CALIPER - 12 GAUGE



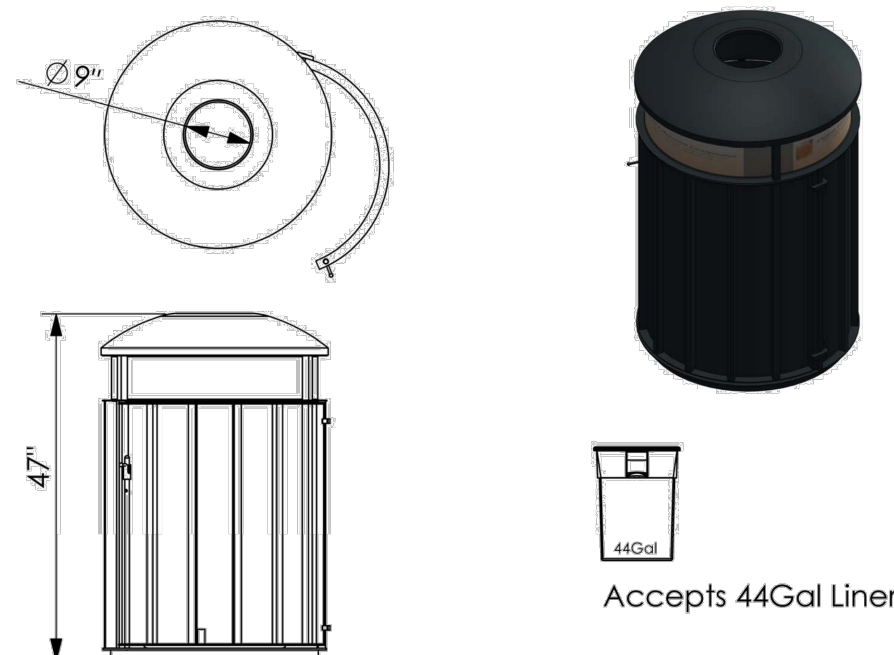
ALL STAKES SHALL BE DRIVEN OUTSIDE THE EDGE OF THE ROOT BALL.

ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR CABLE AGAINST THE TREE TRUNK IS A MINIMUM OF 0.5 IN.

REMOVE ALL STAKING AS SOON AS THE TREE HAS GROWN SUFFICIENT ROOTS TO OVERCOME THE PROBLEM THAT REQUIRED THE TREE TO BE STAKED. STAKES SHALL BE REMOVED NO LATER THE END OF THE FIRST GROWING SEASON AFTER PLANTING.

TREE STAKING DETAIL TREES 3 INCH CALIPER OR LARGER

NOT TO SCALE



TRASH RECEPTACLE

NOT TO SCALE

DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT. SEE STAKING DETAIL.

MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHEN EVER POSSIBLE.

SET TOP OF ROOT BALL FLUSH TO GRADE OR 1-2 INCHES HIGHER IN SLOWLY DRAINING SOILS.

3 INCHES MULCH. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK. MAINTAIN THE MULCH WEED-FREE FOR DURATION OF CONTRACT PERIOD.

