

NCCD CONTRACT NO. 1668-00

NEW CASTLE CONSERVATION DISTRICT

The Mill Race Drainage Improvements

INVITATION FOR BIDS

BID PACKAGE

AND

SPECIFICATIONS

COMPLETION: 20 Working Days

The attached copies of "Proposal and Schedule of Prices" in this booklet must be submitted and turned in for Bidding.

MANDATORY PRE-BID 10:00 AM ON APRIL 16, 2019

BIDS DUE BY 10:00 AM ON APRIL 25, 2019

NEW CASTLE CONSERVATION DISTRICT

NOTICE AND INVITATION TO BID

The New Castle Conservation District is inviting Bids for Contract No. 1668-00 The Mill Race Drainage Improvements which includes the removal of trees, redefining a rock channel, and the installation of a retaining wall.

The new construction is located in the community of The Millrace, New Castle County, Delaware.

Bids will be received until 10:00 AM, April 25, 2019 in the New Castle Conservation District office, 2430 Old County Road, Newark, Delaware 19702, when they will be opened and read publicly. Specifications and instructions to bidders may be obtained from Ms. Liz Hook at this office or from the website (<http://www.newcastleconservationdistrict.org/Projects/Projects.html>) on April 8, 2019. The office is located at the intersection of Business Route 896 and Old County Road.

The District may extend the date and time for the opening of bids from that described herein with not less than five calendar days' notice, by certified mail, to those prospective bidders who obtained copies of the bidding documents.

Plans and specifications obtained from the District office will cost \$40 per set. (non-refundable)

There will be a mandatory pre-bid meeting on April 16, 2019 at 10:00 AM at the site to answer any questions regarding the project.

The completion time shall be 20 Working Days.

The terms of the contract shall require a bid security equivalent to 10% of the total bid amount and a performance & payment bond. A 5% Retainage is required upon payment(s) to be held for six months following completion of the contract.

New Castle Conservation District prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political belief and marital or family status.

Dan Severson
Secretary

INSTRUCTIONS TO BIDDERS

The scope of this contract is as described on New Castle Conservation District plans entitled "The Mill Race Drainage Improvements signed and sealed on January 21, 2019" and these General and Special Provisions.

Specifications and additional information may be obtained at the District office at 2430 Old County Road (302-832-3100 ext. 8970) or from the website (<http://www.newcastleconservationdistrict.org/Projects/Projects.html>).

Bids shall be made by completing and submitting the "**Proposal and Schedule of Prices**" and the "**Bid Security**" portions of this booklet.

Bid envelope shall carry a clear notation in the lower left quadrant, "Bid for The Mill Race Drainage Improvements - NCCD Contract No. 1668-00".

Award, if any, will be made to the lowest and most responsive bidder. The District reserves the right to reject all bids and to waive minor irregularities and to refuse award to any bidder who has not satisfactorily completed work on a previous District project. Successful bidder shall be licensed and authorized to do business in the State of Delaware.

Bid Security:	REQUIRED – 10% of bid amount
Performance & Payment Bond:	REQUIRED – 100% of contract amount
Retainage:	REQUIRED - 5% of contract payments

Mailing Address: New Castle Conservation District
2430 Old County Road
Newark, Delaware 19702

STANDARD SPECIFICATIONS

Unless otherwise specified in these contract documents and Special Provisions, DeIDOT Standard Specifications, August 2001, with any and all Supplemental Specifications and addenda shall apply, and are hereby made part of this contract as fully and with the same effect as if attached or set forth at length herein.

Certain clauses in these Special Provisions represent modifications to the corresponding subsections of the Standard Specifications. In the case of conflicting requirements, these modifications shall govern, as specified in Subsection 105.06 of the Standard Specifications. Any applicable provision in the Standard Specifications not amended by and not in conflict with any Special Provisions shall be understood to be in full effect.

DeIDOT Standard Drawings shall govern the details required for the construction of curbs, gutters, sidewalks, drainage inlets, manholes, junction boxes, etc. unless otherwise required in these specifications. Details of DeIDOT's Standard Specifications and/or Standard Drawings are available on the DeIDOT website – http://www.deldot.gov/information/pubs_forms/manuals/standard_specifications/index.shtml and http://www.deldot.gov/information/pubs_forms/const_details/index.shtml.

GENERAL PROVISIONS

All bids shall be accompanied by a deposit of either a good and sufficient bond to the State of Delaware for the benefit of the District, with corporate surety authorized to do business in the State of Delaware, with warrant of attorney to confess judgment, or a certified check drawn on a responsible banking institute, paying to the order of the New Castle Conservation District for Ten (10) percent of the total amount of the bid which deposit is to be forfeited as liquidated damages in case the bid is accepted and the bidder shall fail to execute a contract within twenty (20) calendar days after notification of award.

The deposit shall be returned to the successful bidder upon execution of the contract and the deposits of unsuccessful bidders shall be returned to them immediately upon the awarding of the contract.

Upon award of the contract, the contractor shall execute the contract and provide a performance and payment bond within 20 calendar days after contract award.

All contract work shall be completed within **20 Working Days** and time charges shall commence as specified in the "Notice to Proceed" letter. Section 101.91 "Working Day" of DeIDOT Specifications is revised as follows: Item 4 in the first sentence is deleted. Work days shall be charged between December 16 and March 15 when the weather is deemed suitable by the District for prosecution of the work on the contract.

The District will issue to the Contractor a Notice to Proceed which will stipulate the date on or before which the Contractor is expected to begin work. The date specified in the Notice to Proceed will be at least ten calendar days subsequent to the date of issuance of the Notice to Proceed. No work is to be started before receipt of the Notice to Proceed. The specified contract time shall begin on the day the work actually starts or on the date stipulated in the Notice to Proceed, whichever is earlier.

In the event the contractor fails to complete the project in the contract specified period, default shall be announced. At that time, the District shall offer to let the contractor continue under the specific liquidated damage assessment of \$1030.00 per Working Day. If the Contractor rejects the offer, the District reserves the right to terminate the contract. Compensation for work completed and materials provided to the job will be calculated by the District. After a deduction for necessary administrative costs associated with terminating the contract, payment will be made to the Contractor of the remaining funds.

CONTRACT INSPECTION

An inspector representing the New Castle Conservation District will be present on the project.

NON-DISCRIMINATION

New Castle Conservation District prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political belief and marital or family status. Contractors and subcontractors working on NCCD contracts shall comply with these requirements.

