

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
MAINTENANCE AND OPERATIONS



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PLANS AND SPECIFICATIONS FOR
Contract Number: T201703401
Federal Aid Project Number: ESTP-2017(15)
Drainage Improvements, Interstate, North, Open End, FY18-20

PLANS PREPARED BY: MLK
NORTH DISTRICT CONTRACTS ENGINEER

DATE: 6/26/17

DATE RECOMMENDED: 6/26/17

[Signature]
NORTH DISTRICT DESIGN ENGINEER



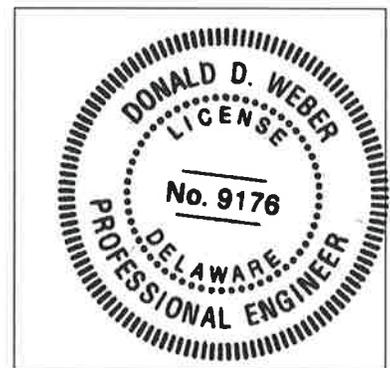
DATE RECOMMENDED: 26 JUNE 2017

[Signature]
NORTH DISTRICT MAINTENANCE ENGINEER



DATE APPROVED: 6/26/17

[Signature]
NORTH DISTRICT ENGINEER



DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

CONTRACT DESCRIPTION

The purpose of this contract is to provide material, equipment, and labor for the installation and/ or modification of roadway drainage systems along I-95/I-295/I-495, including associated ramps.

The work activities include, but are not limited to, the following:

- Roadside ditch excavation and re-grading to maintain and improve drainage
- Placement of riprap or concrete at drainage pipe inlet/outfalls and other locations as necessary for erosion protection
- Repair/ replacement of concrete lining in drainage ditches
- Cleaning, grubbing, vegetation removal and tree removal along roadside drainage ditches.
- Repair /replacement of drainage pipes
- Removal of obstructions from drainage pipes and drainage inlets (catch basins)
- Re-sealing joints in pipes
- Repair/replacement of deteriorated drainage inlets (catch basins)
- Re-grading, placement of borrow material, and establishment of grass in eroded areas along roadsides and median
- Other maintenance and repair work for drainage systems

The specific work sites are not listed herein, but will be scheduled by issuance of work orders from the District Maintenance office. The work orders will indicate the work to be performed at each site.

The duration of this open-end contract shall be for a period of three (3) years from the date of initial "Notice to Proceed" letter.

GENERAL NOTES

1. All work shall be performed in accordance with the Delaware Department of Transportation Standard Specifications dated August 2016 (as amended by the Supplemental Specifications), the DelDOT Special Provisions, Standard Constructions Details, and these project notes.
2. An updated Performance Bond shall be submitted at the beginning of each fiscal year. Failure on the part of the Contractor to submit the Performance Bond shall result in the Contract being cancelled.
3. Whenever the word "Contractor" is used in this contract, it shall refer to the person or persons, company or corporation furnishing the services required.
4. Whenever the word "Department" or "Engineer" is used, it shall refer to the person or persons, representing the Delaware Department of Transportation (DelDOT).

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

5. Tasking of work is contingent upon authorization of State funding.
6. It is anticipated that all work will occur within DelDOT's existing right of way or easement areas. Should the need occur to trespass onto private property; it will be the responsibility of the DelDOT Project Manager to secure such trespass needs.
7. It is anticipated that all work will occur within DelDOT's right of way. Should the need occur to trespass onto railroad property, including the highway-rail crossing; it will be the responsibility of the Project Manager to contact the DelDOT Railroad Coordinator and obtain written authorization before entering.
8. No utility relocation involvement is anticipated. Should any conflicts be encountered during construction requiring adjustment and/or relocation of the agencies' existing facilities, the necessary relocation work shall be accomplished by the respective agencies' forces, as directed by the District Engineer. Any adjustments and/or relocations of municipally owned facilities shall be done by the State's contractor in accordance with the respective agencies' standard specifications as directed by the District Engineer.
9. Prosecution and Progress of Work:

The Contractor shall commence on work indicated on the work order no later than the tenth (10th) business day after issuance unless required materials are not available. Non-availability of materials shall be verified by at least three (3) different sources. Verification shall be formal and supplied by the Contractor in writing.

