

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION



BID PROPOSAL

CONTRACT T201901102

**US13, PAVING AND PEDESTRIAN IMPROVEMENTS -
LLANGOLLEN BLVD TO BACON/BOULDEN BLVD**

Federal Aid No. NH-N024(25)
CFDA: 20.205

Advertisement Date: November 21, 2024

INCLUDED IN THIS DOCUMENT:

BID PROPOSAL:

*GENERAL DESCRIPTION
PROSPECTIVE BIDDERS NOTES
GENERAL NOTICES
PREVAILING WAGES
SPECIAL PROVISIONS
STATEMENTS
QUANTITY SHEET SUMMARY*

ADDITIONAL BID PROPOSAL ITEMS:

ATTACHED OR POSTED DOCUMENTS:

*PROJECT PLANS
QUESTIONS & ANSWERS (if posted)
DBE PROJECT PARTICIPANT AFFIDAVIT
DBE UTILIZATION COMMITMENT STATEMENT
BIDDERS LIST*

**PAPER BIDDERS CONTACT DELDOT
FOR BID SUBMITTAL DOCUMENTS:**

*DRUG TESTING AFFIDAVIT
CERTIFICATION FORM
BID BOND FORM
CD FOR BID PRICE ENTRY & PRINTING
DBE PROJECT PARTICIPANT AFFIDAVIT
DBE UTILIZATION COMMITMENT STATEMENT
BIDDERS LIST*

This Bid Proposal and related documents can be viewed on bids.delaware.gov and bidx.com/de/

Internet Bids for Bidders with Bid Express® accounts can be submitted at [BIDX.com/de](https://bidx.com/de/); **OR**;

Paper Bids with CD will be received in the Bidder's Room at the DelDOT Administration Building, Dover, DE;

ALL BIDS DUE PRIOR TO 2:00 P.M. Local Time, DECEMBER 31, 2024

GENERAL DESCRIPTION

A. BIDS DUE: DECEMBER 31, 2024 PRIOR TO 2:00 P.M. Local Time – unless changed via Addendum.

BIDS MUST BE SUBMITTED VIA:

(a) **Internet** - Bidders with DelDOT Bid Express® accounts can submit bids at www.bidx.com/de/.

OR:

(b) **Paper Bid Delivered To:** Delaware Department of Transportation (DelDOT), Administration Building
North Entrance, Bidders Room, 800 Bay Road, Dover, DE 19901

For paper bids, contact DelDOT at dot-ask@delaware.gov or (302) 760-2031 to request a CD for bidding, required forms, and instructions. Bidders enter their Bid Item prices onto the supplied CD then print the form and deliver in a sealed envelope; the Bid Form, completed CD, and required documents prior to the Bid due date and time.

(CD's cannot be used to submit bids to bidx.com)

Do not submit both Internet and Paper Bids. If so, the Internet bid and documents will be rejected.

BID OPENING: Bids will be publicly opened and read aloud at the Date and Time of the Bid Opening. The Bid Opening will be held at the 'Paper Bid Delivered To' address shown above. Bidder bears the risk of late delivery, bids received after the stated time will be returned unopened.

Attendance is not required. DelDOT offers a call-in number to hear the Bid Opening telephonically. The telephone number to call is (408) 418-9388.

When prompted, enter Meeting number (access code): 173 970 0618#

It is anticipated the telephone access information will remain the same for all Bid Openings.

B. PRE-BID MEETING: No

C. DBE GOAL: 15% Disadvantaged Business Enterprise Goal

D. OJT TRAINEES: 3 See Prospective Bidder's Notes and posted OJT Manual for details.

E. LOCATION: New Castle County

These improvements are more specifically shown on the Location Map(s) of the attached Plans.

F. DESCRIPTION: The improvements consist of furnishing all labor and materials for this project which includes improvements to address multi-modal needs and pavement rehabilitation in this highly traveled section of US 13 between US40 and Boulden Blvd. The proposed improvements include ADA compliant sidewalks, improved crossings, median lighting, median barriers to discourage mid-block crossings and reduced lane widths along the road. Follow other incidental construction in accordance with the location, notes and details shown on the plans, and as directed by the Engineer.

G. BUY AMERICA REQUIREMENTS APPLY – Build America, Buy America Act, refer to 'GENERAL NOTICES'.

H. COMPLETION TIME: All work on this contract must be complete within 831 Calendar Days.

Extensions of contract time due to weather are specified in the Standard Specifications Section 108.7F, weather days.

It is estimated a Notice to Proceed is issued such that work starts on or about February 18, 2025.

I. SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DELAWARE DEPARTMENT OF TRANSPORTATION, JANUARY 2024 apply to this Bid Proposal and Project. The Contractor shall make himself aware of any revisions and corrections (Supplemental Specifications, if any) and apply them to the applicable item(s) of this contract. The Standard and Supplemental Specifications can be viewed [here](#). Units of Measure can be found at 101.04.

J. ATTACHMENTS: Included as part of this Bid Proposal are; *Project Plans; Questions & Answers* (if posted); *Addenda, Referenced Documents, Documents Posted with this Bid Proposal*; and *Bid documents mailed to contractors*.

K. ADDENDA: All Addenda are posted on the internet at bids.delaware.gov, and bidx.com/de/ and are included as part of the Bid Proposal. The Bidder is responsible to check the Website as needed to ensure that the Bidder is aware of Addenda that are included in the Bid Proposal. If Addenda are issued, the final Addendum will be posted no later than the end of the day two business days prior to the bid date. Each Addendum number and issue date must be entered on the submitted Certification Form. This original Bid Proposal will not be updated, you must refer to each Addendum.

L. QUESTIONS: E-MAIL TO; dot-ask@delaware.gov

Questions regarding this project are to be e-mailed to the above address no less than **six business days** prior to the bid opening date in order to receive a posted response. Please include the Contract number in the subject line. Questions and responses are posted at bids.delaware.gov, and bidx.com/de/. The date of the final posted Questions and Answers document must be entered on the submitted Certification Form.

M. ROAD USER COSTS:

FAILURE TO OPEN PROJECT TO UNRESTRICTED HIGHWAY TRAFFIC ON TIME

The Maintenance of Traffic Plans for Contract T201901102 has Road User Costs associated with lane closures along US 13 and along US 40. As detailed in the plans, all work requiring lane closures along US 13 or along US 40 must be completed during allowable lane closure hours as identified in the Allowable Lane Closure Hour Matrices in the Maintenance of Traffic Plans.

Interim Road User Costs (RUC) for delays in opening lanes on US 13 NB and SB and on US 40 EB and WB will be enforced per 15-minutes per lane closed. The Interim Road User Costs (RUC) established will be **\$3,500.00 per 15 minutes per lane closed** beyond the allowable lane closure hours, Monday through Sunday.

For every hour, or portion thereof, after the allowable lane closure hour, the following RUC will be assessed:

| | |
|--------------------------------------|---|
| Lane(s) Closed beyond X:59 am/pm* | Additional Contractor Damages for Failure to Reopen Lanes beyond X:59 am/pm |
| (X+1):00 AM/PM | +\$3,500.00 /15 Minutes /Lane |

*See Allowable Lane Closures Matrices in the Maintenance of Traffic Plans for Contract T201901104.

Assessment of Road User Costs will be made through Item 736525: Road User Cost. There is no limit on the number of days that RUCs can be assessed. The Engineer will be the sole approving authority as to when lane closures are complete after traffic is returned to the unrestricted travel.

All vertical differences as determined by the DE MUTCD along the shoulder shall be addressed prior to opening the roadway to traffic. The Contractor will be assessed the Road User Costs for failure to open the roadway on time per the Contract.

Example Calculations for Assessment of Road User Cost

1) After 6:59 AM on Tuesday US 13 NB at Station 500+00:

One Lane closure on US 13 NB at Station 500+00 until 8:08 AM on a Tuesday, Verizon time:

A RUC of \$3,500.00 / 15-minute / lane will be assessed.

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Lane Closure RUC from 7:00 am to 8:08 am on US 13 NB at Station 500+00

| | |
|--------------------|--------------------|
| 7:00 AM to 7:14 AM | \$3,500.00 |
| 7:15 AM to 7:29 AM | \$3,500.00 |
| 7:30 AM to 7:44 AM | \$3,500.00 |
| 7:45 AM to 7:59 AM | \$3,500.00 |
| 8:00 AM to 8:14 AM | \$3,500.00 |
| Total | \$17,500.00 |

2) After 4:59 AM on Tuesday US 13 NB at Station 500+00:

Three Lane closure on US 13 NB at Station 500+00 until 6:08 AM on a Tuesday, Verizon time:

A RUC of \$3,500.00 / 15-minute / lane will be assessed.

Lane Closure RUC from 5:00 am to 6:08 am on US 13 NB at Station 500+00

| | |
|--------------------|--------------------|
| 5:00 AM to 5:14 AM | \$3,500.00 |
| 5:15 AM to 5:29 AM | \$3,500.00 |
| 5:30 AM to 5:44 AM | \$3,500.00 |
| 5:45 AM to 5:59 AM | \$3,500.00 |
| 6:00 AM to 6:14 AM | \$7,000.00 |
| Total | \$21,000.00 |

FAILURE TO OPEN PROJECT TO UNRESTRICTED HIGHWAY TRAFFIC ON TIME

A RUC of \$20,000.00 will be assessed for each calendar day **Ramp B1** (SB SR 141 to NB US 13) and **Ramp B2** (NB US 13 to SB SR 141) are not fully opened to traffic in excess of the allowable closure duration identified in the Plans. The full daily RUC is assessed regardless of what time of day the ramps are reopened, starting at 12:00 AM. As such, no consideration will be given for partial calendar days.

A RUC of \$15,000.00 will be assessed for each calendar day **Ramp C1** (NB US 13 to NB SR 141) and **Ramp C2** (NB SR 141 to NB US 13) are not fully opened to traffic in excess of the allowable closure duration identified in the Plans. The full daily RUC is assessed regardless of what time of day the ramps are reopened, starting at 12:00 AM. As such, no consideration will be given for partial calendar days.

Example of calculation for assessment of Road User Cost:

The duration of the detour for Ramps B1 and B2 according to the Plans is a maximum of 45 calendar days. If the ramps are reopened at 12:05 AM on day 46, the full amount of the \$20,000.00 RUC will be assessed.

The duration of the detour for Ramps C1 and C2 according to the Plans is a maximum of 45 calendar days. If the ramps are reopened at 12:05 AM on day 46, the full amount of the \$15,000.00 RUC will be assessed.

Assessment of the RUC will be made through Item 763525 – Road User Cost. The Engineer will be the sole approving authority as to when the project is complete after traffic is returned to the ultimate alignment and when the contractors work activities will permit highway traffic ultimate lane width and shoulder widths.

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N. FLAGGERS:

- A. Included in the Bid Proposal are the prevailing wages for highway construction as determined by the Department of Labor of the State of Delaware in accordance with [Title 29 Del. C. §6960](#), relating to wages and the regulations implementing that Section.
- B. Flagger must be bid at a minimum equal to the Laborer wage rate and may be bid up to, but not to exceed, 3 times the Laborer wage rate in accordance with the County where the Work is being performed.
- C. The Department will adjust the bid to the minimum for prices bid below the minimum acceptable bid and to the maximum for prices bid above the maximum allowable bid prior to award of the Contract.
 1. Flagger overtime must be bid at minimum of 1.45 times and may be bid up to a maximum of 4.35 times, the Laborer wage rate in accordance with the County where the Work is being performed.
 2. When a Contract for a Project contains both Federal Davis-Bacon and State of Delaware prevailing wage standards, the employer's minimum wage obligations are determined by whichever standards are higher.
- D. Overtime:
 1. Payment for overtime will be considered on a weekly basis for time worked in excess of 40 hours for a continuous 7-day period beginning Monday and ending Sunday inclusive.
 2. Time worked on other Projects or Work activities other than flagging will not be counted in the normal 40 hours or the overtime.
- E. The cost of the flagging operation when performed by others who are not the Contractor's employees will not be included in the 50% subcontracting limit as outlined in Section 108.1.

O. PROSPECTIVE BIDDERS NOTES:

1. **BIDDERS MUST BE REGISTERED** with DelDOT in order to submit a bid. E-Mail dot-ask@delaware.gov or call (302) 760-2031 to request registration information.
2. **SURETY BOND** - Each proposal must be accompanied by a deposit of either surety bond or security for a sum equal to at least 10% of the amount bid.
3. **DELAWARE'S CONTRACTOR REGISTRATION ACT** - 19 Del.C. §§ 3601 *et seq.*, requires all contractors and subcontractors to register with the Delaware Department of Labor before performing construction services or maintenance. Refer to the GENERAL NOTICES section for further information.
4. **DRUG TESTING** - Regulation 4104; The state Office of Management and Budget has developed regulations that require Contractors and Subcontractors to implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds pursuant to 29 Del.C. §6908(a)(6). **Refer to the full requirements at the following link:**

<https://regulations.delaware.gov/AdminCode/title19/4000/4100/4104.shtml#TopOfPage>

Note a few of the requirements;

- * At bid submission - Each bidder must submit with the bid a single signed affidavit certifying that the bidder and its subcontractors has in place or will implement during the entire term of the contract a Mandatory Drug Testing Program that complies with the regulation (*a blank affidavit form is attached*);
 - * At least two business days prior to contract execution - The awarded Contractor shall provide to DelDOT copies of the Employee Drug Testing Program for the Contractor, each participating DBE firm, and all other listed Subcontractors;
 - * Subcontractors - Contractors that employ Subcontractors on the job site may do so only after submitting a copy of the Subcontractor's Employee Drug Testing Program along with the standard required subcontractor information. A Subcontractor shall not commence work until **DelDOT** has approved the program in writing.
5. **PERFORMANCE-BASED RATING SYSTEM** - 29 Del.C. §6962 (c)(12)(a) requires DelDOT to include a performance-based rating system for contractors. The Performance Rating for each Contractor shall be used as a prequalification to bid at the time of bid. Refer to '*General Notices*' for details.
 6. **NO RETAINAGE** will be withheld on this contract unless through the Performance-Based Rating System.

7. **EXTERNAL COMPLAINT PROCEDURE** can be viewed on DelDOT's Website, <https://regulations.delaware.gov/AdminCode/title2/2000/2500/2501.shtml#TopOfPage> or you may request a copy by calling (302) 760-2035

REVISED



8. **DBE PROGRAM REQUIREMENTS** (49CFR §26.53(b)(3)(i)(B) requires **ALL BIDDERS** to submit a DelDOT DBE Project Participation Affidavit for each DBE proposed for their team no later than five (5) calendars after bid opening. Affidavits shall be submitted electronically to the DelDOT DBE Program Office at DOT.BidDocs@delaware.gov or via US Mail to DelDOT DBE Program Office ATTN: DBE Program Manager 800 Bay Road, Dover, DE 19901. Bidders must fully comply with the requirements of the Disadvantaged Business Enterprises (DBE) Specification shown below in order for their submitted bid to be deemed responsive and therefore eligible for award. Please note that the Bidder's DBE Project Participation Affidavit is different than what is required to be included in the Bidder's List submitted at the time of bid discussed below.

NEW



9. **DeIDOT CERTIFIED DBE UTILIZATION COMMITMENT STATEMENT** In accordance with 49 CFR Part 26 all bidders must make good faith efforts toward meeting assigned DBE goals on federally assisted projects. Bidders are required to complete and submit this document at the time of bid to provide DelDOT with their anticipated goal attainment and/or any good faith efforts documentation for the project on which they are bidding. Failure to include the DBE Utilization Commitment Statement with your bid will result in your Bid being deemed irregular.

10. **FLATWORK CONCRETE TECHNICIAN CERTIFICATION TRAINING:**

Section 501.3, 503.3, 505.3, 610.3, 701.3 and 702.3 of the 2024 Standard Specifications require contractors to provide an American Concrete Institute (ACI) or National Ready-Mix Concrete Association (NRMCA) certified concrete flatwork technician to supervise all finishing of flatwork concrete.

11. **On-The-Job Trainee(s).** The On-the-Job (OJT) Program Plan and all required documents must be submitted online as soon as possible by the apparent low bidder at deldot.delawareojt.gov. Award of the Contract will not take place until acceptable OJT program plans are received and approved by the Department's Office of Civil Rights. Failure of the apparent low bidder to submit acceptable OJT required documents within ten (10) calendar days of bid opening shall create a rebuttable presumption that the bid is not responsive.

12. NOTE that FHWA Form 1273 (attached) has been modified effective October 23, 2023. Changes are [reviewed here](#).

13. **SIGNAGE LANGUAGE:**

In order to maintain effective communication with the traveling public, only place signs, banners, flags, or other displays within the projects limits that meet the requirements of the latest version of the Delaware Manual on Uniform Traffic Control Devices. Any signs or other materials which deviate from the MUTCD, must be preapproved by the Engineer. The only signage and materials which may be displayed upon vehicles and equipment within the Project area are signs denoting the name of the Contractor and any subcontractors and other signs and/or materials required and approved pursuant to the MUTCD and the Engineer. Contractor shall immediately remove any signs or materials within the Project that does not meet these requirements immediately upon notification by the Engineer. Failure to remove signs or other materials following notification from the Engineer will result in Liquidated Damages being assessed in the manner and amount specified in the Standard Specifications section 108.9.A.

NEW**14. Bidders List Requirement:**

Under 49 CFR 26.11 DeIDOT must collect bidders list information from **ALL** contractors and subcontractors who seek to work on federally assisted contracts. The submitted information must be complete and must include the required information for the prime and all (DBE and non-DBE) subcontractors, service providers, manufacturers, distributors, and suppliers.

ALL bidders must complete the Bidders List Form (attached as an exhibit) and submit it at the time of bid. Late submission of this information will not be accepted. Submitted information must include the following for those being proposed to work on the contract if awarded:

- Firm name;
- Firm address including ZIP code;
- Firm's status as a DBE or non-DBE;
- Race and gender information for the firm's majority owner;
- NAICS code applicable to each scope of work the firm sought to perform in its bid;
- Age of the firm; and
- The annual gross receipts of the firm shown as an approximate range (i.e., \$1-3 million)

This information will be maintained as confidential to the extent allowable by federal and state law.

Failure to submit the required bidders list documentation at the time bid will result in the bidder being deemed non-responsive and therefore ineligible for award of the contract.

15. Please see Special Provision 801501-MAINTENANCE OF RAILROAD TRAFFIC. This Spec contains additional insurance requirements.
16. Railroad Agreement required. The Contractor cannot begin work until the Agreement is complete and fully executed.

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GENERAL NOTICES

CONTRACTOR REGISTRATION ACT

On July 1, 2021, the Contractor Registration Act, as codified in 19 Del.C. §§ 3601 *et seq.*, took effect. This law requires all contractors to register with the Delaware Department of Labor before performing construction services or maintenance. The Contractor Registration Act applies to all contractors that engage in construction and maintenance within the State of Delaware. Additionally, it requires contractors to have Delaware workers' compensation insurance where required, compliance with labor laws, and proof of a state business license. The Delaware Department of Labor's Office of Contractor Registration is responsible for enforcement of the requirements of the Contractor Registration Act. If you have any questions about the contractor registration process, please call 302-430-7739 or email Contract.Registry@delaware.gov. Registration at <https://onestop.delaware.gov/>.

BUY AMERICA REQUIREMENT

The Build America, Buy America Act (BABA), enacted as part of the Bipartisan Infrastructure Law (BIL) requires iron, steel, manufactured products, and construction materials used in infrastructure projects funded by Federal financial assistance to be produced in the United States.

In accordance with 23 U.S.C. 313, and 23 CFR 635.410, all iron and steel materials permanently incorporated into this project will be produced in the United States and that all manufacturing processes involving these materials will occur in the U.S., except that a minimal amount of foreign steel or iron materials may be used, provided the cost of the foreign materials does not exceed 0.1 percent of the total Contract cost or \$2,500.00, whichever is greater. If such minimal amount of foreign steel is used, the Contractor shall maintain a record of the costs to ensure that the allowable limit is not exceeded.

Manufactured products are currently exempt from the Buy America requirements included in BABA in accordance with a waiver issued for such products by the FHWA in 1983. The 1983 waiver does not supersede 23 CFR 635.410 which requires all manufacturing processes involving the steel or iron used occur in the U.S., except that a minimal amount of foreign steel or iron materials may be used, provided the cost of the foreign materials does not exceed 0.1 percent of the total Contract cost or \$2,500.00, whichever is greater. If such minimal amount of foreign steel is used, the Contractor shall maintain a record of the costs to ensure that the allowable limit is not exceeded.

All construction materials permanently incorporated into this project are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States. Construction materials which are exempt from BABA requirements include cement and cementitious materials, aggregates such as stone, sand, or gravel, and aggregate binding agents or additives.

DelDOT maintains a list of all pay items, the applicable BABA category designation, and additional guidance at the following address: <https://deldot.gov/Business/prodlists/index.shtml?dc=buyAmerica>.

By signing and submitting this proposal, the bidder certifies that:

“All materials that will be permanently incorporated into this project will meet the Buy America material requirements. At the Department's request, I/we will provide manufacturer's/supplier's documentation verifying domestic origin as defined in the Contract. All Materials accepted on the basis of such Certificate of Compliance may be sampled by the Department and tested at any time. Use of Material on the basis of Certificate of Compliance shall not relieve the Contractor of responsibility for incorporating Material in the Project conforming to the requirements of the Contract. Any Material not conforming to such requirements will be subject to rejection whether in place or not. The Department reserves the right to refuse to permit the use of Material on the basis of Certificate of Compliance.”

SPECIFICATIONS :

The Delaware specifications entitled "*Standard Specifications for Road and Bridge Construction*, with the applicable version defined in the 'GENERAL DESCRIPTION' and hereinafter referred to as the *Standard Specifications*; shall govern the work to be performed under this contract. The Contractor shall make itself aware of these specifications, revisions and corrections, and apply them to the applicable item(s) of this contract.

CLARIFICATIONS :

Under any Section or Item included in the Contract, the Contractor shall be aware that when requirements, responsibilities, and furnishing of materials are outlined in the details and notes on the Plans and in the paragraphs preceding the "Basis of Payment" paragraph in the Standard Specifications or Special Provisions, no interpretation shall be made that such stipulations are excluded because reiteration is not made in the "Basis of Payment" paragraph.

DelDOT requires the use of various electronic applications for various documentation processes. These processes will be identified, and the Contractor's required use will be detailed during the Preconstruction Meeting. No additional payments will be made to the contractor to use or interface with the applications.

ATTESTING TO NON-COLLUSION :

DelDOT requires as a condition precedent to acceptance of bids a sworn statement executed by, or on behalf of, the person, firm, association, or corporation to whom such contract is to be awarded, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract. The form for this sworn statement is included in the proposal and must be properly executed in order to have the bid considered.

QUANTITIES :

The quantities shown are for comparison of bids only. DelDOT may increase or decrease any quantity or quantities without penalty or change in the bid price.

PERFORMANCE-BASED RATING SYSTEM

29 Del.C. §6962 (c)(12)(a) requires a DelDOT project, excluding a municipal street aid contract, to include a performance-based rating system. At the time of bid, the Performance Rating for each Contractor shall be used as a prequalification to bid.

Bidders with Performance Rating scores equal to or greater than 85% shall be permitted to bid. Bidders with scores of less than 85% who comply with the retainage requirements of 29 Del.C. §6962 shall be permitted to bid provided the *Agreement to Accept Retainage* (located on the Certification Page) is executed and submitted with the bid. Lack of an executed *Agreement to Accept Retainage* will result in the rejection of the bid by DelDOT. Successful bidders awarded DelDOT contracts who have no performance history within the last five (5) years will be assigned a provisional Performance Rating of 85% at the date of advertisement.

Notification of Performance Rating. DelDOT shall post publicly the Performance Rating for all Contractors on DelDOT's [website](#). DelDOT will complete performance-based evaluations on the construction company contracted by DelDOT to build the project (the "Contractor"). Provisions to appeal Performance Ratings are described in the regulations. The regulations are set forth in Section 2408 of Title 2, Delaware Administrative Code, found [here](#).

EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS :

Delaware Code, Title 29, Chapter 69, Section 6962, Paragraph (d), Subsection (7) states;

- a. As a condition of the awarding of any contract for public works financed in whole or in part by State appropriation, such contracts shall include the following provisions:

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

1. The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, sexual orientation, gender identity or national origin. The contractor will take positive steps to ensure that applicants are employed and that employees are treated during employment without regard to their race, creed, color, sex, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, 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 contracting agency setting forth this nondiscrimination clause.

2. The contractor 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 race, creed, color, sex, sexual orientation, gender identity or national origin.
3. The contractor will ensure employees receive equal pay for equal work, without regard to sex. Employee pay differential is acceptable if pursuant to a seniority system, a merit system, a system which measures earnings by quantity or quality of production, or if the differential is based on any other factor other than sex.

TAX CLEARANCE :

As payments to each vendor or contractor aggregate \$2,000, the Division of Accounting will report such vendor or contractor to the Division of Revenue, who will then check the vendor or contractor's compliance with tax requirements and take such further action as may be necessary to ensure compliance.

LICENSE :

A person desiring to engage in business in this State as a contractor on a project designated to include federal funds, shall obtain a Delaware business license upon making application to the Division of Revenue. Proof of said license compliance to be made prior to, or in conjunction with, the execution of a contract to which he has been named.

SUBCONTRACTOR LICENSE: 29 DEL. C. §6967:

- (c) Any contractor that enters a public works contract must provide to the agency to which it is contracting, within 30 days of entering such public works contract, copies of all occupational and business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the contractor entered the public works contract the occupational or business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.

DIFFERING SITE CONDITIONS:

SUSPENSIONS OF WORK and SIGNIFICANT CHANGES IN THE CHARACTER OF WORK:

Differing site conditions: During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

Upon written notification, the engineer will investigate the conditions, and if he/she determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding loss of anticipated profits, will be made and the contract modified in writing accordingly. The engineer will notify the contractor of his/her determination whether or not an adjustment of the contract is warranted.

No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice. No contract adjustment will be allowed under their clause for any effects caused on unchanged work.

Suspensions of work ordered by the engineer: If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of

such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The engineer will notify the contractor of his/her determination whether or not an adjustment of the contract is warranted.

No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed. No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this contract.

Significant changes in the character of work: The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the contract, whether or not changed by any such different quantities or alterations, an adjustment, excluding loss of anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.

The term "significant change" shall be construed to apply only to the following circumstances:

- (A) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction, or
- (B) When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

CONFLICT WITH FEDERAL STATUTES OR REGULATIONS:

Delaware Code, Title 29, Chapter 69, Section 6904, Paragraph (a):

"If any provision of this subchapter conflicts or is inconsistent with any statute, rule or regulation of the federal government applicable to a project or activity, the cost of which is to be paid or reimbursed in whole or in part by the federal government, and due to such conflict or inconsistency the availability of federal funds may be jeopardized, such provision shall not apply to such project or activity."

FEDERAL LABOR AND EMPLOYMENT REQUIREMENTS

Federal Regulation 23 CFR § 635.117(b) Labor and employment, states:

"No procedures or requirement shall be imposed by any State which will operate to discriminate against the employment of labor from any other State, possession or territory of the United States, in the construction of a Federal-aid project."

CONVICT PRODUCED MATERIALS:

(a) Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if such materials have been:

- (1) Produced by convicts who are on parole, supervised release, or probation from a prison or

(2) Produced in a qualified prison facility and the cumulative annual production amount of such materials for use in Federal-aid highway construction does not exceed the amount of such materials produced in such facility for use in Federal-aid highway construction during the 12-month period ending July 1, 1987.

(b) Qualified prison facility means any prison facility in which convicts, during the 12-month period ending July 1, 1987, produced materials for use in Federal-aid highway construction projects.

RIGHT TO AUDIT

DelDOT shall have the right to audit the books and records of the contractor or any subcontractor under this contract or subcontract to the extent that the books and records relate to the performance of the contract or subcontract. The books and records shall be maintained by the contractor for a period of 3 years from the date of final payment under the prime contract and by the subcontractor for a period of 3 years from the date of final payment under the subcontract (29 Del.C. §6930)

TO REPORT BID RIGGING ACTIVITIES:

The U. S. Department of Transportation (DOT) operates the below toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

TO REPORT BID RIGGING ACTIVITIES
CALL 1-800-424-9071

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

Goals for Minority Participation In
Each Trade

Goals for Female Participation In
Each Trade

12.3% (New Castle County)

6.9% (Entire State)

14.5% (Kent & Sussex Counties)

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.
4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the County specified in the General Description section.

REV. 11-3-80

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:
 - i. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - ii. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - iii. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - iv. American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Program Office or from the Federal procurement contracting offices. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
- a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
 - h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
 - i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontractors from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participating, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
 9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is under utilized).
 10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Order of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
 13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
 14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours

worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

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TRAINING SPECIAL PROVISIONS

This Training Special Provision supersedes subparagraph 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities", (Attachment 1), and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved.

The number of trainees to be trained under the special provision will be as set forth in the General Description section of this document. In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also ensure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year apprenticeship or training.

The number of trainees shall be distributed among the work classification on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Department of Highways and Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Department of Highways and Transportation and the Federal Highway Administration. The Department of Highways and Transportation and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid

highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work the classification covered by the program. It is the intention of these provisions that the training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some off-site training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the engineer, reimbursement will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other sources does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for off-site training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training; provides the instruction of the trainee; or pays the trainee's wages during the off-site training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainees as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid a least 60 percent of the appropriate minimum journeymen's rate specified in the contract for the first half of the of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees is an approved existing program are enrolled as trainees on this project. In fact case, the appropriate rates approved by the Department of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provisions.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training.

The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

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INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT
& TRANSPORTATION EQUITY ACT

Recipients of Federal-aid highway funds authorized under Titles I (other than Part B) and V of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), or Titles I, III, and V of the Transportation Equity Act for the 21st Century (TEA-21) are required to comply with the regulations of 49 Code of Federal Regulations (CFR) Part 26 - Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs.

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DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM SPECIFICATION

DeIDOT has established a Disadvantaged Business Enterprise (DBE) program in accordance with the regulations of the United States Department of Transportation (USDOT), 49 CFR Part 26. The Department has received Federal financial assistance from the USDOT and as a condition of receiving this assistance, the Department has signed an assurance that it will comply with 49 CFR Part 26.

It is the policy of DeIDOT to ensure that DBEs, as defined in 49 CFR Part 26, have an equal opportunity to receive and participate in USDOT-assisted contracts. It is also the policy of the DeIDOT:

1. To ensure nondiscrimination in the award and administration of USDOT-assisted contracts;
2. To create a level playing field on which DBEs can compete fairly for USDOT-assisted contracts;
3. To ensure that the DBE program is narrowly tailored in accordance with applicable law;
4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are counted as DBEs;
5. To help remove barriers to the participation of DBEs in USDOT-assisted contracts;
6. To assist in the development of firms that can compete successfully in the marketplace outside the DBE program and;
7. To promote the use of DBEs in all types of federally assisted contracts and procurement activities.

The following definitions apply to this subpart:

Commercially Useful Function (CUF) means a Commercially Useful Function as defined fully in 49 CFR §26.55 which definition is incorporated herein by reference. CUF is discussed further in the next section.

Committed DBE means a DBE that was identified by the contractor, typically on a DBE Project Participation Affidavit, to assist in making a good faith effort to meet an assigned DBE goal. This also includes any substitute DBE that has subsequently been committed work to meet the assigned contract goal.

Days mean calendar days. In computing any period of time described in this part, the day from which the period begins to run is not counted, and when the last day of the period is a Saturday, Sunday, or Federal holiday, the period extends to the next day that is not a Saturday, Sunday, or Federal holiday. Similarly, in circumstances where the DeIDOT's offices are closed for all or part of the last day, the period extends to the next day on which the agency is open.

Disadvantaged Business Enterprise or DBE means a for-profit small business concern (1) that is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals; and, (2) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

DOT-assisted contract means any contract between a recipient and a contractor (at any tier) funded in whole or in part with DOT financial assistance, including letters of credit or loan guarantees, except a contract solely for the purchase of land.

Good Faith Efforts means efforts to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

Joint Venture means an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

NAICS Code means the North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the US business economy.

Non-DBE means any firm that is not a DBE or any entity which has not been certified by DeIDOT as a DBE prior to bid closing.

Race-conscious measure or program is one that is focused specifically on assisting only DBEs, including women-owned DBEs.

Race-neutral measure or program is one that is, or can be, used to assist all small businesses. For the purposes of this part, race-neutral includes gender neutrality.

Small Business concern means, with respect to firms seeking to participate as DBEs in DOT-assisted contracts, a small business concern as defined pursuant to section 3 of the Small Business Act and Small Business Administration regulations implementing it (13 CFR part 121) that also does not exceed the cap on average annual gross receipts specified in 49 CFR §26.65(b).

Socially and Economically Disadvantaged Owner (SEDO) means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is - (1) any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis; (2) any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged according to 49 CFR §26.5:

- (i) Black Americans which includes persons having origins in any of the Black racial groups of Africa;
- (ii) Hispanic Americans which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
- (iii) Native Americans which includes persons who are enrolled members of a federally or State recognized Indian tribe, Alaska Natives, or Native Hawaiians;
- (iv) Asian-Pacific Americans which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia,

the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Republic of the Northern Mariana Islands, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong;

(v) Subcontinent Asian Americans which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives, Nepal or Sri Lanka;

(vi) Women;

(vii) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

DBE Participation Goals

DeIDOT has established an overall annual goal for DBE participation on Federal-aid contracts. DeIDOT intends that the goal be met with a combination of race conscious and race neutral efforts. Race-conscious participation occurs when the contractor uses a percentage of DBEs, as defined herein, to meet the contract-specified goal. Race-neutral efforts are those that are, or can be, used to assist all small businesses or increase opportunities for all small businesses.

The regulation, 49 CFR, Part 26, also describes race neutral participation as when a DBE wins a prime contract through customary competitive procurement procedures or is awarded a subcontract on a prime contract that does not carry a DBE contract goal.

DeIDOT will establish specific goals for each particular DOT-assisted project which will be expressed as a percentage of the total dollar amount of contract bid. The specific contract goal for this contract is listed in the General Description section of this document.

The contractor shall make Good Faith Efforts to meet the goal specified herein with DBEs or establish that it was unable to meet the goal despite making good faith efforts to do so. Prime contractors are encouraged to obtain DBE participation above and beyond any goals that may be set for this project.

DBE Project Participation Affidavit

In order to be eligible for award, ALL Bidders shall submit **no later than five (5) calendar days after bid opening** the completed DeIDOT DBE Project Participation Affidavit for each Committed DBE that it intends to use to meet the project DBE goal if the contract is awarded to their firm. This affirms that the Bidder intends to utilize those listed on the form to make a good faith effort toward attaining the DBE goal assigned to this project. Information that will be included shall be as outlined in 49 CFR §26.53(b)(2). This information shall be submitted electronically to the DeIDOT DBE Program Office at DOT.BidDocs@delaware.gov or via US Mail to DeIDOT DBE Program Office ATTN: DBE Program Manager 800 Bay Road, Dover, DE 19901.

All Bidders will be required to complete the form and provide the following information regarding the DBE participation on their teams:

1. The names and addresses of DBE firms that will participate in the contract;
2. A description of the work that each DBE will perform. To count toward meeting a goal, each DBE firm must be certified in a NAICS code applicable to the kind of work the firm will perform on the contract;
3. The dollar amount of the participation of each DBE firm participating;

4. Written documentation of the Bidders commitment to use a DBE subcontractor whose participation it submits to meet a contract goal; and
5. Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contractor's commitment.

Only those DBE firms certified by DeIDOT's DBE Program Office as a DBE as of the deadline for bid submittal will be considered for DBE credit. It shall be the Bidders responsibility to ascertain the certification status of designated DBEs prior to submitting a bid which seeks to rely upon an entity as a DBE to satisfy DBE participation requirements. A list of certified DBEs with their respective NAICS codes can be located in the [DeIDOT DBE Directory](https://deldotcivilrights.dbesystem.com) which is located on DeIDOT's website at: <https://deldotcivilrights.dbesystem.com>.

If the apparent low bidder fails to submit the required information in the manner herein specified, or if the submitted information reveals a failure to meet the requirements of the specifications shown herein, the apparent low bidder shall be ineligible to receive award of the contract and their bid will be rejected.

Reduction of DBE commitments after affidavit submittal and prior to execution of the contract without written consent of DeIDOT, which consent will only be given for good cause, will result in the bid being rejected or DeIDOT rescinding any award. Scheduling conflicts are not necessarily evidence of good cause as this should have been considered during pre-bid negotiations. The contractor is responsible for ensuring the DBE is available to meet the requirements of the contract at all relevant times.

In an instance where a Bidder indicates that it is unable to meet the assigned DBE goal for a contract, the bidder shall **AT THE TIME OF BID SUBMISSION**, provide all documentation to verify that the Bidder has made Good Faith Efforts (GFE) toward meeting the assigned DBE Goal. Guidance for submitting Good Faith Efforts documentation is identified in the next section of this document and in the [DBE Program Plan](https://deldot.gov/Business/dbe/contentFolder/pdfs/dbeProgram.pdf?cache=1726767277676). <https://deldot.gov/Business/dbe/contentFolder/pdfs/dbeProgram.pdf?cache=1726767277676>

DBE Subcontract Provisions

DeIDOT continues to reserve the right to approve ALL DBE subcontractors and all substitutions of DBE subcontractors prior to award, and during the of completion of the contract. **ALL DBEs subcontracted (whether submitted for participation credit or not) must be submitted to DeIDOT's DBE Program Office for approval.** No contract work shall be performed by a DBE subcontractor until the executed DBE subcontract is approved in writing by DeIDOT and DeIDOT has issued the required Notice to Proceed. Any DBE subcontract relating to work to be performed pursuant to this contract, which is submitted to DeIDOT for approval, must contain all DBE subcontractor information, the requirements contained in this contract, and must be fully executed by the contractor and DBE subcontractor.