HOLIDAYS

All Saturdays, Sundays, and Holidays as listed below are non-work days for the District. The District will consider allowing the contractor to work on Saturdays, Sundays, and Holidays providing a written request is received at the District office at least 3 calendar days prior to the event and the Contractor agrees to reimburse the District at 1.5 times the inspector's hourly billing rate for Saturdays and 2.0 times for Sundays or Holidays up to eight (8) hours. No more than eight (8) hours shall be worked. No work is to be performed without approval of the District. If the Contractor receives permission and works on a Sunday or holiday, full working days will be charged, weather permitting. No time will be charged for work on Saturdays.

Official District Holidays for Calendar 2019

January	1, 2019	New Year's Day Holiday
January	21, 2019	Martin Luther King Jr. Day
February	18, 2019	President's Day
May	27, 2019	Memorial Day
July	4, 2019	Independence Day
September	2, 2019	Labor Day
October	14, 2019	Columbus Day
November	11, 2019	Veterans Day
November	28, 2019	Thanksgiving Day
November	29, 2019	Thanksgiving Friday
December	25, 2019	Christmas Day

WORK SCHEDULE

A work schedule is not required for this contract.

INSURANCE

The Contractor will maintain insurance coverage in amounts not less than the following: (a) Workers Compensation with Statutory Employer Liability Limits for the state or states in which the work is to be performed; (b) Comprehensive General Liability Insurance including Products and Completed Operations and Blanket Contractual Liability in the amount of \$1,000,000 per occurrence / \$2,000,000 General Aggregate / \$2,000,000 Products and Completed Operations Aggregate / \$1,000,000 Personal Injury and Advertising Liability / \$50,000 Property Damage Liability / and \$10,000 Medical Payments. In addition to the foregoing, contracts that involve Professional Liability (Errors and Omissions) the contractor will be required to maintain at least a Limit of Liability of \$500,000 per Claim with at least \$500,000 Policy Aggregate. The Contractor will maintain all coverage in force for the duration of the contract and have issued a Certificate of Insurance to the **District**. In the event of cancellation of any insurance coverage the **District** requires a 30 day notice prior to cancellation. The Contractor shall hold the **District** and its agents harmless from claims resulting from events pertaining to this contract such as, but not limited to, trespass, property damage, personal injury, poor workmanship, inferior materials, liens of suppliers and subcontractors, and theft.

UTILITIES

Delete Subsection 105.09 and replace with the following:

It shall be the Contractor's responsibility to accurately locate all existing utilities such as gas, sewer, electric, water, telephone, etc. The Contractor shall take every precaution to prevent damage to any utility facilities. The Contractor shall be financially responsible for the repair of any utilities damaged as a result of his construction activities. The following shall be contacted for assistance in identifying the locations of utilities prior to commencing any activities on the project.

MISS UTILITY	1-800-282-8555
New Castle County Sewer	395-5700
City of Wilmington	576-3060

The Contractor shall contact the appropriate utility companies at least ten days prior to construction when adjustment or relocation is necessary. Upon approval of the estimate by the District, the Contractor shall submit invoices for the relocation work to the District for payment. These costs shall not be included in any bid prices for the contract.

PERMITS AND EASEMENTS

The District shall obtain any permits required from DeIDOT for work within State Rights-of-Way.

Construction Easements have been granted by affected property owners and are available upon request to the District office.

The Contractor shall be responsible for any permits, ingress/egress and construction rights-of-way not provided by the District, including any required DeIDOT Temporary Construction Entrance permit.

PROPERTY MARKERS

The Contractor shall be responsible to protect any identified or found property markers or monuments and shall replace, at the Contractor's own expense, any markers or monuments disturbed during construction using a Delaware Professional Land Surveyor (PLS) or Delaware Professional Engineer (PE). The PLS or PE shall provide a letter certifying and describing the work done in resetting any markers or monuments.

REGULATIONS

The Contractor and all Subcontractors shall comply with all applicable Federal, State, County and Municipal laws, rules and regulations during the construction of this project, including but not limited to the following:

Construction Occupational Safety and Health
Equal Employment Opportunity
Sediment and Storm Water Management

These contract documents do not include the necessary components for construction safety. It is the overriding intention of the parties of this contract that nothing in this paragraph requires the District, its employees or its agents to be responsible for any aspect of safety during construction of this contract or to ensure that the Contractor follows whatever safety regulations which may be applicable.

THIRD PARTY AGREEMENTS

The Contractor shall obtain the District's consent prior to making any third party agreements with regard to this contract.

SUBCONTRACTORS

All proposed Subcontractors shall be approved in writing by the District prior to any work being done by same. The Contractor shall perform a minimum of 50% of the work on the contract with his own forces.

EXAMINATION OF SITE, PLANS AND SPECIFICATIONS:

The bidder shall examine carefully the site of the proposed work, the proposal, plans and specifications and contract forms before submitting a proposal. The submittal of a bid shall be prima facie evidence that the bidder has made such examinations and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the plans, specifications and contract. No additional payments shall be made for the completion of this contract, other than payment for the bid items included herein except as provided in these specifications.

CHANGE IN SCOPE OF WORK

The District reserves the right to change the scope of work through alteration, addition or deletion. If such changes involve other than increasing or decreasing contract bid quantities, the District will initiate cost negotiations for the extra work. The District Chairman shall reserve the right to issue unilateral work directives and payment when agreement cannot be reached.

CHANGE OF CONTRACT BID QUANTITIES

The District reserves the right to increase or decrease contract quantities at the contract unit bid prices. Any such changes in contract quantities shall not be grounds for changes in the unit bid prices.

INSPECTIONS

A semi-final inspection will be held at the request of the Contractor, at completion of the project. Any deficiencies will be noted at that time. Any requests for additional compensation shall be made at that time by the Contractor. Payment, less 5% retainage, will be made within 30 days of the semi-final acceptance of all work. An inspection will be held at six months' time following semi-final or conditional acceptance, and final payment will be made if all work is found satisfactory and all required reports, drawings, etc. turned in and accepted.

PAYMENTS

The New Castle Conservation District will make a lump sum payment every 30 calendar days as the Contractor submits estimates for work completed on the bid schedule and as determined and approved by the Engineer. In making such progress payments, there shall be retained 5% of the estimated amount until final inspection and acceptance of the contract work. The retainage of 5% shall be held by the District for six months after the semi-final inspection and may be used to make repairs to any defects in materials or workmanship which may become evident during this time period in the event that the Contractor does not make such repairs at his expense. A final inspection will be conducted approximately six months after the semi-final inspection, at which time the final acceptability of the project will be determined. Retainage will be returned to the Contractor when all work, including reports, drawings, etc., is found acceptable.