Issuance of each work order constitutes the notice to proceed with the work described on the work order.

If there is a verified non-availability of materials, time charges shall commence on the first (1st) working day following the delivery date of materials.

Failure to start assigned work orders in the allowed time constitutes "Failure to Pursue the Work" and subjects the Contractor to Liquidated damages as outlined in Section 108.08 of the Standard Specifications. If work on a specific work order is not completed within the allotted time, Liquidated Damages will be assessed in accordance with Subsection 108.09 and based on the total value of that work order.

Each work order shall be considered a separate unit of work. Upon substantial completion of the work at an individual location, the Engineer will stop time at that location and perform a semi-final inspection for the work order location in accordance with Subsection 105.16. The Engineer reserves the right to require the Contractor to add Work or make repairs to completed locations until such a location has been accepted by the Department. The Contractor must repair all defects in the work caused by poor workmanship or materials at his/her own expense until the Department accepts the Contract after the Final Inspection.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

A Final Inspection may be completed on an annual basis for work orders completed in a calendar year. Upon satisfactory completion of the Final Punchlist, the Department will accept the location and release the Contractor from responsibility for the Work at that location. If a work order is sufficiently large and complex as determined by the Engineer, a Final Inspection may be held upon the individual completion of that work order.

10. Payment will be monthly for the completed work as outlined in Section 109.07.
11. Clearing and grubbing of trees, shrubs and other vegetation less than 6 inches in diameter shall be incidental to Item 763000 (Initial Expense/De-Mobilization). Grubbing activities performed in wetland areas requires environmental permit approvals.
12. The Contractor shall not trespass on private property unless the District has acquired a "Temporary Trespass Agreement" from the property owner. If the work is within a permanent easement, the work shall not begin until the adjacent property owners have been notified. Prior to starting work on private property, the Contractor shall notify affected property owners in writing of the proposed work dates, scope of work, proposed work hours, and DelDOT contact phone number. Compensation for notification shall be incidental to Item 763000 (Initial Expense/De-Mobilization).
13. No environmental permits are required for this work provided no jurisdictional wetlands or waters are impacted. If there is any question as to whether or not a water or wetland is jurisdictional, contact the DelDOT Environmental Section at (302) 760-2264.
14. Work within waters/wetlands shall not begin on locations requiring environmental permits until all applicable permits have been obtained by DelDOT. Confirm permit status with DelDOT Engineer prior to commencement of applicable work.
15. Proper disposal of construction related wastes shall be the sole responsibility of the Contractor.
16. Underground utilities may be present at all locations. Therefore, all standard practices and procedures regarding utilities shall be followed. The Contractor shall contact Miss Utility of Delaware prior to starting each work order. 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 purposes for his equipment, and make arrangements directly with utility companies for field adjustments for adequate clearances if necessary.
17. Section 101.03 "Working Day" definition is amended. There will not be a winter shutdown from December 16th to March 15th. The Department reserves the right to issue work and charge time between these dates.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

18. Delete Section 104.06 of the DelDOT Standard Specifications, and replace with the following:

The Department reserves the right to, at any time prior to completion of the contract, issue plan revisions, make adjustments in Contract item quantities, or make such alterations considered necessary to satisfactorily complete the Contract.

The Department reserves the right to increase or decrease the quantities of Pay Items specified in the Contract. Such additions or deletions shall not be cause for an increase or decrease in Contract unit bid prices. The "Change" threshold of plus or minus 25%, as described in Subsection 104.06 of the DelDOT Standard Specifications dated August 2016 shall not apply to this Contract. Quantity increases or decreases of plus or minus 25% or greater shall not be justification for adjustments to unit prices.

The plan revisions and quantity adjustments described above do not invalidate the Contract or release the Contract surety. Payment for these changes shall exclude any amount for loss of anticipated profits alleged to result from the change.