Each contract between the prime contractor and each DBE subcontractor shall at the minimum include the following:

1. All pertinent provisions and requirements of the prime contract.
2. Assurance that the contractor and subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract.
3. Description of the work to be performed by the DBE subcontractor.

4. The dollar value of each item of work to be completed by the DBE subcontractor and the bid price of each item of work to be completed by the DBE subcontractor.
5. An attached copy of the most current FHWA 1273- Required Contract Provisions Federal-Aid Construction Contracts.
6. Language indicating that retainage will not be withheld unless the prime contract with DelDOT allows for the withholding of retainage.
7. Language requiring the payment of all funds received from DelDOT for work satisfactorily performed within the time frame contemplated by 49 CFR §26.29.

DelDOT reserves the right to conduct periodic reviews of DBE and non-DBE subcontract documentation to ensure compliance with federal requirements.

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CRITICAL DBE REQUIREMENTS

A bid may be held to be non-responsive and not considered if the required DBE information is not provided. In addition, the Bidder may lose its bidding capability on DelDOT projects and such other sanctions as the DelDOT may impose. It is critical that the bidder understands:

1. In the event that the Bidder is unable to meet the DBE goal as set forth in this specification, in accordance with 49 CFR §26.53 (b)(2)(vi), the Bidder **shall at the time of bid submittal** provide all evidence upon which Bidder intends to rely as evidence of Good Faith Efforts (GFE) to DelDOT which shall include the percentage of the DBE Goal that will be met, if any, on the completed DelDOT DBE Utilization Commitment form made a part of this contract. All Bidders shall review [Appendix A to Part 26 – Guidance Concerning Good Faith Efforts](#) as that provides guidance on what DelDOT will look for and evaluate as GFE by a Bidder to obtain DBE participation. <https://www.ecfr.gov/current/title-49/subtitle-A/part-26/appendix-Appendix%20A%20to%20Part%2026>
2. The contractor shall also at the time of bid submit all documentation that the contractor wishes to have DelDOT consider in determining that the contractor made a Good Faith Effort to meet the assigned contract DBE Goal. DelDOT will not accept Good Faith Efforts documentation other than on the scheduled date and time of the bid opening. However, DelDOT may ask for clarification of information submitted should the need arise.
3. A bid which does not contain either a completely executed DelDOT DBE Utilization Commitment and/or Good Faith Efforts documentation, where appropriate, shall be declared non-responsive and shall not be considered by DelDOT.
4. Failure of the apparent low bidder to present originals of all DBE subcontracts to substantiate the volume of work to be performed by DBE's as indicated in the bid within fifteen (15) calendar days after the bid opening shall create a rebuttable presumption that the bid is not responsive.
5. Bidders are advised that failure to make a Good Faith Effort to meet the assigned and agreed upon DBE goals during the term of the contract may subject them to DelDOT sanctions as identified in the DelDOT DBE Program Plan.
6. In the execution of this contract, the successful bidder agrees to comply with the following contract clauses:

Prompt Payment: The prime contractor/consultant receiving payments shall, within 30 days of receipt of any payment, file a statement with DelDOT on a form to be determined by DelDOT that all subcontractors furnishing labor or material have been paid the full sum due them at the stage of the contract, except any funds withheld under the terms of the contract as required by Chapter 8, Title 17

of the Delaware Code, annotated and as amended. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of DelDOT. This clause applies to both DBE and non-DBE subcontractors.

Retainage: The prime contractor agrees to return retainage to each subcontractor within 15 calendar days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of DelDOT. This clause covers both DBE and non-DBE subcontractors. As guidance, once a subcontractor has satisfactorily completed the physical work, and has given to the prime contractor a certified statement that all laborers, lower tier contractors, and materialmen who have furnished labor and materials to the subcontractor have been paid all monies due them, the prime contractor shall return retainage to the subcontractor within 15 calendar days.

7. In the execution of this contract, the successful bidder agrees to comply with the following contract assurance and will include this same language in each subcontractor contract:

"The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such remedy as the recipient deems appropriate." 49 CFR Section 26.13

8. A prime contractor can receive participation credit toward DBE goals only if the DBE performs a Commercially Useful Function (CUF). According to 49 CFR §26.55 (c)(1) a DBE performs a CUF when it is responsible for execution of the work of a contract and carries out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself that it uses on the project.

In order to determine whether a DBE is performing a commercially useful function, DelDOT will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing, and the DBE credit claimed for its performance of the work, and other relevant factors.

In addition to this specification, bidders must comply with all provisions of the rules and regulations adopted by the United States Department of Transportation for DBE participation in USDOT and DelDOT Programs (49 CFR Part 26) and the DelDOT Disadvantaged Business Enterprise Program Plan; each of which is hereby incorporated and made part of this specification. Bidders are also reminded that they must be responsive and responsible bidders in all other aspects aside from the DBE Program in order to be awarded the contract.

9. In accordance with 49 CFR §26.53(f)(1), DelDOT requires that a prime contractor not terminate a DBE subcontractor without prior written consent from the DelDOT's Office of Civil Rights, which consent will only be provided if the Bidder demonstrates good cause for the termination. This includes, but is not limited to, instances in which a prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. The contractor shall make all reasonable efforts to avoid terminating or substituting a DBE listed on the DBE Project Participation Affidavit.

* * * * *

**GUIDANCE FOR GOOD FAITH
EFFORT**

If the apparent low bidder has stated in its bid proposal that it has been unable to meet the DBE goal, that Bidder must demonstrate, through detailed and comprehensive documentation, that good faith efforts have been made to solicit, assist, and use DBE firms to meet the DBE goal prior to the bid. If the Bidder certifies that it has been unable to meet the goal and has made a good faith effort, the Bidder cannot change its position after submission of the bid and claim to have met the established goal. (See 49 CFR §26.53 and Appendix A to Part 26 of 49 CFR- Guidance Concerning Good Faith Efforts).

The contractor shall demonstrate that the efforts made were those that a contractor actively and aggressively seeking to meet the goals established by DelDOT would make, given all relevant circumstances. Evidence of this good faith effort will be submitted with the bid at the time of the bid opening.

In order to be awarded a contract on the basis of good faith efforts, a Bidder must show that it took all necessary and reasonable steps to achieve the DBE goal which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful. Simply faxing and emailing DBEs requesting bids is not sufficient to constitute good faith efforts. DelDOT will consider the quality, quantity, and intensity of the different kinds of efforts the Bidder has made. Mere pro forma efforts are not sufficient good faith efforts to meet the DBE contract requirements.

The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the Bidder when a non-DBE subcontractor was selected over a DBE for work on the contract. A generalized assertion that the contractor received multiple quotes is not sufficient unless copies of those quotes are provided. Bidders are encouraged to review 49 CFR Part 26 Appendix A- Guidance Concerning Good Faith Efforts.

Failure to demonstrate good faith efforts to the satisfaction of the DelDOT will result in the rejection of the bid. In the event that the low bid is rejected, DelDOT will consider award of the contract to the next responsive and responsible bidder.

The following are the types of efforts that *may* be considered as Good Faith Efforts to meet DBE participation requirements. This list is not an exclusive or exhaustive, and DelDOT may consider other factors and types of efforts that may be relevant:

1. Contacting DelDOT's DBE Program Office prior to the submission of bids, either by email or by telephone, to inform them of the Bidder's difficulty in meeting the DBE goals on a given project and requesting assistance. The Bidder must document its contact with the DBE Program Office and indicate the type of contact, the date and time of the contact, the name of the person(s) contacted, and any details related to the communication. The contact must be made in sufficient time before bid submission to allow the DBE Program Office a meaningful opportunity to offer effective assistance. The Bidder will **not** be considered to have made good faith efforts if the Bidder failed to contact the DBE Program Office in advance of bid closing or if the Bidder fails to contact the DBE Program Office sufficiently in advance of bid submission for the DBE's that bidder intends to solicit to have a meaningful opportunity to respond to the solicitation.
2. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goal will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units (for example smaller tasks or quantities) to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces. Selection of portions of work are required to at least equal the goal for DBE utilization specified in this contract.

3. Soliciting interest as early in the process as practicable to allow DBEs a meaningful opportunity to respond to the solicitation and submit a timely offer for the subcontract. Bidders should provide written notification at least ten (10) calendar days prior to the opening of a bid, soliciting DBE interest in participating on the contract as a subcontractor, supplier, manufacturer, or distributor for specific items of work.
4. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist DBEs in responding to solicitation.
5. Negotiating in good faith with interested DBEs. It is the Bidders responsibility to make a portion of the work available to the DBE subcontractors, and to select those portions of work or material needs consistent with the available DBE subcontractors, suppliers, manufacturers, or distributors so as to facilitate DBE participation. Evidence of such negotiation includes:
 - a. Description of the means by which firms were solicited (i.e. by telephone, e-mail, written notice, advertisement).
 - b. The names, addresses, telephone numbers of DBE's contacted, the dates of initial contact; and whether initial solicitations of interest were followed-up by contacting the DBEs to determine with certainty whether the DBEs were interested.
 - c. A description of the information provided to DBE firms regarding the plans, specifications, and estimated quantities for portions of the work to be performed.
 - d. A statement of why additional agreements with DBE's were not reached in order to meet the projected goal.
 - e. Listing of each DBE contacted but not contracted and the reasons for not entering a contract.
6. Making efforts to assist DBEs that need assistance in obtaining bonding, insurance, or lines of credit required by the contractor.
7. Detailing the reasons why certified DBEs are not available or not interested.
8. Effectively using the services of available minority/women community organizations; minority/women contractor's groups; local, state and federal business assistance offices; and other organizations that provide assistance in recruitment and placement of DBEs.

The following are examples of actions that may not be used as justification by the contractor for failure to meet DBE contract goals:

1. Failure to contract with a DBE solely because the DBE was unable to provide performance and/or payment bonds.
2. Rejection of a DBE bid or quotation based on price alone.
3. Rejection of a DBE because of its union or non-union status.
4. Failure to contract with a DBE because the contractor normally would perform all or most of the work in the contract.

DelDOT may contact rejected DBEs as part of its investigation. However, nothing listed here shall be construed to require the Bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.

In determining whether a Bidder has made good faith efforts, DelDOT will review the documented efforts of the contractor and will review the performance, taking into account the ability of other Bidders in meeting the contract DBE goal.

DelDOT will evaluate the submittal to determine whether in fact good faith efforts have been demonstrated consistent with the specifications and the Federal regulations, 49 CFR 26, Appendix A.

Administrative Reconsideration Procedures (49 CFR §26.53(d)):

Within five (5) calendar days of being informed by DelDOT that it has not documented sufficient good faith efforts, a Bidder may request an administrative reconsideration. The Bidder should make this request in writing to the attention of DelDOT's Director of Finance, 800 Bay Road, Dover, Delaware 19901, and email a copy to dot-ask@delaware.gov. The Reconsideration Official will not have played any role in the original determination that the Bidder did not document sufficient good faith efforts.

As part of this reconsideration, the Bidder will have the opportunity to provide written documentation or argument concerning the issue of whether it made adequate good faith efforts toward meeting the assigned DBE goal. The Bidder will have the opportunity to meet in person with the Reconsideration Official, to discuss the issue of whether it met the goal or made adequate good faith efforts to do so. The final decision made by the Reconsideration Official will be communicated to the Bidder in writing. In accordance with 49 CFR §26.53(d)(5) the result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

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**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements (1) Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements (1) Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature*. The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification*. The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention*. The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents*. The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers*. The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements*. If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures*. Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay*. Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits*. Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio*. The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates*. Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity*. The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

CARGO PREFERENCE ACT

Requirements in the Federal-aid Highway Program

(a) Agreement Clauses. “Use of United States-flag vessels:

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(b) Contractor and Subcontractor Clauses. “Use of United States-flag vessels: The contractor agrees—

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

NOTE:

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

* * * * *

APPENDICES TO THE TITLE VI ASSURANCE

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, (Federal Highway Administration (FHWA), or Federal Transit Authority (FTA)), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts and the Regulations, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration (FHWA), or Federal Transit Authority (FTA) to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration (FHWA), or Federal Transit Authority (FTA), as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration (FHWA), or Federal Transit Authority (FTA) may determine to be appropriate, including, but not limited to:
 - withholding payments to the contractor under the contract until the contractor complies;
 - and/or cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through five in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts and the Regulations. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration (FHWA), or Federal Transit Authority (FTA) may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX E

During the performance of this contract, the contractor or consultant, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,(42 U.S.C. § 460 I), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);

Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part27;

The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);

Airport and Airway Improvement Act of 1982,(49 USC §471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

The Civil Rights Restoration Act of 1987,(PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964,The Age Discrimination Act of 1975and Section 504 of the Rehabilitation Act of 1973,by expanding the defrnition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 - 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;

The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. S 41123) (prohibits discrimination on the basis of race, color, national origin, and sex);

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs; policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

* * * * *

PREVAILING WAGES

Included in this proposal are the minimum wages to be paid various classes of laborers and mechanics as determined by the Department of Labor of the State of Delaware in accordance with Title 29 Del.C. §6960, relating to wages and the regulations implementing that Section.

REQUIREMENT BY DEPARTMENT OF LABOR FOR SWORN PAYROLL INFORMATION

Title 29 Del.C. §6960 stipulates;

- (b) Every contract based upon these specifications shall contain a stipulation that the employer shall pay all mechanics and laborers employed directly upon the site of the work, unconditionally and not less often than once a week and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the specifications, regardless of any contractual relationship which may be alleged to exist between the employer and such laborers and mechanics. The specifications shall further stipulate that the scale of wages to be paid shall be posted by the employer in a prominent and easily accessible place at the site of the work, and that there may be withheld from the employer so much of accrued payments as may be considered necessary by the Department of Labor to pay to laborers and mechanics employed by the employer the difference between the rates of wages required by the contract to be paid laborers and mechanics on the work and rates of wages received by such laborers and mechanics to be remitted to the Department of Labor for distribution upon resolution of any claims.
- (c) **Every contract based upon these specifications shall contain a stipulation that sworn payroll information, as required by the Department of Labor, be furnished weekly. The Department of Labor shall keep and maintain the sworn payroll information for a period of 6 months from the last day of the work week covered by the payroll.**

Bidders are specifically directed to note the Department of Labor's prevailing wage regulations implementing §6960 relating to the effective date of the wage rates, at Part VI., Section C., which in relevant part states:

"Public agencies (covered by the provisions of 29 Del.C. §6960) are required to use the rates which are in effect on the date of the publication of specifications for a given project. In the event that a contract is not executed within one hundred twenty (120) days from the date the specifications were published, the rates in effect at the time of the execution of the contract shall be the applicable rates for the project."

PREVAILING WAGE REQUIREMENTS

It is DelDOT's understanding that the Davis-Bacon Act is not a preemptive statute in the broad sense, and does not preempt or displace State of Delaware prevailing wage requirements.

When a contract for a project contains both Federal Davis-Bacon and State of Delaware prevailing wage standards because of concurrent Federal and State coverage, the employer's minimum wage obligations are determined by whichever standards are higher.

Contractors with questions may contact:

Department of Labor, Division of Industrial Affairs, 4425 N. Market Street, Wilmington, DE 19802
Telephone (302) 761-8200 <https://dia.delawareworks.com/labor-law/>

STATE OF DELAWARE
 DEPARTMENT OF LABOR
 DIVISION OF INDUSTRIAL AFFAIRS
 OFFICE OF LABOR LAW ENFORCEMENT
 PHONE: (302) 318-2769

Mailing Address:
 252 Chapman Road
 Suite 210
 Newark, DE 19702

Located at:
 252 Chapman Road
 Suite 210
 Newark, DE 19702

PREVAILING WAGES FOR HIGHWAY CONSTRUCTION EFFECTIVE MARCH 15, 2024

| CLASSIFICATION | NEW CASTLE | KENT | SUSSEX |
|---------------------------|------------|-------|--------|
| BRICKLAYERS | 65.24 | 65.24 | 69.05 |
| CARPENTERS | 65.85 | 61.06 | 49.30 |
| CEMENT FINISHERS | 70.64 | 43.32 | 44.16 |
| ELECTRICAL LINE WORKERS | 35.67 | 57.63 | 28.21 |
| ELECTRICIANS | 81.62 | 81.62 | 81.62 |
| IRON WORKERS | 86.81 | 31.66 | 33.63 |
| LABORERS | 54.96 | 50.59 | 49.65 |
| MILLWRIGHTS | 21.38 | 20.75 | 17.93 |
| PAINTERS | 81.29 | 81.29 | 81.29 |
| PILEDRIVERS | 95.51 | 31.53 | 88.62 |
| POWER EQUIPMENT OPERATORS | 82.31 | 52.56 | 48.15 |
| SHEET METAL WORKERS | 30.20 | 26.96 | 24.40 |
| TRUCK DRIVERS | 51.73 | 37.48 | 45.64 |

CERTIFIED: 9/9/2024

BY: [Signature] / For Fran Chudzik
 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) 318-2769.

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

PROJECT: T201901102 US13, Paving And Pedestrian Improvements - Llangollen Blvd to Bacon Blvd, New Castle County



| | Rates | Fringes |
|-------------------------------------|----------|---------|
| CARPENTER..... | \$ 50.06 | 4.32 |
| CEMENT MASON/CONCRETE FINISHER...\$ | 33.03 | 5.25 |
| ELECTRICIAN..... | \$ 65.99 | 0.00 |
| FORM WORKER..... | \$ 49.77 | 3.37 |
| IRONWORKER, REINFORCING..... | \$ 55.67 | 0.00 |
| LABORER: Common or General..... | \$ 36.33 | 3.50 |
| LABORER: Mason Tender - | | |
| Cement/Concrete..... | \$ 43.30 | 1.66 |
| OPERATOR: Bulldozer..... | \$ 37.55 | 16.19 |
| OPERATOR: Loader..... | \$ 38.36 | 4.31 |
| OPERATOR: Mechanic..... | \$ 28.11 | 11.18 |
| OPERATOR: Milling Machine..... | \$ 38.29 | 11.15 |
| TRAFFIC CONTROL: Flagger..... | \$ 37.49 | 0.00 |
| TRUCK DRIVER: Dump Truck..... | \$ 29.31 | 9.84 |

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this

example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
 - * a survey underlying a wage determination
 - * a Wage and Hour Division letter setting forth a position on a wage determination matter
 - * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations

Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:
Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board).

Write to:
Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Contract T201901102
 US13, PAVING AND PEDESTRIAN IMPROVEMENTS - LLANGOLLEN BLVD
 TO BACON/BOULDEN BLVD
SPECIAL PROVISIONS

| S.P. Code | SPECIAL PROVISION DESCRIPTION |
|-----------|---|
| 202560-20 | CONTAMINATED MATERIAL |
| 401502-20 | ASPHALT CEMENT COST ADJUSTMENT |
| 401510-20 | TACK COAT |
| 401580-20 | RIDE QUALITY OF BITUMINOUS PAVEMENT |
| 401699-20 | QUALITY CONTROL/QUALITY ASSURANCE OF BITUMINOUS CONCRETE |
| 602502-20 | CONVERTING EXISTING CATCH BASIN TO MANHOLE |
| 701500-20 | PORTLAND CEMENT CONCRETE CURB, TYPE 1, MODIFIED |
| 701510-20 | CURB/SIDEWALK OPENING |
| 701515-20 | CURB OPENING, MODIFIED |
| 701516-20 | CURB/SIDEWALK OPENING, MODIFIED |
| 705528-20 | TEMPORARY PEDESTRIAN CONNECTION |
| 707500-20 | CHANNEL BED FILL |
| 709505-20 | WEEP HOLE RETROFIT, 4" DIAMETER |
| 710503-20 | ADJUST GAS VALVE BOXES |
| 710511-20 | FLEXIBLE COUPLING |
| 711500-20 | ADJUST AND REPAIR EXISTING SANITARY MANHOLE |
| 723503-20 | BIFURCATED CONCRETE BARRIER WALL |
| 727511-20 | PROVIDE ORNAMENTAL STEEL FENCE ON MEDIAN BARRIER |
| 727512-20 | INSTALL ORNAMENTAL STEEL FENCE ON MEDIAN BARRIER |
| 763501-20 | CONSTRUCTION ENGINEERING |
| 763503-20 | TRAINEE |
| 763518-20 | CONNECTED MACHINERY |
| 763520-20 | ELECTRONIC TICKETING |
| 763525-20 | ROAD USER COST |
| 801501-20 | MAINTENANCE OF RAILROAD TRAFFIC |
| 811502-20 | RAILROAD FLAGGER |
| 831501-20 | PROVIDE AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (OPEN CUT) |
| 831503-20 | PROVIDE AND INSTALL 2-1/2" SCHEDULE 80 PVC CONDUIT (OPEN CUT) |
| 831514-20 | PROVIDE AND INSTALL 2-1/2" SCHEDULE 80 PVC CONDUIT (TRENCH) |
| 831515-20 | PROVIDE AND INSTALL 3" SCHEDULE 80 PVC CONDUIT (TRENCH) |
| 831516-20 | PROVIDE AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (TRENCH) |
| 831523-20 | PROVIDE AND INSTALL 2" GALVANIZED STEEL CONDUIT (TRENCH) |
| 831526-20 | PROVIDE AND INSTALL 4" GALVANIZED STEEL CONDUIT (TRENCH) |
| 831531-20 | PROVIDE AND INSTALL 4" GALVANIZED STEEL CONDUIT (BORE) |
| 831533-20 | PROVIDE AND INSTALL 2" GALVANIZED STEEL CONDUIT (OPEN CUT) |
| 831538-20 | PROVIDE AND INSTALL 2" GALVANIZED STEEL CONDUIT (ON STRUCTURE) |
| 831545-20 | PROVIDE AND INSTALL 4" HDPE SDR-13.5 CONDUIT (BORE) |
| 831564-20 | PROVIDE AND INSTALL 1-1/2" GALVANIZED STEEL CONDUIT (TRENCH) |
| 831574-20 | PROVIDE AND INSTALL SECOND AND SUBSEQUENT ADDITIONAL 4" SCHEDULE |
| 831578-20 | PROVIDE AND INSTALL SECOND AND SUBSEQUENT ADDITIONAL |
| 831581-20 | PROVIDE AND INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2" GALVANIZED STEEL CONDUIT IN TRENCH OR OPEN CUT |
| 834501-20 | PARTIAL REMOVAL OF CONCRETE POLE BASES AND CABINET FOUNDATIONS |

Contract T201901102
US13, PAVING AND PEDESTRIAN IMPROVEMENTS - LLANGOLLEN BLVD
TO BACON/BOULDEN BLVD
SPECIAL PROVISIONS

| S.P. Code | SPECIAL PROVISION DESCRIPTION |
|-----------|--|
| 850521-20 | LUMINAIRE (LED), 250 WATTS, HPS EQUIVALENT |
| 908526-20 | GEOSYNTHETIC CEMENTITIOUS COMPOSITE MAT |

202560 - CONTAMINATED MATERIAL

Description:

Contaminated Material is defined as solids or liquids (including soil) potentially contaminated with a hazardous substance, requiring special handling and/or disposal per state or federal regulation.

Overview of Costs:

A. Potential contaminated solids may affect contractor's costs as follows:

1. Additional cost to normal excavation requirements:

- a. Cost of 8 mil plastic for placement under and over solid contaminated material,
- b. Maintaining the segregated contaminated solids staging area.

2. Reduced cost to normal excavation requirements:

- a. Not required to, or charged for, transport of contaminated material from site.
- b. Not required to, or charged for, disposal of contaminated soil.

B. Potential contaminated liquids will affect contractor's cost as follows:

1. Additional cost to normal excavation requirements:

- a. Cost of supplying appropriately sized watertight containers.
- b. Cost of cleaning of rented frac tanks (if applicable).

2. Reduced cost to normal excavation requirements:

- a. Not required to, or charged for, transport of contaminated material from site.
- b. Not required to, or charged for, disposal of contaminated liquids.

Construction Methods and Responsibilities:

A. Contractor's Responsibilities for potential contaminated solids:

- 1. The Contractor shall provide the appropriate equipment and personnel necessary to excavate, stage, and load contaminated material for off-site disposal. If required for the site, the work will

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be performed in accordance with the procedures described in the site specific "Contaminated Materials Management Plan".

2. The Contractor shall immediately be responsible for notifying the Department's HAZMAT Program Manager's office (302-894-6308) for scheduling coordination with the environmental representative. Submit a proposed schedule of work for review and approval prior to any commencement of work on this site. Coordinate with all utility companies prior to excavation. The Department's environmental representative shall be present during all phases of work associated with the excavation and removal of potentially contaminated material.

3. The Contractor shall excavate material in accordance with the project specifications. Separate the contaminated soil from the clean soil as designated by the Department. The contaminated soil shall be placed in the designated staging area. The staging area shall be lined with 8-mil plastic and a berm constructed to minimize storm water run-off. Cover the staging area with 8-mil plastic at the end of each workday. Ensure the cover is secured so the contaminated soil remains entirely under the plastic. The Contractor shall load contaminated soil onto trucks arranged by the Department's environmental representative when the contaminated soil is shipped off-site to a licensed disposal/treatment facility. Backfill and compact the excavated area(s) in accordance with the contract.

B. Contractor's Responsibilities for potential contaminated liquids:

1. The Contractor shall provide the appropriate equipment and personnel necessary to remove and stage contaminated liquids for off-site disposal. If required for the site, the work will be performed in accordance with the procedures described in the site specific "Contaminated Materials Management Plan".

2. The Contractor shall immediately be responsible for notifying the Department's HAZMAT Program Manager's office (302-894-6308) for scheduling coordination with the environmental representative. Submit a proposed schedule of work for review and approval prior to any commencement of work on this site. Coordinate with all utility companies prior to excavation. The Department's environmental representative shall be present during all phases of work associated with the removal of potentially contaminated liquids.

3. The Contractor shall remove liquids in accordance with the project specifications. The potentially contaminated liquids shall be placed in the appropriate watertight container(s). The watertight container(s) shall be placed in the designated staging area. If rented frac tanks are utilized, once removal of the contaminated liquids by the Department's environmental representative is completed, the Contractor shall be responsible to have the frac tanks cleaned prior to ending the rental.

Department's Responsibilities:

A. The Department is responsible for providing:

1. the environmental representative;
2. the transportation of contaminated material for disposal; and
3. the disposal of contaminated material.

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B. When issued, the "Contaminated Materials Management Plan" will identify;

1. the procedures to be used to excavate and stage the contaminated material;
2. the licensed treatment/disposal facility where the Department will ship the contaminated material;
3. the method the material will be transported to the treatment/disposal facility; and
4. any additional health and safety requirements for site personnel.

C. The Department's environmental representative will be responsible to:

1. conduct a health and safety briefing prior to commencement of activities on the sites to ensure an understanding of all applicable standards, guidelines, laws, procedures, etc. consistent with successful completion of this type of activity;
2. potentially conduct air monitoring during any excavation activities at the site to identify and mitigate fire, explosion and vapor hazards;
3. coordinate the excavation activities with all applicable local, state, and federal environmental regulatory agencies;
4. oversee the excavation, removal and treatment/disposal of the material in the designated area(s) and perform such tests as field screening for soil contamination utilizing vapor monitoring techniques and collect soil samples for laboratory analysis to meet the requirements of the treatment/disposal facility, DNREC and/or the USEPA;
5. subcontract with the disposal/treatment facility to provide transportation and disposal/treatment of all contaminated materials to be removed as part of the project;
6. measure the quantity of the contaminated material removed, via certified scale weights, for the Department's records.

Method of Measurement:

The Department will not measure contaminated material. It will be included in the excavation quantity.

Basis of Payment:

A. The Department will make no additional payment for the handling of contaminated material. Price and payment will be included in the excavation items and will constitute full compensation for:

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1. excavation and backfilling;
2. constructing and maintaining soil staging area;
3. placement of contaminated soil;
4. providing plastic and daily covering; and
5. loading of contaminated soil for removing.

B. The Department reserves the right to delete this contingency item from the contract. The Contractor shall make no claims for additional compensation because of deletion of the item.

C. No payment will be made for any work done without a Department approved Inspector or environmental representative present to provide environmental oversight.

D. The Department will pay for the following:

1. the environmental representative;
2. the transportation of contaminated material for disposal; and
3. the disposal of contaminated material.

9/16/22

401502 - ASPHALT CEMENT COST ADJUSTMENT

For Sections 304, 401, 402, 403, 404, and 405, payments to the Contractor shall be adjusted to reflect increases or decreases in the Delaware Posted Asphalt Cement Price when compared to the Project Asphalt Cement Base Price, as defined in these Special Provisions.

The Delaware Posted Asphalt Cement Price will be issued monthly by the Department and will be the industry posted price for Asphalt Cement, F.O.B. Philadelphia, Pennsylvania. The link for the posting is https://deldot.gov/Business/bids/index.shtml?dc=asphalt_cement_english.

The Project Asphalt Cement Base Price will be the Delaware Posted Asphalt Cement Price in effect on the date of advertisement.

All deviations of the Delaware Posted Asphalt Cement Price from the Project Asphalt Cement Base Price are eligible for cost adjustment. No minimum increases or decreases or corresponding percentages are required to qualify for cost adjustment.

Actual quantity of asphalt cement qualifying for any Asphalt Cement Cost Adjustment will be computed using the weight of eligible asphalt that is shown on the QA/QC pay sheets as a percentage for the delivered material.

If the mix was not inspected and no QA/QC pay sheet was generated, then the asphalt percentage will be obtained from the job mix formula for that mix ID. The asphalt percentage eligible for cost adjustment shall only be the virgin asphalt cement added to the mix.

There shall be no separate payment per ton cost of asphalt cement. That cost shall be included in the various unit prices bid per ton for those bid items that contain asphalt cement (mentioned above).

The Asphalt cement cost adjustment will be calculated on grade PG 64-22 asphalt regardless of the actual grade of asphalt used.

If the Contractor exceeds the authorized allotted completion time, the price of asphalt cement on the last authorized allotted workday, shall be the prices used for cost adjustment during the time liquidated damages are assessed. However, if the industry posted price for asphalt cement goes down, the asphalt-cement cost shall be adjusted downward accordingly.

NOTE:

Application of Asphalt Cement Cost Adjustment requirements as indicated above shall apply only to those contracts involving items related to bituminous base and pavements, and with bitumen, having a total of 1,000 tons or more of hot-mix bid quantity in case of Sections 401, 402 and 403; and 15,000 gallons or more in case of Sections 304, 404 and 405.

12/14/2020

401510 – TACK COAT

Description:

The Department will not measure and will make no payment for this item. This language replaces Section 1011 of the Standard Specifications.

SECTION 1011 -TACK COAT

1011.1 Description.

Provide material in accordance with 1011.2 for thin lift maintenance applications, or as directed by the engineer. Provide material in accordance with Section 1011.3 and selected from the approved product list and in accordance with manufacturer recommendations for all other applications.

1011.2 Asphalt Cement (PG Graded).

Provide PG-64-22 (PG 64S-22) as tack coat in lieu of emulsified asphalts.

1011.3 Emulsified Asphalts.

1. Anionic emulsified asphalt in accordance with M140 except the sieve test requirement for field samples collected at the point of use shall be a maximum of 0.4 percent.
2. Cationic emulsified asphalt in accordance with M208 except the sieve test requirement for field samples collected at the point of use shall be a maximum of 0.4 percent.
3. Polymer-modified cationic emulsified asphalts in accordance with M316 except the sieve test requirement for field samples collected at the point of use shall be a maximum of 0.4 percent.
4. Non-Tracking emulsified asphalt in conformance with Table 1011.3-1.

| Property | Test Method | Requirement |
|--|--------------------|-------------------------------|
| Saybolt Viscosity at 77 F, (SFS) | AASHTO T59 | 15-100 |
| Storage Stability Test, 24 hours, (%) | AASHTO T59 | 1 maximum |
| Residue by Distillation or Residue by Evaporation, (%) | AASHTO T59 | 50 minimum |
| Sieve Test, No. 20, (%) | AASHTO T59 | 0.4 maximum for field samples |
| Penetration at 77 F, 100 g, 5 s, (dmm) | AASHTO T49 | 10-40 |
| Solubility in Trichloroethylene, (%) | AASHTO T44 | 97.5 minimum |

6/11/2024

401580 - RIDE QUALITY OF BITUMINOUS PAVEMENT

Description:

This specification outlines requirements for an acceptable ride surface in addition to requirements established in DelDOT Standard Specifications. The Contractor is responsible for providing smoothness characteristics that meet these requirements. The Contractor is responsible for providing equipment, maintenance of traffic (MOT) as required by the Delaware MUTCD, and performing testing in accordance to this specification. All costs for testing and MOT are incidental to this item. Both the International Roughness Index (IRI) and deviations located within a 10' straightedge are used to characterize smoothness in this Special Provision.

Definitions:

Class 1 Project - a project that consists of full depth construction. Full depth construction is considered to be when contract documents or modifications provide opportunity for preparation of the subgrade prior to paving.

Class 2 Project - a project that consists of a minimum of two smoothness opportunities.

Class 3 Project - a project that consists of one smoothness opportunity.

Deviation - a hump or depression that exceeds defined tolerances.

Smoothness Opportunity - a smoothness opportunity is considered to be any of the following; roadway milling, placement of a leveling course, in-place recycling, or placement of a lift of bituminous concrete. The final wearing surface is considered one smoothness opportunity.

Equipment:

The Contractor must have a 10' straightedge available during all paving operations.

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The Contractor must also have a high speed or lightweight inertial profiling system that meets requirements of AASHTO M328 capable of collecting data in both wheelpaths simultaneously.

Prior to the start of corrective actions, the Contractor must provide to the Engineer:

1. Manufacturer, Make, and Model of the test system
2. Equipment Owner,
3. Relevant Certifications,
4. Manufacturer Calibration Procedures, and
5. Relevant Operator Training information.

Testing:

The Contractor is responsible for testing the pavement surface using an approved inertial profiler in accordance to manufacturer and AASHTO R57 from the start of paving limits to the end of pavement limits. Testing must be performed 3 times in each lane paved in the direction of traffic flow. Testing must be performed within seven (7) days of completion of project paving operations in each location.

The Contractor is responsible for providing information relative to locations that are to be excluded from calculation of the International Roughness Index. These areas must still meet 10' straightedge requirements.

Areas that are to be tested but will be removed prior to IRI analysis are:

1. 50 feet prior to the first bridge deck expansion joint and 50 feet after the last expansion joint if a bridge deck is excluded from smoothness operations.
2. 50' longitudinally from the center of an existing obstruction within the test area such as a manhole, water main, or catch basin that impedes paving operations.
3. 50' longitudinally from transverse joints that separate it from existing pavement not included on this contract.

Areas that are not to be profiled but are still subject to 10' straightedge requirements are:

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1. Shoulder areas
2. Parking lots
3. Ramps, Streets, or Acceleration / Deceleration lanes less than 1000' in length.

Submission Requirements:

Test results must be submitted to the Engineer within five working days of completion of testing. Results not received within the allotted time frame will be assessed a charge of \$1,000.00 per day at the discretion of the Engineer.

The Contractor is required to submit summary table IRI reports from their test equipment for 1 run for each lane and direction of paving. This report must also include:

1. Profiling Company Name
2. Date of Test
3. Contract Number
4. Location Description
5. Testing Personnel

The Contractor is required to submit ERD files for each of the 3 tests run in each lane and direction of paving to the Engineer for analysis. The Contractor must provide to the Engineer written documentation indicating the start and end of bridges and the center of obstructions relative to the stationing used on the testing that are not subject to IRI analysis.

Acceptance and Payment:

Acceptance of the final pavement will be based on Engineer calculated IRI values using ProVAL software upon removal of allowable areas of exemption and the number of deviations found in the pavement surface. The IRI measurements will be calculated in 0.1 mile (528 foot) sections for payment purposes. The average value of the three test runs will be used and the average value will be rounded to the nearest tenth. Payments for each section will be based on estimated tonnage calculated from plan thickness and widths using the average maximum specific gravity ("Rice") for all surface mix used at that location.

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Deviations equal to or in excess of 0.25" in 10' are to be corrected at the Contractor's expense or will have a discount charge of \$200.00 per deviation.

$$\text{Estimated Tonnage} = [L * W * T] * \text{Rice} * 62.4 \text{ (lb/ft}^3\text{)} * (0.0005 \text{ tons} / 12 \text{ in.})$$

Where: L = Length Segment (ft.)

W = Lane Width (ft.)

T = Plan Thickness (in.)

$$\text{IRI Incentive / Disincentive} = \text{Estimated Tonnage} * \text{UP} * (\text{PA}-100)/100$$

Where: UP = Contract Unit Price (Dollars)

PA = Pay Adjustment (Table A)

The total pay adjustment for paving work performed on each location is:

$$(\sum \text{IRI adj for each section}) - \text{Total Deviations} * 200$$

It is possible to receive incentive for IRI measurements and a discount charge for excessive deviations on the same project. If a 528' section has an IRI value resulting in a deduction of at least 84% of the section pay, the deviation discount charge for that section is disregarded and the IRI discount charge is the only action taken for that section.

| Table A: Payment Adjustments for IRI | |
|---|-----------------------|
| Class 1 | |
| IRI per 0.1 mile Segment (in./mi.) | Pay Adjustment |
| ≤ 50 | 103% |
| > 50 and < 145 | 100+ 0.2(65- IRI) |
| ≥ 145 | 84% |

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| Class 2 | |
|---|------------------------------|
| IRI per 0.1 mile Segment (in./mi.) | Pay Adjustment |
| ≤ 60 | 106% |
| > 60 and < 170 | $100 + 0.2(90 - \text{IRI})$ |
| ≥ 170 | 84% |

Correction to the paving surface, such as diamond grinding with approved equipment, patching, or other measures may be taken at the Contractor's expense and at the Engineers discretion to correct pavement surfaces assessed a discount charge. The Engineer may require corrective actions including remove & replace if the deviation discount charge exceeds 50% of the cost of materials or the IRI pay adjustment is 84%. Deviations must be corrected if it is determined that they are at a height or depth that may create a safety concern.