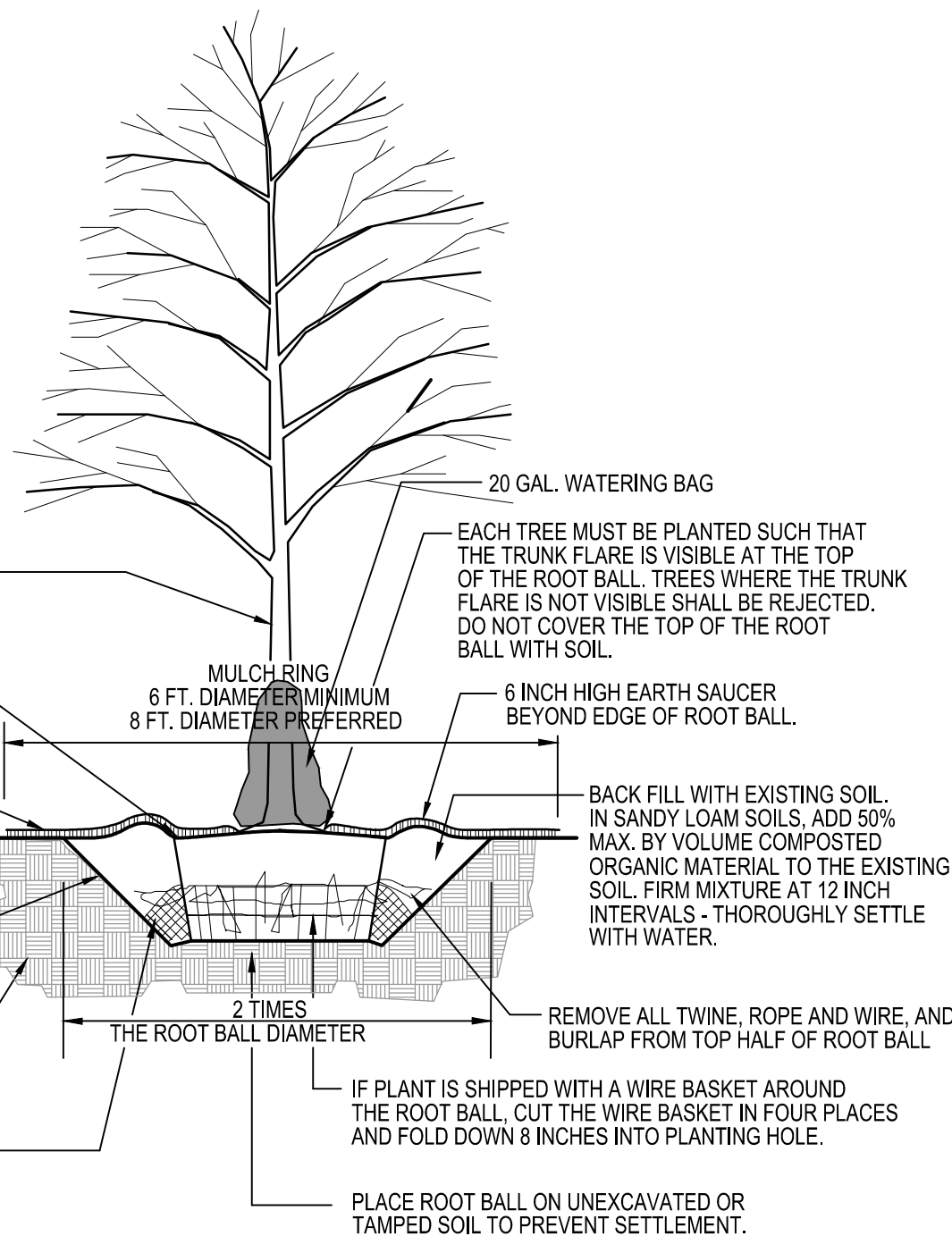
1:1 SLOPE ON SIDES OF PLANTING HOLE.

TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT.

LOAMY SOILS: INCLUDE THE FOLLOWING USDA TEXTURAL CLASSIFICATIONS AND HAVE A CLAY CONTENT OF BETWEEN 15 TO 27%: LOAM, SANDY LOAM AND SILT LOAM. NOTE THAT SOILS AT THE OUTER LIMITS OF THE LOAM CLASSIFICATIONS MAY PRESENT SPECIAL PLANTING PLANTING PROBLEMS NOT ANTICIPATED BY THIS DETAIL.