When payment for the Contract work cannot be agreed upon by the Contractor and the Department prior to starting such work ordered, the Department may direct the Contractor to perform the work under Force Account provisions of Subsection 109.04. The Contractor will proceed immediately with the work so ordered and such direction shall neither invalidate the Contract, nor release the surety.

19. Trash, rubbish, debris or brush that hampers repair / maintenance work in this Contract (as determined by the Engineer), shall be removed within the project limits and shall be incidental to Pay Item 763000 (Initial Expense).
20. If required during the placement or repair of PCC items, preformed expansion joint material shall be placed at designated locations as directed by the Engineer. Payment for furnishing and placing the preformed expansion joint material shall be incidental to the PCC pay items.
21. Patching of graded aggregate base course within roadway (including shoulders and travel lanes) shall be performed to match existing full depth pavement section with respect to course thickness and pavement structural number.
22. Proper disposal of construction related wastes shall be the sole responsibility of the Contractor, and shall be performed in accordance with all applicable State regulations.
23. Grass and soil areas within State right-of-way that have been damaged by equipment during this contract, shall be restored with topsoil, seed and mulch at Contractor's own expense, and in accordance with the requirements for Special Provisions 908004 (Topsoil, 6"Depth) and 908014 (Permanent Grass Seeding, Dry Ground).
24. The Contractor shall guarantee all work to be free from defects for a period of one year from time of owner acceptance. Any defects occurring during this period shall be corrected by the Contractor at no additional cost to the Department.
25. Excavated material not needed on the project shall be removed from the site at Contractor's expense.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

26. All warm mix bituminous paving materials shall be placed utilizing a paving machine, unless otherwise directed by the Engineer.
27. Unless otherwise directed by the Engineer, all full depth saw cuts will be wet cuts. All additional costs for wet cutting are incidental to Item 762001 (Saw Cutting, Concrete, Full Depth).
28. When drainage inlets (catch basins) are designated for replacement, removal and disposal of the existing drainage inlet shall be incidental to the new applicable drainage inlet item.
29. Replacement of drainage inlets (catch basins) that have a depth less than or equal to 5 feet, measured from the surface of the footer to the bottom of the grate/manhole cover, shall be paid at the unit bid cost for the applicable replacement Pay Item. Replacement of drainage inlets with a depth greater than 5 feet will be negotiated or performed by Force Account.
30. In locations that include a triple grated inlet, the payment for adjust and repair shall be 2 times (2x) the bid cost for Pay Item 602130 (Adjusting And Repairing Existing Drainage Inlet).
31. Sealing of cracks in concrete paved ditches shall be paid under Item 504001 (Crack And Joint Sealing Less Than ¾ Inch Wide) or 504002 (Crack and Joint Sealing ¾" to 1 ¾" Wide) as directed by the Engineer. Any sealing of cracks greater than 1 ¾" wide shall be paid as 2x times the bid price for 504002. The Contractor shall thoroughly clean the concrete area prior to repair work, including the removal of vegetation, soil and debris. Removal of existing vegetation, soil and debris from concrete shall be incidental to the applicable concrete crack repair.
32. When required, new drainage ditches shall be excavated and paid for under Item 202000 (Excavation and Embankment). Any additional materials required to establish the new ditch, such as topsoil, seed and mulch, shall be paid for under their respective contract items. Clearing and grubbing of all vegetative matter 6" in diameter or less to establish new ditches shall be incidental to Item 202000. The Contractor shall be responsible for confirming that positive flow in the new ditches is established.
33. Concrete paved drainage ditches shall be repaired in locations as directed by the Engineer. Locations requiring complete replacement of existing sections of concrete in ditches shall be performed under Item 610009 (Portland Cement Concrete Masonry, Class B) and Item 610019 (High Early Strength Concrete) at the discretion of the engineer.
34. Payment for Item 610009 (Portland Cement Concrete Masonry, Class B) and Item 610019 (High Early Strength Concrete) will be based on the actual measured quantity placed. Epoxy coated reinforcement, bonding agent, smooth bar dowels, ties, inserts, etc as required by the Engineer shall be incidental to 610009 and 610019.
35. Payment for the removal of existing pipe from trenches shall be incidental to the bid price for 202000 (Excavation and Embankment).