4/10/2019

401699 - QUALITY CONTROL/QUALITY ASSURANCE OF BITUMINOUS CONCRETE

.01 Description

This item shall govern the Quality Assurance Testing for supplying bituminous asphalt plant materials and constructing bituminous asphalt pavements and the calculation for incentives and disincentives for materials and construction. The Engineer will evaluate all materials and construction for acceptance. The procedures for acceptance are described in this Section. Include the costs for all materials, labor, equipment, tools, and incidentals necessary to meet the requirements of this specification in the bid price per ton for the bituminous asphalt. Payment to the Contractor for the bituminous asphalt item(s) will be based on the Contract price per ton and the pay adjustments described in this specification.

.02 Bituminous Concrete Production – Quality Acceptance

(a) Material Production - Tests and Evaluations.

All acceptance tests shall be performed by qualified technicians at qualified laboratories following AASHTO or DelDOT procedures and shall be evaluated using Quality Level Analysis. The Engineer will conduct acceptance tests. The Engineer will directly base acceptance on the acceptance test results, the asphalt cement quality, the Contractor's QC Plan work, and the comparisons of the acceptance test results to the QC test results. The Engineer may elect to utilize test results of the Contractor in some situations toward judging acceptance.

Supply and capture samples, as directed by the Engineer under the purview of the Engineer from delivery trucks before the trucks leave the production plant. Hand samples to the Engineer to be marked accordingly. The sample shall represent the material produced by the Contractor and shall be of sufficient size to allow the Engineer to complete all required acceptance tests. The Engineer will direct the Contractor when to capture these samples, on a statistically random, unbiased basis, established before production begins each day based upon the anticipated production tonnage. The captured sample shall be from the Engineer specified delivery truck. The Contractor may visually inspect the specified delivery load during sampling and elect to reject the load. If the contractor elects to reject the specified delivery truck, each subsequent load will be inspected until a visually acceptable load is produced for acceptance testing. All visually rejected loads shall not be sent to a Department project.

The first sample of the production day will be randomly generated by the Engineer between loads 0 and 12 (0-250 tons). Subsequent samples will be randomly generated by the Engineer on 500-ton sub-lots for the production day. Samples not retrieved in accordance with the Contractor's QC plan will be deemed unacceptable and may be a basis for rejection of material produced. Parallel tests or dispute resolution tests will only be performed on material captured at the same time and location as the acceptance test sample. Parallel test samples or Dispute Resolution samples will be created by splitting a large sample or obtaining multiple samples that equally represent the material. The Engineer will perform all splitting and handling of material after it is obtained by the Contractor.

The Contractor may retain dispute resolution samples or perform parallel tests with the Engineer on any acceptance sample.

The Engineer will evaluate and accept the material on a lot basis. All the material within a lot shall have the same JMF (mixture ID). The lot size shall be targeted for 2000 tons or a maximum period of three days,

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whichever is reached first. If the 2000th ton target lot size is achieved during a production day, the lot size shall extend to the end of that production day. The Contractor may interrupt the production of one JMF in order to produce different material; this type of interruption will not alter the determination of the size or limits of material represented by a lot. The Engineer will evaluate each lot on a subplot basis. The size for each subplot shall be 100 to 500 tons and testing for the sub lots will be completed on a daily basis. For each subplot, the Engineer will evaluate one sample.

The target size of sub-lots within each lot, except for the first sample of the production day, is equal-sized 500 ton sub lots and will be based upon anticipated production, however, more or fewer sublots, with differing sizes, may result due to the production schedule and conditions. If the actual production is less than anticipated, and it's determined a sample will not be obtained (based upon the anticipated tonnage), a new sample location will be determined on a statistically random, unbiased basis based upon the new actual production. If the actual production is going to be 50 tons or greater over the anticipated sub lot production, a new sample location will be determined on a statistically random, unbiased basis based upon the new actual production. The Engineer will combine the evaluation and test results for all of the applicable sublots in order to evaluate each individual lot.

If the Engineer is present, and the quantity exceeds 25 tons, a statistically random sample will be used for analysis. When the anticipated production is less than 100 tons and greater than 25 tons, and the Engineer is not present, the contractor shall randomly select a sample using the Engineer's random location program. The captured sample shall be placed in a suitable box, marked to the attention of the Engineer, and submitted to the Engineer for testing. A box sample shall also be obtained by the contractor at the same time and will be used as the Dispute Resolution sample if requested by the Engineer. The Contractor shall also obtain one liquid asphalt sample (1 pint) per grade of asphalt used per day and properly label it with all pertinent information.

The Engineer will conduct the following tests in order to characterize the material for the pavement compaction quality and to judge acceptance and the pay adjustment for the material:

- AASHTO T312 - Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor
- AASHTO T166, Method C (Rapid Method) - Bulk Specific Gravity of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface Dry Specimens
- AASHTO T308 - Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method
- AASHTO T30 - Mechanical Analysis of Extracted Aggregate
- AASHTO T209 - Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt (HMA)
- ASTM D7227 - Standard Practice for Rapid Drying of Compacted Asphalt Specimens using Vacuum Drying Apparatus

(b) Pavement Construction - Tests and Evaluations.

The Engineer will directly base acceptance on the compaction acceptance test results, and on the inspection of the construction, the Contractor's QC Plan work, ride smoothness as referenced in the contract documents, lift thickness as referenced in the contract documents, joint quality as referenced in the contract documents, surface texture as referenced in the contract documents, and possibly the comparisons of the acceptance test results to the independent test results. For the compaction acceptance testing, the Engineer will sample the work on a statistically random basis and will test and evaluate the work based on daily production.

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Notify the Engineer of any locations within that road segment that may not be suitable to achieve minimum (93%) compaction due to existing conditions prior to paving the road segment. Schedule and hold a meeting in the field with the Engineer in order to discuss all areas that may potentially be applicable to Table 5a before paving starts. Areas that will be considered for Table 5a will be investigated in accordance with the method described in Appendix B. If this meeting is not held prior to paving, no areas will be considered for Table 5a. Areas of allowable exemptions that will not be cored include the following: partial-depth patch areas, driveway entrances, paving locations of less than 100 tons, areas around manholes and driveway entrances, and areas of paving that are under 400 feet in continuous total length and/or 5 feet in width.

The exempt areas around manholes will be a maximum of 4 feet transversely on either side from the center of the manhole, and 20 feet longitudinally on either side from the center of the manhole. The exempt areas around driveway entrances shall be the entire width of the driveway, and 3 feet from the edge of the longitudinal joint next to the driveway. Areas of exemption that will be cored for informational purposes only include: areas where the mat thickness is less than three times the nominal maximum aggregate size as directed by the Engineer, violations of Section 401.08 in the Standard Specifications as directed by the Engineer, and areas shown to contain questionable subgrade properties as proven by substantial yielding under a fully legally loaded truck. Failure to obtain core samples in these areas will result in zero payment for compaction regardless of the exempt status.

The Engineer will evaluate and accept the compaction work on a daily basis. Payment for the compaction will be calculated by using the material production lots as referenced in **.02 Acceptance Plan (a) Material Production - B Tests and Evaluation** and analyzing the compaction results over the individual days covered in the material production lot. The compaction results will be combined with the material results to obtain a payment for this item.

The minimum size of a compaction lot shall be 100 tons. If the compaction lot is between 101 and 1000 tons, the Engineer shall randomly determine four compaction acceptance test locations. If the compaction lot is between 1001 and 1500 tons, the Engineer shall randomly determine six compaction acceptance test locations. If the compaction lot is between 1501 and 2000 tons, the Engineer shall randomly determine eight compaction acceptance test locations. If the compaction lot is greater than 2000 tons, the Engineer shall randomly determine two compaction acceptance test locations per 500 tons.

If a randomly selected area falls within an Engineer approved exemption area, the Engineer will select one more randomly generated location to be tested per the requirements of this Specification. If that cannot be accomplished, or if an entire location has been declared exempt, the compaction testing shall be performed as per these Specifications, but a note will be added to the results that the location was an Engineer approved exempt location.

Testing locations will be a minimum of 1.0 feet from the newly placed longitudinal joint and 50 feet from a new transverse joint. Cut one six (6) inch diameter core through the full lift depth at the exact location marked by the Engineer. Cores submitted that are not from the location designated by the Engineer will not be tested and will be paid at zero pay. Notify the Engineer prior to starting paving operations with approximate tonnage to be placed. The Contractor is then responsible for notifying the appropriate Engineer test personnel within 12 hours of material placement. The Engineer will mark core locations within 24 hours of notification. After determination of locations, the Contractor shall complete testing within two operational days of the locations being marked. If the cores are not cut within two operational days, the area in question will be paid at zero pay for compaction testing.

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Provide any traffic control required for the structural number investigation, sampling, and testing work at no additional cost to the Department. Commence coring of the pavement after the pavement has cooled to a temperature of 140°F or less. Cut each core with care in order to prevent damaging the core. Damaged cores will not be tested. Label each core with contract number, date of construction, and number XX of XX upon removal from the roadway. Place cores in a 6-inch diameter plastic concrete cylinder mold or approved substitute for protection. Separate cores in the same cylinder mold with paper. Attach a completed QC test record for the represented area with the corresponding cores. The Engineer will also complete a test record for areas tested for the QA report and provide to Materials & Research. Deliver the cores to the Engineer for testing, processing, and report distribution at the end of each production day. Repair core holes per Appendix A, Repairing Core Holes in Bituminous Asphalt Pavements. Core holes shall be filled immediately. Failure to repair core holes at the time of coring will result in zero pay for compaction testing for the area in question.

The Engineer will conduct the following tests on the applicable portion of the cores in order to evaluate their quality:

- AASHTO T166, Method C (Rapid Method) B Bulk Specific Gravity of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface Dry Specimens
- AASHTO T209 - Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt
- ASTM D7227 - Standard Practice for Rapid Drying of Compacted Asphalt Specimens using Vacuum Drying Apparatus

The Engineer will use the average of the last five test values of the same JMF (mixture ID) material at the production plant in order to calculate the average theoretical maximum specific gravity of the cores. The average will be based on the production days test results and as many test results needed from previous days production to have an average of five samples. If there are less than five values available, the Engineer will use the JMF design value in addition to the available values to calculate the average theoretical maximum specific gravity.

.03 Payment and Pay Adjustment Factors

The Engineer will determine pay adjustments for the bituminous asphalt item(s) in accordance with this specification. The Engineer will determine a pay adjustment factor for the material produced and a pay adjustment factor for the pavement construction. Pay adjustments for material and construction will be calculated independently. When the pay adjustment calculation for either material or construction falls to zero payment per tables 4, 5, or 5a, the maximum pay adjustment for the other factor will not exceed 100.

Pay Adjustment factors will only be calculated on in place material. Removed material will not be used in payment adjustment calculations.

Material Production Pay Adjustments will be calculated based upon 70% of the contract unit price and calculated according to section .03(a) of this specification. Pavement construction Pay Adjustments will be calculated based upon 30% of the contract unit price and calculated according to section .03(b) of this specification.

(a) Material Production - Pay Adjustment.

Calculate the material pay adjustment by evaluating the production material based on the following parameters:

| Table 2 - Material Parameter Weight Factors | | |
|--|------------------------------------|----------------------|
| Material Parameter | Single Test Tolerance (+/-) | Weight Factor |
| Asphalt Content | 0.4 | 0.30 |
| #8 Sieve (>=19.0 mm) | 7.0 | 0.30 |
| #8 Sieve (<=12.5 mm) | 5.0 | 0.30 |
| #200 Sieve (0.075mm Sieve) | 2.0 | 0.30 |
| Air Voids (4.0% Target) | 2.0 | 0.10 |

Using the JMF target value, the single test tolerance (from Table 2), and the test values, the Engineer will use the following steps to determine the material pay adjustment factor for each lot of material:

1. For each parameter, calculate the mean value and the standard deviation of the test values for the lot to the nearest 0.1 unit.
2. For each parameter, calculate the Upper Quality Index (QU):

$$QU = ((JMF \text{ target}) + (\text{single test tolerance}) - (\text{mean value})) / (\text{standard deviation}).$$
3. For each parameter, calculate the Lower Quality Index (QL):

$$QL = ((\text{mean value}) - (JMF \text{ target}) + (\text{single test tolerance})) / (\text{standard deviation}).$$
4. For each parameter, locate the values for the Upper Payment Limit (PU) and the Lower Payment Limit (PL) from Table 3 - Quality Level Analysis by the Standard Deviation Method. (Use the column for "n" representing the number of sublots in the lot. Use the closest value on the table when the exact value is not listed).
5. Calculate the PWL for each parameter from the values located in the previous step:

$$PWL = PU + PL - 100.$$
6. Calculate each parameter's contribution to the payment adjustment by multiplying its PWL by the weight factor shown in Table 2 for that parameter.
7. Add the calculated adjustments of all the parameters together to determine the Composite PWL for the lot.
8. From Table 4, locate the value of the Pay Adjustment Factor corresponding to the calculated PWL. When all properties of a single test are within the single test tolerance of Table 2, Pay Adjustment factors shall be determined by Column B. When any property of a single test is outside of the Single Test Tolerance parameters defined in Table 2, the Material Pay Adjustment factor shall be determined by Column C.
9. For each lot, determine the final material price adjustment:

Final Material Pay Adjustment =
 (Lot Quantity) x (Item Bid Price) x (Pay Adjustment Factor) x 70%. This final pay calculation will be paid to the cent.

In lieu of being assessed a pay adjustment penalty, the Contractor may choose to remove and replace the material at no additional cost to the Department. When the PWL of any material parameter in Table 2 is below 60, the Engineer may require the removal and replacement of the material at no additional cost to the Department. Test results on removed material shall not be used in calculation of future PWL calculations for Mixture ID.

The test results from the Engineer on production that is less than 100 tons will be combined with the two most recently completed Engineer tests with the same Mixture ID to calculate payment for the lot

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encompassing the single test. If that cannot be accomplished, the approved JMF will be used to calculate payment for the lot encompassing the single test. Payment for previously closed lots will not be affected by the analysis.

When a sample is outside of the allowable single test tolerance for any Materials criteria in Table 2, that sample will be isolated. For payment purposes, the test result of the out of acceptable tolerance sample will be combined with the two previous acceptable samples of the same JMF and analyzed per this specification. The material that is considered out of the acceptable tolerance will only include the material within the represented sub-lot (i.e., a maximum of 500 tons). If the previous acceptable test result is from the previous production day, only the material produced on the second production day will be considered out of tolerance. All future sub lots will not include the isolated test. The pay factors for the out of tolerance sample lot will be calculated using column C of table 4.

If, during production, a QA sample test result does not meet the acceptable tolerances and the Contractor QC sample duplicates the QA sample test result, the Contractor can make an appropriate change to the mixture (within the JMF boundaries), and request to have that sample further isolated. After the Contractor has made appropriate changes, the Contractor will visually inspect each produced load. The first visually acceptable load will be sampled and tested. If that sample test result shows compliance with the specifications, the material that is considered out of the acceptable tolerance will include the material from the previous acceptable test result to the third load after the initially sampled and tested sample. If the sample does not meet the specification requirements, the Engineer will no longer accept material. Production may resume when changes have been made and an acceptable sample and test result is obtained.

| Table 3 B Quality Level Analysis by the Standard Deviation Method | | | | | | | |
|--|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| PU or PL | QU and QL for An@ Samples | | | | | | |
| | n = 3 | n = 4 | n = 5 | n = 6 | n = 7 | n = 8 | n = 9 |
| 100 | 1.16 | 1.50 | 1.79 | 2.03 | 2.23 | 2.39 | 2.53 |
| 99 | - | 1.47 | 1.67 | 1.80 | 1.89 | 1.95 | 2.00 |
| 98 | 1.15 | 1.44 | 1.60 | 1.70 | 1.76 | 1.81 | 1.84 |
| 97 | - | 1.41 | 1.54 | 1.62 | 1.67 | 1.70 | 1.72 |
| 96 | 1.14 | 1.38 | 1.49 | 1.55 | 1.59 | 1.61 | 1.63 |
| 95 | - | 1.35 | 1.44 | 1.49 | 1.52 | 1.54 | 1.55 |
| 94 | 1.13 | 1.32 | 1.39 | 1.43 | 1.46 | 1.47 | 1.48 |
| 93 | - | 1.29 | 1.35 | 1.38 | 1.40 | 1.41 | 1.42 |
| 92 | 1.12 | 1.26 | 1.31 | 1.33 | 1.35 | 1.36 | 1.36 |
| 91 | 1.11 | 1.23 | 1.27 | 1.29 | 1.30 | 1.30 | 1.31 |
| 90 | 1.10 | 1.20 | 1.23 | 1.24 | 1.25 | 1.25 | 1.26 |
| 89 | 1.09 | 1.17 | 1.19 | 1.20 | 1.20 | 1.21 | 1.21 |
| 88 | 1.07 | 1.14 | 1.15 | 1.16 | 1.16 | 1.16 | 1.17 |
| 87 | 1.06 | 1.11 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 |
| 86 | 1.04 | 1.08 | 1.08 | 1.08 | 1.08 | 1.08 | 1.08 |

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| | | | | | | | |
|----|------|------|------|------|------|------|------|
| 85 | 1.03 | 1.05 | 1.05 | 1.04 | 1.04 | 1.04 | 1.04 |
| 84 | 1.01 | 1.02 | 1.01 | 1.01 | 1.00 | 1.00 | 1.00 |
| 83 | 1.00 | 0.99 | 0.98 | 0.97 | 0.97 | 0.96 | 0.96 |
| 82 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.93 | 0.93 |
| 81 | 0.96 | 0.93 | 0.91 | 0.90 | 0.90 | 0.89 | 0.89 |
| 80 | 0.93 | 0.90 | 0.88 | 0.87 | 0.86 | 0.86 | 0.86 |
| 79 | 0.91 | 0.87 | 0.85 | 0.84 | 0.83 | 0.82 | 0.82 |
| 78 | 0.89 | 0.84 | 0.82 | 0.80 | 0.80 | 0.79 | 0.79 |
| 77 | 0.87 | 0.81 | 0.78 | 0.77 | 0.76 | 0.76 | 0.76 |
| 76 | 0.84 | 0.78 | 0.75 | 0.74 | 0.73 | 0.73 | 0.72 |
| 75 | 0.82 | 0.75 | 0.72 | 0.71 | 0.70 | 0.70 | 0.69 |
| 74 | 0.79 | 0.72 | 0.69 | 0.68 | 0.67 | 0.66 | 0.66 |
| 73 | 0.75 | 0.69 | 0.66 | 0.65 | 0.64 | 0.63 | 0.63 |
| 72 | 0.74 | 0.66 | 0.63 | 0.62 | 0.61 | 0.60 | 0.60 |
| 71 | 0.71 | 0.63 | 0.60 | 0.59 | 0.58 | 0.57 | 0.57 |
| 70 | 0.68 | 0.60 | 0.57 | 0.56 | 0.55 | 0.55 | 0.54 |
| 69 | 0.65 | 0.57 | 0.54 | 0.53 | 0.52 | 0.52 | 0.51 |
| 68 | 0.62 | 0.54 | 0.51 | 0.50 | 0.49 | 0.49 | 0.48 |
| 67 | 0.59 | 0.51 | 0.47 | 0.47 | 0.46 | 0.46 | 0.46 |
| 66 | 0.56 | 0.48 | 0.45 | 0.44 | 0.44 | 0.43 | 0.43 |
| 65 | 0.52 | 0.45 | 0.43 | 0.41 | 0.41 | 0.40 | 0.40 |
| 64 | 0.49 | 0.42 | 0.40 | 0.39 | 0.38 | 0.38 | 0.37 |
| 63 | 0.46 | 0.39 | 0.37 | 0.36 | 0.35 | 0.35 | 0.35 |
| 62 | 0.43 | 0.36 | 0.34 | 0.33 | 0.32 | 0.32 | 0.32 |

| Table 3 B Quality Level Analysis by the Standard Deviation Method | | | | | | | |
|--|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| PU or PL | QU and QL for An@ Samples | | | | | | |
| | n = 3 | n = 4 | n = 5 | n = 6 | n = 7 | n = 8 | n = 9 |
| 61 | 0.39 | 0.33 | 0.31 | 0.30 | 0.30 | 0.29 | 0.29 |
| 60 | 0.36 | 0.30 | 0.28 | 0.27 | 0.27 | 0.27 | 0.26 |
| 59 | 0.32 | 0.27 | 0.25 | 0.25 | 0.24 | 0.24 | 0.24 |

| Table 4 - PWL Pay Adjustment Factors | | |
|--------------------------------------|---------------------------------------|---------------------------------------|
| PWL | Pay Adjustment Factor (%) Column B | Pay Adjustment Factor (%) Column C |
| 100 | +5 | 0 |
| 99 | +4 | -1 |
| 98 | +3 | -2 |
| 97 | +2 | -3 |
| 96 | +1 | -4 |
| 95 | 0 | -5 |
| 94 | -1 | -6 |
| 93 | -2 | -7 |
| 92 | -3 | -8 |
| 91 | -4 | -9 |
| PWL<91 | PWL - 100 | PWL - 100 |

(b) Pavement Construction - Pay Adjustments.

The Engineer will determine the pavement construction pay adjustment by evaluating the construction of the pavement, based on the following parameter:

- Degree of compaction of the in-place material

Using the test values for the cores, the Engineer will use the following steps to determine the pavement construction pay adjustment for each lot of work.

1. Calculate the core bulk specific gravity values from the subplot tests values, to the nearest 0.001 unit. Obtain the Theoretical maximum Specific Gravity values from the corresponding laboratory subplot tests.
2. Calculate the Degree of Compaction:
Degree of Compaction =
 $((\text{Core Bulk Specific Gravity}) / (\text{Theoretical Maximum Specific Gravity})) \times 100\%$ recorded to the nearest 0.1%.
3. The average compaction for the sublots shall be averaged together for the compaction level of the lot. The lots compaction test level shall be averaged and recorded to the nearest whole percent.
4. Locate the value of the Payment Adjustment Factor corresponding to the calculated degree of compaction from Table 5 or Table 5a.
5. Determine the pavement construction price adjustment by using the following formula:
Construction Pay adjustment = (Lot Quantity) x (Bid Price) x (Pay Adjustment Factor) x 30%.

| Table 5: Compaction Price Adjustment Highway Locations | | |
|---|---------------|---------------------------|
| Degree of Compaction (%) | Range | Pay Adjustment Factor (%) |
| >= 97.0 | >= 96.75 | -100* |
| 96.5 | 96.26 – 96.74 | -5 |
| 96.0 | 95.75 – 96.25 | -3 |
| 95.5 | 95.26 – 95.74 | -2 |
| 95.0 | 94.75 – 95.25 | 0 |
| 94.5 | 94.26 – 94.74 | 0 |
| 94.0 | 93.75 – 94.25 | 1 |
| 93.5 | 93.26 – 93.74 | 3 |
| 93.0 | 92.75 – 93.25 | 5 |
| 92.5 | 92.26 – 92.74 | 3 |
| 92.0 | 91.75 – 92.25 | 0 |
| 91.5 | 91.26 – 91.74 | 0 |
| 91.0 | 90.75 – 91.25 | -5 |
| 90.5 | 90.26 – 90.74 | -15 |
| 90.0 | 89.75 – 90.25 | -20 |
| 89.5 | 89.26 – 89.74 | -25 |
| 89.0 | 88.75 – 89.25 | -30 |
| 88.5 | 88.26 – 88.74 | -50 |
| =<88.0 | =<88.25 | -100* |

* or remove and replace it at Engineer's discretion

| Table 5A: Compaction Price Adjustment Other¹ Locations | | |
|--|---------------|---------------------------|
| Degree of Compaction | Range | Pay Adjustment Factor (%) |
| >= 97.0 | >= 96.75 | -100* |
| 96.5 | 96.26 – 96.74 | -5 |
| 96.0 | 95.75 – 96.25 | -3 |
| 95.5 | 95.26 – 95.74 | -2 |
| 95.0 | 94.75 – 95.25 | 0 |
| 94.5 | 94.26 – 94.74 | 0 |

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| | | |
|---------|---------------|-------|
| 94.0 | 93.75 – 94.25 | 0 |
| 93.5 | 93.26 – 93.74 | 1 |
| 93.0 | 92.75 – 93.25 | 3 |
| 92.5 | 92.26 – 92.74 | 1 |
| 92.0 | 91.75 – 92.25 | 0 |
| 91.5 | 91.26 – 91.74 | 0 |
| 91.0 | 90.75 – 91.25 | 0 |
| 90.5 | 90.26 – 90.74 | 0 |
| 90.0 | 89.75 – 90.25 | 0 |
| 89.5 | 89.26 – 89.74 | 0 |
| 89.0 | 88.75 – 89.25 | -1 |
| 88.5 | 88.26 – 88.74 | -3 |
| 88.0 | 87.75 – 88.25 | -5 |
| 87.5 | 87.26 – 87.74 | -10 |
| 87.0 | 86.75 – 87.25 | -15 |
| 86.5 | 86.26 – 86.74 | -20 |
| 86.0 | 85.75 – 86.25 | -25 |
| 85.5 | 85.26 – 85.74 | -30 |
| 85.0 | 84.75 – 85.25 | -40 |
| 84.5 | 84.26 – 84.74 | -50 |
| =< 84.0 | =<84.25 | -100* |

* or remove and replace at Engineer's discretion

¹ This chart is to be used for areas where the structural value of the area to be paved is less than 1.75 as determined by the Engineer. See Appendix B - Method for Obtaining Cores for Determination of Roadway Structure. This chart is applicable to rehabilitation work only; full depth construction will not be considered for Table 5a.

.04 Dispute Resolution

Disputes or questions about any test result shall be brought to the attention of the Contractor and the Engineer within two operational days of reported test results. The following dispute resolution procedures will be used. The Engineer and the Contractor will review the sample quality, the test method, the laboratory equipment, and the laboratory technician. If these factors are not the cause of the dispute, a third-party dispute resolution will be used.

Third party resolution testing can be performed at either another Contractor's laboratory, the Engineer's laboratory, or an independent accredited laboratory. Unless otherwise mutually agreed upon by DAPA and the Engineer, the Engineer's qualified laboratory in Dover and qualified personnel shall conduct the necessary testing for third party Dispute Resolution after the Engineer has provided reasonable notice to

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allow the Contractor to witness this testing. When disputes over production testing occur, the samples used for Dispute Resolution testing will be those samples the properly captured, labeled, and stored, as described in the second paragraph of the section of these specifications titled **.02 Acceptance Plan, (a) Material Production - Tests and Evaluations**. If no samples are available, the original testing results will be used for payment calculations.

Dispute Resolution samples for air void content will be heated by a microwave oven.

If there is a discrepancy between the Engineer's acceptance test result and the Contractor's test result, the Contractor may ask for the Dispute Resolution sample to be tested. The Contractor may request up to two dispute resolution samples be tested per calendar year without charge. Any additional Dispute Resolution samples run at the Contractors request where the results substantiate the acceptance test result will be assessed a fee of \$125. Any additional Dispute Resolution samples that substantiate the Contractors test result will not be assessed the fee.

When disputes over compaction core test results occur, the Engineer's acceptance core will be used for the dispute resolution sample. The Contractor will be advised on when the testing will occur as referenced above to witness the testing. The results of the dispute resolution testing shall replace all of the applicable disputed test results for payment purposes.

Appendix A - Repairing Core Holes in Bituminous Asphalt Pavement

Description.

This appendix describes the procedure required to repair core holes in a bituminous concrete pavement.

Materials and Equipment.

The following material shall be available to complete this work:

- Patch Material - DelDOT approved High Performance Cold Patch material shall be used.

The following equipment shall be available to complete this work:

- Sponge or other absorbent material - Used to extract water from the hole.
- Compaction Hammer - mechanical (electrical, pneumatic, or gasoline driven) tamping device with a flat, circular tamping face smaller than 6 inches in diameter.

Construction Method.

After core removal from the hole, remove all excess water from within the hole, and prevent water from re-entering the hole.

Place the patch material in lifts no greater than 3 inches and compact with mechanical tamping device. If the hole is deeper than 3 inches, use two lifts of approximately equal depths so that optimum compaction is achieved. Make sure that the patch surface matches the grade of the existing roadway. Make every effort to achieve the greatest possible compaction

Performance Requirements.

The Engineer will judge the patch on the following basis:

- The patch shall be well compacted
- The patch surface shall match the grade of the surrounding roadway surface.

Basis of Payment.

No measurement or payment will be made for the patching work. The Contractor must gain the Engineer's acceptance of the patching work before the Engineer will accept the material represented by the core.

Appendix B - Method for Obtaining Cores for Determination of Roadway Structure

The Contractor is responsible for obtaining cores in areas that they propose are eligible for compaction price adjustments according to Table 5a in this specification. Table 5a is not applicable for new full-depth pavement box construction. Cores submitted for this process shall be obtained according to the following process.

1. Contact Materials & Research (M&R) personnel to determine if information about the area is already available. If M&R has already obtained cores in the location that is being investigated, the contractor may opt to use the laboratory information for the investigation and not core the area on their own.
2. If M&R does not have information concerning the section of the roadway, the contractor needs to contact M&R to arrange for verification of coring operations. Arrangements shall be made to allow for an individual from M&R to be on the site when the cores are obtained. Cores will be turned over to M&R for evaluation.
3. The Contractor is responsible for providing all traffic control and repairing core holes in accordance to 401699 Appendix A - Repairing Core Holes in Bituminous Asphalt Pavements.
4. Cores are to be taken throughout the entire project for the area in question. Cores will be spaced, from the start of the project in increments determined based on field and project specifics. Cores will be evenly distributed throughout the project location. The cores will be taken in the center of the lane in question.
5. Additional cores may be taken at other locations, if surface conditions indicate that there may be a substantial difference in the underlying section. The location of these cores should be documented and submitted to M&R.
6. Cores shall be full depth and include underlying materials. If there is a stone base included in the pavement section, at a minimum 1 core must have information concerning the thickness of the base. This is determined by augering to the subgrade surface.
7. The calculations used to determine the structural capacity of the roadway is as follows. If the contractor finds, upon starting the coring process, that the areas are of greater thickness than applicable to Table 5a, they may terminate the coring process on their own and retract the request.

Structural Number Calculations

Each pavement box material is assigned a structural coefficient based upon AASHTO design guides. The structural coefficient is used to determine the total strength of the pavement section.

Materials used in older pavement sections are assigned lower structural coefficients to compensate for aging of the materials. The coefficients used to determine the structural number of an existing pavement are:

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| Existing Material | Structural Coefficient |
|-----------------------------------|-------------------------------|
| HMA | 0.32 |
| Asphalt Treated Base | 0.26 |
| Soil Cement | 0.16 |
| Surface Treatment (Tar & Chip) | 0.10 |
| GABC | 0.14 |
| Concrete | 0 - 0.7* |

* The Structural Coefficient of Concrete is dependent upon the condition of the concrete. Compressive strengths & ASR analysis are used to determine condition - contact the Engineer if this situation arises.

Newly placed materials use a different set of structural coefficients. They are as follows:

| New Material | Structural Coefficient |
|--------------------------------|-------------------------------|
| HMA | 0.40 |
| Asphalt Treated Base (BCBC) | 0.32 |
| Soil Cement | 0.20 |
| GABC | 0.14 |

Example:

Location includes placement of a 1.25" Type C overlay on 2.25" Type B. Existing roadway is cored and is shown to consist of 2" HMA on 7" GABC.

Calculation:

For the Type B lift the calculation would be:

| | | | |
|--------------|------------|---|--------------------|
| Existing HMA | $2 * 0.32$ | = | 0.64 |
| GABC | $7 * 0.14$ | = | 0.98 |
| | | | <u>1.62</u> |

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For the Type C lift the calculation would be:

| | | | |
|----------------|--------------|---|--------------------|
| Newly Placed B | $2.25 * 0.4$ | = | 0.90 |
| Existing HMA | $2 * 0.32$ | = | 0.64 |
| GABC | $7 * 0.14$ | = | 0.98 |
| | | | <u>2.52</u> |

11/3/20

602502 - CONVERTING EXISTING CATCH BASIN TO MANHOLE

DESCRIPTION:

This work consists of providing all materials and constructing a manhole from an existing catch basin.

MATERIALS:

| | |
|-----------------------------------|--------------------------------|
| A. PCC, Class A or B | Section 1022 |
| B. Expansion Joint Material | Section 1042 |
| C. Bar Reinforcement | Section 611 and Section 1037 |
| D. Curing Compound | Section 1022 |
| E. Welding | AASHTO / AWS D1.1 Welding Code |
| F. Castings | Section 1039.7 |
| G. Steps | AASHTO M199 and ASTM C478 |
| H. Polypropylene | ASTM D4101 |
| I. Borrow, Type C | Section 1001 |
| J. Rectangular Precast Structures | ASTM C913 |

CONSTRUCTION METHODS:

Construct in accordance with section 602.3

METHOD OF MEASUREMENT:

The Department will measure as each the quantity of catch basins converted to manholes and accepted.

BASIS OF PAYMENT:

- A. The Department will pay the quantity of catch basins converted to manholes. Price and payment will constitute full compensation for:
1. saw cutting;
 2. reinforcing steel;
 3. frames and covers;
 4. excavating within the template of the item;
 5. removal and disposal of existing materials;

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6. providing and placing materials;
7. forms and forming;
8. supplying, placing, finishing, and curing PCC;
9. joints;
10. expansion joint material;
11. sealing;
12. backfilling;
13. all labor, equipment, tools, and incidentals necessary to complete the item.

1/20/22

701500 - PCC CURB, TYPE 1, MODIFIED

DESCRIPTION:

This work consists of providing all materials and constructing PCC Curb, Type 1, Modified at the location(s) as called for on the Plans.

MATERIALS:

- | | | |
|----|---|--------------|
| A. | PCC, Class B | Section 1022 |
| B. | Curing Compound | Section 1022 |
| C. | ½-inch Preformed Expansion Joint Material | Section 1042 |
| D. | Bituminous Joint Sealant | Section 1042 |

CONSTRUCTION METHODS:

- A. Construct curb in accordance with Section 701.3

METHOD OF MEASUREMENT:

- A. The Department will measure PCC Curb, Type 1, Modified as the number of linear feet measured along the linear face of acceptably placed and completed curb.

BASIS OF PAYMENT:

- A. The Department will pay for PCC Curb, Type 1, Modified at the contract unit price per linear foot. Price and payment will constitute full compensation in accordance with Section 701.5

4/5/2022

701510 - CURB/SIDEWALK OPENING

Description.

This work consists of providing all materials and constructing curb/sidewalk openings.

Materials.

- | | | |
|----|---|------------------------------|
| A. | PCC, Class B | Section 1022 |
| B. | Curing Compound | Section 1022 |
| C. | 1/2-inch Preformed Expansion Joint Material | Section 1042 |
| D. | Bituminous Joint Sealant | Section 1042 |
| E. | Bar Reinforcement | Section 611 and Section 1037 |

Construction.

Construct curb/sidewalk in accordance with Section 701.3 and 705.3

Method of Measurement.

The Department will measure the quantity of curb/sidewalk openings as the actual number installed in place and accepted.

Basis of Payment.

The Department will pay for curb/sidewalk openings at the contract unit price per each. Price and payment will constitute full compensation in accordance with Section 701.5 and 705.5.

12/1/2022

701515 – CURB OPENING, MODIFIED

Description.

This work consists of constructing modified PCC curb openings for the width as indicated in the construction plans.

Materials.

- | | | |
|----|--|------------------|
| A. | PCC, Class B | Section 1022 |
| B. | Liquid Membrane-Forming Compounds for Curing | Section 1045.7 |
| C. | 1/2-Inch Preformed Expansion Joint Material | Section 1042.2.A |
| D. | Bituminous Joint Sealant | Section 1042.2.B |

Construction.

Construct PCC curb opening in accordance with Section 701.3.

Method of Measurement.

The Department will measure modified curb openings as the number of modified curb openings installed.

Basis of Payment.

The Department will pay the quantity of modified curb openings at the contract unit price per each. Price and payment will constitute full compensation in accordance with Section 701.5.

06/11/2024

701516 – CURB/SIDEWALK OPENING, MODIFIED

Description.

This work consists of providing all materials and constructing curb/sidewalk openings and in accordance with the details on the contract plans.

Materials.

- | | | |
|----|---|------------------------------|
| A. | PCC, Class B | Section 1022 |
| B. | Curing Compound | Section 1022 |
| C. | 1/2-inch Preformed Expansion Joint Material | Section 1042 |
| D. | Bituminous Joint Sealant | Section 1042 |
| E. | Bar Reinforcement | Section 611 and Section 1037 |

Construction.

Construct curb/sidewalk in accordance with Section 701.3 and 705.3

Method of Measurement.

The Department will measure the quantity of curb/sidewalk openings as the actual number installed in place and accepted.

Basis of Payment.

The Department will pay for curb/sidewalk openings at the contract unit price per each. Price and payment will constitute full compensation in accordance with Section 701.5 and 705.5.

06/11/2024

705528 – TEMPORARY CURB RAMP

Description:

This work consists of providing all materials and installing temporary curb ramps at the required locations as required for maintenance of traffic and pedestrians.

Materials:

The engineer shall approve the temporary curb ramp materials including the posts and methods of fabrication prior to installation.