DEFINITIONS

Contracting Officer	District official, or designee authorized to enter into all money obligating contracts.
Program Manager	Administers the District Construction Program. May make recommendations for changes in contract quantities, extra work items. Can direct field changes or approve recommendations for field changes and hear contractor claims. Coordinates Project Engineer, Planner and Inspector activities.
DeIDOT	The Delaware Department of Transportation
DeIDOT Specifications	The Delaware Department of Transportation's Standard Specifications for Road and Bridge Construction dated August 2001 with any addenda or Supplemental Specifications issued.
Disposal Off Site	Disposal off site requires that materials will be disposed of at an approved facility or an operating landfill. The contractor must notify the District as to the location of the disposal site. If other than a previously approved facility or operating landfill will be used, the contractor is responsible to obtain all permits, approvals, investigations, etc. required to use such site and must provide documentation of same to the District.
District	The New Castle Conservation District
Fixed Price Item	A fixed price item is defined as an item where the District establishes the price of the item in the contract bidding documents. The Contractor, by

virtue of bidding the contract, agrees to do the work at the price stated in the bidding documents for the actual number of bid units which are completed and accepted.

Fixed Quantity Item	A fixed quantity item is defined as an item where the District determines the fixed quantity in the bidding documents, which will be used as measurement for payment of the item of work, realizing that the actual quantity of work performed on the project may vary somewhat either above or below the established fixed quantity. By virtue of the Contractor bidding the contract, he shall agree to do the work at the contract unit price bid for the exact quantity stated in the bidding documents. The exact quantity established in the bidding documents shall only be adjusted as provided in these specifications under "Basis of Payment For Fixed Quantity Items".
Inspector	Individual representing District on site who ensures quantity and quality of work completed is in accordance with specifications. Reports to Program Manager.
Change Order	Written order issued by Contracting Officer to the Contractor to change, add or delete work.
Planner	Responsible for developing scope of project in conjunction with Engineer, landowners and District officials.
Project Engineer	Responsible for design of project. Makes recommendations for field changes. May approve shop and/or working drawings.
NRCS Specifications	Standard Specifications of the U.S. Department of Agriculture, Natural Resources Conservation Service.
Working Day	A working day is defined as any calendar day exclusive of Saturdays, Sundays or District holidays when the Contractor can prosecute the work. The application and interpretation of work day charges will be in accordance with DelDOT Specifications except work days shall be charged between December 16 and March 15 when the weather is deemed suitable by the DISTRICT for prosecution of the work on the contract.

BASIS OF PAYMENT FOR FIXED QUANTITY ITEMS

When indicated on the plans, special provisions or bidding documents, certain items may be paid for on an estimated fixed quantity item basis. Such items will be specifically identified as **Estimated Fixed Quantity (EFQ)** items. Where this occurs, the method of measurement and basis of payment indicated in DelDOT Standard Specifications for such items are deleted.

When estimated fixed quantities are indicated, the only quantities for which payment will be made are the estimated quantities as shown in the proposal at the unit price bid.

The bidder should check the estimates and make his/her own appraisal of the amount of labor, equipment, and/or material required to complete the work in accordance with the plans and specifications. No allowance will be made or claims considered for any quantities used in completing the work in excess of those given in the proposal unless changes are authorized in writing by the Engineer.

In the case where the actual quantities differ from the fixed quantities indicated in the proposal by more than 25%, additions or deductions will be made to or from the proposed quantities for the actual volume or amounts in excess or deficient of the 25%, with payment adjusted in accordance with the unit bid price of the item. No claim shall be made by the Contractor for anticipated profits or for the costs of other items of work which he may have included in the item. The Contractor is cautioned not to include any other hidden contract costs or unbalanced bidding in the item.

MINIMUM WAGE RATES

The rates of wages contained herein shall be the minimum wage rates to be paid by the Contractor and any Subcontractor on the project when costs of this contract exceeds \$500,000.00 for new construction (including painting and decorating) or \$45,000.00 for alteration, repair, renovation, rehabilitation, demolition or reconstruction (including painting and decorating) of buildings or works.

A workday shall be considered eight hours and any employee of the Contractor or Subcontractor shall be paid time and one-half for any work done in excess of forty hours per week.

The Contractor shall forfeit as a penalty to the New Castle Conservation District the sum prescribed by Delaware Law for each laborer, workman or mechanic employed for each calendar day, or portion thereof, for when such laborer, workman or mechanic is paid less than the stipulated rates for any work done under the said contract, by him, or any Subcontractor under him.

New Castle Conservation District shall withhold and retain there from all sums and amounts which shall have been forfeited pursuant to these stipulations, provided however, that no sum shall be withheld or retained except from final payment without a full investigation by the District Coordinator.

Contractor may withhold from any of his Subcontractors sufficient sums to cover any penalties withheld by New Castle Conservation District due to the Subcontractor's failure to comply with the terms of this contract.

Nothing in this contract, however, shall be construed to prohibit the payment to any laborer, workman or mechanic employed on work in the scope of this contract of more than the stated wage rate.

In the event that any sum shall be withheld or forfeited under the terms set forth, it shall be the duty of the New Castle Conservation District to determine the amount due and owed to the laborers, mechanics and workers under the terms of this contract and make full restitution of same from the amount so withheld.

The Delaware Code (Title 29, Chapter 69, Section 6960, Paragraph (c)) requires the contractor to furnish weekly sworn payroll information to the Department of Labor. The Department of Labor shall keep and maintain the sworn payroll information for a period of six months from the last day of the work week covered by the payroll.

If the Contractor needs further clarification pertaining to prevailing wage rates, the District has on file two publications published by the Delaware Department of Labor, entitled "Delaware Prevailing Wage Regulations" and "Classification of Workers Under Delaware Prevailing Wage Law." These publications are available for review upon request.