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

36. At minimum, Soil Retention Blanket Mulch Type 5 will be specified in the flow line of ditches, unless shear stress calculations show that Type 5 or Type 7 blanket is needed.
37. Vegetation and debris shall be removed from the vicinity of pipe and culvert inlet/outlets as directed by the Engineer. Payment shall be incidental to the applicable excavation or ditching pay item, as directed by the Engineer. There shall be no separate payment for removal of vegetation and debris.
38. Pipe Failures shall be repaired in one of two ways or at the discretion of the Engineer. The minimum repair will be to plug lift holes or seams with mortar or as directed by the Engineer, and triple wrap the pipe with a 3 feet wide strip of an approved geotextile material fastened securely around the pipe with three wraps of tie wire. Payment for this work will be incidental to Item 202000 (Excavation and Embankment).

Pipes in the roadway or in the cases of severe joint or pipe dislocation a concrete collar shall be placed after wrapping the pipe in geotextile as stated above. The collar shall consist of a double wrap of heavy gauge 4 inch x 4 inch welded wire fabric offset a minimum of 2 inches from the pipe wall with cement brick, and an 8 inch thick concrete collar with a 24 inch lap on each side of the failure. The collar shall surround the length of the pipe that has failed (top, bottom, and sides). Payment for this work will fall under Item 202000 (Excavation and Embankment) and 610019 (High Early Strength Concrete). Any geotextile, welded fabric, mortar for plugging lift holes or seams, lumber for form work or miscellaneous hardware or material required for pipe repairs shall be incidental to Items 202000 (Excavation And Embankment) and 610019 (High Early Strength Concrete). No concrete shall be released or placed until the depth of the excavation and the character of the foundation material, the adequacy of the forms and falsework, and the placing of reinforcement have been inspected and approved by the Engineer. Immediately upon placing concrete, it shall be consolidated by means of a vibrator.

39. Repair spalls and delamination on concrete headwalls and wingwalls of drainage pipes in locations as directed by the Engineer. Sounding of Concrete is incidental to the applicable repair item. Payment for these repairs is structured as follows:
 - 628040 (Shallow Spall Repair) – Use for spall repairs 2 inches or less in depth
 - 628041 (Deep Spall Repair) – Use for spall repairs greater than 2 inches in depth but 1 CY or less in a single area
 - 628042 (Rehabilitation Of P.C.C. Masonry) – Use for spall repairs greater than 2 inches in depth but exceeds 1 CY in a single area
40. Apply sealant at base of wingwalls in locations as directed by the Engineer, to prevent stormwater from penetrating beneath the wingwall foundation. Payment shall be under Item 504001 / 504002. All vegetation, sediment, debris and existing debonded sealant in the vicinity of the base of the

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

wingwall joint shall be removed prior to applying sealant, Payment for removal and cleaning of joint shall be incidental to pay item 504001 / 504002.

41. All open trenches/excavations, test holes, etc must be protected at the end of the work day by means of backfilling or the use of steel plates. Payment for backfilling shall be incidental to 202000 (Excavation and Embankment). Payment for the use of steel plates shall be incidental to 801000 (Maintenance of Traffic)