Construction Methods:

- A. Curb ramps must be provided wherever an accessible pedestrian route crosses a curb or experiences a change of grade requiring a temporary curb ramp.
 - 1. The smallest possible slope should be used for all ramps and the maximum slope is 1:12.
 - 2. Transitions from ramps to walks or streets should be flush without abrupt changes. The adjoining landing areas, within 3 feet of temporary curb ramps, shall not exceed 1:20.
 - 3. Temporary curb ramps must have a minimum width of 36 inches, exclusive of flared sides. The maximum slope of the flare shall be 1:10.
 - 4. Temporary curb ramp surfaces must be stable and slip resistant.
 - 5. Changes in surface level up to 1/4-inch may be vertical without edge treatment.
 - 6. If a curb ramp is located where pedestrians must walk across the ramp or where the ramp is not shielded by handrails or guardrails, it must have flared sides.
- B. Locations of curb ramps to be used during each stage of construction will be submitted to the Engineer as part of the maintenance of pedestrian access plan for approval.
- C. The temporary curb ramps will be moved as needed so that adjacent construction activities and pedestrian access can coexist within the project site simultaneously as required.

Method of Measurement:

The Department will measure the quantity of temporary curb ramp as each placed and accepted.

Basis of Payment:

- A. The Department will pay for temporary curb ramp at the contract unit price per each. Price and payment will constitute full compensation for:
1. Providing and placing all materials;
 2. cleaning and maintaining the curb ramp area;
 3. moving or repositioning curb ramps; and
 4. removal and disposal of the temporary curb ramps.

8/2/2021

707500 - CHANNEL BED FILL

Description.

This work consists of providing and placing channel bed fill.

Materials.

- A. Provide aggregate material meeting the following requirements:
1. Natural, rounded, unwashed and uncrushed aggregate material meeting the gradation of Table 1 when tested in accordance with AASHTO T-11 and T-27.
 - a. Aggregate material meeting this requirement may be located within the excavation area of the project. This material may be salvaged by separating and stockpiling the material meeting the requirements of Table 1 and Notes 1&2.
 - b. Angular quarried aggregate is unacceptable.

Table 1

| Percent Passing | Light ³ | Medium ⁴ | Heavy |
|-----------------|---------------------|---------------------|---|
| 5-inch | 100 | 90-100 ¹ | Gradation to be noted on Plan sheets |
| 1-inch | 70-100 ¹ | 0-20 ² | |
| 3/4-inch | 30-95 | | |
| 3/8-inch | 0-10 ² | | |

Notes:

- ¹ Salvaged materials may contain material exceeding this size and be acceptable.
- ² Salvaged materials may contain up to 20% passing the 3/8-inch sieve but not to exceed 10% passing the #200 sieve when tested in accordance with AASHTO T-11.
- ³ Unless noted otherwise on plan sheets, light gradation shall be used in locations in Sussex County
- ⁴ Unless noted otherwise on plan sheets, medium gradation shall be used in locations in Kent and New Castle Counties.

Construction.

Place channel bed fill to the dimensions and at the locations shown on the plans or as established by the engineer.

Method of Measurement.

The Department will measure the quantity channel bed fill as the number of cubic yards of material placed and accepted.

Basis of Payment.

- A. The Department will pay for channel bed fill at the contract unit price per cubic yard. Price and payment will constitute full compensation for:
 - 1. Providing all materials;
 - 2. salvaging and stockpiling;
 - 3. hauling;
 - 4. removal and disposal; and
 - 5. all incidentals required to complete the Work.
- B. The Department will pay for excavation in accordance with section 203.

1/20/22

709505 – WEEP HOLE RETROFIT, 4” DIAMETER

Description:

This item consists of providing and installing a 4-inch diameter weep hole filter.

Materials:

- A. Weep Hole Filter: 4” Diameter Jet Filter SS (JF4SS) manufactured by Jet Filter System LLC, or approved equal.
- B. Coarse Aggregate, No. 57 Stone Section 1004

Construction:

- A. Perform any concrete repairs prior to installation of weep hole retrofit.
- B. At locations and invert elevations indicated in the plans, core through the thickness of the wall plus an additional 1-foot.
- C. Pack the core hole beyond the depth of the weep hole filter with No. 57 Stone prior to installation of the filter.
- D. Install weep hole filter in accordance with manufacturer’s instructions.

Method of Measurement:

The Department will measure the quantity of Weep Hole Retrofit, 4” Diameter as the number of each filter placed and accepted.

Basis of Payment:

The Department will pay the quantity of Weep Hole Retrofit, 4” Diameter at the contract unit price per each. Price and payment constitute full compensation for providing and placing all materials, coring holes, and all incidentals required to complete the Work.

06/11/2024

710503 – ADJUST GAS VALVE BOXES

Description:

This work consists of vertically adjust gas valve boxes.

Construction:

Adjust the gas valve box to be flush with the pavement surface in accordance with the contract or as directed by the engineer. Locate the valve box directly over the valve, plumb and level.

Method of Measurement:

The Department will measure the adjusting of gas valve boxes on a per each basis.

Basis of Payment:

The Department will pay for each gas valve box acceptably adjusted. Price and payment will constitute full compensation for all incidentals to complete the Work.

5/19/21

710511– FLEXIBLE COUPLING

Description:

This work consists of providing and placing flexible couplings to connect clay/terracotta pipe to PVC pipe.

Materials:

- A. Specially formulated PVC (polyvinyl chloride) compound that performs as a coupling to ensure leak proof pipe seal connections for 6-inch inside diameter clay/terracotta pipe and 6-inch inside diameter PVC pipe.
- B. Stainless steel clamp attachment to the circumference of the PVC coupling are corrosion-resistant and rust proof.
- C. Materials in accordance with ASTM D5926, C1173, and CSA B602.
- D. Supply all materials of the product from a single manufacturer.

Construction:

- A. Installation
 - 1. Prior to installation, ensure the circumference of the pipe that the flexible coupling will be installed over is free of dust, fines, and soil particles.
 - 2. Install flexible coupling in accordance with manufacturer's specification.
 - 3. Properly center the two pipe ends inside the flexible coupling.
 - 4. Tighten stainless steel clamps according to manufacturer's specification.
 - 5. Inspect the completely installed flexible coupling and connected pipes with the engineer before backfilling the excavation.
- B. The engineer will reject flexible coupling installation for any of the following reasons:
 - 1. Spalls and cracks on the connecting pipes.
 - 2. Damaged flexible coupling and/or missing stainless steel clamps.
 - 3. Two pipe ends are inserted inside the flexible coupling at the same time.
- C. The engineer will determine the need for remediation or replacement of flexible coupling post-installation for any of the following reasons:
 - 1. Improper flexible coupling installation.
 - 2. Vertical and horizontal misalignment of the connecting pipe.
 - 3. Joint leakage at the pipe end.
 - 4. Differential joint movement at the pipe end.

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5. Loose/Overtightened steel clamps.
6. Uneven pipe ends inside the flexible coupling.

Method of Measurement:

The Department will measure the quantity of flexible coupling as the number of each fabricated, installed, and accepted.

Basis of Payment:

- A. The Department will pay the quantity of flexible coupling at the contract unit price for each. Price and payment constitute full compensation for providing and placing all materials and all incidentals required to complete the Work.
- B. The Department will pay for:
 1. Excavation in accordance with Section 202.
 2. Backfill and Backfilling in accordance with Sections 202 and 207 or 209.
 3. Pipe in accordance with Section 602.
- C. The Department will make no payments for couplings rejected and reinstalled at the direction of the engineer.

06/11/2024

711500 - ADJUST AND REPAIR EXISTING SANITARY MANHOLE

DESCRIPTION:

Adjust and repair existing sanitary manholes.

MATERIALS:

- | | |
|---------------------------------------|--------------|
| A. Manhole frames, lids, and castings | Section 711 |
| B. PCC, Class B | Section 1022 |
| C. Bar Reinforcement | Section 611 |

CONSTRUCTION METHODS:

A. Vertically adjust the sanitary manhole to be flush with the pavement or surrounding surface in accordance with the contract or as directed by the engineer.

B. Repair any damage to the existing sanitary manhole to the satisfaction of the engineer and utility owner in accordance with Section 711.3

C. If there is a conflict between the Department's specifications and the specifications of the utility owner, the utility owners specifications take precedence.

METHOD OF MEASUREMENT:

The Department will measure the adjustment and repair of sanitary manholes on a per each basis.

BASIS OF PAYMENT:

The Department will pay for each sanitary manhole acceptably adjusted and repaired. Price and payment will constitute full compensation for all materials, labor, tools, equipment, and incidentals.

5/19/21

727511 – PROVIDE ORNAMENTAL STEEL FENCE ON MEDIAN BARRIER

727512 – INSTALL ORNAMENTAL STEEL FENCE ON MEDIAN BARRIER

Description:

The work consists of providing and installing the ornamental steel fence system on concrete median barrier.

Materials:

- A. Obtain Department approval for all materials before use.
 1. The Department's approval of a source, certification, or approved product does not constitute final acceptance. If materials do not meet the contract requirements at the jobsite before or after use, remove or correct the materials to comply with the contract.
- B. Ornamental Steel Fence
 1. Style in accordance with the Plans, 3-rail system with extended picket bottom rail treatment.
 2. The aligned pickets and rails shall be joined at each picket-to-rail intersection by the fusion welding process, thus completing the rigid panel assembly.
 3. Steel material for fence panels and posts shall conform to ASTM A653/A653M.
 - a. Minimum yield strength of 45,000 psi.
 - b. Minimum zinc (hot-dip galvanized) coating weight of 0.60 oz/ft².
 4. Steel material for base plates shall conform to ASTM A36/A36M, with a minimum yield strength of 36,000 psi.
 5. Material for fence pickets shall be 18 Gauge tubing, fence posts shall be 16 Gauge steel, and fence rails shall be 14 Gauge steel.
 6. Hardware
 - a. Anchor bolts shall conform to ASTM F1554, Grade 55.
 - b. Nuts for anchor bolts shall conform to ASTM A563.
 - c. Washers for anchor bolts shall conform to ASTM F436.
 - d. Galvanize all anchor bolt hardware in accordance with Section 1039.10.
 7. Pickets, posts, and rails shall be pre-cut to specified lengths. Rails shall be pre-punched to accept pickets.

8. The manufactured fence system, shall meet ASTM F2408-16 Required Test Load Capabilities identified for commercial fence.

9. The manufactured panels, posts, and base plates shall have been subjected to an inline electrode position coating (E-Coat) process consisting of a multi-stage pretreatment/wash, followed by a duplex application of an epoxy primer and an acrylic topcoat. The minimum cumulative coating thickness of epoxy and acrylic shall be 2 mils. The color shall be black. The coated panels, posts, and base plates shall be capable of meeting the performance requirements for each quality characteristic shown in Table 1.

10. The fence panels must allow the bottom rail to remain uniform on slope grade with an extended picket bottom rail treatment.

| Table 1 – Coating Performance Requirements | | |
|---|-------------------------------|---|
| <u>Quality Characteristics</u> | <u>ASTM Test Method</u> | <u>Performance Requirements</u> |
| Adhesion | D3359 – Method B | Adhesion (Retention of Coating) over 90% of test area (Tape and knife test). |
| Corrosion Resistance | B117, D714 & D1654 | Corrosion Resistance over 1,500 hours (Scribed per D1654; failure mode is accumulation of 1/8” coating loss from scribe or medium #8 blisters). |
| Impact Resistance | D2794 | Impact Resistance over 60 inch lb. (Forward impact using 0.625” ball). |
| Weathering Resistance | D822 D2244, D523 (60° Method) | Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units). |

C. The Department will not allow supplier changes or substitutions once the project starts, without the engineer’s approval.

Construction Methods:

A. Submittals

1. The manufacturer’s performance specification, manufacturer’s installation recommendations, sample fence material section, shop drawings, and warranty certification shall be submitted in advance of construction and approved by the engineer. Shop drawings shall detail Fence Panel, Brackets, Footing/Post Detail and Taper End Section Detail in accordance with the Plans and section 105.4.

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B. Install Ornamental Steel Fence

1. Install Ornamental Steel Fence in accordance with the manufacturer's installation recommendations.
2. All installation shall be laid out in accordance with the Plans.
3. Provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.
4. Fence post spacing may vary between 4' minimum and 8' maximum. An 8' panel shall be used wherever possible.
5. Fence posts shall be centered along the median barrier.
6. For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade.
7. Fence panels shall be attached to posts with brackets supplied by the manufacturer.
8. When cutting/drilling rails or posts, adhere to the following steps to seal the exposed steel surfaces.
 - a. Remove all metal shavings from cut area.
 - b. Apply zinc-rich primer to thoroughly cover cut edge and/or drilled hole; let dry.
 - c. Apply 2 coats of custom finish paint matching fence color.
9. Manufacturer approved paint pens shall be used to prime and finish exposed surfaces.
10. Install taper end sections at specified locations in accordance with the Plans.

Method of Measurement:

A. Provide ornamental steel fence on median barrier

1. The Department will measure ornamental steel fence on median barrier as the number of linear feet along the fence that is provided and accepted.

B. Install ornamental steel fence on median barrier

1. The Department will measure ornamental steel fence on median barrier as the number of linear feet along the fence that is installed and accepted.

Basis of Payment:

- A. The Department will pay the quantity of providing the ornamental steel fence on median barrier at the contract unit price per linear foot provided and accepted. Price and payment will constitute full compensation for providing and storing the materials.

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B. The Department will pay the quantity of installing the ornamental steel fence on median barrier at the contract unit price per linear foot installed and accepted. Price and payment will constitute full compensation for:

1. Removal and disposal of existing materials;
2. drilling and epoxying all connections to barrier;
3. providing and placing concrete and epoxy for anchor bolts;
4. installing all fittings and hardware;
5. erecting fence;
6. tapering fence end sections;
7. removal of surplus materials; and
8. incidentals required to complete the Work.

C. The Department will pay for:

1. Concrete Median Barrier accordance with Section 723.

D. Product Warranty

1. All structural fence components (i.e. rails, pickets, and posts) shall be warranted by the manufacturer for a period of 20 years from the date of original purchase. Warranty shall cover any defects in material finish, including cracking, peeling, chipping, blistering or corroding.
2. Reimbursement for labor necessary to restore or replace components that have been found to be defective under the terms of manufactures warranty shall be guaranteed for 5 years from date of original purchase.
3. Warranty must be the manufacturers published warranty. Project specific warranties will not be accepted.

12/6/2022

763501 - CONSTRUCTION ENGINEERING

763597 – UTILITY CONSTRUCTION ENGINEERING

DESCRIPTION:

- A. This work consists of construction lay out. Subsection 105.10 Construction Stakes, Lines and Grades will be replaced by this spec.
- B. The Department will only establish the following:
 - 1. Original and final cross-sections for borrow pits.
 - 2. Final cross-sections:
 - a. Top and bottom pay limit elevations for all excavation bid items that are not field measured by construction inspection personnel.
 - b. The contractor shall notify the engineer when these pay limit elevations are ready and allow for a minimum of two calendar days for the engineer to obtain the information.
 - 3. Line and grade for extra work added on to the project plans.
- C. When applicable, this work will also consists of providing construction and right-of-way/easement information to utility companies performing work (as defined in the Utility Statement) within the LOC.

MATERIALS:

Not applicable.

CONSTRUCTION METHODS:

- A. Equipment
 - 1. Use and provide written certification that the equipment/instrument has been calibrated and is within manufacturer's tolerance. The certification shall be dated a maximum of 9 months before the start of construction. Renew the certification a minimum of every 9 months. The equipment/instrument shall have a minimum measuring accuracy of [3mm+2ppmxD] and an angle accuracy of up to 2.0 arc seconds or 0.6 milligons.
 - 2. If the use of GPS technology in construction stakeout is chosen, provide the engineer with a GPS rover and automatic level for the duration of the contract. The GPS rover must be in good working condition and of similar make and model. Provide formal training on the GPS system being used to a maximum of 4, of the engineer's appointees. The formal training must be up to 8

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hours or to the satisfaction of the engineer. At the end of the contract, the engineer will return the GPS rover. If any of the equipment/instruments are found to be out of adjustment or inadequate to perform its function they shall be immediately replaced to the satisfaction of the engineer.

3. Choosing to use GPS technology does not give the authority to use machine control. Construction Engineering (GPS) Machine Control Grading shall only be used if noted in the contract outlining the available files that will be provided and "the Release for delivery of documents in electronic form to a contractor" are signed by all parties prior to delivery of any electronic files. Only files designated in the contract shall be provided. If machine control grading is allowed on the project, see the machine control section of this specification. GPS technology and machine control technology shall not be used in the construction of bridges.

B. Engineering/Survey Staff

1. Provide and have available an adequate engineering staff that is competent and experienced to set lines, grades, and compatibility with the scope of the project. Additionally, employ an engineer or surveyor, licensed in the State of Delaware, to be responsible for the quality and accuracy of the work done by the engineering staff. When individuals or firms other than the contractor perform any professional services under this item, that work shall not be subject to the subcontracting requirements of Subsection 108.1. Assume full responsibility for any errors and/or omissions in the work of the engineering staff.

C. Performance Requirements

1. Construction Engineering shall include establishing:
 - a. the survey points and survey centerlines;
 - b. finding, referencing, offsetting the project control points;
 - c. running a horizontal and vertical circuit to verify the precision of given control points.
2. Establishing plan coordinates and elevation marks for:
 - a. culverts
 - b. slopes
 - c. subbase
 - d. subsurface drains
 - e. paving
 - f. subgrade
 - g. retaining walls
 - h. any other stakes required for control lines and grades.
3. Setting vertical control elevations for:
 - a. footings

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- b. caps
 - c. bridge seats and deck screed.
4. Preserve the Department's project control points and benchmarks. Establish and preserve any temporary control points (traverse points or benchmarks) needed for construction. Any project control points (traverse points) or benchmarks conflicting with construction of the project shall be relocated. Replace any or all stakes that are destroyed at any time during the life of the contract as directed by the engineer. Re-establish centerline points and stationing prior to final cross-sections by the engineer. The vertical control error of closure shall not exceed 0.035 feet times. The horizontal control precision ratio shall have a minimum precision of 1:20,000 feet of distance traversed prior to adjustment.
 5. Perform construction centerline layout of all roadways, ramps, connections, and driveways from project control points set by the engineer. Use the profiles and typical sections provided in the plans shall calculate proposed grades at the edge of pavement or verify information shown on the Grades and Geometric sheets.
 6. Advise the engineer of any horizontal or vertical alignment revisions needed to establish smooth transitions to existing facilities. Immediately bring to the attention of the engineer any potential drainage problem within the project limits. The engineer must approve any proposed variation in profile, width, or cross slope.
 7. Establish the working points at centerlines of bearings on bridge abutments and on piers, mark the location of anchor bolts to be installed, check the elevation of bearing surfaces before and after they are ground, and set anchor bolts at their exact elevation and alignment in accordance with the contract. Before completion of the fabrication of beams for bridge superstructures, verify the locations, both vertically and horizontally, of all bearings and assume full responsibility for fabricated beams fitting and bearing as constructed. After beam erection and concurrently with the Department project surveyors or their designated representative, survey top of beam elevations at a maximum of 10-foot stations and compute screed grades. Submit the beam elevations to the engineer for review and approval before the stay-in-place forms are set. Construction stakes and other reference control marks shall be set at intervals as established by the engineer to assure that all components of the structure are constructed in accordance with the lines and grades shown on the plans. Take full responsibility for all structure alignment control, grade control and all necessary calculations to establish and set these controls.
 8. Investigate proposed construction for possible conflicts with existing and proposed utilities. Report any conflicts to the engineer for resolution.

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9. Stake all sidewalk and curb ramp grades in accordance with the contract. Review the stakeout with the engineer prior to construction. The engineer must approve any deviation from the contract in writing.
10. Stake all drainage inlets in accordance with the contract. The offsets and top of grate elevations need to be calculated for each type of drainage inlet specified in the contract in order to line up the drainage inlet's flow line with the specified curb or ditch flow line as shown in the contract. The engineer must approve any deviations from the contract in writing.
11. If wetland areas are involved and specifically defined on the plans the following shall apply:
 - a. Do not enter, damage, or destroy wetland areas, which exist beyond the LOC. These provisions will be strictly enforced, and all personnel shall understand the importance of these provisions.
 - b. Delineate wetlands at the LOC throughout the entire project, before any clearing operations commence as shown on the plans to the satisfaction of the engineer.
 - c. Use orange vinyl flagging material with "Wetland Boundary" printed on the flagging. In wooded areas, tie the flagging on the trees, at approximate 20-foot intervals through wetland areas. In open field and yard areas that have been identified as wetlands, drive 6-foot posts into the ground at approximate 50-foot intervals and tie with the flagging. The flagging shall extend approximately 12-inches in length beyond the post. Use oak posts with cross sectional dimensions of 1 1/2-inches to 2-inches by 1 1/2-inches to 2-inches or 1/4-inch rebar.
 - d. If the flagging has been destroyed and the engineer determines that its use is still required, reflag the area. Flagging shall be replaced within 48 hours of notification that replacement is needed. After 48 hours the engineer may proceed to have the area reflagged.
 - e. Remove all posts and flagging at project acceptance.
 - f. Assume any responsibility for any damages to wetlands located beyond the LOC, which occurs from his/her operations during the life of the contract. Restore all temporarily disturbed wetland areas to their preconstruction conditions.
12. Whenever the engineer will be recording data for establishment of pay limits, the contractor will be invited to obtain the data jointly with the engineer's survey crew(s) in order to agree with the information. If the contractor's representative is not able to obtain the same data, then the information obtained by the engineer shall be considered the information to be used in computing the quantities in question.

D. Submittals

1. All computations, survey notes, electronic files, and other records necessary to accomplish the work shall be preserved and made available to the Department in a neat and organized manner at

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any time as directed by the engineer. The engineer may check all or any portion of the stakeout survey work or notes and any necessary correction to the work shall be made as soon as possible. Provide the engineer with such assistance as may be required for checking all lines, grades, and measurements necessary for the execution of the work. Checking by the engineer shall not relieve responsibility for the accuracy or completeness of the work. Copies of all notes must be provided to the engineer at the completion of the project.

2. Submit any of the following at the engineer's request:
 - a. Proposed method of recording information in field books to ensure clarity and adequacy.
 - b. A printout of horizontal control verification, as well as coordinates, differences, and error of closure for all reestablished or temporary control points.
 - c. A printout of vertical control verification, with benchmark location elevation and differences from plan elevation.
 - d. Sketch of location of newly referenced horizontal control, with text printout of coordinates, method of reference and field notes associated with referencing control - traverse closure report.
 - e. Description of newly established benchmarks with location, elevation, and closed loop survey field notes - bench closure report
 - f. All updated electronic and manuscript survey records.
 - g. Stakeout plan for each structure and culvert.
 - h. Computations for buildups over beams, screed grades, and overhang form elevations.
 - i. A report showing differences between supplied baseline coordinates and field obtained coordinates, including a list of preliminary input data.
 - j. Any proposed plan alteration to rectify a construction stakeout error, including design calculations, narrative and sealed drawings.
 - k. Baseline for each borrows pit location.
 - l. Detailed sketch of proposed overhead ground mounted signs or signals showing obstructions that may interfere with their installation.
 - m. Copies of cut sheets.

E. Machine Control Grading

1. Machine control grading to be used on the project if authorized by the engineer.
2. Use of this procedure and equipment is intended for grading the subgrade surface; it is not intended for the use in constructing final surface grades.
3. Materials:
 - a. Provide all equipment required to perform GPS machine control grading, including

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equipment needed by to verify the work to the engineer.

- b. Use manufacturer's GPS machine control equipment and system to achieve the grading requirements in accordance with the contract.
4. Construction
- a. Convert the electronic data provided by the Department into the format required for the equipment.
 - b. The Department will provide no additional electronic data.
 - c. Perform at least one 500 foot test section with the selected GPS system to demonstrate the capabilities, knowledge, equipment, and experience to properly operate the system and meet acceptable tolerances. The engineer will evaluate and make the determination as to whether additional 500 foot test sections are required. Failure to demonstrate this ability to the satisfaction of the engineer, construct the project using conventional surveying and staking methods.
 - d. DelDOT Responsibilities:
 - i. The Department will set initial vertical and horizontal control points in the field for the project as indicated in the contract.
 - ii. The Department will provide the project specific localized coordinate system.
 - iii. The Department may provide data in an electronic format as indicated in the general notes.
 - (1.) The information provided shall not be considered a representation of actual conditions to be encountered during construction. Providing this information does not relieve the responsibility of making an investigation of conditions to be encountered. This includes site visits, and basing the bid on information obtained from these investigations, and the professional interpretations and judgments of the contractor.
 - (2.) The Department will develop and provide electronic data for use as part of the contract in the format as indicated in the general notes.
 - iv. The Department will provide the following electronic files:
 - (1.) ASCII data files with coordinates and elevations for proposed points as selected by the engineer.
 - (2.) Existing digital terrain model in .dtm file format compatible with software currently used by the Department.
 - (3.) Proposed digital terrain model in .dtm file format compatible with software currently used by the Department.

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- (4.) Design file in .dgn file format, that contains 3D features lines for the proposed design, 3D feature lines are for the proposed top surface elevation only.
- v. The engineer will perform spot checks of the machine control grading results, surveying calculations, records, field procedures, and actual staking. If the work is not being performed in a manner that will assure accurate results, the engineer may order the work to be redone to the requirements of the contract. The engineer may also require the use of conventional surveying and staking.
- e. Contractor's responsibilities:
- i. No less than 2 weeks before the scheduled preconstruction meeting, submit to the engineer for review a written machine control grading work plan which shall include the equipment type, control software manufacturer and version, and proposed location of the local GPS base station used for broadcasting differential correction data to rover units.
 - ii. If the need to establish new control points, traverse from existing control points and verify to be accurate by conventional surveying techniques.
 - iii. Assume all risks and liabilities of any assumptions or manipulations marked from the electronic information provided or if chosen to develop a separate digital terrain model.
 - iv. Ensure that the electronic data provided will function in their machine control grading system.
 - v. Provide the engineer with a GPS rover and Automatic Level, for use during the duration of the contract. At the end of the contract, the GPS rover and Automatic Level will be returned. Provide a total of 8 hours of formal training on the GPS machine control system to the engineer and up to three additional Department appointees per rover.
 - vi. Review and apply the data provided by the Department to perform GPS machine control grading.
 - vii. Convert the electronic data provided by the Department into a format compatible with their system.
 - viii. At the beginning of each work day check and if necessary, recalibrate the GPS machine control system in accordance with the manufacturer's recommendations, or more frequently as needed to meet the requirements of the project.
 - ix. Meet the accuracy requirements as detailed per the Department's standards.
 - x. Establish secondary control points at appropriate intervals and at locations along the length of the project. These points shall be outside the project limits and/or where work is performed. These points shall not to exceed 1000 feet intervals. The horizontal position of these points shall be determined by conventional survey traverse and adjustments from

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the original baseline control points. The conventional traverse shall meet or exceed the Department's Standards. The elevation of these control points shall be established using differential leveling from the project benchmarks, forming a closed loop. A copy of all new control point information including closure report shall be provided and approved by the engineer prior to construction activities. Assume responsibility for all errors resulting from these efforts and correct deficiencies to the satisfaction of the engineer.

- xi. Provide stakes at all alignment control points, at every 500 foot stationing, and where required for coordination activities involving environmental agencies and utility companies.
- xii. Set hubs, at a minimum of 500 foot intervals, at the top of finished grade at all hinge points on the cross section on the main line and at least 4 cross sections on side roads and ramps as directed by the engineer or as shown on the plans. Placement of a minimum of 4 control points outside the limits of disturbance for the excavation of borrow pits, Stormwater Management Ponds, and wetland mitigation sites. These control points shall be established using conventional survey methods for use by the engineer to check the accuracy of the construction.
- xiii. Preserve all reference points and monuments that are identified and established by the engineer for the project.
- xiv. Provide control points and conventional grades stakes at critical points such as, PC's, PT's, superelevation points, and other critical points required for the construction of drainage and roadway structures.
- xv. Follow the guidelines set forth in the "Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques" and follow a minimum of Second Order Class 1, (2-I) classification standards.
- xvi. Automated equipment operations have a high reliance on accurate control networks from which to take measurements, establish positions, and verify locations and features. Therefore, a strong contract control network in the field which is the same or is strongly integrated with the project control used during the design of the contract is essential to the successful use of this technology with the proposed Digital Terrain Model (DTM). Consistent and well designed site calibration for all machine control operations are required to ensure the quality of the contract deliverables. The Contract Control Plan is intended to document which horizontal and vertical control will be held for these operations. Continued incorporation of the Base Station(s) as identified in the Contract Control Plan is essential to maintaining the integrity of positional locations and elevations

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of features. The Contract Control Plan shall be submitted to the Department for review and approval by the Departments Survey Section 3 weeks prior to the start of any machine control work. Operate and maintain all elements of the Machine Grade Control continuously once the operations begin until otherwise approved by the engineer.

5. Contract Control Plan:

- a. Develop and submit a Contract Control Plan for use of Machine Control Grading. Contract control includes all primary and secondary horizontal and vertical control which will be used for the construction contract. Upon the completion of the initial survey reconnaissance and control verification, but prior to beginning primary field operations, submit a Contract Control Plan document. The Contract Control plan shall be signed and sealed by a Delaware licensed Land Surveyor or Delaware Professional Engineer who oversees its preparation for acceptance by the engineer. The plan shall include the following:
 - i. A control network diagram of all existing horizontal and vertical control recovered in the field as contract control.
 - ii. Include a summary of the calculated closures of the existing control network, and which control has been determined to have been disturbed or out of tolerance from its original positioning.
 - iii. An explanation of which horizontal and vertical control points will be held for construction purposes. If necessary, include all adjustments which may have been made to achieve required closures.
 - iv. An explanation of what horizontal and vertical control (including base stations) was set to accomplish the required stakeout or automated machine operation. Include how the position of these new control points was determined.
 - v. Describe the proposed method and technique (technology and quality control) for utilizing the control to establish the existing and/or proposed feature location and to verify the completed feature location and/or measured quantity.
 - vi. A listing of the horizontal and vertical datums to be used and the combined factor to be used to account for ellipsoidal reduction factor and grid scale factor.
 - vii. If chosen to use machine control as a method of measuring and controlling excavation, fill, material placement or grading operations as a method of measuring and controlling excavation, fill, material placement or grading operations, the Control Plan shall include the method by which the automated machine guidance system will initially be site calibrated to both the horizontal and vertical contract control, and shall describe the method and frequency of the calibration to ensure consistent positional results.

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F. Utility construction methods:

1. The engineer must approve all requests for Utility Construction Engineering before the work begins.
2. Instruct utility companies to submit their requests to the engineer. The engineer will decide if the requested work meets the criteria for Utility Construction Engineering or is normal Construction Engineering and pass the requests along with the decision.
3. The survey crew size shall be adequate to efficiently perform the work required and must be approved by the engineer.
4. Work covered under Utility Construction Engineering will fall into two categories:
 - a. Engineering/surveying work that is not necessary for construction of the project, staking the clear zone line, providing cut/fill grades at proposed utility pole locations, staking back of drainage structures, and staking right-of-way lines where construction of the project (exclusive of utilities) is within the right-of-way.
 - b. Engineering/surveying work that is necessary for construction but must be provided for utility companies well in advance of the need and will likely need to be redone later, as determined by the engineer. This can be any of the Construction Engineering work that when done early cannot be expected to remain undisturbed until needed for construction of the project (non-utility).

METHOD OF MEASUREMENT:

- A. The Department will not measure construction engineering.
- B. The Department will measure the quantity of utility construction engineering as the actual number of hours the survey crew is in the field actively engaged in utility construction engineering work.

BASIS OF PAYMENT:

- A. The Department will pay the lump sum unit bid price for this work. Price and payment constitute full compensation for:
 1. the work associated with construction engineering;
 2. providing all equipment and instruments;
 3. providing and placing stakes;
 4. flagging and any reflagging;
 5. reconstruction of work;
 6. all costs related to the development of separate digital terrain model;
 7. reestablishing reference points; and
 8. wetland restoration.

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- B. The Department will pay for utility construction engineering at the contract unit price per hour actively engaged in performing the work. Price and payment will constitute full compensation for:
 - 1. Office work;
 - 2. providing all labor;
 - 3. equipment;
 - 4. instruments;
 - 5. stakes; and
 - 6. other materials necessary to complete the work.
- C. The Department will make monthly payment in proportion to the amount of work done as determined by the engineer.
- D. The Department will not make any adjustment in payment for any issues with equipment to operate the GPS machine control system for any construction items or be justification for granting contract time extension.
- E. The Department will not make any consideration for any extension of contract time or additional compensation due to delays, corrective work, or additional work that may result from faulty and erroneous construction stakeout, surveying, and engineering required.
- F. The Department will not make any adjustments for all liability, costs, or delays if the contractor chooses to develop a separate digital terrain model.

4/20/21

763503 - TRAINEE

DESCRIPTION:

The work will consist of providing training in the construction crafts in accordance with the requirements stated in the General Notices of this proposal under the Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246).

METHOD OF MEASUREMENT:

The quantity of trainee hours will be measured as the actual number of hours the trainee is actively engaged in construction activities.

BASIS OF PAYMENT:

The Department will pay for trainee at a fixed rate of \$0.80 per hour toward the hourly rate.

763518 - CONNECTED MACHINERY

Description:

This work consists of providing electronic data for telematic-equipped machinery within the project limits.

General Requirements:

Connect telematic-equipped machinery to the Department's eConstruction Portal using the Original Equipment Manufacturer (OEM) or approved telematic vendor's open Application Programming Interface (API), in accordance with ISO 15143-3. Transmit data when the machinery's engine is running. Transmit updated data at least every five minutes to the Department's portal.

Submittals:

- A. Provide the following information prior to the first chargeable day of work:
1. Product Data: The OEM or telematic vendor(s) technical literature for each system to be utilized on the project.
 2. Open API Data: The OEM or telematic vendor(s) technical literature for the open API to be utilized on the project.
 3. A list of the applicable machinery expected to be utilized on the project.

Data Connection:

- A. Upon establishing a data connection with the Department's Portal, provide the following telematics data as follows:

| <u>Data Element</u> | <u>Example</u> |
|----------------------------|-----------------------|
| OEM Name | Case IH |
| Model | Puma® 165 |
| EquipmentID | HACT7210HMD101469 |
| Location datetime | 2021-09-16T19:17:47Z |
| Latitude | 26.51067 |
| Longitude | -80.63166 |
| EngineStatus datetime | 2021-09-16T19:17:47Z |

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| | |
|-----------------------------|----------------------|
| Running | True |
| Cumulative Engine Hours | 6939.95 |
| Cumulative Fuel Consumption | 6922 |
| Fuel Consumption UOM | Gal |
| Fuel datetime | 2021-09-16T19:17:47Z |

B. API malfunction or disconnection shall be reported immediately. Rectify any malfunction or disconnection of the API within 24 hours.

Optional Data:

The following telematics data fields may be provided, depending upon equipment type and information availability, but are not required and shall be considered optional:

| <u>Data Element</u> | <u>Example</u> | <u>Equipment Type</u> |
|----------------------------|-----------------------|------------------------------|
| Heading in Degrees | -168 | All |
| Speed | 2.4 | All |
| Speed UOM | MPH | All |
| Width | 12.0 | Paver |
| Width UOM | Ft | Paver |
| Depth | 2.5 | Paver, Miller |
| Depth UOM | In | Paver, Miller |
| Drum RPM | 109 | Miller |

Applicability of Machinery:

A. The following machinery must be connected to the Department's eConstruction Portal:

1. Asphalt Roadway Pavers (excluding sidewalk pavers)
2. Asphalt cold milling machinery (excluding skid steer or loaded mounted cold planning equipment)

B. If equipped with telematics, the following machinery may be connected to the Department's eConstruction Portal.

1. Tandem Rollers
2. Vibratory Soil Compactors
3. Backhoes
4. Loaders
5. Excavators

Method of Measurement:

The Department will not measure connected machinery.

Basis of Payment:

- A. The Department will pay for connected machinery at the contract lump sum price. Price and payment will constitute full compensation for establishing and maintaining the connection between the OEM or telematic vendor and the Department's eConstruction Portal, for all equipment.
- B. The Department will not pay to retrofit equipment to provide optional data fields.

03/19/2024

763520 - ELECTRONIC TICKETING

Description:

This work consists of providing electronic data for material weight tickets delivered to the project. This work also consists of placing an identifying vehicle number on the driver side and the passenger or rear sides of the delivery vehicle. This does not preclude or dismiss any requirement for paper tickets required by the Standard Specifications or other rules and regulations.

General Requirements:

- A. Send electronic tickets (eTicket) to the Department's Electronic Ticketing Portal <https://tickets.delldot.gov> as they are generated. The Department will reject any load that does not have a corresponding eTicket unless the cause is beyond the contractor's control. In such circumstances paper tickets may be permitted at the discretion of the engineer.
- B. Payment for material weight delivered to the project will be based upon the eTickets marked "Delivered", less waste, excess material weight as noted in 105.12 of the Standard Specifications, and any audit corrections.
- C. Do not reissue or reprint tickets that have been marked "Delivered" or "Rejected" without first notifying the engineer. The engineer may reject a reissued or reprinted ticket at their discretion. When a reissued or reprinted ticket is rejected, payment will be based upon the original ticket.

Data Integration:

Request a list of the Department's naming nomenclature. Include in the request an identification of what system the supplier utilizes for its load read-out weighing system. If necessary, create an Application Programming Interface (API) to integrate with the Department's eTicketing Portal. Utilize the API to provide electronic data from the load read-out weighing system at the material source that is readable by the Department's eTicketing Portal. Update the load read-out weighing system and API as necessary to maintain connection the Department's eTicketing Portal.