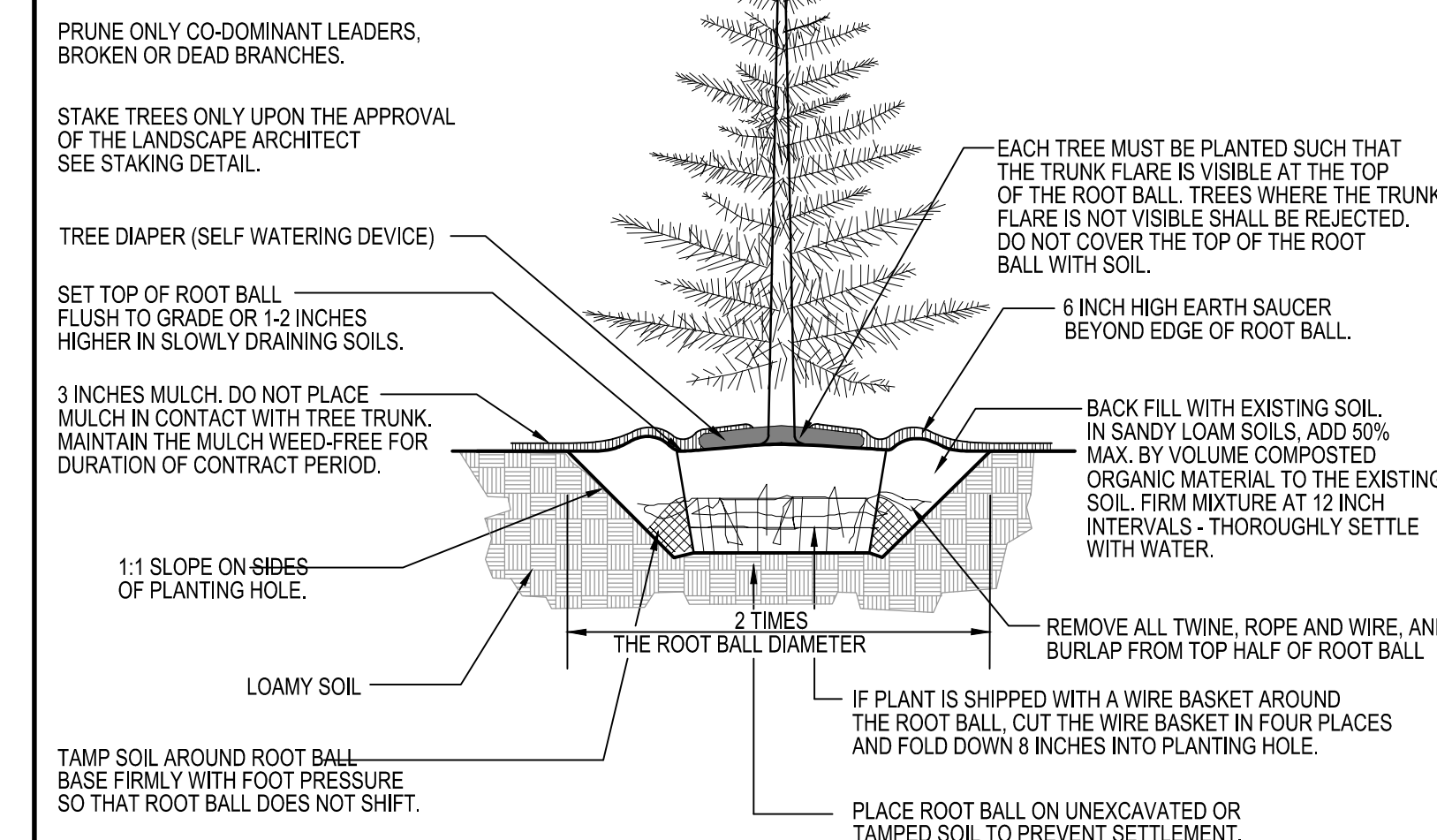
TREE PLANTING DETAIL

NOT TO SCALE



PLANTING NOTES

- ALL PLANT MATERIAL SHALL CONFORM TO STANDARDS SET BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL PLANT MATERIAL SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER INSPECT PLANT MATERIALS FOR CONDITION AND DAMAGE AT ANY TIME DURING THE PROGRESS OF WORK. ANY AND ALL UNSATISFACTORY PLANT MATERIALS SHALL BE REMOVED IMMEDIATELY FROM THE PROJECT SITE.
- ALL B & B MATERIAL SHALL BE FRESHLY DIG THE CURRENT GROWING SEASON. MATERIALS SHALL NOT BE PRUNED PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED. DO NOT BEND OR BIND/TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY THE NATURAL SHAPE.
- ANY DISCREPANCIES BETWEEN PLANS, NOTES, DETAILS AND EXISTING CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT PRIOR TO RESUMING WORK. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REVISIONS DUE TO FAILURE TO GIVE SUCH NOTICE.
- ALL PLANTING, SOODING AND SEEDING SHALL BE PERFORMED IN A WORKMANLIKE MANNER USING ACCEPTED NURSERY PRACTICES AND STANDARDS. PAVED SURFACES TO BE KEPT BROOM-CLEAN AND ALL DEBRIS GENERATED BY THIS WORK IS TO BE PROMPTLY REMOVED BY THE CONTRACTOR.
- PERSONNEL SHALL BE FAMILIAR WITH PLANTING PROCEDURES AND BE SUPERVISED BY A QUALIFIED FOREMAN. ALL EQUIPMENT NECESSARY TO COMPLETE THE LANDSCAPING WORK SHALL BE SUPPLIED BY THE CONTRACTOR.
- CONTRACTOR SHALL FIELD LOCATE PLANT MATERIAL FOR LANDSCAPE ARCHITECT APPROVAL PRIOR TO INSTALLATION.
- ALL PLANTS AND ENTIRE SHRUB BEDS SHALL RECEIVE MULCH AS INDICATED ON THE DRAWINGS.
- ALL PLANT BEDS SHALL RECEIVE A MINIMUM OF 1\"/>