STATE OF DELAWARE
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL AFFAIRS
OFFICE OF LABOR LAW ENFORCEMENT
PHONE: (302) 761-8200

Mailing Address:
4425 North Market Street
3rd Floor
Wilmington, DE 19802

Located at:
4425 North Market Street
3rd Floor
Wilmington, DE 19802

PREVAILING WAGES FOR HEAVY CONSTRUCTION EFFECTIVE MARCH 15, 2019

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
ASBESTOS WORKERS	23.12	20.33	44.22
BOILERMAKERS	79.62	33.60	61.64
BRICKLAYERS	69.61	24.27	26.06
CARPENTERS	55.63	55.63	44.22
CEMENT FINISHERS	45.61	25.48	18.98
ELECTRICAL LINE WORKERS	77.06	76.66	67.64
ELECTRICIANS	70.49	70.49	70.49
GLAZIERS	21.36	18.55	12.56
INSULATORS	57.88	57.88	57.88
IRON WORKERS	64.26	63.77	61.00
LABORERS	47.70	47.70	47.70
MILLWRIGHTS	74.23	74.23	59.84
PAINTERS	83.91	83.91	83.91
PILEDRIVERS	78.02	41.17	32.04
PLASTERERS	20.12	17.48	11.81
PLUMBERS/PIPEFITTERS/STEAMFITTERS	89.13	81.44	18.72
POWER EQUIPMENT OPERATORS	71.29	71.29	71.29
SHEET METAL WORKERS	32.15	19.95	18.73
SPRINKLER FITTERS	34.65	13.12	10.86
TRUCK DRIVERS	23.44	21.57	23.30

CERTIFIED: 03/15/2019

BY: *[Signature]*
ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

NOTE: THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 761-8200

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

THESE RATES ARE BEING PROVIDED IN ACCORDANCE WITH DELAWARE'S FREEDOM OF INFORMATION ACT.

THEY ARE NOT INTENDED TO APPLY TO ANY SPECIFIC PROJECT.

SPECIAL PROVISIONS

GENERAL DESCRIPTION OF PROJECT

The project is to redefine a stone channel and building a wall behind the units on Millrace Lane. The work will include modifications to the existing stone channel to redirect storm water flow to the existing closed drainage system, tree removal, installation of a concrete retaining wall, installing pipe and catch basins, and restoration of the disturbed areas.

EROSION AND SEDIMENT CONTROL

The Contractor shall comply with all aspects of Delaware and/or New Castle County Erosion and Sediment Control requirements. The costs involved in meeting these requirements shall be included in the bid items in this contract. No separate payment shall be made for compliance with these regulations other than those individual erosion and sediment control related bid items that are specifically listed in this contract.

ACCESS TO THE SITE

Access to the site is from Millrace Lane.

CONSTRUCTION LIMITS

The construction right-of-way or work area limits shall be established on the plans and/or described at the pre-bid meeting on site.

CONSTRUCTION PLANS AND SPECIFICATIONS

Four (4) sheets entitled "New Castle Conservation District Contract No.1668-00" prepared by the New Castle Conservation District and signed and sealed on January 17, 2019, Standard Specifications and Special Provisions shall govern the construction of this project.

ITEM #SP-2 EXCAVATION AND EMBANKMENT

DESCRIPTION OF WORK -

- A. Excavation and embankment shall consist of removal, grading, shaping, stockpiling and final disposal of all soils as needed to complete this contract and not included in the cost of other contract bid items, including but not limited to general grading of the site for swales, drainage, preparation for sod, etc.
- B. Work includes salvaging and re-using excavation for backfilling and dressing of graded areas. No sod or unsuitable material shall be allowed in the backfill or dressing.
- C. Topsoil shall be salvaged for reuse. Providing a stockpile location shall be the responsibility of the Contractor. When directed additional topsoil required to complete the project shall be paid under SP-18 – Topsoil or SP-19 – Screened Topsoil.
- D. All disturbed areas requiring seeding or sod shall be topsoiled to a minimum compacted depth of four inches to conform to the required final grades.
- E. Work shall conform to lines and grades and typical cross section and no allowance shall be made for undercutting.
- F. The Contractor is responsible for the removal and disposal off-site of all excess excavation, spoil and debris. These materials will be disposed of offsite. The Contractor shall notify the District in writing as to the location of the disposal site. If the contractor elects to dispose of excess materials at other than an operating landfill or previously approved disposal site, the contractor is responsible for obtaining all permits, investigations, approvals, etc. required to use such site and must provide documentation of same to the District.

CONSTRUCTION METHODS - The construction methods for Excavation and Embankment shall conform to DelDOT's Specifications for Section 202, "Excavation and Embankment."

METHOD OF MEASUREMENT - Excavation and Embankment shall not be measured; however, the work to be paid for shall be that completed within the limits of the project.

BASIS OF PAYMENT - Excavation and Embankment within the limits of the project will be paid for at the lump sum price bid for this item, which price and payment shall constitute full compensation for salvaging and placing salvaged topsoil, all labor, equipment, tools, and incidentals necessary to complete the item.

ITEM #SP-19 SCREENED TOPSOIL

DESCRIPTION OF WORK - This item shall consist of ground preparation, furnishing and placing screened topsoil for establishing vegetative cover when there is an insufficient quantity of topsoil salvaged from the job site to meet project requirements.

MATERIALS AND CONSTRUCTION METHODS - Topsoil shall be a loam, sandy loam, clay loam, silt loam sandy clay loam, loamy sand or other soil approved by the Engineer. It shall not have a mixture of contrasting textured subsoil and shall not contain slag, cinders, stones, lumps of soil, sticks, roots, trash or other extraneous material larger than 1/2" in diameter. . Immediately prior to dumping and spreading the topsoil, the subgrade shall be loosened by discing or by scarifying to a depth of at least 3 inches. Topsoil shall be uniformly distributed and compacted to a minimum of four inches to conform to the required final grades. Compaction shall be done with a minimum 18" diameter by 24 inch wide roller weighing a minimum of 225 pounds or an approved equivalent or by passing a bulldozer up and down slope to create horizontal erosion check slots. Spreading shall be performed in such a manner that seeding can proceed with a minimum of additional soil preparation and tillage

The materials and construction methods for topsoiling shall be according to Delaware Erosion & Sediment Control Handbook Detail No. DE-ESC-3.4.1.

NOTE: Topsoil may be paid either by weight or lump sum. The bidder is instructed to refer to the "PROPOSAL AND SCHEDULE OF PRICES" included in this bid package to determine which method applies to this contract.

METHOD OF MEASUREMENT - When paid by weight, the quantity of topsoil to be paid will be the actual number of tons provided, as documented by certified weight slips, complete, in place, and accepted.