The data shall be provided as follows:

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| Reference Field No. | Description | Examples | Data Type | Required |
|---------------------|-------------------------------------|--|-----------|----------|
| 1 | Ticket Number | 5126349, 101R, 539-19 | String | Yes |
| 2 | Contract Number | T202011001 | String | Yes |
| 3 | Contract Name (Job) | Walnut Street Streetscape Improvements | String | Yes |
| 4 | Contractor Name (Customer) | Mumford & Miller, Inc.; A Del Construction | String | Yes |
| 5 | Supplier Name | River Asphalt; Allan Myers Materials | String | Yes |
| 6 | Supplier Plant | Plant #1 Dagsboro; Dover Asphalt | String | Yes |
| 7 | Job Number (Location) | Task 1; Location 5 | String | Yes |
| 8 | Weigh Master Name | Johnny Scales | String | Yes |
| 9 | Weigh Master ID | 1234567 | String | Yes |
| 10 | Left Intentionally Blank | | | No |
| 11 | Mix Design ID (Product) | 1628p; AM-WILM-29 76-22 | String | Yes |
| 12 | Material Type (Product Description) | 9.5mm top; 19MM 76-22 NON CARB | String | Yes |
| 13 | Item No. (Product Code) | 401005; 401016 | String | Yes |
| 14 | Load Number | 75 | Number | Yes |
| 15 | Identifying Vehicle Number | T-1 | String | Yes |
| 16 | Hauler | John Doe Trucking | String | Yes |
| 17 | Legal Gross Vehicle Weight | 73,280 | Number | Yes |
| 18 | Loading Date & Time | 2020-06-15T13:45:30 | String | Yes |
| 19 | Gross Weight | 72,980 | Number | Yes |
| 20 | Net Weight | 27,900 | Number | Yes |
| 21 | Truck Tare Weight | 45,080 | Number | Yes |
| 22 | Void | 280 | Number | No |
| 23 | Daily Running Total | 44.43 | Number | Yes |

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All provided weights shall be accurate to 0.01 tons.

Loads which do not have the required data shall be rejected.

Setup and Calibration:

Conduct a test of each supplier's integration with the Department's eTicketing Portal prior to shipping material. Complete test at least 14 days prior to shipping material unless otherwise approved by the engineer. The test must involve at least four calibration eTickets from each supplier approved for use on the project. The calibration eTickets must accurately reflect the categories 1-7 shown above; all other categories shall be marked "TEST". After the engineer confirms the calibration eTickets have been entered into the Department's eTicket Portal, void the eTickets with the reason "Calibration Testing".

Uptime:

Uptime reliability of the material supplier's ticketing system must be 99.5% over any 30-day rolling period. Uptime is defined as the ability for the Department to receive electronic tickets within a maximum of 10 minutes from when the ticket was created.

Load Identification:

Ensure the identifying vehicle numbers on the delivery vehicle correspond to the ticket. Place the numbers on the delivery vehicles such that at least one can be safely read from within the work area. Delivery vehicles without identifying vehicle numbers shall be rejected.

Method of Measurement:

The Department will not measure electronic ticketing.

Basis of Payment:

- A. The cost associated with creating and maintaining an API, providing electronic ticketing data, and placing identifying vehicle numbers on the delivery vehicles is incidental to the item being placed.
- B. The Department will make no payment for material that is rejected.

01/18/2022

763525 – ROAD USER COST

Description:

Road User Cost shall be assessed to compensate failure to open the project to unrestricted highway traffic on time in accordance with the contract's General Description.

Method of Measurement:

The Department will not measure Road User Cost.

Basis of Payment:

The assessment will be determined by the Road User Cost documentation in the General Description of the Contract.

8/3/23

801501 - MAINTENANCE OF RAILROAD TRAFFIC

(Norfolk Southern Railway Company)

I. AUTHORITY OF RAILROAD ENGINEER AND STATE ENGINEER:

- a. The authorized representative of the Railroad Company, hereinafter referred to as "Railroad Engineer", shall have final authority in all matters affecting the safe maintenance of Railroad traffic of their Company including the adequacy of the foundations and structures supporting the Railroad tracks.
- b. The authorized representative of the State, hereinafter referred to as the "Engineer", shall have authority over all other matters as prescribed herein and in the Project Specifications.

II. DEFINITIONS:

- a. For the purpose of this Contract, the following terms, names, titles, and/or abbreviations refer to the following:
 - i. The terms Railroad and NS shall mean the Norfolk Southern Railway Company.
 - ii. The terms DelDOT, State, Department, Agency, Owner of Contract shall mean the Delaware Department of Transportation.

III. NOTICE OF STARTING WORK:

- a. The Contractor shall not commence any work on Railroad rights-of-way until they have complied with the following conditions:
 - i. Given the Railroad written notice, with copy to the Engineer who has been designated to be in charge of the work, at least ten days in advance of the date they propose to begin work on the Railroad's rights-of-way.

Crossing Surfaces

Chief Engineer - D&C
Norfolk Southern Corp.
175 Spring Street, SW
Building Box 142
Atlanta, Georgia 0303

Warning Devices

Chief Engineer - S&C
Norfolk Southern Corp.
99 Spring Street, SW
Building Box 123
Atlanta, Georgia 30303

Bridges & Structures

Chief Engineer
Bridges and Structures
Norfolk Southern Corp.
99 Spring Street, SW
Atlanta, Georgia 30303

- ii. Obtained written authorization from the Railroad to begin work on Railroad rights-of-way, such authorization to include an outline of specific conditions with which he/she must comply.
 - iii. Obtained written approval from the Railroad of Railroad Protective Insurance Liability coverage as required by paragraph 14 herein.
 - iv. Furnished a schedule for all work within the Railroad rights-of-way as required by paragraph IX.b.i.
- b. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

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IV. INTERFERENCE WITH RAILROAD OPERATIONS:

- a. The Contractor shall so arrange and conduct his/her work that there will be no interference with Railroad operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad Company or to poles, wires, and other facilities of tenants on the rights-of-way of the Railroad Company. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service shall be deferred by the Contractor until the flagging service or inspection service required by the Railroad is available at the job site.

- b. Whenever work within Railroad rights-of-way is of such a nature that impediment to Railroad operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his/her operations so that such impediment is reduced to the absolute minimum.

- c. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in their absence, the Engineer, such provision(s) are insufficient, either may require or provide such provisions as they deem necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railroad or the State.

- d. "One Call" services do not locate buried Railroad utilities. The contractor shall contact the Railroad's representative two (2) days in advance of work in those places where excavation, pile driving, or heavy loads may damage the Railroad's underground facilities. Upon request from the Contractor or Sponsor, Railroad forces will locate and paint mark or flag the Railroad's underground facilities. The Contractor shall avoid excavation or other disturbances of these facilities. If disturbance or excavation is required near a buried Railroad facility, the contractor shall coordinate with the Railroad to have the facility potholed manually with careful hand excavation. The facility shall be protected by the Contractor during the course of the disturbance under the supervision and direction of the Railroad's representative.

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V. TRACK CLEARANCES:

- a. The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. If temporary clearances are not shown on the project plans, the following criteria shall govern the use of falsework and formwork above or adjacent to operated tracks.
 - i. A minimum vertical clearance of 22'-0" above top of highest rail shall be maintained at all times.
 - ii. A minimum horizontal clearance of 13'-0" from centerline of tangent track or 14'-0" from centerline of curved track shall be maintained at all times. Additional horizontal clearance may be required in special cases to be safe for operating conditions. This additional clearance will be determined by the Railroad Engineer.
 - iii. All proposed temporary clearances which are less than those listed above must be submitted to Railroad Engineer for approval prior to construction and must also be authorized by the regulatory body of the State if less than the legally prescribed clearances.
 - iv. The temporary clearance requirements noted above shall also apply to all other physical obstructions including, but not limited to: stockpiled materials, parked equipment, placement or driving of piles, and bracing or other construction supports.

Before undertaking any work within Railroad right-of-way, or before placing any obstruction over any track, the Contractor shall:

- i. Notify the Railroad's representative at least 72 hours in advance of the work.
- ii. Receive assurance from the Railroad's representative that arrangements have been made for flagging service as may be necessary.
- iii. Receive permission from the Railroad's representative to proceed with the work.

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- iv. Ascertain that the Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

VI. CONSTRUCTION PROCEDURES:

a. General:

Construction work and operations by the Contractor on Railroad property shall be:

- i. Subject to the inspection and approval of the Railroad.
- ii. In accord with the Railroad's written outline of specific conditions.
- iii. In accord with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.
- iv. In accord with these Special Provisions.

b. Submittal Requirements:

- i. The Contractor shall submit all construction related correspondence and submittals electronically to the Railroad Engineer.
- ii. The Contractor shall allow for 30 days for the Railroad's review and response.
- iii. All work in the vicinity of the Railroad's property that has the potential to affect the Railroad's train operations or disturb the Railroad's Property must be submitted and approved by the Railroad prior to work being performed.

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- iv. All submittals and calculations must be signed and sealed by a registered engineer licensed in the state of the project work.

- v. All submittals shall first be approved by the Sponsor's Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.

- vi. For all construction projects, the following submittals, but not limited to those listed below, shall be provided for review and approval when applicable:
 - 1. General Means and Methods
 - 2. Ballast Protection
 - 3. Construction Excavation & Shoring
 - 4. Pipe, Culvert, & Tunnel Installations
 - 5. Demolition Procedure
 - 6. Erection & Hoisting Procedure
 - 7. Debris Shielding or Containment
 - 8. Blasting
 - 9. Formwork for the bridge deck, diaphragms, overhang brackets, and protective platforms
 - 10. Bent Cap Falsework. A lift plan will be required if the contractor wants to move the falsework over the tracks.

- vii. The Contractor shall include in all submissions a detailed narrative indicating the progression of work with the anticipated timeframe to complete each task. Work will not be permitted to commence until the Contractor has provided the Railroad with a satisfactory plan that the project will be undertaken without scheduling, performance or safety related issues. Submission shall also provide a listing of the anticipated equipment to be used, the location of all equipment to be used and ensure a contingency plan of action is in place should a primary piece of equipment malfunction.

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c. Ballast Protection

- i. The Contractor shall submit the proposed ballast protection system detailing the specific filter fabric and anchorage system to be used during all construction activities.
- ii. The ballast protection is to extend 25' beyond the proposed limit of work, be installed at the start of the project and be continuously maintained to prevent all contaminants from entering the ballast section of all tracks for the entire duration of the project.

d. Excavation:

- i. The subgrade of an operated track shall be maintained with edge of berm at least 10'-0" from centerline of track and not more than 24' below top of rail. Contractor will not be required to make existing section meet this specification if substandard, in which case existing section will be maintained.

e. Excavation for Structures:

- i. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for shoring, shall first be approved by the Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.

VII. ERECTION & HOISTING PROCEDURES:

a. General

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- i. Erection plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-of-way; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of the boom length plus 15'-0" from the centerline of the track.
 - ii. Railroad tracks and other Railroad property must be protected from damage during the erection procedure.
 - iii. A pre-erection meeting shall be conducted with the Sponsor, the Railroad Engineer or their representative, and the key Contractor's personnel prior to the start of the erection procedure.
 - iv. The Railroad Engineer or his designated representative must be present at the site during the entire erection procedure period.
 - v. For field spliced located over Railroad property, a minimum of 50% of the holes for each connection shall be filed with bolts or pins prior to releasing the crane. A minimum of 50% of the holes filled shall be filled with bolts. All bolts must be appropriately tightened. Any changes to previously approved field splice locations must be submitted to the Railroad for review and approval. Refer to Norfolk Southern's Overhead Grade Separation Design Criteria for additional splice details (Norfolk Southern Public Projects Manual Appendix H.1, Section 4.A.3.).
- b. Submittal Requirements
- i. The Contractor shall submit the following for approval by the Railroad Engineer:
 1. As-built beam seat elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Railroad Engineer for review and verification at least 30 days in advance of the erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.
 2. A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or staging locations shown. The location of all tracks and other Railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.

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3. Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
4. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the proposed structure showing complete sufficient details with supporting data for the erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
5. The Contractor shall provide a sketch of all rigging components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Sponsor and the Railroad.
6. A complete erection procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
7. Design and supporting calculations for the temporary support of components, including but not limited to temporary girder tie-downs and falsework.

c. **Blasting:**

The Contractor shall obtain advance approval of the Railroad Engineer and the Engineer for use of explosives on or adjacent to Railroad property. The request for permission to

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use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:

- i. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.
 - ii. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way radios.
 - iii. No blasting shall be done without the presence of an authorized representative of the Railroad. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed (see Section II. Notice of Starting Work) will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.
 - iv. Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his/her expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway's authorized representative. If his/her actions result in delay of trains, the Contractor shall bear the entire cost thereof.
- d. The Railroad representative will:
- i. Determine approximate location of trains and advise the Contractor the appropriate amount of time available for the blasting operation and clean-up.
 - ii. Have the authority to order discontinuance of blasting if, in his/her opinion, blasting is too hazardous or is not in accord with these Special Provisions.

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- e. Track Monitoring
 - i. At the direction of Railroad Engineer, any activity that has the potential to disturb Railroad track structure may require the Contractor to submit a detailed track monitoring program for approval by the Railroad Engineer.
 - ii. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during and after construction. Railroad reserves the right to modify the survey locations and monitoring frequency as necessary during the project.
 - iii. The survey data shall be collected in accordance with the approved frequency immediately furnished to the Railroad Engineer for analysis.
 - iv. If any movement has occurred as determined by the Railroad Engineer, the Railroad will be immediately notified. Railroad, as its sole discretion, shall have the right to immediately require all Contractor operations to be ceased and determine what corrective action is required. Any corrective action required by the Railroad or performed by the Railroad including the monitoring of corrective action of the Contractor will be at project expense.
- f. Maintenance of Railroad Facilities:
 - i. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from his/her operations and provide and maintain any erosion control measures as required. The Contractor will promptly repair eroded areas within Railroad rights-of-way and repair any other damage to the property of the Railroad or its tenants.
 - ii. If, in the course of construction, it may be necessary to block a ditch, pipe or other drainage facility, temporary pipes, ditches or other drainage facilities shall be installed to maintain adequate drainage, as approved by the Road Engineer. Upon completion of the work, the temporary facilities shall be removed and the permanent facilities restored.
 - iii. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

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- g. Storage of Materials and Equipment:
 - i. Materials and equipment shall not be stored within 25' of the centerline of Railroad's track or where they will interfere with Railroad operations, nor on the rights-of-way of the Railroad Company without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad Company will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.
 - ii. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.
- h. Cleanup:
 - i. Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights-of-way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said rights-of-way in a neat condition satisfactory to the Chief Engineer of the Railroad or his/her authorized representative.

VIII. DAMAGES:

- a. The Contractor shall assume all liability for any and all damages to his/her work, employees, servants, equipment and materials caused by Railroad traffic.
- b. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

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IX. FLAGGING SERVICES:

a. When Required:

- i. Flagging will not be provided until the Contractor's insurance has been reviewed & approved by the Railroad.
- ii. Under the terms of the agreement between the State and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the Railroad's right-of-way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a Railroad structure or the Railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.
- iii. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required full time until the project has been completed.
- iv. For Projects exceeding 30 days of construction, Contractor shall provide the flagmen a small work area with a desk/computer and chair within the field/site trailer, including the use of bathroom facilities, where the flagman can check in/out with the Project, as well as to the flagman's home terminal. The work area should provide access to two (2) electrical outlets for recharging radio(s), and a laptop computer; and have the ability to print off needed documentation and orders as needed at the field/site trailer. This should aid in maximizing the flagman's time and efficiency on the Project.

b. Scheduling and Notification:

- i. The Contractor's work requiring Railroad flagging should be scheduled to the limit the presence of a flagman at the site to a maximum of 50 hours per week. The

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Contractor shall receive Railroad approval of work schedules requiring a flagman's presence in excess of 40 hours per week.

- ii. Not later than the time that approval is initially requested to begin work on Railroad right-of-way, Contractor shall furnish to the Railroad and the State a schedule for all work required to complete the portion of the project within Railroad right-of-way and arrange for a job site meeting between the Contractor, the State, and the Railroad's authorized representative. This schedule may be submitted in the format of a bar graft chart. Flagman or flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.

- iii. The Contractor will be required to give the Railroad representative at least 10 working days of advance written notice of intent to begin work within Railroad right-of-way in accordance with this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor will be required to give the Railroad representative at least 3 working days of advance notice before resuming work on Railroad right-of-way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen is present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad. Due to Railroad labor agreements, it is necessary to give 5 working days' notice before flagging service may be discontinued and responsibility for payment stopped.

- iv. If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work on Railroad right-of-way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the State or Railroad.

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c. Payment:

- i. The State will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction.
- ii. The charge to the State by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.
- iii. Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 and 1/2 times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 and 1/2 times the normal rate.
- iv. Railroad work involved in preparing and handling bills will also be charged to the State. Charges to the State by the Railroad shall be in accordance with applicable provisions of Subchapter B, Part 140, Subpart I and Subchapter G, Part 646, Subpart B of the Federal-Aid Policy Guide issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change.

d. Verification:

- i. Railroad's flagman will electronically enter flagging time via Railroad's electronic billing system. Any complaints concerning flagging must be resolved in a timely manner. If the need for flagging is questioned, please contact the Railroad Engineer. All verbal complaints will be confirmed in writing by the Contractor within 5 working days with a copy to the Sponsor's Engineer. Address all written correspondence electronically to Railroad Engineer.
- ii. The Contractor and State will review and sign the Railroad flagman's time sheet (Form 11123), attesting that the flagman was present during the time recorded. Flagmen may be removed by the Railroad if form is not signed. If flagman is removed, the Contractor will not be allowed to re-enter the Railroad right-of-way

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until the issue is resolved. Any complaints concerning flagman or flagmen must be resolved in a timely manner. If need for flagman or flagmen is questioned, please contact Railroad's Engineer, Grade Separation Structures (404)529-1641. All verbal complaints will be confirmed in writing by the Contractor within 5 working days with a copy to the Engineer. Address all written correspondence to:

CROSSING SURFACES

Norfolk Southern Corp.
Office of Chief Engineer
Bridges & Structures
Attn: T. D. Wyatt
Engineer Grade Separation
99 Spring Street, SW
Atlanta, Georgia 30303

- iii. The Railroad flagman assigned to the project will be responsible for notifying the Project Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he/she performs such services for each separate period that services are provided. The Project Engineer will document such notification in the project records. When requested, the Project Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

X. HAUL ACROSS RAILROAD:

- a. Where the Plans show or imply that materials of any nature must be hauled across a Railroad, unless the Plans clearly show that the State has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor will be required to bear all costs incidental to such crossings whether services are performed by his/her own forces or by Railroad personnel.

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- b. No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad Company unless specific authority for its installation, maintenance, necessary watching and flagging thereof and removal, until a temporary private crossing agreement has been executed between the Contractor and Railroad. The approval process for an agreement normally takes 90 days.

XI. WORK FOR THE BENEFIT OF THE CONTRACTOR:

- a. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the Plans; included in the force account agreement between the State and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the State and/or the Railroad.
- b. Should the Contractor desire any changes in addition to the above, then he/she shall make separate arrangements with the Railroad for same to be accomplished at the Contractor's expense.

XII. COOPERATION AND DELAYS:

- a. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his/her schedule he/she shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.
- b. No charge or claim of the Contractor against either the State or the Railroad will be allowed for hindrance or delay on account of railway traffic; any work done by the Railroad or other delay incident to or necessary for safe maintenance of railway traffic or for any delays due to compliance with these special provisions.

XIII. TRAINMAN'S WALKWAYS:

- a. Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10' from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments

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or obstructions allowed during work hours while Railroad's protective service is provided shall be removed before the close of each work day. If there is any excavation near the walkway, a handrail, with 10' - 0" minimum clearance from centerline of track, shall be placed.

XIV. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHT-OF-WAY:

- a. The Contractor and/or the Sponsor's personnel authorized to perform work on Railroad's property as specified above are not required to complete Norfolk Southern Roadway Worker Protection Training; However, the Contractor and the Sponsor's personnel must be familiar with Norfolk Southern's standard operating rules and guidelines, should conduct themselves accordingly, and may be removed from the property for failure to follow these guidelines.
- b. All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Safety boots are strongly recommended.
- c. No one is allowed within 25' of the centerline of track without specific authorization from the flagman.
- d. All persons working near track while train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.
- e. No one is allowed to cross tracks without specific authorization from the flagman.
- f. All welders and cutting torches working within 25' of track must stop when train is passing.
- g. No steel tape or chain will be allowed to cross or touch rails without permission.

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XV. GUIDELINES EQUIPMENT ON RAILROAD RIGHT-OF-WAY:

- a. No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15' of centerline of track without specific permission from Railroad official and flagman.
- b. No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.
- c. All employees will stay with their machines when crane or boom equipment is pointed toward track.
- d. All cranes and boom equipment under load will stop work while train is passing (including pile driving).
- e. Swinging loads must be secured to prevent movement while train is passing.
- f. No loads will be suspended above a moving train.
- g. No equipment will be allowed within 25' of centerline of track without specific authorization of the flagman.
- h. Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman.
- i. No equipment or load movement within 25' or above a standing train or railroad equipment without specific authorization of the flagman.
- j. All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.

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- k. All equipment, loads and cables are prohibited from touching rails.
- l. While clearing and grubbing, no vegetation will be removed from Railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.
- m. No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.
- n. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.
- o. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.
- p. Prior to performing any crane operations, the Contractor shall establish a single point of contact for the Railroad flagman to remain in communication with at all times. Person must also be in direct contact with the individual(s) directing the crane operation(s).

XVI. INSURANCE:

- a. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor will be required to carry insurance of the following kinds and amounts:
 - i. Commercial General Liability Insurance having a combined single limit of not less than \$2,000,000 per occurrence for all loss, damage, cost and expense, including attorneys' fees, arising out of bodily injury liability and property damage liability during the policy period. Said policy shall include explosion, collapse, and underground hazard (XCU) coverage, shall be endorsed to name Railroad specified in item XVI.a.iii.3, below, both as the certificate holder and as an additional insured, and shall include a severability of interests provision.

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- ii. Automobile Liability Insurance with a combined single limit of not less than \$1,000,000 each occurrence for injury to or death of persons and damage to or loss or destruction of property. Said policy or policies shall be endorsed to name Railroad Specified in item XVI.a.iii.3, below, both as the certificate holder and as an additional insured, and shall include a severability of interests provision.

- iii. Railroad Protective Liability Insurance having a combined single limit of not less than \$2,000,000 each occurrence and \$6,000,000 in the aggregate applying separately to each annual period. If the project involves track over which passenger trains operate, the insurance limits required are not less than a combined single limit of \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.

- iv. The standards for the Railroad Protective Liability Insurance are as follows:
 - 1. The insurer must be rated A- or better by A.M. Best Company, Inc.

Note: NS does not accept from insurers Chartts (AIG or Affiliated Company including Lexington Insurance Company), Hudson Group or Liberty or Affiliated Company.

- 2. The policy must be written using one of the following combinations of Insurance Services Office ("ISO") Railroad Protective Liability Insurance Form Numbers:
 - A. CG 00 35 01 96 and CG 28 3110 93; or
 - B. CG 00 35 07 98 and CG 28 31 07 98; or
 - C. CG 00 35 10 01; or
 - D. CG 00 35 12 04; or
 - E. CG 00 35 12 07; or
 - F. CG 00 35 04 13.

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3. The named insured shall read:

Norfolk Southern Railway Company

Three Commercial Place

Norfolk, Virginia 23510-2191

Attn: S. W. Dickerson Risk Management

Note: NS does not share coverage on Railroad Protective Liability Insurance with any other entity on this policy.

4. The description of operations must appear on the Declarations, must match the project description in this agreement, and must include the appropriate Sponsor project and contract identification numbers.
5. The job location must appear on the Declarations and must include the city, state, and appropriate highway name/number, and NS file number for the project number.

Note: Do not include any references to milepost, valuation station, or mile marker on the Insurance policy.

6. The name and address of the prime Contractor must appear on the Declarations.
7. The name and address of the Sponsor must be identified on the Declarations as the "Involved Governmental Authority or Other Contracting Party."
8. Other endorsements/forms that will be accepted are:

A. Broad Form Nuclear Exclusion - Form IL 00 21

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- B. 30-day Advance Notice of Non-renewal or cancellation
- C. Required State Cancellation Endorsement
- D. Quick Reference or Index Form CL/IL 240

9. Endorsements/forms that are NOT acceptable are:

- A. Any Pollution Exclusion Endorsement except CG 28 31
- B. Any Punitive or Exemplary Damages Exclusion
- C. Known injury or Damage Exclusion form CG 00 59
- D. Any Common Policy Conditions form
- E. Any other endorsement/form not specifically authorized in item XV.a.iii.8 above.

b. If any part of the work is sublet, similar insurance, and evidence thereof as specified above, shall be provided by or on behalf of the subcontractor to cover its operations on Railroad's right of way.

c. All insurance required under the preceding subsection "a" shall be underwritten by insurers and be of such form and content, as may be acceptable to the Company. Prior to entry on Railroad right-of-way, the original Railroad Protective Liability Insurance Policy shall be submitted by the Sponsor's Prime Contractor to the Sponsor at the address below for its review and then transmitted to the Railroad. In addition, certificates of insurance evidencing the Sponsor's Prime Contractor's and any subcontractors' Commercial General Liability Insurance shall be issued to the Railroad and the Sponsor at the addresses below, and forwarded to the Sponsor for its review and transmittal to the Railroad. The certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without (30) days advance written notice to Railroad and the Sponsor. No work will be permitted by Railroad on its right-of-way until it has reviewed and approved in writing the evidence of insurance required herein.

- For the Sponsor:

Construction Engineer for the DelDOT District Administrating the Project

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- For the Railroad:

Risk Management

Norfolk Southern Railway Company

Three Commercial Place

Norfolk, Virginia 23510-2191

- d. The insurance required herein shall in no way serve to limit the liability of Sponsor or its Contractors under the terms of this agreement.
- e. Insurance Submission Procedures
- i. Railroad will only accept initial insurance submissions via US Mail or Overnight carrier to the address noted above. Railroad will NOT accept initial insurance submissions via email or faxes. Please provide point of contact information with the submission including a phone number and e-mail address.
 - ii. Railroad requires the following two (2) forms of insurance in the initial insurance submission to be submitted under a cover letter providing details of the project and contact information:
 1. The full original or certified true countersigned copy of the railroad protective liability insurance policy in its entirety inclusive of all declarations, schedule of forms and endorsements along with the policy forms and endorsements.
 2. The Contractor's commercial general, automobile, and workers' compensation liability insurance certificate of liability insurance evidencing a combined single limit of a minimum of \$2M per occurrence of general and \$1M per occurrence of automobile liability insurance naming Norfolk Southern Railway Company, Three Commercial Place, Norfolk, VA 23510 as the certificate holder and as

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an additional insured on both the general and automobile liability insurance policy.

- A. The full original or certified true countersigned copy of the railroad protective liability insurance policy in its entirety inclusive of all declarations, schedule of forms and endorsements along with the policy forms and endorsements.
 - B. The Contractor's commercial general, automobile, and workers' compensation liability insurance certificate of liability insurance evidencing a combined single limit of a minimum of \$2,000,000 per occurrence of general and \$1,000,000 per occurrence of automobile liability insurance naming Norfolk Southern Railway Company, Three Commercial Place, Norfolk, VA 23510 as the certificate holder and as an additional insured on both the general and automobile liability insurance policy.
3. It should be noted that the Railroad does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Railroad must have the full original countersigned policy. Further, please note that mere receipt of the policy is not the only issue but review for compliance. Due to the number of projects system-wide, it typically takes a minimum of 30-45 days for the Railroad to review.

NOTE: The above information listed within Section XVI: Insurance, found above, is based on the most recent information obtained from the Railroad as of the date this Special Provision was written. The Contractor and all their Subcontractors, required to have this type of insurance, are directed to contact the Railroad's Risk Management Section (address found above) in order to meet any insurance revisions or additions required by the Railroad at the time of their bid.

XVII. FAILURE TO COMPLY:

- a. In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:
 - i. The Railroad Engineer may require that the Contractor vacate Railroad property.

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- ii. The Engineer may withhold all monies due the Contractor on monthly statements.

- b. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

XVIII. PAYMENT FOR COST OF COMPLIANCE:

- a. The payment for the item shall be made for at the Contract unit price per Lump Sum bid for "Maintenance of Railroad Traffic (NS)", which price and payment shall constitute full compensation for maintaining Railroad traffic during the life of the project; submission of drawings and procedures to the Railroad; for all incidental costs imposed by the Railroad on the Contractor in accordance with the terms and conditions set in these Specifications; meeting all insurance requirements as described herein; for any cost incidental to or arising from the need to meet any or all requirements outlined, herein; for all materials, labor, tools, equipment, and incidentals necessary to complete the work.

- b. Payment for the Railroad Protective Liability Insurance requirements and all other required Insurance not normally held in force by the contractor shall be made under this Item. All other Insurances (such as, but not limited to, auto, etc.) required for this Contract shall be considered incidental to the Contract.

XIX. PROJECT INFORMATION:

- a. The following information shall be shown on all correspondence with the Railroad:
 - i. Date:
 - ii. NS File No.:
 - iii. NS Milepost:
 - iv. Sponsor's Project No.:

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NOTE:

1. As stated above in this specification, the DelDOT will pay the Railroad directly for protective services required for this project. Should deviation from the sequence of construction plan by the Contractor result in additional costs for protective services than the method and sequence of construction originally shown in the Plans, then that additional cost shall be deducted from monies due the Contractor unless prior permission was obtained from DelDOT to revise the original method.

2. The Contractor's attention is drawn to the section that reads, in part:

"However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required full time until the project has been completed."

3. If such "full time" flagging requirements are imposed by the Railroad because of the Contractor's negligence or willful disregard of Railroad requirements, the Contractor will be held responsible for extra cost involved. Time charges for flagging services provided, but not needed for legitimate pursuit of construction will be recorded and charges for such flagging time will be deducted from monies due the Contractor.

5/24/2022

811502 – RAILROAD FLAGGER (NORFOLK SOUTHERN)

Description:

This work consists of providing railroad flaggers. The Railroad will have the ultimate determination of when Flagger services are required.

Construction:

A. Requirements for Railroad Flagger approval

1. Only the following contractors are approved by Norfolk Southern to provide railroad flaggers:

- a. RailPros (Irving, TX)

Field Support Team

877-315-0513 (option 1)

NS.Info@railpros.com

Adam Brown

334-530-2861

adam.brown@railpros.com

- b. R&R Consulting TEAM (Harrisburg, PA)

David N. Craft

Co-Owner & President

R&R Consulting TEAM, LLC.

PO Box 4739

Harrisburg, PA 17111

717-497-4373 (Cell)

775-521-2495 (E-Fax)

dcraft@rrconsultingteam.com

www.rrconsultingteam.com

2. Obtain approval of the Department and the Railroad before performing any work requiring railroad flagger protection as determined by the Railroad.
3. A railroad flagger is required any time construction activities are taking place on or adjacent to the Railroad property and/or have the potential to foul the Railroad's tracks or operations as determined by the Railroad.

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B. Norfolk Southern must provide approval prior to the Department's Contractor entering their property to perform any work.

1. Refer to Item 801501 - Maintenance of Railroad Traffic (NS) for all requirements to enter Railroad property.

Method of Measurement:

The Department will measure railroad flagger by invoiced hour. Each flagger's hours will be individually recorded and broken down by work activity, into increments no less than one quarter of an hour and submitted by invoice by the railroad flagger.

Basis of Payment:

- A. The Department will pay for railroad flaggers at the contract unit price per hour. Price and payment constitute full compensation for providing railroad flaggers, vehicles, and equipment. Billable hours include:
1. Travel time;
 2. On site flagging time;
 3. Other off site work.
- B. For bidding purposes, the Department has fixed the unit price at \$100.00 per hour. The Department will pay for railroad flagger based on a submitted invoice from the railroad flagger plus 10 percent.
- C. Provide an executed agreement with the firm supplying the railroad flagger(s), indicating the terms and agreed rates for the services provided to the Department.
1. The value of the agreement will not be counted against the contract subletting limit as dictated by Section 108.1.A.
 2. The agreed rates are all-inclusive, they cover per diem expenses including:
 - a. Transportation and vehicle expenses;
 - b. lodging;
 - c. food; and
 - d. all incidentals or other costs billed to the contractor by the Railroad Flagger firm.

3/27/2024

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- 831500 - PROVIDE AND INSTALL UP TO 6" SCHEDULE 80 PVC CONDUIT (OPEN CUT)**
 - 831501 - PROVIDE AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (OPEN CUT)**
 - 831502 - PROVIDE AND INSTALL 3" SCHEDULE 80 PVC CONDUIT (OPEN CUT)**
 - 831503 - PROVIDE AND INSTALL 2-1/2" SCHEDULE 80 PVC CONDUIT (OPEN CUT)**
 - 831504 - PROVIDE AND INSTALL 2" SCHEDULE 80 PVC CONDUIT (OPEN CUT)**
 - 831505 - PROVIDE AND INSTALL 1" SCHEDULE 80 PVC CONDUIT (OPEN CUT)**
- 831506 - PROVIDE AND INSTALL 1" FLEXIBLE METALLIC-LIQUIDTIGHT CONDUIT**
- 831507 - PROVIDE AND INSTALL 2" FLEXIBLE METALLIC-LIQUIDTIGHT CONDUIT**
- 831508 - PROVIDE AND INSTALL 3" FLEXIBLE METALLIC-LIQUIDTIGHT CONDUIT**
- 831509 - PROVIDE AND INSTALL 4" FLEXIBLE METALLIC-LIQUIDTIGHT CONDUIT**
 - 831512 - PROVIDE AND INSTALL 1" SCHEDULE 80 PVC CONDUIT (TRENCH)**
 - 831513 - PROVIDE AND INSTALL 2" SCHEDULE 80 PVC CONDUIT (TRENCH)**
 - 831514 - PROVIDE AND INSTALL 2-1/2" SCHEDULE 80 PVC CONDUIT (TRENCH)**
 - 831515 - PROVIDE AND INSTALL 3" SCHEDULE 80 PVC CONDUIT (TRENCH)**
 - 831516 - PROVIDE AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (TRENCH)**
- 831517 - PROVIDE AND INSTALL 1" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)**
- 831518 - PROVIDE AND INSTALL 2" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)**
- 831519 - PROVIDE AND INSTALL 2-1/2" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)**
- 831520 - PROVIDE AND INSTALL 3" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)**
- 831521 - PROVIDE AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)**
 - 831522 - PROVIDE AND INSTALL 1" GALVANIZED STEEL CONDUIT (TRENCH)**
 - 831523 - PROVIDE AND INSTALL 2" GALVANIZED STEEL CONDUIT (TRENCH)**
 - 831524 - PROVIDE AND INSTALL 2-1/2" GALVANIZED STEEL CONDUIT (TRENCH)**
 - 831525 - PROVIDE AND INSTALL 3" GALVANIZED STEEL CONDUIT (TRENCH)**
 - 831526 - PROVIDE AND INSTALL 4" GALVANIZED STEEL CONDUIT (TRENCH)**
 - 831527 - PROVIDE AND INSTALL 1" GALVANIZED STEEL CONDUIT (BORE)**
 - 831528 - PROVIDE AND INSTALL 2" GALVANIZED STEEL CONDUIT (BORE)**
 - 831529 - PROVIDE AND INSTALL 2-1/2" GALVANIZED STEEL CONDUIT (BORE)**
 - 831530 - PROVIDE AND INSTALL 3" GALVANIZED STEEL CONDUIT (BORE)**
 - 831531 - PROVIDE AND INSTALL 4" GALVANIZED STEEL CONDUIT (BORE)**
 - 831532 - PROVIDE AND INSTALL 1" GALVANIZED STEEL CONDUIT (OPEN CUT)**
 - 831533 - PROVIDE AND INSTALL 2" GALVANIZED STEEL CONDUIT (OPEN CUT)**
 - 831534 - PROVIDE AND INSTALL 2-1/2" GALVANIZED STEEL CONDUIT (OPEN CUT)**

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- 831535 - PROVIDE AND INSTALL 3" GALVANIZED STEEL CONDUIT (OPEN CUT)**
- 831536 - PROVIDE AND INSTALL 4" GALVANIZED STEEL CONDUIT (OPEN CUT)**
- 831537 - PROVIDE AND INSTALL 1" GALVANIZED STEEL CONDUIT (ON STRUCTURE)**
- 831538 - PROVIDE AND INSTALL 2" GALVANIZED STEEL CONDUIT (ON STRUCTURE)**
- 831539 - PROVIDE AND INSTALL 2-1/2" GALVANIZED STEEL CONDUIT (ON STRUCTURE)**
- 831540 - PROVIDE AND INSTALL 3" GALVANIZED STEEL CONDUIT (ON STRUCTURE)**
- 831541 - PROVIDE AND INSTALL 4" GALVANIZED STEEL CONDUIT (ON STRUCTURE)**
- 831542 - PROVIDE AND INSTALL 2" HDPE SDR-13.5 CONDUIT (BORE)**
- 831543 - PROVIDE AND INSTALL 2-1/2" HDPE SDR-13.5 CONDUIT (BORE)**
- 831544 - PROVIDE AND INSTALL 3" HDPE SDR-13.5 CONDUIT (BORE)**
- 831545 - PROVIDE AND INSTALL 4" HDPE SDR-13.5 CONDUIT (BORE)**
- 831560 - PROVIDE AND INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (OPEN CUT)**
- 831561 - PROVIDE AND INSTALL 1-1/2" SCHEDULE 80 PVC CONDUIT (TRENCH)**
- 831562 - PROVIDE AND INSTALL 1-1/2" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)**
- 831563 - PROVIDE AND INSTALL 1-1/2" GALVANIZED STEEL CONDUIT (OPEN CUT)**
- 831564 - PROVIDE AND INSTALL 1-1/2" GALVANIZED STEEL CONDUIT (TRENCH)**
- 831565 - PROVIDE AND INSTALL 1-1/2" GALVANIZED STEEL CONDUIT (BORE)**
- 831566 - PROVIDE AND INSTALL 1-1/2" GALVANIZED STEEL CONDUIT (ON STRUCTURE)**
- 831569 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 1" SCHEDULE 80 PVC CONDUITS IN TRENCH OR OPEN CUT**
- 831570 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 1-1/2" SCHEDULE 80 PVC CONDUITS IN TRENCH OR OPEN CUT**
- 831571 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2" SCHEDULE 80 PVC CONDUITS IN TRENCH OR OPEN CUT**
- 831572 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2-1/2" SCHEDULE 80 PVC CONDUITS IN TRENCH OR OPEN CUT**
- 831573 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 3" SCHEDULE 80 PVC CONDUITS IN TRENCH OR OPEN CUT**
- 831574 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 4" SCHEDULE 80 PVC CONDUITS IN TRENCH OR OPEN CUT**
- 831575 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2" HDPE 13.5 SDR CONDUIT IN DIRECTIONAL BORE**
- 831576 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2-1/2" HDPE 13.5 SDR CONDUIT IN DIRECTIONAL BORE**
- 831577 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 3" HDPE 13.5 SDR CONDUIT IN DIRECTIONAL BORE**

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831578 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 4" HDPE 13.5 SDR CONDUIT IN DIRECTIONAL BORE

831579 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 1" GALVANIZED STEEL CONDUIT IN TRENCH OR OPEN CUT

831580 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 1-1/2" GALVANIZED STEEL CONDUIT IN TRENCH OR OPEN CUT

831581 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2" GALVANIZED STEEL CONDUIT IN TRENCH OR OPEN CUT

831582 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2-1/2" GALVANIZED STEEL CONDUIT IN TRENCH OR OPEN CUT

831583 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 3" GALVANIZED STEEL CONDUIT IN TRENCH OR OPEN CUT

831584 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 4" GALVANIZED STEEL CONDUIT IN TRENCH OR OPEN CUT

831585 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 1" STEEL CONDUIT IN DIRECTIONAL BORE

831586 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 1-1/2" STEEL CONDUIT IN DIRECTIONAL BORE

831587 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2" STEEL CONDUIT IN DIRECTIONAL BORE

831588 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2-1/2" STEEL CONDUIT IN DIRECTIONAL BORE

831589 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 3" STEEL CONDUIT IN DIRECTIONAL BORE

831590 - PROVIDE & INSTALL SECOND AND SUBSEQUENT ADDITIONAL 4" STEEL CONDUIT IN DIRECTIONAL BORE

Description:

This work consists of providing and installing a conduit or shield, of the type and size required.