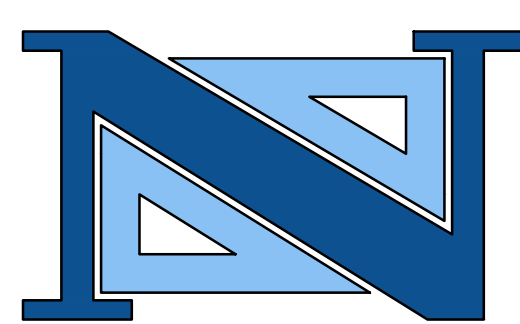
CONIFER TREE PLANTING DETAIL

NOT TO SCALE

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			NO.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED



RAYMOND M. MILCSIK, L.L.A.
LICENSED LANDSCAPE ARCHITECT
N.J. LICENSE NO. 21A500086200

Raymond M. Milcsik

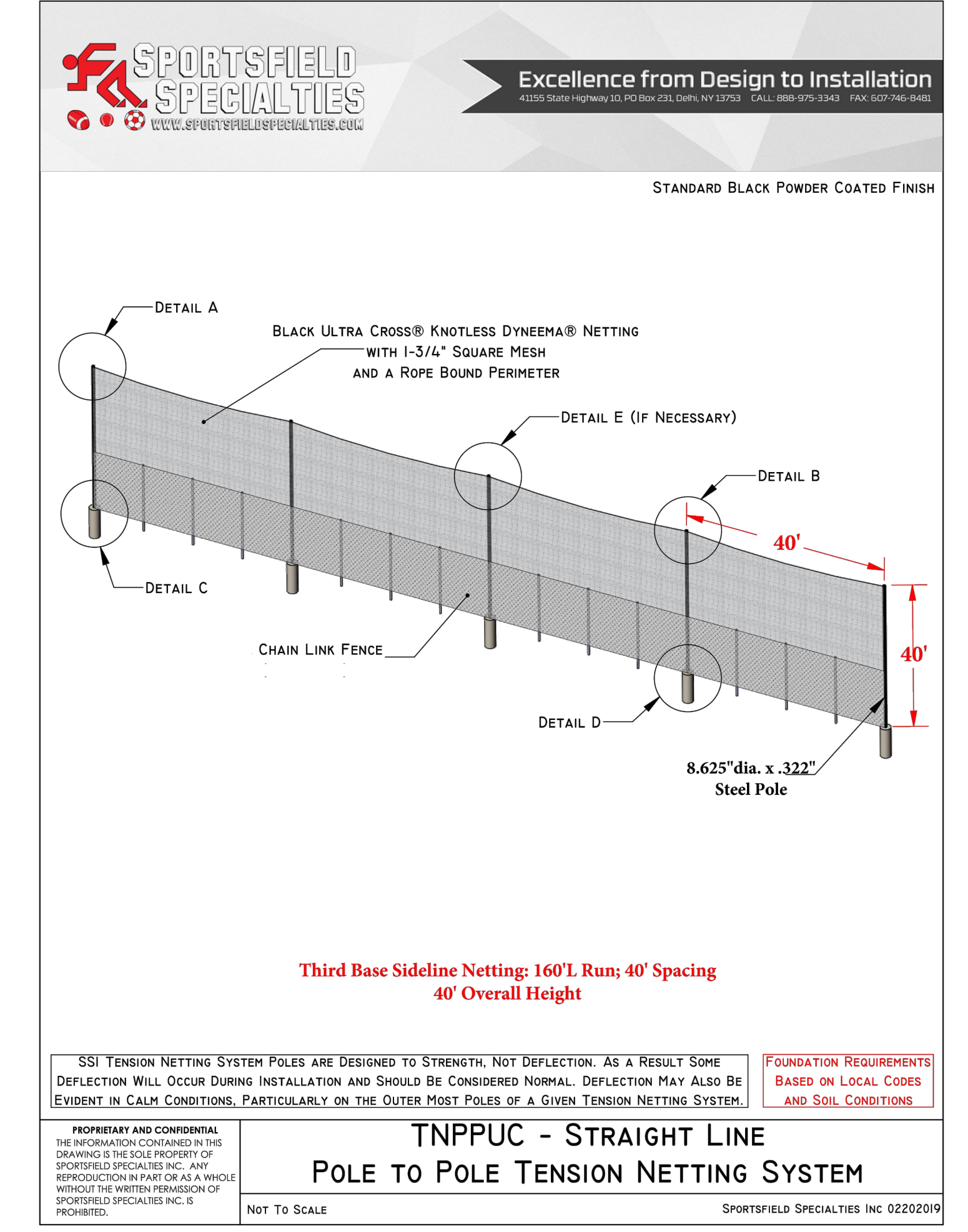
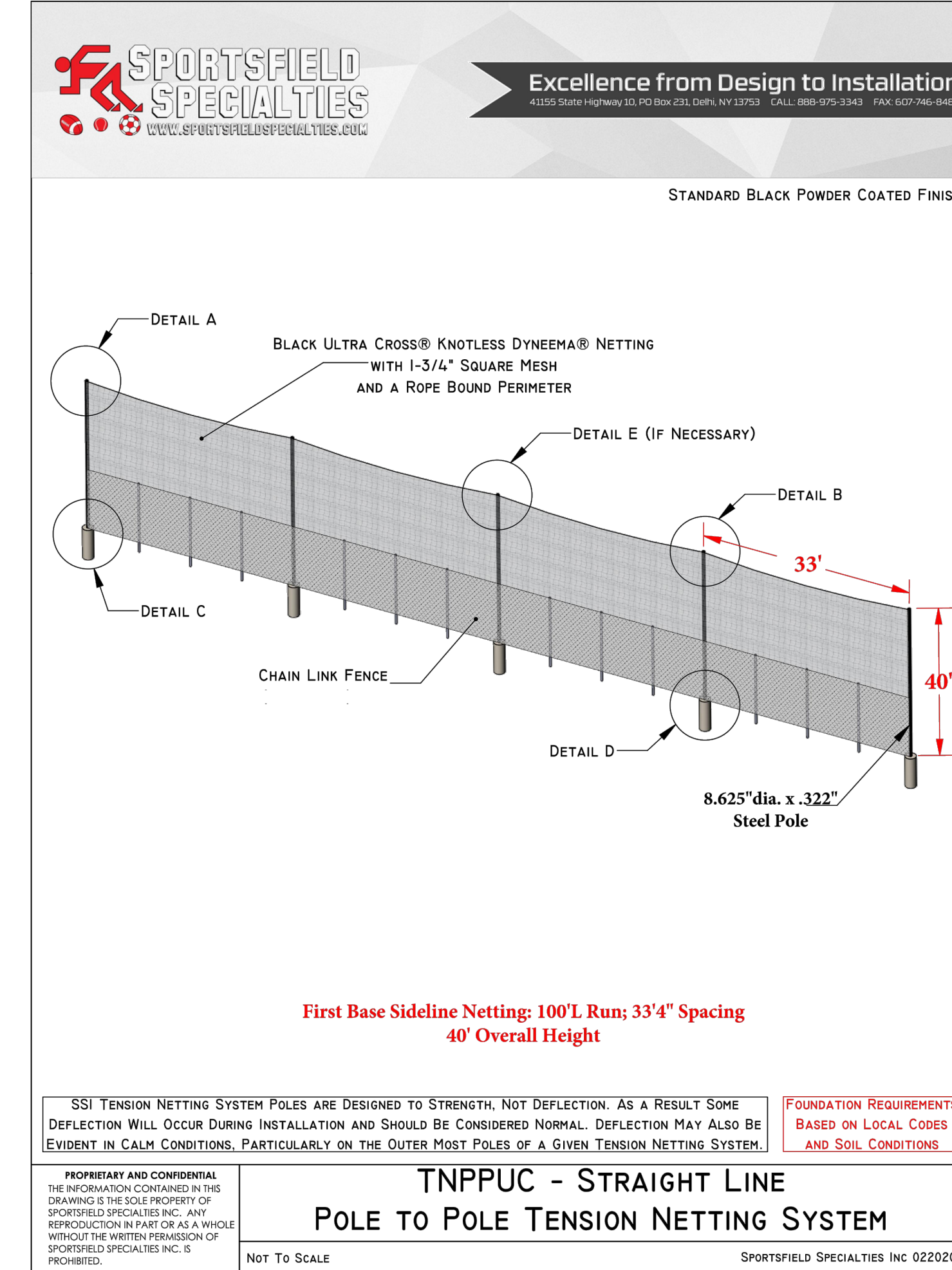