When paid lump sum, topsoil will not be measured; however, the work to be paid for shall be that required to complete the project, performed in accordance with the requirements of these specifications, complete, in place, and accepted.

BASIS OF PAYMENT - The quantity of Topsoil, measured as determined above as applicable to this contract, will be paid at the contract unit price bid for this item, which price and payment shall be full compensation for preparation of the grade, furnishing, hauling and placing all materials, and for all labor, equipment, tools and incidentals necessary to complete the work.

ITEM #SP-23 HIGH DENSITY POLYETHYLENE PIPE

DESCRIPTION OF WORK - This work consists of furnishing and installing corrugated polyethylene pipe with a smooth interior in reasonably close conformity with the lines and grades indicated on the plans, and as directed by the Engineer. This item shall include excavation for the pipe, salvaging and stockpiling existing topsoil and excavated material, disposal of excess excavation, furnishing and placing polyethylene pipe, connections, couplings, risers, etc., furnishing and backfilling with Type C Borrow and excavation material, replacing topsoil over backfilled area, and shaping a swale over the pipe when designated.

MATERIALS - Pipes, couplings, and fittings shall be made of polyethylene compounds, and shall meet all applicable requirements of AASHTO M294 current edition Type S or Type D for pipe and sizes 12 inches in diameter and larger. Polyethylene pipes, couplings, and fittings less than 12 inches in diameter shall meet the requirements of AASHTO M252 current edition. Bends, tees, wyes, etc. will be standard fabricated fittings. The pipes and fittings shall be free of foreign inclusions and visible defects and pipe shall be cut squarely and cleanly so as not to adversely affect joining or connecting. Visible defects such as cracks, creases, unpigmented or nonuniformly pigmented pipe are not permissible in the pipe as furnished.

The pipe as noted below shall have minimum pipe stiffness at five percent deflection when tested in accordance with the requirements of ASTM D-2412:

<u>Diameter (Inches)</u>	<u>Pipe Stiffness (psi)</u>
12	50
15	42
18	40
24	34
30	28
36	22
42	19
48	17

Joints for all pipe and fittings shall use gasketed watertight bell/spigot or bell/bell couplers. The gaskets shall meet the requirements of ASTM F477 and the joint system shall be certified to meet ASTM D3212. In addition, the joint system shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joint.

The Contractor shall provide a manufacturer's certificate signed by a manufacturer's representative stating the product was manufactured, tested, and supplied in accordance with all the applicable requirements of AASHTO M294 (or AASHTO M252 as applicable), ASTM F477 and ASTM D3212.

Type C Borrow shall conform to the requirements of DelDOT Specifications for Subsection 209.04.

CONSTRUCTION METHODS - Pipe shall be installed as per notes and details on the plans and in accordance with the requirements of Section 614 of the DeIDOT Standard Specifications, ASTM D2321, or the manufacturer's recommendations, whichever are more stringent (for minimum trench widths see table below). The Contractor should be aware that for different sizes of pipe different requirements shall govern. All connections shall be assembled in accordance with the manufacturer's recommendations to produce secure, tight joints. Unless instructed otherwise by the manufacturer's installation procedures, the pipe shall have a 6 inch thick bedding of backfill material. The Contractor shall use whatever means necessary to prevent displacement of the pipe horizontally or vertically. Backfill materials and placement of the material shall conform to applicable requirements of Section 208 of the DeIDOT Standard Specifications.

Minimum Trench Widths (All dimensions in inches)

<u>Nominal Pipe Dia.</u>	<u>Outside Pipe Dia.</u>	<u>DeIDOT</u>	<u>ADS</u>	<u>Hancor</u>	<u>ASTM D2321</u>
12	14.45	38.45	31	28	30.1
15	17.57	41.57	34	35	34.0
18	21.2	45.2	39	43	38.5
24	27.8	51.8	48	56	46.8
30	35.1	59.1	66	60	55.9
36	41.7	65.7	78	65	64.1
42	47.7	71.7	83	84	71.6
48	52.7	76.7	89	91	77.9

Not less than 30 days after installation is complete, the pipe will be inspected for deflection and if pipe deflection appears to be greater than 5% a mandrel test will be required to be performed by the Contractor. If mandrel testing indicates deflection of more than 5%, the pipe shall be removed and reinstalled or replaced if damaged at the Contractor's expense.

METHOD OF MEASUREMENT - The number of linear feet of High Density Polyethylene Pipe to be paid for under this section shall be the actual number of linear feet of High Density Polyethylene Pipe installed in accordance with the plans and these specifications, measured from end to end, complete, in place, and accepted.

BASIS OF PAYMENT - The number of linear feet of High Density Polyethylene Pipe, measured as provided above, shall be paid for at the contract unit prices bid per linear foot for the sizes required by this contract. Price and payment shall constitute full compensation for all costs for removing and stockpiling existing topsoil, excavation for pipe, disposal of excess excavation, furnishing, hauling and installation of High Density Polyethylene Pipe including all required connections, couplings, risers, etc., furnishing and placing Type C Borrow backfill, backfilling with excavation material and replacing topsoil over the backfilled area, finish grading of the area, including shaping a swale when designated, to accommodate sod/seed and mulch, and mandrel testing if necessary. No separate payment will be made for the items herein listed under this item of work.

ITEM #SP-28 CONSTRUCTION ENGINEERING

DESCRIPTION OF WORK - This item shall consist of providing survey for layout and construction. The Contractor shall provide an experienced, competent engineering/surveying staff working under the direction of a Professional Engineer or Professional Land Surveyor licensed in the state of Delaware, to set the lines and grades necessary to construct the project. The Contractor shall perform all construction layout from the information provided on the drawings.

Construction engineering shall include establishing all control points, reference points, elevations, grade stakes, etc., as required for completion of the project. All computations necessary for completion of this item shall be made and preserved by the Contractor. All computations, survey notes and other records necessary to accomplish the work shall be made available to the District upon request.

The engineer may check all or any portion of the survey work or notes made by the Contractor and any necessary correction to the work shall be made immediately. Such checking shall not relieve the Contractor of his responsibility for the accuracy or completeness of the work. The Contractor shall assume full responsibility for any errors and/or omissions in the work of the engineering/surveying staff in the performance of this item.