Materials:

Provide materials in accordance with Section 831.2.

Construction:

A. General Installation Requirements -

1. The Department has the right to reject any installation method proposed for a given work site. PVC shall not be installed under existing pavement unless it is on a continuous roll or with the engineer's written approval.
2. Conduit installed underground shall be installed in a straight line between terminal points. In straight runs, junction well spacing shall be no more than 600 feet for fiber optic conduit or no more than 300 feet for copper in conduit, or as directed by the engineer. If bends are required

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during installation, they must be manufactured sweeping bends. The engineer will be consulted before any bends are installed to ensure that the proper arc is provided.

3. Underground conduit shall have a minimum cover as measured from the finished grade of 24 inches and a maximum cover of 48 inches. The opening shall be filled halfway with the cover material and tamped down firmly before filling in the remainder of the opening. Additional lifts shall be used as required to install the metallic warning tape at the specified depth. All cover material shall be free of rocks, debris, vegetation or other deleterious material that may damage the conduit. An underground utility warning tape shall be installed as specified in this section and the remainder of the fill shall be added, tamping down the top layer.
4. Conduit not terminated to a base or in a junction well shall be terminated 2 feet beyond the edge of the pavement unless otherwise directed by the engineer, and properly capped. Tape is not an approved method. Conduit shall not extend more than 3 inches inside a junction well. See Standard Construction Details or applicable Plan Details for typical methods of termination.
5. All underground conduits shall be marked in the ground with a metallic warning tape. The marking tape shall be buried directly above the conduit run that it identifies, at a depth of approximately 12 inches below final grade. The tape identifying all conduits shall be at least 6 inches wide and have a minimum thickness of 3 mils and 500 percent elongation.
6. The color of the metallic warning tape identifying fiber optic cable should be bright orange (preferably AULCC orange) and shall read "WARNING - OPTICAL CABLE" or other wording approved by the engineer that conveys the same message. The color of the tape identifying all other cables shall be bright red and shall read "WARNING -BURIED ELECTRIC BELOW" or other wording approved by the engineer that conveys the same message.
7. Using conduit tools, rigid metallic conduit shall be cut, reamed, and threaded. The thread length shall be as necessary to ensure that the sections of conduits when screwed into a coupling and tightened correctly will butt together and the joint will be watertight. A three-piece threaded union, as approved by the engineer, shall be used to join two threaded lengths of conduit in the case where a standard coupling will not work. A threaded union shall not be used in a conduit run that is to be driven. At no time is a threadless coupling or a split-bolt coupling to be used for direct buried conduit.
8. All lengths of HDPE conduit shall be connected with irreversible fusion couplings. Mechanical and removable couplings will not be accepted.
9. All lengths of PVC conduit shall be connected by one conduit end fitting inside the flared end of the other conduit section. If this is not possible, then a coupling may be used. Regardless of how connection is made, all joints shall be sealed with the appropriate epoxy to ensure that the two conduit pieces bond to one another to form a solid waterproof link. Using conduit tools, the conduit shall be cut and prepared. If approved by the engineer, a coupler module may be used where conduit segments do not align properly to allow the flared end of one conduit segment to mate with the normal end of the other segment.
10. Sealed end caps (with knockouts if empty) shall be placed on the ends of all conduits, after compressed air has been used to clear all foreign matter.
11. If not already pre-installed by the manufacturer, a polyester or polypropylene pulling rope or tape (fish wire) with a minimum rated strength of 1,250 pounds shall be installed in each conduit for future use. In instances where the Contractor installs the cable, the fish wire may be eliminated.
12. All PVC and HDPE conduits shall have a continuous metallic trace wire installed for the entire length of the conduit run for all fiber installations.
13. Stabilize slopes in accordance with section 908 as directed by the engineer.

B. Installation of Conduit Under Existing Pavement, Directional Bore -

1. Directional bore shall be used for installation of conduits under existing pavement with a conduit diameter not less than 1-1/2-inch. The size of a bore shall not exceed the outside diameter of the conduit by more than 1 inch. If it does, cement grout shall be pumped into the void. Only HDPE and/or Galvanized Steel conduit may be installed by Directional Bore methods.

C. Installation of Conduit Under Existing Pavement, Open Cut -

1. Installation by saw cutting the full pavement depth and removing the existing pavement with an excavator or by hand methods, shall be used only for conduits not less than 1-1/2-inch diameter. The engineer must first approve all open cutting of roadways. The width and length of open cut and patch restoration materials shall be as shown on the plan details. The Contractor shall be responsible for the removal of all cut pavement and surplus excavation, and for the replacement and correction of any damaged pavement outside the sawcut limits after the conduit(s) are installed.

D. Installation of Conduit Under Existing Pavement, Unpaved Trench -

1. Trenching or other approved method shall be used for installation of conduit in unpaved trench or under new pavement. Backfill in conduit trenches shall be compacted thoroughly as it is being placed. At the discretion of the engineer, remove sod to place conduit with an approved sod cutter and replace, or place 6 inches of topsoil and seed in accordance with section 908. In areas where new pavement is to be placed or in areas where total reconstruction is taking place, sodding or seeding may not be required by the engineer.

E. Installation of Conduit on Structure -

1. Conduit installed on structure shall consist of drilling anchors into concrete, brick, stone, steel or wood and mounting the conduit with the proper clamps or hangers. The conduit shall be attached to the structure by use of one-hole conduit hangers and approved anchors not more than 36 inches apart. Any 90-degree turns in the conduit run shall be accomplished by placing the proper size and type manufactured sweeping bends for the application needed.

F. Installation of Additional Conduit in Trench or Open Cut Pavement -

1. In the case of slotted or trenched installations, install additional conduits at the same time as the initial installation. The engineer shall indicate the quantity of conduits to be installed during a build. Additional conduits may be stacked one on top of the other, side by side or in a matrix. Conduits shall not twist around one another or be allowed to deviate from straight line paths except in the case of bend installations. Conduits installed at the same time in the same trench or slot shall remain oriented the same in relation to one another throughout the conduit run.

G. Installation of Additional Conduits in Directional Bore -

1. In the case of a directional bore that more than one conduit shall be installed at the same time as the initial installation, install 1 or more additional conduits. The engineer shall indicate the quantity of conduits to be installed during a build. The additional conduits may be stacked one on top of the other, side by side or in a matrix. Conduits shall not twist around one another or be allowed to deviate from straight line paths except in the case of a gentle bend. Conduits installed at the same time, in the same bore shall remain oriented in the same relation to one another throughout the conduit run.

Method of Measurement:

- A. The Department will measure the quantity of conduit in linear feet of conduit provided and installed and accepted.

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- B. The Department will measure the quantity of conduit in linear feet of conduit installed under existing pavement by a directional bore or by open cutting the pavement along the path of the bore or open cut, from the point that cannot be trenched to the point that trenching can resume.
- C. The Department will measure the quantity of conduit in linear feet of conduit reduced or divided (with a junction well or conduit body) as part of the larger conduit.

Basis of Payment:

- A. The Department will pay for providing and installing conduit at the contract unit price per linear foot. Price and payment will constitute full compensation for:
 - 1. Providing and placing all materials; and
 - 2. labor.
- B. The Department will pay for installing conduit by directional bore at the contract unit price per linear foot. Price and payment will constitute full compensation for:
 - 1. Excavation and backfilling;
 - 2. placing the conduit;
 - 3. caps, if required; and
 - 4. all other requirements.
- C. The Department will pay for installing conduit by open cutting existing pavement at the contract unit price per linear foot. Price and payment will constitute full compensation for:
 - 1. Excavation and backfilling;
 - 2. placing the conduit;
 - 3. disposal of excess materials; and
 - 4. all other requirements.
- D. The Department will pay for installing conduit by unpaved trench at the contract unit price per linear foot. Price and payment will constitute full compensation for:
 - 1. Excavation and backfilling;
 - 2. removal of sod, if required;
 - 3. placing the conduit;
 - 4. disposal of excess materials;
 - 5. replacing excavated on site sod, if required;
 - 6. seeding, if required; and
 - 7. all other requirements.
- E. The Department will pay for:
 - 1. Borrow in accordance with Section 207;
 - 2. Restoring pavement in accordance with Sections 401 or 502;
 - 3. Saw cutting in accordance with Section 762; and
 - 4. Topsoil and seeding or sodding from an outside source in accordance with Section 908.

10/23/23

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850520 - LUMINAIRE (LED), 150 WATTS HPS EQUIVALENT

850521 - LUMINAIRE (LED), 250 WATTS HPS EQUIVALENT

850522 - LUMINAIRE (LED), 400 WATTS HPS EQUIVALENT

850523 - LUMINAIRE (LED), 640 WATTS HPS EQUIVALENT (HIGH MAST ONLY)

850524 - LED WALL PACK, 250 WATTS HPS EQUIVALENT

850525 - LED WALL PACK, 400 WATTS HPS EQUIVALENT

850526 - LED WALL PACK, 75 WATTS HPS EQUIVALENT

850527 - LED WALL PACK, 150 WATTS HPS EQUIVALENT

Description.

This work consists of providing and installing an LED light fixture (luminaire) on pole (not inclusive in this item) with wattage, lamp type and distribution type.

Materials.

The LED Wattages above are based on the equivalent output to HPS lighting. Refer to maximum LED Wattages below.

Provide a complete fixture with a heavy-duty, cast-aluminum housing, door with extruded aluminum heat sink, tool-less entry, hinged removable power tray door for easy maintenance, and have fastening hardware that is stainless steel or zinc plated steel. The fixture shall meet ANSI 136.31 3.0 G vibration requirements. Fixture shall have a two-bolt slip fitter system for mounting on a 1 1/4-inch to 2 3/8-inch mounting arm connection. A grey powder coat finish shall be applied to the fixture unless otherwise shown on the plans, or as directed by the engineer.

The fixture shall also meet the following criteria:

1. Lamps: LED
2. Wattage:
 - a. 50 Watt Maximum for Item No. 850526
 - b. 90 Watt Maximum for Item No. 850520 and 850527

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- c. 175 Watt Maximum for Item No. 850521 and 850524
 - d. 250 Watt Maximum for Item No. 850522 and 850525
 - e. 450 Watt Maximum for Item No. 850523
3. Voltage: 120V - 277V
4. CRI: 70 Minimum
5. Lumens:
- a. 3,000 to 5,000 for Item No. 850526
 - b. 8,000 to 12,000 for Item No. 850520 and 850527
 - c. 16,00 to 20,000 for Item No. 850521 and 850524
 - d. 27,000 to 31,000 for Item No. 850522 and 850525
 - e. 40,000 to 50,000 for Item No. 850523
6. Rated L70 Lamp Life: 100,000-hours minimum when operated at 77-degrees F.
7. Distribution: Type II or Type III (unless otherwise indicated).
8. Color Temperature: 3,000 K - 4,500 K.
9. Drive Current: 850-mA maximum.
10. Driver: 0-10V dimming.
11. IP66 Rating for optical portion of the housing.
12. 10kV/10kA minimum internal surge suppression module, meeting UL 1449/ANSI C62.41.2 Category C.
13. 3 Pin NEMA Photocontrol Receptacle with a Shorting Cap.

Luminaire mounting height shall be as indicated on drawings. Luminaire shall provide point illumination of not less than the given values in the table that follows:

Point 1

| Luminaire | Foot-candle Point Table | |
|---|-------------------------|---------|
| | Point 1 | Point 2 |
| Luminaire (LED), 75 Watts HPS Equivalent | 0.10 | 0.11 |
| Luminaire (LED), 150 Watts HPS Equivalent | 0.16 | 0.22 |
| Luminaire (LED), 250 Watts HPS Equivalent | 0.27 | 0.37 |
| Luminaire (LED), 400 Watts HPS Equivalent | 0.46 | 0.55 |
| Luminaire (LED), 640 Watts HPS Equivalent | 0.55 | 0.60 |

coordinates are 90 feet longitudinal distance. Point 2 coordinates are 90-foot longitudinal and 30-foot transverse. The point values given in the table are based on a 30-foot mounting height with a Light Loss Factor of 1. The point values produced by the submitted fixture shall be included with the fixture submittal.

Metal Parts shall be free of burrs and sharp corners and edges. Doors, frames, and other internal access shall be smooth operating and free of light leakage under operating conditions.

Factory applied labels shall comply with UL 1598. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place. Labels shall include the following lamp characteristics:

1. CCT and CRI for all luminaires

Luminaire finish shall be manufacturers standard paint applied to factory-assembled and tested luminaire before shipping.

Construction.

A. Install luminaires in accordance with the manufacturer's installation instructions and shall follow the following installation requirements:

1. Comply with NECA 1.

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2. Fasten luminaire to pole.
 3. Install luminaires at height indicated on drawings and level and square with finished grade.
 4. Perform an illumination test.
- B. Luminaire identification decals shall be installed to the luminaire housing in accordance with NEMA conventions. Ensure the decal is readily visible from the ground and meets ANSI C136.15-2015 Roadway and Area Lighting Equipment-Luminaire Field Identification standard.
- C. After installation of luminaires and control devices and after electrical circuitry has been energized, test units to confirm proper operation.
- D. Inspect each installed luminaire for damage. Replace damaged luminaires and components.
- E. Luminaires will be considered defective if they do not pass tests and inspections. Provide fixture cutsheets, details, and the IESNA LM-79 and LM-80 test reports to the engineer for shop drawing review before purchasing.
- F. Provide documentation that demonstrates that the proposed model of LED luminaire has been tested for electromagnetic compliance following the measurement protocols specified in ANSI standard C63.4-2003 and required by 47 CFR 15.31.
- G. If the Contract require each light fixture to be provided with an independent photoelectric control device, provide a photocell with each lighting fixture in place of the shorting cap. Provide photoelectric control using solid state circuitry, cadmium sulfide type with hermetically sealed silicone rectifier rated 120-volt, 60-cycle AC and 1000-watts maximum load. Provide photoelectric control with "Fail On" functionality such that in the event of a photocell becoming inoperative, the light fixture will remain in a permanent "On" state through day and nighttime hours. Photo control shall be twist lock type, with suitable mounting bracket with locking type receptacle.
- H. The photoelectric control shall be set to operate, by default factory setting or by field adjustment, using the following criteria:
1. Turn on the light fixture at a minimum vertical illumination value of 3-foot-candles.
 2. Turn off the light fixture at a maximum vertical illumination value of 6-foot-candles.
- I. All electrical materials shall conform to the requirements of the National Electrical Code of the National Fire Protection Association, and to all local and state laws and/or ordinances governing such installations.

Method of Measurement.

The Department will measure the quantity of LED luminaires as the number luminaires provided, installed, and accepted.

Basis of Payment.

- A. The Department will pay for LED luminaires at the contract unit price of each luminaire installed, and accepted. Price and payment will constitute full compensation for:
1. All materials, including the luminaires; and
 2. incidentals required to complete the Work.

2/9/23

908526 – GEOSYNTHETIC CEMENTITIOUS COMPOSITE MAT

Description:

The item consists of providing and installing geosynthetic cementitious composite mat (GCCM). GCCM is a flexible cement impregnated fabric that hardens after hydration into a rigid concrete surface.

Materials:

A. Geosynthetic Cementitious Composite Mat (GCCM)

1. Pre-packaged by the Manufacturer to assure material performance properties.
2. A polyester fiber matrix, which is cement impregnated, manufactured in rolls, which conforms to the shape of its substrate and hardens when watered.
3. Provide GCCM from the following manufacturers:
 - a. Inland Tarp & Liner
4172 N. Frontage Road East
Moses Lake, WA 98837
800-346-7744
 - b. Concrete Canvas USA Inc.
1350 NASA Rd 1, Suite 120
Houston, TX 77058
832-864-2946
 - c. Approved Equal
4. Provide GCCM conforming to the following ASTM specifications:

| <u>Property</u> | <u>Test Method</u> | <u>Required Properties</u> |
|------------------------------|--------------------|----------------------------|
| Dry Thickness | ASTM D5199 | 0.31 inches |
| Cured Thickness | ASTM D5199 | 0.35 inches |
| Dry Weight | ASTM D5261/D5993 | 2.5 psf |
| Cured Weight | ASTM D5261/D5993 | 3.4 psf |
| Compressive Strength (3-Day) | ASTM C109 | 4,000 psi |
| Ultimate Cured Strip Tensile | ASTM D5035 | 49 lb/in |

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| | | |
|---|------------|-----------|
| Strength | | |
| Ultimate Uncured Strip Tensile Strength | ASTM D5035 | 108 lb/in |
| Flexural Strength (7-Day) | ASTM C1185 | 475 psi |

- B. Fastening Hardware: Provide stainless steel self-tapping screws as recommended by the GCCM manufacturer.
- C. Caulk: Provide a caulking compound as recommended by the GCCM manufacturer.
- D. Borrow, Type C Section 209 or 1001

Construction:

A. Submittals

- 1. Submit manufacturer's product data and installation instructions. Include required substrate preparation and a list of fastening devices to be used.
- 2. Submit a manufacturer's letter of certification that the product meets or exceeds all technical and packaging requirements.

B. Delivery, Storage and Handling

- 1. Deliver materials and products in a sealed factory labeled package to prevent moisture from the air or other sources from reaching the GCCM.
- 2. Store and handle in strict compliance with manufacturer's instructions and recommendations.
- 3. Protect from damage, weather, excessive temperatures, and construction operations.

C. Substrate Preparation

- 1. Perform any concrete repairs prior to installation of GCCM.
- 2. Examine substrates and conditions where materials will be applied, in the presence of the engineer.
- 3. Ensure surface is flat with no vertical deviations greater than 1/2-inch to achieve optimum contact of the GCCM with the substrate.
- 4. Backfill any depressions with Type C Borrow in accordance with Section 2.
- 5. Remove rocks or foreign objects larger than 1-inch in diameter and any other material which could damage the GCCM or not allow the GCCM to be directly in contact with the surface.
- 6. Ensure the GCCM makes direct contact with the surface to minimize soil migration under the GCCM.
- 7. Do not install on frozen ground.
- 8. Do not proceed with installation until satisfactory substrate conditions are established.

D. Installation

- 9. Comply with the manufacturer's installation instructions, recommendations, and drawings.

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10. Ensure a manufacturer's representative who is knowledgeable about supplying, delivery, placement, and hydration of GCCM material is on site during the GCCM installation. Do not begin installation until the manufacturer's representative is on site for the material placement.
11. Remove the protective plastic cover from each GCCM roll only when ready to deploy and install to prevent undue exposure to humidity, precipitation, or other construction activities that would cause the GCCM to start to hydrate prior to completing the installation of the roll. Design the GCCM layout to keep field seams to a minimum and to be consistent with proper methods of manufacturer's installation requirements.
12. Begin work at the downstream end of the GCCM installation.
13. Overlap field seams upstream over downstream to allow for shingling and prevent water from striking exposed edges in the direction of water flow.
14. Place GCCM to be free of tensile stresses, folds, and wrinkles using proper spreader and rolling bars to prevent stretching during deployment. Do not drag GCCM sheets across rough soil subbase.
15. Install the approved anchoring devices and caulking in accordance with manufacturer's recommendations.
16. Inspect each panel for damage and/or defects after placement and prior to seaming. Perform repairs in accordance with manufacturer's requirements and as directed by the representative. Remove and replace damaged panels which cannot be repaired.
17. Hydrate GCCM in accordance with the manufacturer's requirements.
18. Do not hydrate the GCCM if ambient temperatures are expected to fall below 32-degrees-F within 8-hours of hydration.
19. Spray the fiber surface multiple times until the GCCM is fully saturated to the satisfaction of the manufacturer's representative.
20. Do not spray high pressure water directly onto the GCCM causing washout of cementitious materials.
21. Verify the GCCM has been sufficiently hydrated per manufacturer's recommendations. Re-wet GCCM immediately if found to be under hydrated.

Method of Measurement:

The Department will measure the quantity of Geosynthetic Cementitious Composite Mat as the number of square feet placed and accepted. The Department will determine the quantity by computations based on field measurements along the completed finished surfaces. As such, no measurement will be taken for any overlapping, spliced, or cutoff material.

Basis of Payment:

- A. The Department will pay the quantity of Geosynthetic Cementitious Composite Mat at the contract unit price per square foot. Price and payment constitute full compensation for:
 1. Providing and submitting all submittals;
 2. the GCCM manufacturer's representative;
 3. providing and placing all materials;

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4. preparing the substrate; and
5. backfill and backfilling.

B. The Department will make no additional payments for:

1. Overlapping material, splices, or material cut off or wasted.
2. Damaged GCCM that could not be repaired and was directed to be replaced.

06/11/2024

STATEMENTS

Included on the following pages:

UTILITY STATEMENTS

RIGHT-OF-WAY STATEMENTS

ENVIRONMENTAL STATEMENTS

RAILROAD STATEMENTS



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
 800 BAY ROAD
 P.O. Box 778
 DOVER, DELAWARE 19903

NICOLE MAJESKI
 SECRETARY

UTILITY STATEMENT
July 1, 2024
STATE CONTRACT NO. T201901102
PROJECT I.D. NO: 19-33001
FAP NO.: NH-N024(25)
US 13 PAVING AND PEDESTRIAN IMPROVEMENTS – LLANGOLLEN BLVD TO
BACON/BOULDEN BLVD
NEW CASTLE COUNTY

The following utility companies may own and/or maintain facilities within the project limits:

| | |
|---|-----------------------|
| Artesian Water Company | Water |
| AT&T | Fiber Optic |
| CenturyLink (Level3/Lumen) | Fiber Optic |
| Comcast Cable Communications, Inc. | Communications |
| Crown Castle (Fibertech) | Fiber Optic |
| Delaware Pipeline Company | Petroleum Gas |
| Delmarva Power | Electric |
| Delmarva Power | Gas |
| New Castle County – Special Services | Sanitary Sewer |
| Verizon of Delaware Inc. | Communications |

Norfolk Southern notes:

All utility installations or relocations on Norfolk Southern right-of way that are required in conjunction with this project can be installed or relocated as part of the project provided the construction is performed by the project contractor or project contractor’s sub-contractor. However, the utility must submit an application for the installation or relocation for appropriate handling for license agreement and applicable fees. For utility applications go to: www.nscorp.com > Real estate > NS Services > Wire, Pipeline, and Fiber Optics Projects. Note: License agreement must be executed prior to utility being installed or relocated.

“One Call” services do not locate buried railroad signal and communications lines. The contractor shall contact the railroad’s representative two (2) days in advance of those places where excavation, pile driving, or heavy loads may damage railroad underground lines on railroad property. Upon request from the contractor or agency, railroad signal forces will locate and paint mark or flag railroad underground signal, communication, and power lines in the area to be disturbed for the contractor. The contractor shall avoid excavation or other disturbance of these lines which are critical to the safety of the railroad and the public. If disturbance or excavation is required near a buried railroad signal, communication, or power line, the line shall be potholed manually with careful hand excavation by the contractor and protected by the contractor during the course of the disturbance under the supervision and direction of a railroad signal representative.

The following is a breakdown of the utilities involved, adjustments and/or relocations as required (all locations, offsets, lengths, working days and calendar days are approximate):

Artesian Water Company – Water

Artesian Water Company, Inc. owns and maintains the following facilities within the project limits:

1. 12” Cast Iron pipe on the easterly side of US13 North from Station 401+62 to Station 403+35.
2. 12” Cast Iron pipe that runs perpendicular of US13 North & South at Station 403+35 from Llangollen Blvd. to State Rd.
3. 20” Ductile Iron pipe on the westerly side of US40W from Station 700+00 to 437+21 then crosses to the median and runs north to station 486+69.
4. 16” Cast Iron pipe located in the median that runs from Station 700+00 to 702+16.
5. 12” Cast Iron pipe that travels perpendicular of US40E & US40W at Station 702+16 and runs up Wilton Blvd.
6. 8” Cast Iron pipe on the easterly side of US13N from Station 425+52 to 426+60.
7. 6” AC on the easterly side of US13N from Station 426+60 to 437+96 then runs perpendicular of US13N and ties into the existing 20” DIP at Station at 438+22.
8. 8” Ductile Iron pipe that runs perpendicular to US13S at Station 455+11.
9. 8” Ductile Iron pipe on the westerly side of US13S from Station 455+14 to 454+62 and up along 5th Avenue.
10. 6” Ductile Iron pipe on the westerly side of US13S from Station 455+14 to 461+77.
11. 6” Ductile Iron pipe that runs perpendicular to US13N at Station 457+25 then runs along the easterly side of US13N from Station 457+25 to 462+11.
12. 6” Ductile Iron pipe that runs perpendicular to US13S at Station 463+27 that feeds one hydrant and one service.
13. 16” Ductile Iron pipe that runs perpendicular to US13S at Station 466+91.
14. 12” Ductile Iron pipe that runs perpendicular in the median at Station 471+00 then runs along the easterly side of US13S to Station 486+16.
15. 6” Ductile Iron pipe that runs perpendicular to US13S at Station 471+07 that feeds one hydrant and two services.
16. 12” Ductile Iron pipe that runs perpendicular to US13N at Station 464+49 then continues along Lisa Drive.
17. 12” Ductile Iron pipe that runs perpendicular to US13N at Station 472+07 then continues along Quigley Blvd.

18. 6" Ductile Iron pipe that runs perpendicular to US13S at Station 474+81 then continues along the westerly side of US13S.
19. 12' AC that runs perpendicular to both US13N & US13S at Station 486+16 and continues along Old Churchmans Road.
20. 12" Ductile Iron pipe on the easterly side of US13N that runs to Frenchtown Road from Station 486+16 to 483+13.
21. 12" AC on the easterly side of US13N from Station 486+16 to 548+92.
22. 16" Ductile Iron pipe on the westerly side of US13N from Station 486+69 to 549+69.
23. 8" Ductile Iron pipe that runs perpendicular to US13S at Station 505+45 that feeds two services.
24. 16" Ductile Iron pipe that runs perpendicular to US13S at Station 510+13.
25. 8" Cast Iron pipe that runs perpendicular across US13N & US13S at Station 515+81 that feeds two services and one hydrant.
26. 12" Ductile Iron pipe that runs perpendicular across US13N at Station 516+21 and continues along School Lane.
27. 8" Cast Iron pipe that runs perpendicular across US13N & US13S at Station 524+40.
28. 8" Cast Iron pipe that runs perpendicular across US13N & US13S at Station 532+02 that feeds one service.
29. 8" Cast Iron pipe that runs perpendicular across US13N & US13S at Station 537+23 that feeds one service and one hydrant.
30. 6" Cast Iron pipe located on the easterly side of US13N at Station 539+39 that feeds Penn Mart Shopping Center.
31. 12" Ductile Iron pipe that runs perpendicular across US13N at Station 542+29 and continues east towards Penn Mart Shopping Center.
32. 16" Cast Iron pipe that runs perpendicular across US13S at Station 548+73 and continues west along Basin Road.
33. 16" Cast Iron pipe located along the easterly side of US13S and runs along US13 from Station 548+85 to 561+36 then continues east along Lincoln Ave.
34. 8" AC located along the easterly side of US13N and runs along US13 from Station 548+89 to 566+30.
35. 8" AC that runs perpendicular across US13N & US13S at Station 559+10 and continues running west along Washington Ave.
36. 6" Ductile Iron pipe located on the westerly side of US13S that runs from Station 559+10 to 561+83 and continues west along Lincoln Ave.
37. 2" Galvanized pipe located at the easterly side of US13N at Station 561+90 and runs east along Lincoln Ave.
38. 12" Ductile Iron pipe located along the westerly side of US13N and runs along US13 from Station 561+36 to 1024+93.
39. 4" Ductile Iron pipe located on the westerly side of US13S at Station 566+57 that travels west along the south and north side of Jackson Ave.
40. 2" Galvanized pipe located at the easterly side of US13N at Station 566+30 and runs north along US13 to Station 572+20.
41. 2" Galvanized pipe located on the easterly side of US13N at Station 566+94 that travels east along Jackson Ave.
42. 2" Galvanized pipe located on the easterly side of US13N at Station 569+26 that travels east along E Monroe Ave.
43. 6" Ductile Iron pipe located on the easterly side of US13N at Station 572+17 that travels east along Stahl Ave.

44. 6" Ductile Iron pipe located on the northerly side of W Monroe Ave at Station 569+56 that travels west.
45. 4" Ductile Iron pipe located on the southerly side of Harrison Ave that travels east down Harrison Ave at Station 571+80.
46. 6" Ductile Iron pipe located on the westerly side of US13S that travels along US13 from Station 571+80 to 577+35 then travels west along W Roosevelt Ave.
47. 8" Ductile Iron pipe located on the southerly side of Grant Ave at Station 574+39 that travels east down Grant Ave.
48. 8" Ductile Iron pipe that runs perpendicular to US13S & US13N at Station 575+49 then runs north along US13 to Station 576+22.
49. 6" AC pipe located on the easterly side of US13N that runs along US13 from Station 576+22 to Station 579+99.
50. 8" Ductile Iron pipe located on the southerly side of E Roosevelt Ave at Station 577+02 that runs east along E Roosevelt Ave.
51. 6" AC pipe located on the northerly side of E Roosevelt Ave at Station 577+32 and runs east along E Roosevelt Ave for ±27 feet.
52. 8" Ductile Iron pipe located on the northerly side of E Van Buren Ave at Station 580+00 that runs east along E Van Buren Ave.
53. 8" Ductile Iron pipe located on the northerly side of E Franklin Ave at Station 582+63 that runs east along E Franklin Ave.
54. 4" Ductile Iron pipe located on the northerly side of W Van Buren Ave at Station 579+93 that runs west along W Van Buren Ave.
55. 4" Ductile Iron pipe located on the northerly side of W Franklin Ave at Station 582+62 that runs west along W Franklin Ave.
56. 12" Ductile Iron pipe located on the easterly side of US13N at Station 584+47 that runs north to Station 585+26.
57. 12" Ductile Iron pipe located on the southerly side of Stahl Ave at Station 584+82 that runs west along Stahl Ave.
58. 6" AC pipe that runs perpendicular across US13N & US13S at Station 585+26 then continues west along the northerly side of Jefferson Ave.
59. 8" AC pipe located at the westerly side of US13N at Station 584+99 L and ties into the existing 6" AC at Station 585+26 L.
60. 2" Galv. pipe located at the easterly side of US13N at Station 585+25 and runs north along US13 to Station 592+27.
61. 6" AC pipe located at the easterly side of US13N at Station 585+25 and runs north along US13 to Station 590+76.
62. 4" Ductile Iron pipe located at the easterly side of US13N at Station 592+28 and runs north along US13 to Station 593+62.

Existing services/hydrants are shown at the following stations below:

- | | |
|--|----------------------------------|
| 1. Service line that runs from Station 403+35 R to 405+01 R. | 7. Service at Station 424+17 R. |
| 2. Service at Station 708+79 R. | 8. Service at Station 721+95 L. |
| 3. Service at Station 711+78 R. | 9. Service at Station 722+99 L. |
| 4. Service at Station 717+14 L. | 10. Service at Station 426+71 R. |
| 5. Hydrant lateral located at Station 717+96 L. | 11. Service at Station 724+47 L. |
| 6. Service at Station 424+12 R. | 12. Service at Station 430+44 L. |
| | 13. Service at Station 431+79 L. |
| | 14. Service at Station 434+11 L. |

15. Service at Station 434+22 L.
16. Service at Station 434+67 L.
17. Service at Station 428+54 R.
18. Service at Station 428+63 R.
19. Service at Station 429+35 R.
20. Service at Station 432+08 R.
21. Service at Station 434+38 R.
22. Service at Station 436+20 R.
23. Service at Station 448+46 R.
24. Service at Station 449+14 R.
25. Service at Station 453+42 R.
26. Service at Station 453+65 R.
27. Service line that runs from Station 453+62 L to 454+61 L.
28. Hydrant lateral located at Station 455+25 L.
29. Service at Station 457+15 L.
30. Service at Station 458+82 L.
31. Service at Station 458+87 L.
32. Service at Station 461+51 L.
33. Hydrant lateral located at Station 457+32 R.
34. Service at Station 461+64 R.
35. Service at Station 461+72 R.
36. Hydrant lateral located at Station 461+91 R.
37. Service at Station 465+07 L.
38. Service at Station 468+29 R.
39. Service at Station 474+81 L.
40. Hydrant lateral located at Station 474+91 L.
41. Service at Station 478+64 L.
42. Service at Station 478+66 L.
43. Hydrant lateral located at Station 478+22 L.
44. Service at Station 480+58 R.
45. Service at Station 483+21 L.
46. Hydrant lateral located at Station 486+12 R.
47. Service at Station 483+18 R.
48. Service at Station 486+87 R.
49. Hydrant lateral located at Station 489+94 R.
50. Service at Station 491+28 R.
51. Service at Station 493+36 R.
52. Hydrant lateral located at Station 493+74 R.
53. Service at Station 494+09 R.
54. Service at Station 500+92 R.
55. Service at Station 504+67 R.
56. Service at Station 504+69 R.
57. Service at Station 505+85 R.
58. Hydrant lateral located at Station 507+45 R.
59. Service at Station 504+68 R.
60. Service at Station 510+69 L.
61. Service at Station 511+48 R.
62. Service at Station 513+74 R.
63. Hydrant lateral located at Station 515+17 R.
64. Service at Station 517+14 R.
65. Service at Station 518+29 R.
66. Service at Station 519+43 R.
67. Service at Station 520+78 R.
68. Service at Station 520+88 R.
69. Hydrant lateral located at Station 521+63 R.
70. Service at Station 523+29 R.
71. Service at Station 523+33 R.
72. Service at Station 523+37 R.
73. Hydrant lateral located at Station 524+63 R.
74. Service at Station 524+92 R.
75. Service at Station 526+51 R.
76. Service at Station 528+29 R.
77. Service at Station 528+78 R.
78. Service at Station 532+65 R.
79. Service at Station 534+41 R.
80. Service at Station 535+44 R.
81. Service at Station 536+65 R.
82. Hydrant lateral located at Station 536+98 R.
83. Service at Station 538+87 R.
84. Service at Station 541+31 R.
85. Hydrant lateral located at Station 545+52 R.
86. Service at Station 545+57 L.
87. Service at Station 547+19 R.
88. Service at Station 547+68 L.
89. Service at Station 550+91 R.
90. Hydrant lateral located at Station 552+60 R.
91. Service at Station 552+67 R.
92. Service at Station 559+97 L.
93. Service at Station 573+45 L.
94. Service at Station 575+02 L.
95. Hydrant lateral located at Station 575+62 R.