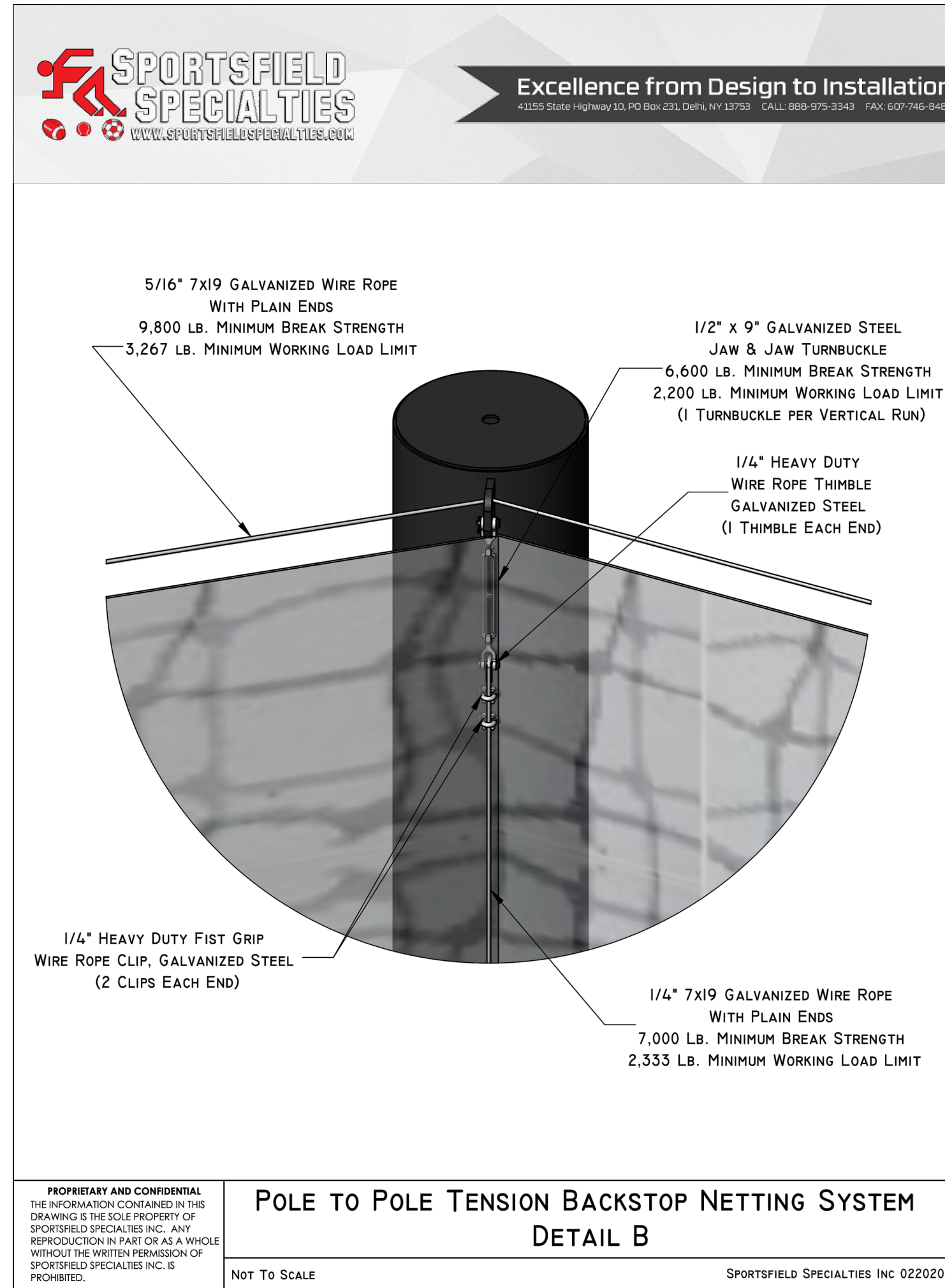
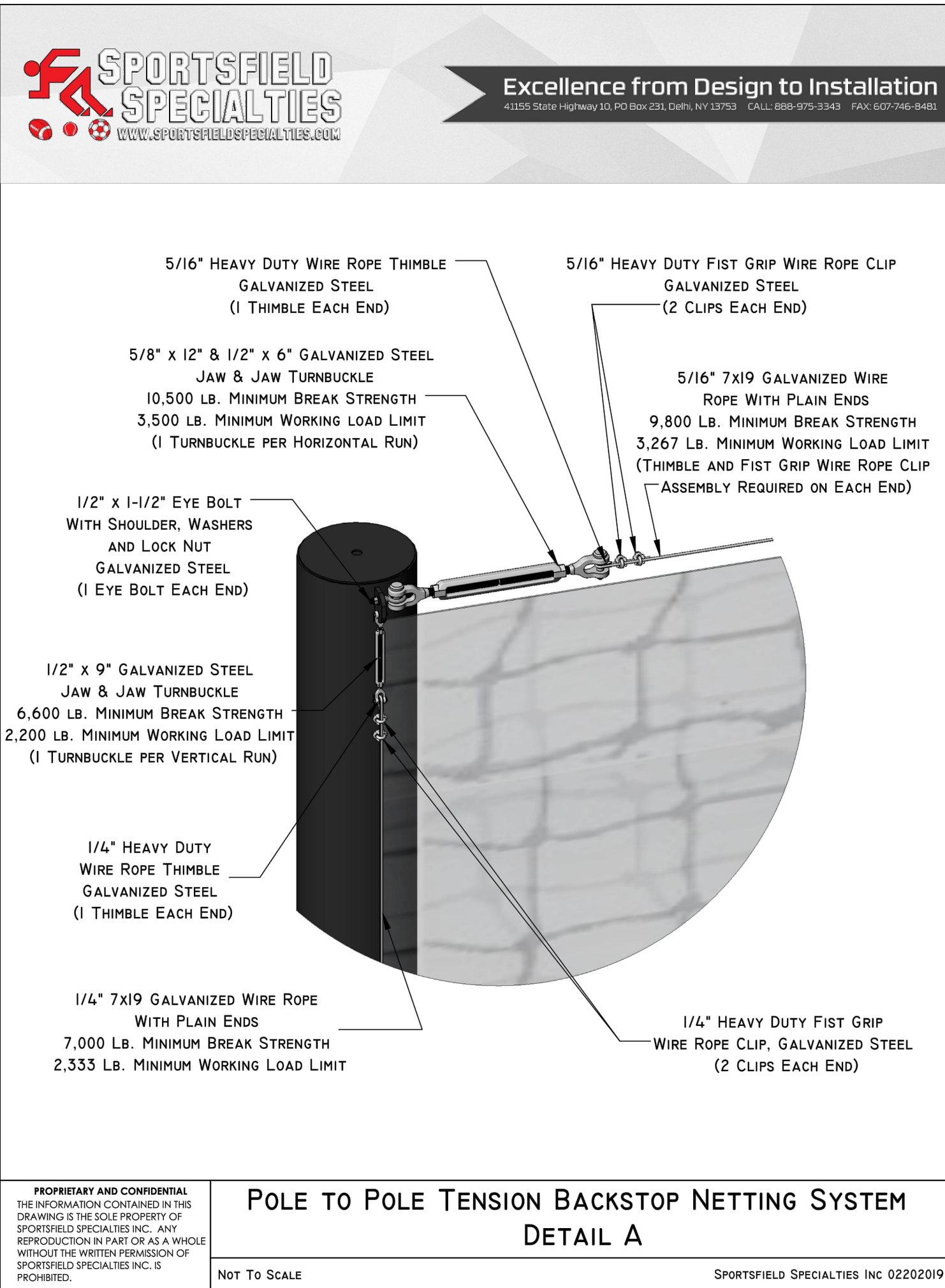
A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 33L000598900