AS-BUILT DRAWINGS - During the progress of the work, the Contractor shall keep a careful record at the job site of all changes and deviations from the layouts shown on the Contract Drawings. The Contractor shall record such changes and deviations on the prints of the Contract Drawings immediately. These drawings will be made available to NCCD for inspection or checking at any time during the construction period. At the time of Semi-Final Inspection of the work, the Contractor shall turn over to NCCD one (1) set of clean, white prints of the Contract Drawings with all the aforementioned as-built information neatly recorded thereon in red. The Contractor shall include on the As-Built Drawings an as-built survey of constructed conditions consisting of the following items:

1. Lines and grades of all disturbed areas.
2. Invert elevations of all structures (existing and constructed).
3. the actual location referenced from at least two (2) permanently fixed surface structures of all sub-surface utilities of work installed

METHOD OF MEASUREMENT - Construction engineering will not be measured.

BASIS OF PAYMENT - Construction engineering will be paid at the contract lump sum price bid for this item, which price and payment shall be full compensation for furnishing all labor, equipment, instruments, stakes and other material and incidentals necessary to complete the work. Monthly payment will be made under this item in proportion to the amount of work done as determined by the Engineer.

ITEM #SP-29 SEEDING & SOIL STABILIZATION MATTING

DESCRIPTION OF WORK - All disturbed areas shall be seeded and stabilized with matting as specified herein and as shown on the plans or as directed by the Engineer. This item shall consist of ground preparation, furnishing and placing seed, fertilizer, limestone and matting in accordance with these specifications, the manufacturer's specifications, the notes, details on the plans, and/or as directed by the Engineer.

MATERIALS - Stabilization matting shall be of the Type specified on the plans or as directed by the Engineer. The seed mixtures shall be as shown on the Plans and in accordance with Delaware Erosion and Sediment Control Handbook Detail No. DE-ESC-3.4.3 unless directed otherwise by Engineer. The contractor shall submit seed mix certificates and matting for approval prior to seeding, and shall provide certified delivery slips of all seed, fertilizer, ground limestone and matting.

Soil Stabilization Matting Types I through IV (SSM-I through SSM-IV) are temporary to long-term degradable mattings, applied to the soil surface to prevent erosion prior to vegetative establishment. They can be used both in slope applications and as temporary channel liners. All materials shall be in accordance with Delaware Erosion and Sediment Control Handbook Detail No DE-ESC-3.4.6.1 unless directed otherwise by Engineer.

SSM-I is a temporary mat that will degrade within 12 months. It is composed of 100% agricultural straw (min 0.5 lbs/SY) or 100% wood excelsior fiber (min 0.8 lbs/SY, min 80% six-inch or longer fiber length) with a single top netting of biodegradable material. An **SSM-I** is acceptable on slopes of 3:1 or flatter and in low flow swales with a maximum design shear stress of 1.55 psf, where natural vegetation will provide permanent stabilization. Example Products: North American Green S75BN, East Coast Erosion Blankets ECS-1B.

SSM-II is also a temporary mat that will degrade within 12 months. It is also composed of 100% agricultural straw (min 0.5 lbs/SY) or 100% wood excelsior fiber (min 0.8 lbs/SY, min 80% six-inch or longer fiber length), but it contains a double netting (top and bottom) of biodegradable material. An **SSM-II** is acceptable on slopes of 2:1 or flatter and in low flow swales with a maximum design shear stress of 1.65 psf, where natural vegetation will provide permanent stabilization. Example Products: North American Green S150BN, East Coast Erosion Blankets ECS-2B.

SSM-III is an extended term mat lasting 12 to 24 months. It is composed of 70% agricultural straw or wood excelsior fiber and 30% coconut (coir) fibers with two woven biodegradable nettings. An **SSM-III** is acceptable on slopes of 1.5:1 or flatter and in medium flow swales with a maximum design shear stress of 1.80 psf, where natural vegetation will provide permanent stabilization. Example Products: North American Green SC150BN, North American Green C125BN, East Coast Erosion Blankets ECC-2B.

SSM-IV is a long term mat lasting 18 to 36 months. It is composed of 100% coconut (coir) fibers or 100% polypropylene fibers with two plastic or woven biodegradable nettings with UV stabilization. An **SSM-IV** is acceptable on slopes of 1:1 or flatter and in high flow swales with a maximum design shear stress of 2.0 psf, where natural vegetation will provide permanent stabilization. Example Products: North American Green C125, Synthetic Industries Landlok C2, East Coast Erosion Blankets ECC-2 Double Net Coconut.

CONSTRUCTION METHODS - The construction methods for seeding and soil stabilization matting shall be according to Delaware Erosion & Sediment Control Handbook Detail No. DE-ESC-3.4.3 and 3.4.6.1.

The area(s) to be seeded shall be topsoiled or disked or scarified to a depth of 4" to form a loose, friable layer of soil, free of clods, rocks and extraneous matter one inch or more in diameter, and shaped to the prescribed grade.

To conform to Sediment and Stormwater Management requirements, all disturbed areas shall be seeded and matted within 14 calendar days following exposure.

METHOD OF MEASUREMENT - When paid by surface area measurement, this item shall be measured by the square yard along the surface area actually covered with matting not including overlaps or check slots, with all the work specified above, completed and accepted within the limits of the project.

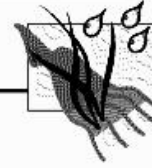
When paid lump sum, this item will not be measured; however, the work to be paid for shall be that required to complete the project, performed in accordance with the requirements of these specifications, complete, in place, and accepted.

BASIS OF PAYMENT - The quantity of Seeding & Soil Stabilization Matting, measured as determined above as applicable to this contract, will be paid at the contract unit price bid for this item, which price and payment shall be full compensation for preparation of the grade, furnishing, hauling and placing all materials, and for all labor, equipment, tools and incidentals necessary to complete the work.