The following adjustments are required for the existing Artesian facilities. All adjustments shall be performed so that there are no unnecessary disruptions of services:

Adjust Water Valves:

- (2) Sta. 403+34 RT
- Sta. 412+80 LT
- Sta. 708+83 RT
- Sta. 716+05 LT
- Sta. 428+55 RT
- Sta. 432+10 LT
- Sta. 432+20 RT
- Sta. 437+15 LT
- Sta. 440+05 RT
- Sta. 441+90 RT
- Sta. 442+96 RT
- Sta. 445+50 RT
- Sta. 448+46 RT
- (2) Sta. 449+02 RT
- Sta. 449+14 RT
- Sta. 453+72 RT
- Sta. 456+81 LT
- Sta. 457+25 LT
- Sta. 457+51 LT
- Sta. 459+14 LT
- Sta. 462+43 LT
- Sta. 463+25 LT
- Sta. 465+07 LT
- Sta. 466+89 LT
- Sta. 467+20 LT
- Sta. 467+81 LT
- Sta. 468+29 RT
- Sta. 471+00 LT
- Sta. 472+06 LT
- Sta. 477+60 LT
- Sta. 482+11 LT
- Sta. 486+04 RT
- Sta. 486+24 RT
- Sta. 489+35 RT
- Sta. 490+05 RT
- Sta. 490+22 RT
- Sta. 490+48 RT
- Sta. 493+75 RT
- Sta. 516+05 RT
- Sta. 520+88 RT
- Sta. 524+45 RT
- Sta. 528+23 RT
- Sta. 528+29 RT
- Sta. 532+01 RT
- Sta. 532+65 RT
- Sta. 534+41 RT
- Sta. 537+25 RT
- Sta. 539+37 RT
- Sta. 547+70 RT
- Sta. 552+67 RT
- Sta. 558+79 LT
- Sta. 559+10 LT
- Sta. 559+24 RT
- Sta. 559+29 LT
- Sta. 561+89 RT
- Sta. 566+57 LT
- Sta. 567+02 LT
- Sta. 573+45 LT
- Sta. 575+50 LT
- Sta. 589+47 LT

Adjust Water Manhole:

- Sta. 431+47 LT

Adjust Fire Hydrant:

- Sta. 545+50 RT

All adjustments to Artesian's existing facilities will be done by the State's Contractor in accordance with the Standard Details and Standard Specifications and as shown in the contract documents. The Contractor shall contact Artesian at (302) 453-6987, five (5) calendar days prior to any relocation work beginning. The Contractor shall determine the number of days required and show that in the contract schedule. The work is not considered complete until accepted by Artesian.

Artesian's review is based upon information contained in DelDOT's **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date.

Should any conflicts be encountered as a result of the contractor's means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as described by the District Engineer. See General Utility Notes below.

Note: The Contractor is not permitted to draw water from any hydrant for any use, without the written permission of the Artesian Water Company and proper metering and backflow prevention equipment in place.

No working/existing Artesian Water Company facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract.

24 hour emergency phone number - 1-800-332-5114.

AT&T – Fiber Optic

AT&T maintains underground and aerial facilities within the project limits. AT&T owns underground facilities within the Verizon conduits on the west side of US 13. AT&T owns and maintains underground fiber on the west side of US 13 throughout the project limits behind the curb line.

All adjustments or relocations shall be performed by the utility owner so that there are no unnecessary disruptions of services. Below are identified conflicts that will need to be adjusted by the utility company during the contract. This list contains identified conflicts and there may be additional conflicts discovered during construction.

- Adjust Fiber Optic Marker Sta. 468+75 LT
- Relocate existing cable within the Verizon duct bank from approximate Station 458+90 to 471+00 into the relocated duct bank to be installed by Verizon.

AT&T will complete this work. These relocations/adjustments are expected to take approximately 30 calendar days to complete after the company has been given a minimum of 60 calendar day's advance notice that work shall begin, and the right-of-way and proposed work has been laid out in the field by the State's contractor and required tree trimming and clearing has been performed. The Contractor must use care when working in these areas.

AT&T's review is based upon information contained in DelDOT's **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date.

Should any conflicts be encountered as a result of the contractor's means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as described by the District Engineer. See General Utility Notes below.

No working/existing AT&T facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract.

CenturyLink Communications (Level3/Lumen) – Fiber Optic

CenturyLink Communications maintains underground facilities in the median of US 13 throughout the project limits.

- Lumen owns and maintains existing (12) 1.25" HDPE Duct Banks within the median.

There are no apparent conflicts and no anticipated CenturyLink involvement during this project. CenturyLink's review is based upon information contained in DelDOT's **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date.

Should any conflicts be encountered as a result of the contractor's means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as described by the District Engineer. See General Utility Notes below.

No working/existing CenturyLink facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract.

Comcast - Communications

Comcast maintains underground and aerial facilities within the project limits. Aerial facilities are located on the Delmarva utility poles on the east and west side of US 13, with various underground service drops throughout the corridor.

All adjustments or relocations shall be performed by the utility owner so that there are no unnecessary disruptions of services. Below are identifies conflicts that will need to be adjusted by the utility company during the contract. This list contains identified conflicts and there may be additional conflicts discovered during construction.

- Adjust Pedestal Sta. 504+60 RT

Comcast will complete this work. These relocations/adjustments are expected to take approximately 2 calendar days to complete after the company has been given a minimum of 30 calendar day's advance notice that work shall begin, and the right-of-way and proposed work has been laid out in the field by the State's contractor and required tree trimming and clearing has been performed. The Contractor must use care when working in these areas.

Comcast's review is based upon information contained in DelDOT's **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date.

Should any conflicts be encountered as a result of the contractor's means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as described by the District Engineer. See General Utility Notes below.

The contractor must use care when working in these underground areas as well as in the vicinity of overhead cable. The time to complete any relocations/adjustments found to be necessary, as directed by the engineer, during the construction of the highway contract will depend on the nature of the work.

No working/existing Comcast facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract.

Crown Castle (Fibertech) – Fiber Optic

Crown Castle Communications maintains underground and aerial facilities within the project limits.

Crown Castle maintains aerial facilities as follows:

- Crown Castle owns and maintains aerial facilities attached to the existing pole line along east and west side of US13 and outside of the project limits.

Crown Castle maintains underground facilities within the project limits.

- Crown Castle owns underground facilities within the Lumen (CenturyLink) conduits.
- Crown Castle owns and maintains (2) 1.5” conduits within US13 median.

There are no apparent conflicts and no anticipated Crown Castle involvement during this project. Crown Castle’s review is based upon information contained in DelDOT’s **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date.

Should any conflicts be encountered as a result of the contractor’s means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State’s Contractor as described by the District Engineer. See General Utility Notes below.

The contractor must use care when working in these underground areas as well as in the vicinity of overhead cable. The time to complete any relocations/adjustments found to be necessary, as directed by the engineer, during the construction of the highway contract will depend on the nature of the work.

No working/existing Crown Castle facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract.

Delaware Pipeline Company – Petroleum Gas

The Delaware Pipeline Company (DPC) maintains a 16” high pressure liquid petroleum pipeline throughout the median within the project limits. **The Delaware Pipeline Company requests that no digging or excavating be done until a site meeting with the contractor occurs, and there must be a DPC representative on site while working near the Delaware Pipeline Company’s line.**

The following adjustments are required for the existing Delaware Pipeline Company facilities. All adjustments shall be performed so that there are no unnecessary disruptions of services:

- Adjust Utility Marker Sta. 424+21 RT
- Adjust Utility Marker Sta. 426+78 RT
- Adjust Gas Valve Sta. 427+62 RT
- Adjust Utility Marker Sta. 432+46 RT
- Adjust Utility Marker Sta. 434+62 RT

Delaware Pipeline will complete this work. These relocations/adjustments are expected to take approximately 14 calendar days to complete after the company has been given a minimum of 30 calendar day’s advance notice that work shall begin, and the right-of-way and proposed work has been laid out in the field by the State’s contractor and required tree trimming and clearing has been performed. The Contractor must use care when working in these areas.

Delaware Pipeline's review is based upon information contained in DelDOT's **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date.

Should any conflicts be encountered as a result of the contractor's means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as described by the District Engineer. See General Utility Notes below.

ALL prospective bidders are advised to contact the Delaware Pipeline Company before bidding to receive all documents pertaining to working around the Delaware Pipeline Company's facilities before submitting a bid. All plans and written correspondence shall be sent to:

Delaware Pipeline Company, Attention: Maintenance Department,
1811 River Road, Delaware City, DE 19706.

The Delaware City, DE Maintenance Department's contact number is 1-302-836-6500.

No working/existing DPC facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract. The Delaware Pipeline Company's 24-hour toll-free emergency contact number is 1-855-887-9768.

Delmarva Power - Electric

Delmarva Power Electric Distribution (Delmarva) maintains aerial and underground facilities within the project limits.

- Delmarva Power has a 3 phase overhead electrical distribution system along US13 on both sides of the highway with several overhead road crossings.
- Delmarva maintains an underground service crossing through the median of US 13 at approximate Station 526+20.
- Delmarva Power maintains underground facilities in the northbound shoulder of US 13 from approximate Stations 477+00 to 483+50 and 551+00 to 573+00.
- Delmarva maintains an underground facility crossing US 13 at SR 273 (approximate Station 480+80), which continues along westbound SR 273.

The following adjustments are required for the existing Delmarva facilities. All adjustments shall be performed so that there are no unnecessary disruptions of services:

- Adjust Guy Anchors DPL Pole 46602-39963, Sta. 415+50 RT.
- Adjust Manhole Sta. 476+70 RT
- Relocate Guy Anchors DPL Pole 47393-40967, Sta. 543+35 RT.
- Adjust Manhole Sta. 480+00 LT
- Adjust Manhole Sta. 480+80 RT
- Adjust Manhole Sta. 481+00 LT
- Adjust Manhole Sta. 482+50 LT
- Adjust Manhole Sta. 486+25 RT
- Adjust Manhole Sta. 548+10 RT
- Adjust Guy Anchor DPL Pole 47429-41017, Sta. 549+10 RT.
- Adjust Manhole Sta. 549+90 LT
- Adjust Manhole Sta. 551+80 RT

- Adjust Manhole Sta. 555+35 RT
- Adjust Manhole Sta. 559+22 RT
- Adjust Manhole Sta. 559+31 LT
- Adjust Manhole Sta. 561+90 LT
- Adjust Manhole Sta. 566+65 LT
- Adjust Manhole Sta. 569+66 RT
- Adjust Manhole Sta. 572+90 RT
- Adjust Guy Wire DPL Pole 47588-41239, Sta. 577+00 RT.
- New point of services at poles 46968-40394 and 47485-41127.

Delmarva will complete this work. These relocations/adjustments are expected to take approximately 30 calendar days to complete after the company has been given a minimum of 60 calendar day's advance notice that work shall begin, and the right-of-way and proposed work has been laid out in the field by the State's contractor and required tree trimming and clearing has been performed. The contractor must use care when working in these underground areas as well as overhead conductor crossings.

Delmarva's review is based upon information contained in DelDOT's **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date.

Should any conflicts be encountered as a result of the contractor's means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as described by the District Engineer. See General Utility Notes below.

DelDOT has not planned for or coordinated with Delmarva Power - Electric Distribution for any temporary power outages, relocations, physical pole support for excavation nor arranged for the installation of insulation of any power line during this contract other than as outlined in the above description. Due to varying construction possibilities; if a contractor's means-and-methods should require support from Delmarva Power to fulfill the requirement of 16 Del. C. § 7405B, OSHA Regulations Table A of § 1926.1408, other applicable federal, state or local law or regulation or the Contractor's company policy; it shall be at the Contractor's sole expense and the contractor shall directly coordinate this request with Delmarva Power. All costs associated with any temporary power outages, relocations, physical pole support for excavation or the installation of insulation of any power line during this contract shall be incidental, including the cost of the coordination, to the work being performed. The Department makes no guarantees that the request for any temporary power outages, relocation or the installation of insulation of any power line during this contract will be granted by Delmarva Power in part or in total; or during the time periods requested by the Contractor for construction purposes. Any proposed coordination with Delmarva Power shall be included in the contractor's CPM schedule. In addition, Delmarva Power will determine if these outages can be accommodated.

No working/existing Delmarva facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract. To report a downed wire, call 1-800-898-8042.

Delmarva Power has a written requirement regarding working near overhead power lines.

Customer/Contractor Acknowledgement

Performing Work within Dangerous Proximity of High Voltage Lines

“You are hereby notified by Delmarva Power that NO work can be performed at this location within dangerous proximity to Delmarva’s overhead lines and that you are required by law to comply with applicable OSHA regulations and the applicable state High Voltage Safety Act. Performance of any activity or causing any person, equipment, or things to come within dangerous proximity of Delmarva’s overhead lines creates an extreme risk of severe injury or death. You are further notified that no activities may be conducted within dangerous proximity of Delmarva’s overhead lines until mutually agreeable measures to prevent contact with overhead lines have been reached with Delmarva and Delmarva has provided you with written authorization to perform the activities.

Additionally, any work involving the use of a crane with intentions to remain outside of dangerous proximity, but within 20 feet of the Company’s overhead lines, requires an Encroachment Prevention Plan in order to satisfy OSHA”

Delmarva Power - Gas

Delmarva (Gas) maintains underground facilities within the project limits.

- Delmarva (Gas) maintains a 12” steel main in the northbound lanes of US 13 from the southern project limits to I-295

Delmarva (Gas) maintains lateral services at the following locations:

- Approximate Station 427+60
- Approximate Station 447+50
- Approximate Station 466+75
- Approximate Station 468+40
- Approximate Station 476+35
- Approximate Station 488+00
- Approximate Station 506+85
- Approximate Station 513+80
- Approximate Station 522+05
- Approximate Station 548+25
- Approximate Station 561+40
- Approximate Station 571+60

The following adjustments and/or relocations are required to Delmarva’s existing facilities. All adjustments or relocations shall be performed by the utility owner so that there are no unnecessary disruptions of services. Below are identifies conflicts that will need to be adjusted by the utility company during the contract. This list contains identified conflicts and there may be additional conflicts discovered during construction.

- Adjust Gas Valve Sta. 400+40 RT
- Adjust Gas Manhole Sta. 403+60 RT
- Adjust Gas Valve Sta. 404+07 RT
- Adjust Gas Marker Sta. 407+71 RT
- Adjust Gas Valve Sta. 412+20 LT
- Adjust Gas Marker Sta. 414+10 RT
- Adjust Gas Valve Sta. 427+20 RT
- Adjust Gas Valve Sta. 427+90 LT
- Adjust (2) Gas Valve Sta. 430+27 RT
- Adjust Gas Valve Sta. 434+65 RT
- Adjust Gas Valve Sta. 447+30 LT
- Adjust Gas Valve Sta. 448+75 LT
- Adjust Gas Valve Sta. 453+60 RT
- Adjust Gas Valve Sta. 463+25 LT
- Adjust Gas Marker Sta. 466+89 LT
- Adjust Gas Valve Sta. 468+40 LT
- Adjust Gas Valve Sta. 468+51 RT
- Adjust Gas Valve Sta. 481+30 LT
- Adjust Gas Valve Sta. 481+65 LT
- Adjust Gas Valve Sta. 504+55 RT
- Adjust Gas Valve Sta. 513+74 RT
- Adjust Gas Valve Sta. 531+81 RT
- Adjust Gas Valve Sta. 534+55 RT
- Adjust Gas Valve Sta.534+95 RT
- Adjust Gas Valve Sta. 539+40 RT
- Adjust Gas Valve Sta. 548+60 LT
- Adjust Gas Valve Sta. 569+25 RT

All adjustments to Delmarva Power's existing facilities will be done by the State's Contractor in accordance with the Standard Details and Standard Specifications and as shown in the contract documents. The Contractor shall contact Delmarva Power at (302) 429-3069, five (5) calendar days prior to any relocation work beginning. The Contractor shall determine the number of days required and show that in the contract schedule. The work is not considered complete until accepted by Delmarva Power.

Delmarva's review is based upon information contained in DelDOT's **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date. Should any conflicts be encountered as a result of the contractor's means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as described by the District Engineer. See General Utility Notes below.

Caution: When saw cutting or digging in close proximity to gas facilities, the contractor is required to verify the depth of the gas main or service to ensure shallow pipe is not encountered. The contractor shall exercise caution when excavating along the curb lines at these locations.

If gas equipment such as pipe, tracer wire, valve boxes, etc. are damaged or you smell gas, call **DPL's emergency number at 302-454-0317 (24 hours a day)** from a safe location. Do not call the project engineer or other contacts from DPL Gas.

No working/existing DPL Gas facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract.

New Castle County – Sanitary Sewer

New Castle County Sanitary Sewer (NCC) maintains underground facilities within the project limits.

New Castle County Sanitary Sewer (NCC) maintains underground facilities on the east side of US 13 from the southern project limits to 424+60, approximate Stations 448+30 to 486+00, 517+50 to 539+50, and 556+00 to the northern project limits.

New Castle County Sanitary Sewer (NCC) maintains sewer lateral crossings at the at the following locations:

- Approximate Station 404+18
- Approximate Station 417+90
- Approximate Station 420+25
- Approximate Station 421+68
- Approximate Station 467+95
- Approximate Station 484+10
- Approximate Station 571+95

The following adjustments and/or relocations to its existing facilities are to be completed concurrently with the State's Contract. All adjustments or relocations shall be performed so that there are no unnecessary disruptions of services. This list contains identified conflicts and there may be additional conflicts discovered during construction.

- Adjust Manhole Sta. 383+76 LT
- Adjust Manhole Sta. 385+30 RT
- Adjust Manhole Sta. 387+38 RT
- Adjust Manhole Sta. 390+32 RT

- Adjust Manhole Sta. 392+61 LT
- Adjust Manhole Sta. 393+22 LT
- Adjust Manhole Sta. 396+10 RT
- Adjust Manhole Sta. 398+59 RT
- Adjust Manhole Sta. 403+46 RT
- Adjust Manhole Sta. 416+50 LT
- Adjust Manhole Sta. 417+80 LT
- Adjust (2) Manholes Sta. 715+97 LT
- Adjust Manhole Sta. 421+61 RT
- Adjust Manhole Sta. 424+68 RT
- Adjust Manhole Sta. 446+75 RT
- Adjust Manhole Sta. 448+35 RT
- Adjust Manhole Sta. 451+01 RT
- Adjust Manhole Sta. 452+79 RT
- Adjust Manhole Sta. 454+32 RT
- Adjust Manhole Sta. 457+29 RT
- Adjust Manhole Sta. 459+83 RT
- Adjust Manhole Sta. 460+11 RT
- Adjust Manhole Sta. 462+88 RT
- Adjust Manhole Sta. 463+80 LT
- Adjust Manhole Sta. 464+65 RT
- Adjust Manhole Sta. 465+85 RT
- Adjust Manhole Sta. 466+84 LT
- Adjust Manhole Sta. 467+96 RT
- Adjust Manhole Sta. 473+60 LT
- Adjust Manhole Sta. 475+00 LT
- Adjust Manhole Sta. 479+90 LT
- Adjust Manhole Sta. 482+80 RT
- Adjust Manhole Sta. 484+12 RT
- Adjust Manhole Sta. 485+92 RT
- Adjust Manhole Sta. 532+39 RT
- Adjust Manhole Sta. 534+37 RT
- Adjust Manhole Sta. 536+40 RT
- Adjust Manhole Sta. 556+32 RT
- Adjust Manhole Sta. 566+60 LT
- Adjust (2) Manholes Sta. 569+38 RT
- Adjust Manhole Sta. 569+35 RT
- Adjust Manhole Sta. 571+98 RT
- Adjust Manhole Sta. 571+98 LT
- Adjust Manhole Sta. 574+60 RT
- Adjust Manhole Sta. 577+20 RT

All adjustments to New Castle County's existing facilities will be done by the State's Contractor in accordance with the Standard Details and Standard Specifications of New Castle County and as shown in the contract documents. The Contractor shall contact New Castle County Dept. Special Services at (302) 395-5756, five (5) calendar days prior to any relocation work beginning. The Contractor shall determine the number of days required and show that in the contract schedule. The work is not considered complete until accepted by New Castle County.

New Castle County's review is based upon information contained in DelDOT's **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date.

Should any conflicts be encountered as a result of the contractor's means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as described by the District Engineer. See General Utility Notes below.

No working/existing New Castle County Sanitary Sewer facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract.

Verizon of Delaware Inc. – Communications

Verizon of Delaware Inc. maintains the following aerial facilities within the project limits:

1. Verizon maintains aerial facilities along the Northwest side of US13 from Pole# 4622/39691 at station 382+60 L100 extending Southwest beyond the project limits and Northeast to State Rd. and beyond the project limits. (CP-01, CP-02, CP-03, CP-04)
2. Verizon maintains aerial facilities along the Southeast side of US13 from Pole# 46531/39862 at station 402+73 R27 extending Southeast along Llangollen Blvd beyond the project limits. (CP-04)
3. Verizon maintains aerial facilities along the Southeast side of US13 from Pole# 46531/39862 at station 402+73 R27 extending Northeast to Pole# Unknown at station 413+30 R52 then continuing West across US13 to Pole# 46580/39952 at station 413+56 L75. (CP-04, CP-05)
4. Verizon maintains aerial facilities along the Northwest side of US40 from Pole# 01 at station 695+00 L120 extending Northeast continuing Northeast along US13 Dupont Hwy. to Pole# Unknown at station 476+47 L150. (CP-06 thru CP-15)
5. Verizon maintains aerial facilities on the Northwest side of US13 from Pole# Unknown at station 442+10 L153 extending Northwest along 1st Ave. and beyond the project limits. (CP-11)
6. Verizon maintains aerial facilities on the Northwest side of US13 from Pole# Unknown at station 445+45 L153 crossing 2nd Ave. to the West side and beyond the project limits. (CP-11)
7. Verizon maintains Over Head Guy Wire from Pole# 46638/40028 at station 422+30 R32 to Pole# 46644/40036 at station 423+35 R32 along the Southeast side of US13. (CP-09)
8. Verizon maintains aerial facilities along the Southeast side of US13 from Pole# 46644/40036 at station 423+30 R42 extending Northeast to Pole #29 at station 474+86 R45. (CP-09 thru CP-15)
9. Verizon maintains aerial facilities on the Southeast side of US13 from Pole# 40086 at station 430+26 R46 extending East to Pole #46694/40086 at station 430+55 R61. (CP-10)
10. Verizon maintains aerial facilities on the Northwest side of US13 from Pole# 46796/40224 at station 447+60 L150 extending West along 3rd Ave. and beyond the project limits. (CP-12)
11. Verizon maintains aerial facilities on the Northwest side of US13 from Pole# 46822/40253 at station 451+40 L152 extending West along 4th Ave. and beyond the project limits. (CP-12)
12. Verizon maintains aerial facilities on the Southeast side of US13 from Pole# 46825\40236 at station 450+50 R42 extending Southeast and beyond the project limits. (CP-12)
13. Verizon maintains aerial facilities on the Southeast side of US13 from Pole# Unknown at station 465+45 R47 extending Southeast along Lisa Dr. and beyond the project limits. (CP-14)
14. Verizon maintains aerial facilities on the Northwest side of US13 from Pole #46924/40365 at station 466+60 L151 extending West along Churchman's Rd. Extension and beyond the project limits. (CP-14)
15. Verizon maintains aerial facilities along the Southeast side of US13 from Pole# Unknown at station 515+55 R48 extending Northeast along US13 to Pole# Unknown at station 550+35 R50. (CP-20 thru CP-24)
16. Verizon maintains aerial facilities on the Southeast side of US13 from Pole# Unknown at station 515+55 R48 extending Southeast along School Ln. and beyond the project limits. (CP-20)
17. Verizon maintains aerial facilities on the Southeast side of US13 from Pole# 47385/40958 at station 542+16 R49 extending Southeast along Ramp B2 to Pole# Unknown at station 404+75 R18. (CP-23, CP-29)
18. Verizon maintains aerial facilities crossing Ramp B2 from Pole# Unknown at station 400+65 R89 extending north to Pole# 47494\40967 at station 543+40 R48. (CP-23)
19. Verizon maintains aerial facilities on the Northeast side of Washington Ave from Pole# 474645/41109 at station 559+15 L216 extending Northwest beyond the project limits. (CP-25)
20. Verizon maintains aerial facilities on the Northeast side of Garfield Ave from Pole # Unknown at station 564+34 L232 extending Northwest beyond the project limits. (CP-25)

21. Verizon maintains aerial facilities on the North side of US13 from Pole# xx517\xx168 at station 566+98 L150 extending Northeast along Jackson Ave. and beyond the project limits. (CP-26)
22. Verizon maintains aerial facilities on the North side of US13 from Pole# xx517\xx168 at station 566+98 L150 extending Northeast to Pole# 47533\41188 at station 569+52 L150 turning West along W Monroe Ave. and beyond the project limits. (CP-26)
23. Verizon maintains aerial facilities along the Northeast side of Harrison Ave from Pole # 47543/41213 at station 572+10 L187 extending Northwest and beyond the project limits. (CP-26)
24. Verizon maintains aerial facilities on the Southeast side of US13 from Pole# 127 at station 570+61 R50 extending Southeast and beyond the project limits. (CP-26)
25. Verizon maintains aerial facilities on the Northwest side of US13 from Pole # 47575/41248 at station 576+97 L146 extending Northwest along W Roosevelt Ave. and beyond the project limits. (CP-27)
26. Verizon maintains aerial facilities on the Southwest side of E Van Buren Ave from Pole# 47603/41259 at station 579+58 R52 extending Southeast along Van Buren Ave. and beyond the project limits. (CP-27)
27. Verizon maintains aerial facilities along the Southeast side of US13 from Pole# x76xx\x1315 at station 586+45 R58 extending Northeast and beyond the project limits. (CP-28)
28. Verizon maintains aerial facilities along the Southeast side of US13 from Pole# x76xx\x1315 at station 586+45 R58 extending Southeast beyond the project limits. (CP-28)

Verizon of Delaware Inc. maintains the following buried/underground facilities within the project limits:

1. Verizon maintains buried\UG facilities along the Northwest side of US13 from MH 473 at station 382+55 L80 extending Southwest to Pole# Unknown at station 380+60 L110. (CP-01)
2. Verizon maintains buried\UG facilities along the Northwest side of US13 from MH 473 at station 382+55 L80 extending Northeast to MH 466 at station 716+45 L50 then continuing along the Northwest side of US13 and beyond the project limits. (CP-01 thru CP-05, CP-09)
3. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 473 at station 382+55 L80 extending Northwest to Pole# 46422\39691 at station 382+55 L100. (CP-01)
4. Verizon maintains buried\UG facilities crossing US13 from MH 473 at station 382+55 L80 extending Southeast along Schafer Blvd. and beyond the project limits. (CP-01)
5. Verizon maintains buried\UG facilities on the Southwest side of Schafer Blvd. from a VZ HH at station 382+75 R75 extending Southwest and Southeast beyond the project limits. (CP-01, CP-02, CP-03)
6. Verizon maintains buried\UG facilities crossing US13 from MH 472 at station 389+56 L55 extending Southeast to a VZ Pedestal at station 389+56 R65 and continuing Southeast beyond the project limits. (CP-03)
7. Verizon maintains buried\UG facilities crossing US13 from MH 471 at station L60 extending Southeast to a VZ HH at approximate station 395+67 R75 turning East to a VZ HH at approximate station 490+88 R78. (CP-03)
8. Verizon maintains buried\UG facilities crossing US13 from MH 470 at station 403+10 L59 extending Southeast along Llangollen Blvd and beyond the project limits. (CP-04)
9. Verizon maintains underground facilities on the Northwest side of US13 from MH 468 at station 412+97 L76 extending Northwest to a Verizon CEV. (CP-05)
10. Verizon maintains buried\UG facilities on the South side of US40 from MH 655 at station 699+18 R25 extending Southwest beyond the project limits and East along US40 to MH 466 at station 716+45 L50. (CP-06, CP-07, CP-08, CP-09)

11. Verizon maintains buried\UG facilities on the South side of US40 from MH654 ½ at station 701+44 L23 extending Northwest along Wilton Blvd. and beyond the project limits. (CP-07)
12. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH4648 ½ at station 432+16 L141 extending North to Pole #46688/40110 at station 432+23 L191. (CP-10)
13. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 4647 at station 440+95 L140 extending West along 1st Ave. and beyond the project limits. (CP-11)
14. Verizon maintains buried\UG facilities on the Northwest side of US13 from a split duct location at approximate station 444+60 L135 extending West along 2nd Ave. and beyond the project limits. (CP-11)
15. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 4645 ½ at station 448+13 L140 extending West to Pole # Unknown at station 447+60 L152. (CP-12)
16. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 4645 ½ at station 448+13 L140 extending West and Dead Ending 1 UG Duct. (CP-12)
17. Verizon maintains buried\UG facilities crossing US13 from MH 4645 ½ at station 448+13 L140 extending Southeast to MH 465 at station 448+10 R47. (CP-12)
18. Verizon maintains buried\UG facilities on the Southeast side of US13 from MH 465 at station 448+10 R47 extending Northeast to Pole# 46812/40221 at station 448+50 R44. (CP-12)
19. Verizon maintains buried\UG facilities on the Southeast side of US13 from MH 465 at station 448+10 R47 extending Southeast and beyond the project limits. (CP-12)
20. Verizon maintains buried\UG facilities on the Southeast side of US13 from Pole# 46812/40221 at station 448+50 R44 extending Southeast and beyond the project limits. (CP-12)
21. Verizon maintains buried\UG facilities crossing US13 from MH 4644 at station 458+95 L140 extending Southeast to Pole# Unknown at station 458+10 R48. (CP-13)
22. Verizon maintains buried\UG facilities crossing US13 from MH 4642 at station 470+95 L140 extending Southeast to Pole# Unknown at station 470+50 R45. (CP-14)
23. Verizon maintains buried\UG facilities on the Southeast side of US13 from Pole# Unknown at station 470+50 R45 extending Southeast and beyond the project limits. (CP-14)
24. Verizon maintains buried\UG facilities on the Southeast side of US13 from MH 4642 at station 470+95 L140 extending Northwest to Pole# Unknown at station 471+10 L148. (CP-14)
25. Verizon maintains buried\UG facilities on the Southeast side of US13 from Pole# Unknown at station 471+90 R45. (CP-14)
26. Verizon maintains buried\UG facilities on the Northwest side of US 13 side from Pole# Unknown at station 476+45 L148 extending Northwest and beyond the project limits. (CP-15)
27. Verizon maintains buried\UG facilities on the Southeast side of US 13 side from Pole# Unknown at station 474+85 R45 extending Southeast and beyond the project limits. (CP-15)
28. Verizon maintains buried\UG facilities from MH 418 at station 480+72 L138 extending West along Christina Rd. and beyond the project limits and East to MH 416 at station 482+50 R116 and continuing East beyond the project limits.
29. Verizon maintains buried\UG facilities from MH 418 at station 480+72 L138 extending West along Christina Rd. beyond the project limits and East to MH 416 at station 482+57 R116 and continuing East beyond the project limits. (CP-16)
30. Verizon maintains underground facilities from MH 416 at station 482+57 R116 extending Northwest to MH 417 at station 483+00 L136. (CP-16)
31. Verizon maintains buried\UG facilities from MH 417 at station 483+00 L136 extending Southwest along US 13 then turning West on Christiana Rd to MH 419E at station 482+30 L355 and beyond the project limits. (CP-16)
32. Verizon maintains buried\UG facilities on Christiana Rd from MH 419E at station 480+33 L292 extending South to Dead End at roughly station 479+86 L300. (CP-16)

33. Verizon maintains buried\UG facilities crossing US 13 from MH 417 at station 483+00 L136 extending Southeast before crossing Frenchtown Rd. to MH 416 at station 482+57 R116. (CP-16)
34. Verizon maintains buried\UG facilities on the South side of Frenchtown Rd. from MH 416 at station 482+57 R116 extending South and beyond the project limits. (CP-16)
35. Verizon maintains underground facilities crossing Frenchtown Rd. from MH 416 at station 482+57 R116 extending North to Private Duct Bank at roughly station 483+42 R70. (CP-16)
36. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 4638 ½ at station 485+65 L135 extending Northwest along Old Churchman Rd. and beyond the project limits. (CP-16)
37. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 4635 at station 506+88 L138 extending Northwest and beyond the project limits. (CP-19)
38. Verizon maintains buried\UG facilities crossing US13 extending Southeast to Pole# 40750 at station 518+84 L138. (CP-20)
39. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 4633 at station 518+84 L138 extending Northwest beyond the project limits. (CP-20)
40. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 1632 at station 524+80 L138 extending Northwest and beyond the project limits. (CP-21)
41. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 1627 at station 549+18 L132 extending Northwest and Southeast and beyond the project limits. (CP-22)
42. Verizon maintains buried\UG facilities on the Northwest side of US13 from a split duct location at roughly station 561+73 L130 extending Northeast along Lincoln Ave. and beyond the project limits. (CP-25)
43. Verizon maintains buried\UG facilities on the Northwest side of US13 from a split duct location at roughly station 564+30 L128 extending Northeast along Garfield Ave. and beyond the project limits. (CP-25)
44. Verizon maintains buried\UG facilities on the Northwest side of US13 from MH 1624 1\2 at station 567+00 L130 extending Northwest to Pole# xx517\xx168. (CP-26)
45. Verizon maintains buried\UG facilities on the Northwest side of US13 from a split duct location at roughly station 571+98 L130 extending Northeast along Harrison Ave. and beyond the project limits. (CP-26)
46. Verizon maintains buried\UG facilities crossing US13 from MH 1623 at station 572+97 L131 extending Southeast then turning Southwest along US13 to Pole# 127 at station 570+61 R50. (CP-26)
47. Verizon maintains buried\UG facilities on the Southeast of US13 from a VZ Pedestal at station 572+18 R38 extending Southeast to Pole# 127 at station 572+18 R112. (CP-26)
48. Verizon maintains buried\UG facilities crossing US13 from MH 1622 at station 579+15 L130 extending Southeast to MH 152 at station 579+37 R46 and continuing to Pole# 41259 at station 579+55 R52. (CP-27)
49. Verizon maintains buried\UG facilities on the Southeast side of US13 from MH152 at station 579+37 R46 extending South along E Van Buren Ave. and beyond the project limits. (CP-27)
50. Verizon maintains buried\UG facilities on the Northwest side of US13 from a split duct location at roughly station 579+65 L128 extending Northwest along W Van Buren Ave. and beyond the project limits. (CP-27)
51. Verizon maintains buried\UG facilities on the Northwest side of US13 from a split duct location roughly at station 582+25 L125 extending Northwest along Franklin Av. and beyond the project limits. (CP-27)

52. Verizon maintains underground facilities on Northwest side of US13 from MH1621 at station 585+35 L130 extending Southwest before turning Northwest along Jefferson Ave to Pole #47615/41316 at station 584+85 L195. (CP-28)

53. Verizon maintains underground facilities along the South side of SR141 from MH 151 at station 405+96 L10 extending Northwest and Southeast beyond the project limits. (CP-30)

54. Verizon maintains underground facilities along the South side of SR141 from MH 151 at station 405+96 L10 extending Southwest to Pole# Unknown at station 404+75 L15. (CP-30)

55. Verizon maintains underground facilities along SR141 from MH 116 at station 501+10 L00 extending Southeast and Northwest beyond the project limits. (CP-30)

Anticipated Verizon Aerial Relocations:

None Anticipated

Anticipated Verizon Underground Relocations:

1. Verizon will relocate the existing conduit run between MH4644 at station 458+95 L140 and MH4642 at station 470+95 L140 out into the street to avoid conflicts with proposed storm drain inlets and pipes. (CP-13, CP-14)

2. Verizon to allow the State Contractor to adjust manhole covers at the following locations as needed:

- MH 473 located on the Northwest side of US13 at station 382+58 L80 (CP 01)
- MH 472 located on the Northwest side of US13 at station 389+53 L55 (CP 02)
- MH 471 located on the Northwest side of US13 at station 395+70 L60 (CP 03)
- MH 470 located on the Northwest side of US13 at station 403+10 L50 (CP 04)
- MH 469 located on the Northwest side of US13 at station 408+75 L65 (CP 04)
- MH 468 located on the Northwest side of US13 at station 412+97 L76 (CP 05)
- MH 466 located on the Northwest side of US13 at station 716+45 L50 (CP 09)
- MH 465 located on the Northwest side of US13 at station 448+10 R47 (CP 10)
- MH 4648.5 located on the Northwest side of US13 at station 432+15 L142 (CP 10)
- MH 4642 located on the Northwest side of US13 at station 470+97 L140 (CP14)
- MH 1624 located on the Northwest side of US13 at station 566+78 L135 (CP26)
- MH 1624.5 located on the Northwest side of US13 at station 567+00 L135 (CP 26)
- MH 1625 located on the Northwest side of US13 at station 560+85 L132 (CP25)
- MH 1622 located on the Northwest side of US13 at station 579+15 L130 (CP27)

Verizon of Delaware will complete these changes. These relocations adjustments are expected to take approximately 16 months to complete after the company has been given a minimum of 60 calendar days advance notice that work shall begin, and the right-of-way and proposed work has been laid out in the field by the State's contractor and required tree trimming and clearing has been performed.

Verizon's review is based upon information contained in DelDOT's **Final** Plans for contract **T201901102**, received on 04/03/2024 and all data available as of this date.

Should any conflicts be encountered as a result of the contractor's means and methods during construction, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as described by the District Engineer. See General Utility Notes below.

The contractor must use care when working in these underground areas as well as in the vicinity of overhead cable. The time to complete any relocations/adjustments found to be necessary, as directed by the engineer, during the construction of the highway contract will depend on the nature of the work.

No working/existing Verizon facilities can be taken out of service. These facilities will remain in place and active during the duration of this contract.

GENERAL UTILITY NOTES

Outside of the companies and facilities discussed above, no additional utility involvement is anticipated. Should any conflicts be encountered as a result of the contractor's means and methods during construction requiring adjustment and/or relocation, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as directed by the District Engineer. The State Contractor shall coordinate any potential conflicts with utility companies and provide adequate notice prior to performing work. Any utility conflicts that are not readily discernable shall be coordinated by the State Contractor once the conflict is recognized. The time to complete any relocations/adjustments found to be necessary during construction of the highway project will depend on the nature of the work.