CONSTRUCTION DETAILS VI
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY NEW JERSEY

DRAWN BY: E.M.J./K.O. CHECKED BY: E.M.J. PROJECT NO: UNIOCTY19.012 SHEET NO: 9.05
DESIGNED BY: E.M.J. SCALE: N.T.S. DATE: SEPTEMBER 23, 2020
FIELD BOOK NO: PAGE: DATE: SEPTEMBER 23, 2020

m:\uniocty19\012\snnyder_park_turf_field\012\012.dwg (p) 24ga27927000.ctb Thursday, September 24, 2020 12:05:36 PM



BASEBALL FIELD SAFETY NETTING

- NOTES:
- CONTRACTOR SHALL SUPPLY A FOOTING DESIGN FOR THE TENSION NETTING SYSTEM WITH PROFESSIONAL ENGINEERS STAMP.



STORAGE SHED

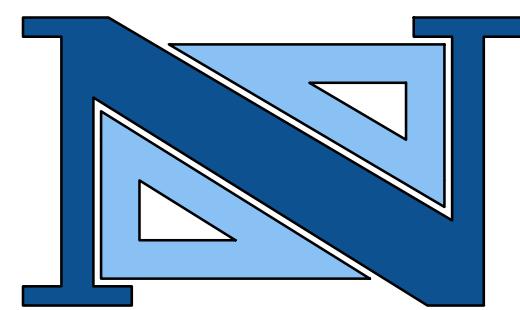
NOTES:

- CONTRACTOR SHALL SUPPLY STORAGE SHED FOR FIELD EQUIPMENT. SHED SHALL BE 12'X20', CAPE COD STYLE TIMBER SHED WITH T1-11 SIDING, ASPHALT SHINGLES, AND GABLE VENTS.
- SHED SHALL HAVE A 9' WIDE X 8' HIGH STANDARD OVERHEAD GARAGE DOOR ON THE SHORT SIDE OF THE SHED AND A STANDARD 5' DOUBLE DOOR ON THE LONG SIDE OF THE SHED.
- SHED SHALL BE INSTALLED ON REINFORCED CONCRETE PAD, 6" THICK. CONTRACTOR SHALL INSTALL A CONCRETE RAMP TO THE GARAGE DOOR FOR EQUIPMENT ACCESS (IF NECESSARY).
- SHED SHALL HAVE TWO (2) POWER OUTLETS AND LIGHTING. COST OF CONDUIT AND ANY & ALL REQUIRED ELECTRICAL COMPONENTS SHALL BE INCLUDED IN THE UNIT PRICE FOR STORAGE SHED, COMPLETE.
- CONTRACTOR SHALL SUBMIT COLOR OPTIONS AND SHED SHOP DRAWINGS TO THE OWNER AND/OR ENGINEER PRIOR TO ORDERING OF MATERIALS.

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. © COPYRIGHT 2020 BY NEGLIA ENGINEERING. ALL RIGHTS RESERVED.

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			NO.	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED



DAVID R. ATKINSON, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45506

THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 33L00569800

CONSTRUCTION DETAILS VII
SNYDER AVENUE TURF FIELD IMPROVEMENTS
BLOCK 1901 - LOT 1.02
TOWNSHIP OF BERKELEY HEIGHTS
UNION COUNTY
NEW JERSEY

PROJECT NO: UNIOCTY19.012 SHEET NO: 9.06
DATE: SEPTEMBER 23, 2020

m:\unio-county\uniocty19.012 Snyder turf field improvements\final\p021\bas001.dwg, Plot Date: Thursday, September 24, 2020, 12:23:43 AM