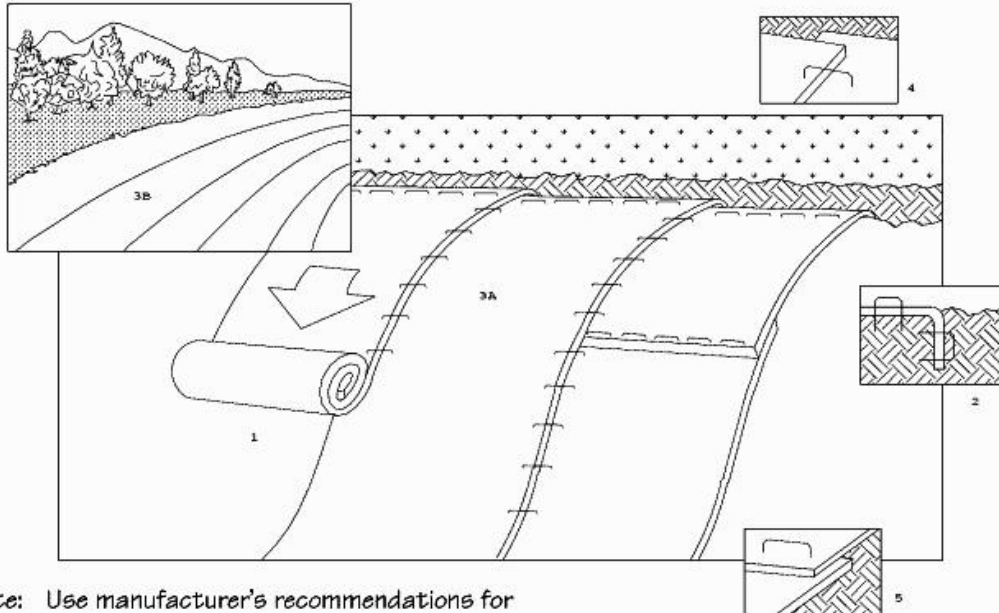
NOTE: Seeding & Soil Stabilization Matting may be paid either by surface area measurement or lump sum. The bidder is instructed to refer to the "PROPOSAL AND SCHEDULE OF PRICES" included in this bid package to determine which method applies to this contract.

Standard Detail & Specifications

Stabilization Matting - Slope



DELAWARE
**EROSION
& SEDIMENT**
CONTROL
HANDBOOK



Note: Use manufacturer's recommendations for stapling patterns for slope installations.

Perspective

Construction Notes:

1. Prepare soil before installing matting, including application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the mat in a 6" deep X 6" wide trench. Backfill and compact trench after stapling.
3. Roll the mats (A) down or (B) horizontally across the slope.
4. The edges of parrallel mats must be stapled with approx. 2" overlap.
5. When mats must be spliced down the slope, place mats end over end (shingle style) with approx. 4" overlap. Staple through overlapped area, approx. 12" apart.

Source:

Adapted from
North American Green, Inc.

Symbol:



Detail No.

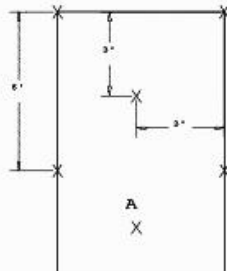
DE-ESC-3.4.6.1

Sheet 1 of 2

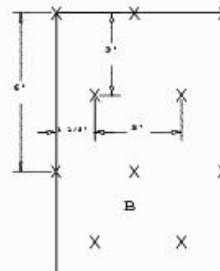
Date: 6/05



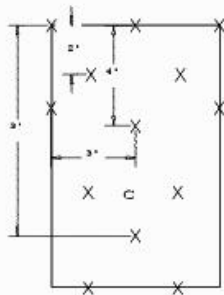
Standard Detail & Specifications Stabilization Matting - Slope



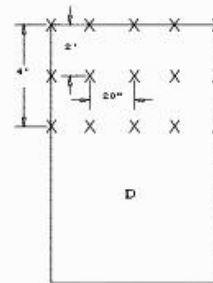
0.7 Staples per Sq. Yd.



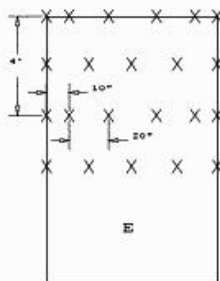
1.2 Staples per Sq. Yd.



1.75 Staples per Sq. Yd.



3.5 Staples per Sq. Yd.



3.75 Staples per Sq. Yd.

NOTE: These patterns are provided for general guidance only. They shall not be used as a substitute for manufacturer's recommendations.

Stapling Patterns

Source:

Adapted from
North American Green, Inc.

Symbol:



Detail No.

DE-ESC-3.4.6.1
Sheet 2 of 2

Date: 6/05

ITEM #SP-39 SUMP PUMP/ROOF DRAIN CONNECTIONS

DESCRIPTION OF WORK - This item shall consist of connecting existing sump pump/roof drain discharge pipes to new or existing drainage facilities. The item includes furnishing and placing pipe, saddles, bends, tees, wyes, reducers, etc. as may be necessary to extend sump pump/roof drain discharge pipes and to make satisfactory connections to pipe, drainage inlets, end walls, etc.

MATERIALS AND CONSTRUCTION METHODS - Materials shall be new standard fabricated items compatible with and equivalent or superior to the existing sump pump/roof drain discharge pipe. Construction methods shall be in accordance with industry standards for installing the types of materials required.

METHOD OF MEASUREMENT - The number of Sump Pump/Roof Drain Connections to be paid shall be the actual number of Sump Pump/Roof drain Connections made, complete, in place, and accepted.

BASIS OF PAYMENT - The number of Sump Pump/Roof Drain Connections as determined above shall be paid for at the contract bid price per each which price and payment shall be full compensation for all excavation, furnishing and placing all materials, backfilling, and for all labor, equipment, materials, tools and incidentals required to satisfactorily complete the item.

ITEM #SP-100 ACCESS PATH

DESCRIPTION OF WORK - This shall consist of all work needed to access the work zone behind 649 to 657 Millrace Lane.

MATERIALS - The materials to be used in the construction will be mats, existing stone, and rip rap.

CONSTRUCTION METHODS - Construction of the access path shall be as needed to construct the PCC Masonry wall and the drainage system behind the units. The path shall be restored to the original condition after the construction.

METHOD OF MEASUREMENT – The Access Path shall not be measured; however, the work to be paid for shall be that completed within the limits of the project.

BASIS OF PAYMENT – Access Path within the limits of the project will be paid for at the lump sum price bid for this item, which price and payment shall constitute full compensation for all labor, equipment, materials, and incidentals necessary to complete the item. Payment will also include restoration of the lawns and stone channel to their original condition.

***** THE FOLLOWING PAGES, "PROPOSAL AND SCHEDULE OF PRICES" AND "BID SECURITY" REQUIREMENTS MUST BE FILLED OUT AND RETURNED TO CONSTITUTE SUBMITTING A BID.**

PROJECT NAME: The Mill Race Drainage Improvements

NCCD Contract No. 1668-00

Bid Opening: Date: April 25, 2019

Time: 10:00 a.m.