Any utility conflicts that are not readily discernable shall be coordinated by the State Contractor once the conflict is recognized. The time to complete any relocations/adjustments found to be necessary during construction of the highway project will depend on the nature of the work. Once the State's contractor has given the Utility the advance notice required above, it is the responsibility of the State's contractor to have the work area prepared and accessible for the Utility to perform the tasks listed above. If the site conditions are not ready and the state contractor has given notice to the utility on when the work is to be accomplished, the State's Contractor shall be responsible for any extra cost incurred by the utility company and the State Contractor shall also be responsible for any time delays. Between when the required notice is given to the Utility and when the work is performed and completed, the coordination and scheduling of the Utility is the sole responsibility of the State's Contractor. All costs related to the coordination and scheduling of the utilities is incidental to the contract.

Any adjustments and/or relocations of municipally owned sewer or water facilities shall be performed by the State's Contractor in accordance with the respective agency's standard specifications as directed by the District Engineer. The State contractor shall coordinate any potential conflicts of municipally owned sewer or water facilities with facility owners and provide adequate notice to the municipally and to the District Engineer prior to performing work.

GENERAL NOTES

- 1. The Contractor's attention is directed to Section 105.09 Utilities, Delaware Standard Specifications, August 2020. The Contractor shall contact Miss Utility (1-800-282-8555) two working days prior to any excavation. The Contractor is responsible for the support and protection of all utilities when excavating. The Contractor is responsible for ensuring proper clearances, including safety clearances, from overhead utilities for construction equipment. The Contractor is advised to check the site for access and operating purposes for his equipment and, if necessary, make arrangements directly with the utility companies for field adjustments for adequate clearances.**


2. The information shown in the Contract Documents, including the Utility Statement and the Utility Schedule contained herein, concerning the location, type and size of existing and proposed utilities, their locations, and construction timing has been compiled by the preparer based on information furnished by each of the involved Utility Companies. It shall be the responsibility of the State's Contractor to verify all information and coordinate with the Utility Companies prior to and during construction, as specified in Section 105.09 of the Standard Specifications.
3. It is understood and agreed that the Contractor has considered in his bid all permanent and temporary utility appurtenances in their present and relocated positions as shown on the plans or described in the Utility Statement or are readily discernible and that no additional compensation will be allowed for any delays, inconvenience, or damage due to any interference from the utility facilities and appurtenances or the operation of moving them, except that the Contractor may be granted an equitable extension of time unless the delay is caused by the Contractor's delay in having the site conditions ready for the utility relocation work after the Contractor has provided the advance notice that the site conditions would be ready for the utility relocation work. The contractor's means and method of construction are not taken into account when known utility conflicts are identified. If the Contractor's means and method of construction create a utility conflict the Utility Statement will prevail in discussions with the utility and the Contractor. The State's Contractor shall be responsible for any costs associated with any temporary outages; holding, bracing, and shielding of utility facilities; temporary relocations; or permanent relocations that are not specifically identified in this utility statement or shown in the contract plan set.
4. Coordination and cooperation among the Utility Companies and the State's Contractor are of prime importance. Therefore, the Contractor is directed to contact the following Utility Company representatives with any questions regarding this work prior to submitting bids and work schedules. Proposed work schedules should reflect the Utility Companies' proposed relocations. The Utility Companies do not work on weekends, nights, or legal holidays.

UTILITY CONTACT LIST

| Company | Name | Email | Phone |
|--------------------------------------|-----------------------------------|--|---------------------|
| AT&T (TREC Group) | Jay Everly | jay@trecgroup.com | (610) 238-6465 |
| Artesian Water | Wayne Tyler | WTyler@artesianwater.com | (302) 453-6987 |
| Comcast Cable Communications, Inc. | Darren Marstellar | dmarstellar@americomm-llc.com | (717) 509-7873x1004 |
| Crown Castle | Bill Muehlberger | Bill.Muehlberger@crowncastle.com | (215) 384-7817 |
| Delaware Pipeline Company | Darrell Eller | Darrell.Eller@pbfenergy.com | (302) 379-4452 |
| Delmarva Power - Gas | Fikayo Falade | fikayo.falade@exeloncorp.com | (667) 313-0873 |
| Delmarva Power – Electric | Tom Smith | thomas.smith1@delmarva.com | (302) 283-5757 |
| Level 3 Communications | Patrick Provost | Patrick.provost@centurylink.com | (720) 888-4686 |
| New Castle County – Special Services | Dan Netta | dan.netta@newcastlede.gov | (302) 395-5817 |
| Verizon of Delaware | George Zang Darren Coppersmith | george.w.zang@verizon.com Darren.Coppersmith@kci.com | (410) 316-7974 |

5. As outlined in Chapter 3 of the DelDOT Utilities Manual, individual utility companies are responsible for obtaining all required permits from municipal, State, and federal government agencies and railroads. This includes but is not limited to water quality permits/DNREC Water Quality Certification, DNREC Subaqueous Lands/Wetlands permits, DNREC Coastal Zone Consistency Certification, County Floodplain permits (New Castle County only), U.S. Coast Guard permits, US Army Corps 404 permits, sediment and erosion permits, and railroad crossing permits.
6. Individual utility companies are required to restore any areas disturbed in conjunction with their relocation work. If an area is disturbed by a utility company and is not properly restored, the Department may have the State's Contractor perform the necessary restoration. Any additional costs incurred as a result will be forwarded to the utility company.
7. 16 Del. C. § 7405B requires notification to and mutually agreeable measures from the public utility operating the electric line for any person intending to carry on any function, activity, work, or operation within dangerous proximity of any high voltage overhead electric lines. All contractors/other utilities must also maintain a minimum distance of 10'-0" from all energized lines. Additional clearance may be required from high voltage transmission lines.
8. Any existing facilities that are comprised of hazardous materials will be removed by the Utility Company unless otherwise outlined in the contract documents or language above. Any existing facilities containing hazardous materials will be purged by the Utility Company unless otherwise outlined in the contract documents or language above.
9. In conjunction with bid preparation and prior to starting work, the State's Contractor shall confirm with all respective Utility Companies noted in this Utility Statement to have advance utility relocations that the advance relocations have in fact been accomplished as summarized herein.
10. Contractors are not permitted to draw water from any hydrant for any use, without the written permission of the Municipality / Water Company having jurisdiction; and proper metering and backflow prevention equipment in place.

Prepared and Recommended by:



 Zach Brander – Pennoni
 (302) 351-5237; zbrander@pennoni.com

July 1, 2024

 DATE

Approved as to form by



 Utility Coordinator, DelDOT

July 1, 2024

 DATE



US13 Paving and Pedestrian Improvements – Llangollen Blvd to Bacon/Boulden Blvd
T201901102
Utility Construction Schedule¹

| ACTIVITY | CY 2024 | | | | | | | | CY 2025 | | | | | | | | CY 2026 | | | | | |
|--|--|--------|---------|---------|---------|--------|---------|---------|---------|--------|--------|---------|---------|---------|--------|---------|---------|---------|--------|---------|---------|---------|
| | SEP | | | | OCT | | | | MAR | | | | APR | | | | OCT | | | | | |
| WEEK STARTING | Sep. 2 | Sep. 9 | Sep. 16 | Sep. 23 | Sep. 30 | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 | Mar. 2 | Mar. 9 | Mar. 16 | Mar. 23 | Mar. 30 | Apr. 6 | Apr. 13 | Apr. 20 | Apr. 27 | Oct. 5 | Oct. 12 | Oct. 19 | Oct. 26 |
| State's Contractor ² | 831 CD (ANTICIPATED NTP SEPTEMBER 3, 2024) | | | | | | | | | | | | | | | | | | | | | |
| Delmarva Power Electric ^{2,3} | DURING CONTRACT | | | | | | | | | | | | | | | | | | | | | |
| Delaware Pipeline Company ^{2,3} | DURING CONTRACT | | | | | | | | | | | | | | | | | | | | | |
| Verizon, Inc ^{2,3} | 16 MONTHS | | | | | | | | | | | | | | | | | | | | | |
| AT&T ^{2,3} | | | | | | | | | | | | | | | | | | | | | | |

| LEGEND | |
|--------|----------------------|
| | Roadway Construction |
| | Utility Activity |

NOTES:

1. Construction phasing milestones and utility relocation durations are subject to final confirmation by DelDOT and the respective utility companies. Project schedule duration is estimated at 831 CD.
2. The Contractor shall notify impacted utilities, as noted in the Utility Statement.
3. Total duration required for adjustments/relocations are shown. Beginning and end dates for utility company work will be dependent on the State's Contractor's phasing.

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
PO BOX 778
DOVER, DELAWARE 19903

CERTIFICATE OF RIGHT-OF-WAY STATUS

STATE PROJECT NO. T201901102

F.A.P. NO. NH-N024(25)

US13, PAVING AND PEDESTRIAN IMPROVEMENTS
LLANGOLLEN BLVD TO BACON/BOULDEN BLVD

NEW CASTLE COUNTY

Certificate of Right-of-Way Status – 100%

Status - LEVEL 1

As required by 23 CFR, Part 635, and other pertinent Federal and State regulations or laws, the following certifications are hereby made in reference to this highway project:

All necessary real property interests have been acquired in accordance with current FHWA/State directives covering the acquisition of real property; and,

All necessary rights-of-way, including control of access rights when pertinent, have been acquired including legal and physical possession; and,

All project rights of way are currently available in accordance with the project right-of-way plans; and,

Any residential displaced individuals or families have been relocated to decent, safe and sanitary housing, or adequate replacement housing has been made available in accordance with the provisions of the current Federal Highway Administration (FHWA) directive(s) covering the administration of the Highway Relocation Assistance Program; and,

All occupants have vacated the lands and improvements; and,

The State has physical possession and the right to remove, salvage, or demolish any improvements acquired as part of this project, and enter on all land.

RIGHT OF WAY SECTION



Monroe C. Hite, III
Chief of Right of Way

May 28, 2024



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

May 2, 2024

ENVIRONMENTAL REQUIREMENTS

FOR

State Contract No. T201901102

Federal Aid No.: NH-N024(25)

Contract Title: US 13 Paving and Pedestrian Improvements – Llangollen BLVD to
Bacon/Boulden BLVD

In accordance with the procedural provisions for implementing the National Environmental Policy Act of 1969, as amended, the referenced project has been processed through the Department's Environmental Review Procedures and has been classified as a Level C/ Class II Action.

Class II Action / Level C
CE action: **23 CFR 771.117 (c)(26)**

Environmental (NEPA) Approval Date: 11/5/2021
NEPA Reevaluation Date: 8/2/2023

PERMIT REQUIREMENTS:

The proposed construction work for this project requires permit approval from the agencies listed below. It is the responsibility of the contracting agency -- the Delaware Department of Transportation, Division of Transportation Solutions -- to obtain the necessary permits to ensure that the contractor complies with the requirements and conditions established by the regulatory agencies. Written authorization from the permitting agencies is required and paperwork for on-

site posting is anticipated. The proposed work for this project will be authorized under the permits listed below:

REQUIRED PERMITS AND APPROVAL STATUS:

- U.S. Army Corps of Engineers (USACE) – Nationwide Permit #3 FYI Email Sent 4/8/2024
- Delaware Department of Natural Resources and Environmental Control (DNREC) Wetlands & Subaqueous Lands Section (WLSL) – Special Exemption (b), FYI Email Sent 4/8/2024
- Delaware Coastal Zone Management (CZM) – Issued
- DNREC Water Quality Certification (WQC) - Issued – Project is not located in a Critical Resource Water

SPECIFIC REQUIREMENTS:

Compliance with all requirements of the permits is the responsibility of the contractor, who will follow all special conditions or requirements as stated within those permits. The contractor will be subject to penalties, fines, and the risk of shut down as mandated by laws governing permitting agencies if such conditions and requirements are violated or ignored. Therefore, all special conditions, general requirements, and/or other required provisions specified within the permits must be followed. Those obligations are indicated or listed within the permit package, which can be obtained from the DelDOT Contract Administration Office.

Additional requirements by DelDOT not specified within the permits, but listed below, are also the responsibility of the contractor. Noncompliance with these requirements may result in shut down of the project at the contractor's expense.

1. The contractor shall employ measures during construction to prevent spills of fuels or lubricants. If a spill should occur, efforts shall be undertaken to prevent its entry into wetlands, aquatic, or drainage areas. Any spills entering wetlands, aquatic, or drainage areas shall be removed immediately. The Division of Water Resources (DNREC), Wetlands & Aquatic Protection Branch, 302-739-4691, shall be notified of any spill(s) within six (6) hours of their occurrence. That office will determine the effectiveness of spill and contamination removal and specify remediation efforts as necessary.

2. All construction debris, excavated material, brush, rocks, and refuse incidental to the work shall be placed either on shore above the influence of flood waters or on some suitable disposal site approved by the department.

3. The disposal of trees, brush, and other debris in any stream corridor, wetland surface water or any drainage ditch is prohibited.
4. There shall be no stockpiling of construction materials or temporary fills in wetlands or subaqueous lands unless otherwise specified on project plans and approved by permitting agencies that govern them. It is the contractor's responsibility to coordinate and secure those additional permits/amendments in deviating from the plan.
5. Construction debris shall be kept from entering adjacent waterways, wetlands, ground cover, or drainage areas. Any debris that enters these areas shall be removed immediately. Netting, mats, or establishing confined work areas in stages may be necessary to address these issues.
6. Refuse material resulting from routine maintenance of worker equipment and heavy machinery is prohibited from being disposed or deposited onto or into the ground. All used oils and filters must be recycled or disposed of properly.
7. Use of harmful chemical wash water to clean equipment or machinery is discouraged. If undertaken, the residue water and/or material must be collected or contained such that it will be disposed of properly. It shall not be deposited or disposed of in waterways, streams, wetlands, or drainage areas.
8. The contractor shall follow all requirements as indicated in the Environmental Compliance Sheet. It is the contractor's responsibility to ensure that workers also follow this requirement. As part of the restrictions, please note the timetables reflected in the contract for the in-stream/water work for endangered species protection.
9. Fill material shall be free of oil and grease, debris, wood, general refuse, plaster and other pollutants, and shall contain no broken asphalt.

ENVIRONMENTAL COMPLIANCE SHEET:

Note 2B—Construction Restrictions

Note 3—Cultural Resources

Note 4—Protection of Resources

The contractor shall pay special attention to specific construction requirements as indicated in the US Army Corps of Engineer Permit as well as the Environmental Compliance (EC) Sheet.

DelDOT Environmental Studies Section must be notified if there are any changes to the project methods, footprint, materials, or designs, to allow the Department to coordinate with the appropriate resource agencies (COE, DNREC, and SHPO), for approval at DOT_EnvironmentalStudies@delaware.gov and/or 302-760-2259.

A handwritten signature in black ink, consisting of a vertical line on the left, a horizontal line crossing it, and a loop at the bottom. To the right of the signature, the date "5/2/2024" is written in a cursive style.

Van Adams, Natural Resource Supervisor



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
 800 BAY ROAD
 P.O. BOX 778
 DOVER, DELAWARE 19903

NICOLE MAJESKI
 SECRETARY

RAILROAD STATEMENT

For

State Contract No.:

Federal Aid No.:

Project Title:

The following railroad companies maintain facilities within the contract limits:

- | | |
|---------------------------------------|----------------------|
| Amtrak | Maryland & Delaware |
| CSX | Norfolk Southern |
| State of Delaware Delmarva Central | Wilmington & Western |
| East Penn | Delmarva Central |
| | None |

DOT Inventory No.: _____ No. Trains/Day: _____ Passenger Trains (Y / N): _____

In accordance with 23 CFR 635, herein is the railroad statement of coordination (check one):

No Railroad involvement.

Railroad Agreement unnecessary but railroad flagging required. The contractor shall follow requirements stated in the DelDOT Maintenance of Railroad Traffic Item in the Special Provisions. Contractor shall coordinate railroad flagging with DelDOT's Railroad Program Coordinator at (302) 659-4664.

Railroad Agreement required. The Contractor cannot begin work until the Agreement is complete and fully executed. Railroad related work to be undertaken and completed as required for proper coordination with physical construction schedules. The Contractor shall follow requirements stated in the DelDOT Maintenance of Railroad Traffic Item in the Special Provisions. Contractor shall coordinate railroad flagging with DelDOT's Railroad Program Coordinator at (302) 659-4664.

Approved As To Form:

Lei Xu

 DelDOT Railroad Program Coordinator

 DATE



Delaware Department of Transportation
Quantity Sheet Summary

Proposal ID: T201901102

Project Descripton: US13, PAVING AND PEDESTRIAN IMPROVEMENTS - LLANGOLLEN BLVD

NOT TO BE USED FOR BIDDING

| Item Number | Description | Unit | Quantity |
|-------------|---|------|----------|
| 701012 | PCC CURB, TYPE 1-6 | LF | 4879 |
| 701013 | PCC CURB, TYPE 1-8 | LF | 426 |
| 701014 | PCC CURB, TYPE 2 | LF | 1776 |
| 701016 | I.PCC CURB AND GUTTER, TYPE 1-4 | LF | 2816 |
| 613001 | SILICONE-BASED ACRYLIC CONCRETE SEALER | SF | 1080 |
| 628001 | REPAIR OF CONCRETE STRUCTURE BY EPOXY INJECTION | LF | 140 |
| 628041 | DEEP SPALL REPAIR | CF | 110 |
| 701500 | PCC CURB, TYPE 1, MODIFIED | LF | 461 |
| 708003 | GEOTEXTILES, RIPRAP | SY | 298 |
| 709001 | PERFORATED PIPE UNDERDRAINS, 6" | LF | 87 |
| 302002 | DELAWARE NO. 3 STONE | TON | 90 |
| 905001 | SILT FENCE | LF | 4784 |
| 905002 | REINFORCED SILT FENCE | LF | 513 |
| 905004 | INLET SEDIMENT CONTROL, DRAINAGE INLET | EACH | 264 |
| 907017 | COMPOST FILTER LOGS | LF | 40 |
| 908004 | TOPSOIL, 6" DEPTH | SY | 25689 |
| 908015 | PERMANENT GRASS SEEDING, STORMWATER | SY | 1821 |

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Delaware Department of Transportation
Quantity Sheet Summary

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Project Descripton: US13, PAVING AND PEDESTRIAN IMPROVEMENTS - LLANGOLLEN BLVD
TO BACON/BOULDEN BLVD

NOT TO BE USED FOR BIDDING

| Item Number | Description | Unit | Quantity |
|-------------|--|------|----------|
| 831578 | PROVIDE AND INSTALL SECOND AND SUBSEQUENT ADDITIONAL 4" HDPE SDR-13.5 CONDUIT IN DIRECTIONAL BORE | LF | 439 |
| 831581 | PROVIDE AND INSTALL SECOND AND SUBSEQUENT ADDITIONAL 2" GALVANIZED STEEL CONDUIT IN TRENCH OR OPEN CUT | LF | 22 |
| 908023 | STABILIZED CONSTRUCTION ENTRANCE | SY | 27 |
| 909002 | SANDBAG DIVERSION | CF | 4140 |
| 817027 | RAISED/RECESSED PAVEMENT MARKER | EACH | 4031 |
| 909005 | STREAM DIVERSION | LS | 1 |
| 707002 | RIPRAP, R-5 | SY | 8 |
| 707020 | PRESACKED CONCRETE RIPRAP | CY | 22 |
| 705010 | PEDESTRIAN CONNECTION, TYPE 5 | SF | 4444 |
| 705528 | TEMPORARY PEDESTRIAN CONNECTION | EACH | 10 |
| 707001 | RIPRAP, R-4 | SY | 206 |
| 831515 | PROVIDE AND INSTALL 3" SCHEDULE 80 PVC CONDUIT (TRENCH) | LF | 312 |
| 201000 | CLEARING AND GRUBBING | LS | 1 |
| 202000 | EXCAVATION AND EMBANKMENT | CY | 17152 |
| 207000 | PIPE, CULVERT, AND STRUCTURAL EXCAVATION | CY | 20 |
| 207021 | STRUCTURAL BACKFILL, (BORROW TYPE C) | CY | 100 |

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TO BACON/BOULDEN BLVD

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| Item Number | Description | Unit | Quantity |
|-------------|--|------|----------|
| 209001 | BORROW, TYPE A | CY | 20 |
| 209002 | BORROW, TYPE B | CY | 4 |
| 209006 | BORROW, TYPE F | CY | 268 |
| 211002 | REMOVAL OF GUARDRAIL AND FENCE | LF | 1841 |
| 301001 | GABC | CY | 9635 |
| 301002 | GABC, PATCHING | CY | 950 |
| 211000 | REMOVAL OF STRUCTURES AND OBSTRUCTIONS | LS | 1 |
| 831516 | PROVIDE AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (TRENCH) | LF | 1157 |
| 819011 | GALVANIZED TELESCOPING STEEL SIGN POSTS, 12' X 2", COMPLETE W/ BASEPOSTS AND HARDWARE | EACH | 279 |
| 819016 | INSTALLATION OF 4" DIAMETER HOLE, LESS THAN OR EQUAL TO 6" DEPTH | EACH | 5 |
| 819018 | INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST | EACH | 648 |
| 819019 | INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON MULTIPLE SIGN POSTS | SF | 1179 |
| 819023 | GALVANIZED TELESCOPING STEEL SIGNPOSTS, 15'X2", COMPLETE W/BASEPOSTS & HARDWARE | EACH | 1 |
| 830001 | CONDUIT JUNCTION WELL, TYPE 1, 20" X 20" PRECAST CONCRETE | EACH | 24 |
| 830002 | CONDUIT JUNCTION WELL, TYPE 4, 20" X 42-1/2" PRECAST CONCRETE | EACH | 8 |
| 830008 | ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL | EACH | 81 |

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| Item Number | Description | Unit | Quantity |
|-------------|---|------|----------|
| 707500 | CHANNEL BED FILL | CY | 75 |
| 720037 | GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31, STEEP SLOPE | LF | 30 |
| 721001 | GUARDRAIL END TREATMENT, TYPE 1-31, TEST LEVEL 3 | EACH | 6 |
| 721003 | GUARDRAIL END TREATMENT, TYPE 2-31, TEST LEVEL 3 | EACH | 1 |
| 721012 | GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 3-31 | EACH | 1 |
| 721006 | END ANCHORAGE 31 | EACH | 8 |
| 720035 | GALVANIZED STEEL BEAM GUARDRAIL, TYPE 2-27 | LF | 25 |
| 723015 | CONCRETE MEDIAN BARRIER, 42" F-SHAPE | LF | 1686 |
| 723011 | CONCRETE ROADSIDE BARRIER, 36" TYPE 2 | LF | 205 |
| 723013 | CONCRETE ROADSIDE BARRIER, 42" TYPE 2 | LF | 50 |
| 727000 | CHAIN LINK FENCE | LF | 1275 |
| 760010 | PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT | SYIN | 986010 |
| 762000 | SAW CUTTING, BITUMINOUS CONCRETE | LF | 46221 |
| 762001 | SAW CUTTING, CONCRETE, FULL DEPTH | LF | 972 |
| 763000 | INITIAL EXPENSE/DE-MOBILIZATION | LS | 1 |
| 763501 | CONSTRUCTION ENGINEERING | LS | 1 |

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Project Descripton: US13, PAVING AND PEDESTRIAN IMPROVEMENTS - LLANGOLLEN BLVD
TO BACON/BOULDEN BLVD

NOT TO BE USED FOR BIDDING

| Item Number | Description | Unit | Quantity |
|-------------|---|------|----------|
| 801000 | MAINTENANCE OF TRAFFIC | LS | 1 |
| 602130 | ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET | EACH | 117 |
| 602132 | ADJUSTING AND REPAIRING EXISTING MANHOLE | EACH | 52 |
| 604003 | SHORING | LS | 1 |
| 607010 | MODULAR BLOCK RETAINING WALLS | SF | 5395 |
| 610000 | PCC MASONRY, CLASS A | CY | 63 |
| 611001 | BAR REINFORCEMENT, EPOXY COATED | LB | 6059 |
| 626010 | ALUMINUM PEDESTRIAN RAILING | LF | 331 |
| 701010 | PCC CURB, TYPE 1-2 | LF | 1007 |
| 701011 | PCC CURB, TYPE 1-4 | LF | 8251 |
| 831523 | PROVIDE AND INSTALL 2" GALVANIZED CONDUIT (TRENCH) | LF | 186 |
| 831545 | PROVIDE AND INSTALL 4" HDPE SDR-13.5 CONDUIT (BORE) | LF | 1932 |
| 211001 | REMOVAL OF PORTLAND CEMENT CONCRETE PAVEMENT, CURB AND SIDEWALK | SY | 10339 |
| 831564 | PROVIDE AND INSTALL 1-1/2" GALVANIZED STEEL CONDUIT (TRENCH) | LF | 153 |
| 832008 | PROVIDE AND INSTALL 1-CONDUCTOR #6 STRANDED COPPER, TYPE USE-2 | LF | 213 |
| 833001 | BONDING AND GROUTING EXISTING JUNCTION WELL | EACH | 11 |

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Project Descripton: US13, PAVING AND PEDESTRIAN IMPROVEMENTS - LLANGOLLEN BLVD
TO BACON/BOULDEN BLVD

NOT TO BE USED FOR BIDDING

| Item Number | Description | Unit | Quantity |
|-------------|---|------|----------|
| 834001 | POLE BASE, TYPE 3 | EACH | 3 |
| 834005 | POLE BASE, TYPE 4A | EACH | 39 |
| 834006 | POLE BASE, TYPE 6 | EACH | 5 |
| 835003 | CABINET BASE TYPE P | EACH | 4 |
| 831574 | PROVIDE AND INSTALL SECOND AND SUBSEQUENT ADDITIONAL 4" SCHEDULE 80 PVC CONDUIT IN TRENCH OR OPEN CUT | LF | 38 |
| 846001 | PROVIDE AND INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT | LF | 8666 |
| 850011 | REMOVAL OF LUMINAIRE | EACH | 1 |
| 850521 | LUMINAIRE (LED), 250 WATTS, HPS EQUIVALENT | EACH | 1 |
| 851007 | RELOCATED EXISTING LIGHT STANDARD | EACH | 5 |
| 401029 | SUPERPAVE TYPE C, PG 64-22, PATCHING | TON | 424 |
| 401030 | SUPERPAVE TYPE B, PG 64-22, PATCHING | TON | 1123 |
| 601032 | REINFORCED CONCRETE PIPE, 15", CLASS IV | LF | 4126 |
| 601033 | REINFORCED CONCRETE PIPE, 18", CLASS IV | LF | 1711 |
| 601142 | REINFORCED CONCRETE FLARED END SECTION, 18" | EACH | 1 |
| 602003 | DRAINAGE INLET, 34" X 24" | EACH | 37 |
| 602009 | DRAINAGE INLET, 72" X 24" | EACH | 11 |

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| Item Number | Description | Unit | Quantity |
|-------------|--|------|----------|
| 602010 | DRAINAGE INLET, 72" X 48" | EACH | 18 |
| 602030 | MANHOLE, 48" X 30" | EACH | 1 |
| 602031 | MANHOLE, 48" X 48" | EACH | 4 |
| 807002 | PROVIDE AND INSTALL TEMPORARY PORTLAND CEMENT CONCRETE SAFETY BARRIER, PINNED IN BITUMINOUS PAVEMENT | LF | 4637 |
| 807010 | REMOVE TEMPORARY PORTLAND CEMENT CONCRETE SAFETY BARRIER, PINNED IN BITUMINOUS PAVEMENT | LF | 4637 |
| 809005 | PROVIDE TEMPORARY IMPACT ATTENUATOR - NON-GATING, REDIRECTIVE, TEST LEVEL 3 | EACH | 11 |
| 817002 | PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC | SF | 55761 |
| 602004 | DRAINAGE INLET, 48" X 30" | EACH | 22 |
| 817006 | PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 12" | LF | 6395 |
| 817015 | PREFORMED RETROREFLECTIVE THERMOPLASTIC MARKINGS, BIKE SYMBOL | EACH | 6 |
| 701021 | I.PCC CURB AND GUTTER, TYPE 3-4 | LF | 5348 |
| 818001 | SUPPLY OF FLAT SHEET ALUMINUM SIGN PANEL, TYPE IV, RETROREFLECTIVE SHEETING | SF | 2262 |
| 831501 | PROVIDE AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (OPEN CUT) | LF | 194 |
| 701022 | I.PCC CURB AND GUTTER, TYPE 3-6 | LF | 981 |
| 701023 | I.PCC CURB AND GUTTER, TYPE 3-8 | LF | 398 |

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|-------------|---|------|----------|
| 701032 | CURB OPENING, 4' OPENING | EACH | 4 |
| 702000 | TRIANGULAR CHANNELIZING ISLANDS | SF | 7700 |
| 705001 | PCC SIDEWALK, 4" | SF | 89144 |
| 705002 | PCC SIDEWALK, 6" | SF | 3408 |
| 831514 | PROVIDE AND INSTALL 2-1/2" SCHEDULE 80 PVC CONDUIT (TRENCH) | LF | 568 |
| 705005 | PCC SIDEWALK, 8" | SF | 2874 |
| 705007 | DETECTABLE WARNING SURFACE | SF | 4570 |
| 705008 | PEDESTRIAN CONNECTION, TYPE 1 | SF | 24678 |
| 701020 | I.PCC CURB AND GUTTER, TYPE 3-2 | LF | 404 |
| 709002 | PERFORATED PIPE UNDERDRAINS, 8" | LF | 5551 |
| 710002 | ADJUST WATER VALVE BOXES | EACH | 71 |
| 710503 | ADJUST GAS VALVE BOXES | EACH | 26 |
| 711500 | ADJUST AND REPAIR EXISTING SANITARY MANHOLE | EACH | 51 |
| 720021 | GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31 | LF | 1192 |
| 208000 | FLOWABLE FILL | CY | 1 |
| 601191 | PVC PIPE, 6" | LF | 10 |

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|-------------|---|------|----------|
| 707003 | RIPRAP, R-6 | SY | 264 |
| 802003 | ARROW PANELS TYPE C | EADY | 374 |
| 709011 | UNDERDRAIN OUTLET PIPE, 6" | LF | 12 |
| 710003 | ADJUST FIRE HYDRANTS | EACH | 1 |
| 763001 | BASELINE SCHEDULE TYPE 1 | LS | 1 |
| 763002 | MONTHLY UPDATE SCHEDULE TYPE 1 | EAMO | 28 |
| 801501 | MAINTENANCE OF RAILROAD TRAFFIC | LS | 1 |
| 817031 | REMOVAL OF PAVEMENT STRIPING | SF | 15661 |
| 817037 | PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 4" | LF | 299 |
| 817038 | PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 6" | LF | 685 |
| 817042 | PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 6" | LF | 233658 |
| 817043 | PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 12" | LF | 78357 |
| 818003 | SUPPLY OF FLAT SHEET ALUMINUM SIGN PANEL, TYPE XI, RETROREFLECTIVE SHEETING | SF | 378 |
| 803001 | PROVIDE AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN | EADY | 152 |
| 804001 | PROVIDE AND MAINTAIN PORTABLE LIGHT ASSEMBLY (FLOOD LIGHTS) | EADY | 1848 |
| 805001 | PLASTIC TRAFFIC CONTROL DRUMS | EADY | 286250 |

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|-------------|---|------|----------|
| 806001 | TRAFFIC OFFICERS | HOUR | 400 |
| 808002 | PROVIDE AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II | EADY | 1076 |
| 810001 | TEMPORARY WARNING SIGNS AND PLAQUES | EADY | 111758 |
| 811001 | FLAGGER, NEW CASTLE COUNTY | HOUR | 840 |
| 811013 | FLAGGER, NEW CASTLE COUNTY, OVERTIME | HOUR | 210 |
| 811502 | RAILROAD FLAGGER | HOUR | 200 |
| 813001 | TEMPORARY BARRICADES, TYPE III | LFDY | 8728 |
| 831531 | PROVIDE AND INSTALL 4" GALVANIZED STEEL CONDUIT (BORE) | LF | 31 |
| 834002 | POLE BASE, TYPE 3A | EACH | 9 |
| 834501 | PARTIAL REMOVAL OF CONCRETE POLE BASES AND CABINET FOUNDATIONS | CY | 11 |
| 401016 | SUPERPAVE TYPE B, PG 76-22 | TON | 3898 |
| 720011 | GALVANIZED TRANSITION SECTION, THRIE BEAM | EACH | 1 |
| 846002 | PROVIDE AND INSTALL A 1-1/2 INCH GALVANIZED RIGID METAL CONDUIT DETECTOR SLEEVE WITH LOOP WIRE | LF | 20 |
| 908020 | EROSION CONTROL BLANKET MULCH | SY | 303 |
| 701515 | CURB OPENING, MODIFIED | EACH | 7 |
| 701510 | CURB/SIDEWALK OPENING | EACH | 9 |

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|-------------|--|------|----------|
| 830010 | REMOVAL OF EXISTING JUNCTION WELL | EACH | 12 |
| 831533 | PROVIDE AND INSTALL 2" GALVANIZED STEEL CONDUIT (OPEN CUT) | LF | 10 |
| 831538 | PROVIDE AND INSTALL 2" GALVANIZED STEEL CONDUIT (ON STRUCTURE) | LF | 20 |
| 906002 | DEWATERING BAG | EACH | 1 |
| 906003 | SUMP PIT | EACH | 1 |
| 908014 | PERMANENT GRASS SEEDING, DRY GROUND | SY | 25689 |
| 709505 | WEEP HOLE RETROFIT, 4" DIAMETER | EACH | 16 |
| 705011 | PEDESTRIAN CONNECTION, SPECIAL | SF | 1146 |
| 723503 | BIFURCATED CONCRETE BARRIER WALL | LF | 318 |
| 724005 | PERMANENT IMPACT ATTENUATOR, TYPE 5 | EACH | 3 |
| 302005 | DELAWARE NO. 57 STONE | TON | 44 |
| 708001 | GEOTEXTILES, STABILIZATION | SY | 96 |
| 710511 | FLEXIBLE COUPLING | EACH | 1 |
| 705009 | PEDESTRIAN CONNECTION, TYPE 2, 3, AND/OR 4 | SF | 4603 |
| 602100 | DRAINAGE INLET GRATE(S) | EACH | 19 |
| 610009 | PCC MASONRY, CLASS B | CY | 6 |



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|-------------|--|------|----------|
| 701516 | CURB/SIDEWALK OPENING, MODIFIED | EACH | 4 |
| 763518 | CONNECTED MACHINERY | LS | 1 |
| 820009 | SUPPLY OF BREAKAWAY I-BEAM SIGN POSTS, W-8 | LF | 42 |
| 820014 | SUPPLY AND INSTALLATION OF BOLT KIT FOR BREAKAWAY COUPLING | EACH | 2 |
| 820015 | SUPPLY AND INSTALL OF HINGE PLATE FOR BREAKAWAY COUPLING | EACH | 2 |
| 820016 | SUPPLY AND INSTALLATION OF BREAKAWAY COUPLING SYSTEM | EACH | 2 |
| 820017 | INSTALLATION OF BREAKAWAY I-BEAM SIGN POSTS | EACH | 2 |
| 820019 | INSTALL SIGN PANEL ON BREAKAWAY I-BEAM SIGN SUPPORT | SF | 112 |
| 822003 | REPOSITION EXISTING SIGN ON OVERHEAD STRUCTURE | SF | 672 |
| 822009 | REMOVAL OF SIGN ON/OVER HIGHWAY STRUCTURE | SF | 225 |
| 908024 | STABILIZED CONSTRUCTION ENTRANCE, TOPDRESSING | TON | 12 |
| 908526 | GEOSYNTHETIC CEMENTITIOUS COMPOSITE MAT | SF | 2124 |
| 910002 | INFILTRATION STONE, NO. 8 | TON | 1104 |
| 910006 | OUTLET STRUCTURE | EACH | 1 |
| 910010 | BIORETENTION AREA | CY | 910 |
| 910011 | BIOSOIL MIX | CY | 365 |

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|-------------|--|------|----------|
| 727511 | PROVIDE ORNAMENTAL STEEL FENCE ON MEDIAN BARRIER | LF | 1686 |
| 727512 | INSTALL ORNAMENTAL STEEL FENCE ON MEDIAN BARRIER | LF | 1686 |
| 760002 | BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT | LF | 5592 |
| 831503 | PROVIDE AND INSTALL 2-1/2" SCHEDULE 80 PVC CONDUIT (OPEN CUT) | LF | 15 |
| 401046 | SUPERPAVE TYPE C, PG 76-22 (NON-CARBONATE STONE) | TON | 60722 |
| 601034 | REINFORCED CONCRETE PIPE, 21", CLASS IV | LF | 547 |
| 601035 | REINFORCED CONCRETE PIPE, 24", CLASS IV | LF | 1421 |
| 601053 | REINFORCED CONCRETE PIPE, 15", CLASS V | LF | 177 |
| 601054 | REINFORCED CONCRETE PIPE, 18", CLASS V | LF | 31 |
| 602005 | DRAINAGE INLET, 48" X 48" | EACH | 17 |
| 602502 | CONVERTING EXISTING CATCH BASIN TO MANHOLE | EACH | 4 |
| 401014 | SUPERPAVE TYPE B, PG 64-22 | TON | 7584 |
| 763503 | TRAINEE | HOUR | 3000 |
| 302004 | DELAWARE NO. 10 STONE | TON | 80 |
| 401036 | SUPERPAVE TYPE C, PG 64-22, WEDGE | TON | 137 |
| 760012 | PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT, VARIABLE DEPTH | SYIN | 6751 |



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|-------------|--|------|----------|
| 820002 | REINFORCED CONCRETE MASONRY SIGN FOUNDATION, W-8 | EACH | 2 |

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