Location: New Castle Conservation District
2430 Old County Road, Newark, DE 19702

Location of Proposed Work: The Mill Race New Castle County, Delaware

Contract Time: 20 Working Days

Liquidated Damages \$ 1,030 per Working Day

Bid Security: REQUIRED – 10% of bid amount

Performance & Payment Bond: REQUIRED – 100% of contract amount

Retainage: REQUIRED - 5% of contract payments

PROPOSAL AND SCHEDULE OF PRICES – PAGE 1 OF 3

ITEM	ESTIMATED QUANTITY	UNIT PRICE (written in words)	UNIT PRICE (figures)	EXTENDED AMOUNT
201	LS	CLEARING AND GRUBBING _____ Dollars & _____ Cents Unit – Lump Sum		
602	15 CY	PCC MASONRY, CLASS A _____ Dollars & _____ Cents Unit – Cubic Yards		
603	LS	BAR REINFORCEMENT _____ Dollars & _____ Cents Unit – Lump Sum		
708K	3 EA	LAWN INLET _____ Dollars & _____ Cents Unit – Each		
SP-2	LS	EXCAVATION AND EMBANKMENT _____ Dollars & _____ Cents Unit – Lump Sum		
SP-19B	LS	SCREENED TOPSOIL _____ Dollars & _____ Cents Unit –Lump Sum		
SP-23B	55 LF	6" HIGH DENSITY P. E. PIPE _____ Dollars & _____ Cents Unit – Linear Feet		
SP-28	LS	CONSTRUCTION ENGINEERING _____ Dollars & _____ Cents Unit - LUMP SUM		
SP-29A	LS	SEEDING & SOIL STABILIZATION MATTING _____ Dollars & _____ Cents Unit - Lump Sum		

PROPOSAL AND SCHEDULE OF PRICES – PAGE 2 OF 3

SP-39	3 EA	SUMP PUMP/ROOF DRAIN CONNECTIONS _____ Dollars & _____ Cents Unit - Each		
SP-100	LS	ACCESS PATH _____ Dollars & _____ Cents Unit –Lump Sum		
763	LS	INITIAL EXPENSE _____ Dollars & _____ Cents Unit – Lump Sum		

TOTAL BID PRICE \$

PROPOSAL AND SCHEDULE OF PRICES – PAGE 3 OF 3

The undersigned bidder has carefully examined the site of the proposed work, Standard Specifications, General and Special Provisions, Drawings and Addenda, if any, forming a part of this contract designated as **NCCD Contract No. 1668-00, The Mill Race Drainage Improvements.** Upon notice of award by the New Castle Conservation District, the Bidder agrees to execute a contract within **20** calendar days which shall incorporate said plans and specifications, and further, upon notice to proceed shall, at his own cost and expense, furnish the materials, supplies, machinery, equipment, tools, labor, supervision, insurance, any other accessories and services to complete said work either with his own organization or subcontractors. The work shall be completed to the satisfaction of the New Castle Conservation District in accordance with the plans, specifications and terms of the contract for the lump sum and/or unit prices for the items on the preceding proposal page(s).

Addendum Number(s)_____ have been considered.

*****NOTE - It is the contractor's responsibility to check if any Addendum(s) have been issued and include them in his bid price(s).**

Total Amount of Proposal: \$ _____
(Amount in figures)

(Amount written in words)

For Individuals and Partnerships:

_____	_____	SEAL
Witness	Contractor	
	Address: _____	

For Corporations:

_____	_____
Witness	Name of Corporation & Corporate Seal

	Signature of Officer & Title
	Address: _____

BID SECURITY

PRINCIPAL: NAME: _____,
MAILING ADDRESS: _____,
SURETY: NAME: _____,
Incorporated in State of _____,

Principal and Surety, authorized to do business in the State of Delaware with warrant of attorney to confess judgment, are held bound to New Castle Conservation District, in the amount of _____ dollars (\$ _____) to be paid the District, its attorney, successors or assigns. For this payment to be made we bind ourselves, our, and each of our heirs, executors, administrators, and successors, jointly and severally, finally by this document.

The condition of this document is that the Principal shall, if awarded NCCD Contract No. 1668-00, The Mill Race Drainage Improvements, execute in writing an agreement with the District and furnish surety, satisfactory to the District, for performance of contract according to plans and specifications.

The execution shall occur within twenty calendar days after written notification of tentative award of the contract to Principal. If accomplished, this bond shall have no effect, otherwise it shall remain in force.

The Principal and Surety have executed and sealed this document on the _____ day of _____ 2019. The corporate name and corporate seal and representative signature are affixed per authority of each corporate governing body.

For Individuals and Partnerships or Corporations:

Witness

Contractor Seal

Witness

Name of Corporation & Corporate Seal

Address: _____

Witness

Surety Company Seal

Attorney-in-Fact

Performance and Payment Bond-Bond No. _____

PRINCIPAL NAME: _____,
MAILING ADDRESS: _____,
SURETY NAME: _____,
INCORPORATED IN THE STATE OF: _____,

Principal and Surety, authorized to do business in the State of Delaware, are held bound to the New Castle Conservation District in the amount of _____ dollars (\$ _____) to be paid the District, its attorney, successors or assigns. For this payment to be made we bind ourselves, our, and each of our heirs, executors, administrators, and successors, jointly and severally, finally by this document.

The condition of this document is that if the bonded Principal, having contracted with New Castle Conservation District for NCCD Contract No. 1668-00, The Mill Race Drainage Improvements in the amount of \$ _____, shall faithfully execute and perform all work and furnish all material in accordance with plans, specifications, and items of the contract; shall pay to all and every person supplying labor, equipment or material, all sums of money due for labor, equipment and material for which the Principal is liable; shall indemnify and hold harmless the District from damages and claims and liens by persons doing any of the contract work, this instrument shall then have no effect; otherwise it shall remain in force. The Principal shall obtain any necessary consent of surety for changes in plans, specifications, agreements, contract and quantities.

The Principal and Surety have developed and sealed this instrument on the _____ day of _____ 2019. The corporate name and corporate seal and representative signature are affixed per authority of each corporate governing body.

For Individuals and Partnerships or Corporations:

Witness

Contractor (when applicable) Seal

Witness

Name of Corporation & Corporate Seal

By:

Signature of Officer & Title Seal

For Surety:

Witness

Surety Company Seal

Attorney-in-Fact