MAINTENANCE OF TRAFFIC

42. All work shall be performed in a manner that will reasonably provide the least practicable obstruction to all road users, including vehicular, pedestrian, and bicycle traffic, and shall conform to the requirements of the Delaware Manual of Uniform Traffic Control Devices (MUTCD), part 6, including revisions up to the date of advertisement for bids.
43. All shoulder or travel lane closures shall be performed at times directed by the Engineer with direction from the North District Safety Officer. Any deviation from the time restriction must be approved by the North District Engineer and North District Safety Officer prior to the commencement of work.
44. No lane closures will be permitted on holidays or holiday weekends, unless approved by the Engineer with consultation with DelDOT Safety Section. This requirement applies to all roads impacted in this Contract.
45. If a road/ramp closure is required, the Contractor shall be required to submit the proposed detour route to the DelDOT Safety Officer for approval. Payment for detour plan preparation shall be included in the bid price for Item 801000 (Maintenance of Traffic). The Department will coordinate with the Safety Section and be responsible for the necessary notifications. The detour route requires approval by the Department prior to closure. A two week detour review lead time shall be required for any requested detour. The Contractor shall be responsible for furnishing and maintaining the Maintenance of Traffic apparatus at the closure (i.e. Type III Barricade, Road Closed signs, etc.) and all signs. The Contractor shall be responsible for placement of detour trailblazers. Payment will be under Item 810001 (Temporary Warning Signs and Plaques).
46. The Project Manager shall be responsible for coordinating with the Traffic Section relating to any impacts to Traffic Section facilities (including but not limited to traffic loops, junction wells, etc.) at least four weeks in advance of the start of the activity. Prior to initiating any work on this contract (or sites), the Project Manager shall be responsible for preparing and submitting for approval of the Safety Section, a Maintenance of Traffic Plan. A two week lead time shall be provided for the review and approval of the plan. The Maintenance of Traffic Plan shall include proposed time restrictions on the closure of travel lanes subject to the approval of the Safety Section.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

47. The Project Manager is responsible for ensuring any required documents and analysis as part of the adopted Work Zone Safety and Mobility Procedures and Guidelines has been completed prior to any work starting on this contract.
48. Traffic control devices shall be provided and placed in accordance with the Delaware Manual on Uniform Traffic Control Devices (DE-MUTCD). The Contractor shall prepare and submit a Temporary Traffic Control Plan for each site to DelDOT for approval. The Temporary Traffic Control Plan must clearly indicate orientation of traffic control devices to be used for each site. The plan must be approved by the DelDOT District Safety Officer and DelDOT Engineer prior to commencement of work on each site. Maintenance of Traffic Typical Applications are described in the Delaware MUTCD. The Contractor shall be responsible for determining the applicable Typical Application for each work application. The proposed Temporary Traffic Control Plan must be submitted to DelDOT a minimum of ten (10) working days prior to commencement of work at each location. Payment for this work will be included in the bid price for 801001 (Maintenance of Traffic).
49. All repair/maintenance equipment shall be removed from the job sites on a daily basis, except when approved by the Engineer. Contractor shall follow guidelines set forth by the Delaware MUTCD for storage of materials.
50. No separate payment shall be made for use of traffic cones. Traffic cones and/or work associated with their use, such as set up, removal, cleaning, etc., shall be incidental to the work for which they protect.
51. Payment for relocation and re-positioning of Traffic Control devices shall be incidental to the respective unit price Pay Items for Maintenance of Traffic included in this Contract. There shall be no additional compensation for relocation or re-positioning of traffic control devices
52. The safety measures outlined within this Contract and the Delaware MUTCD are not necessarily sufficient in every instance to guarantee the protection of the traveling public or the persons working on the project. Therefore, the provisions of this Contract do not relieve the Contractor of the sole responsibility for the safety of all persons working within or traveling through the work zone throughout the duration of the project. The Contractor shall implement any additional safety measures that are not expressly required by the Contract and are necessary to ensure the safety of all persons. The Contractor shall submit to the Engineer justification for deviations from the Traffic Control Plan or Traffic Management Plan. Final approval of the deviations or additions shall rest with the Engineer with guidance from the Traffic Safety Section. All costs for this work shall be incidental to the applicable maintenance of traffic pay items as listed in the original contract.
53. The Department reserves the right to stop the Contractor's operations, if in the opinion of the Engineer the Contractor's operations are not in compliance with the Delaware MUTCD, the specifications, or the Plans. The Department also reserves the right to stop the Contractor's operations if the Engineer deems the operations to be unsafe.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

54. The use of flaggers is prohibited on interstates, freeways, and expressways.
55. The Department will not make payment to the Contractor for any and all temporary traffic control devices where the Contractor sets up temporary traffic control to perform work, but fails to perform any work.
56. Immediately prior to the implementation of any lane or roadway closures, the Engineer shall notify the DelDOT TMC at (302) 659-4600. Notifications shall also be given to the TMC when the closure is lifted. The Engineer shall notify the TMC and the DelDOT Safety Officer if lane closures cannot be removed prior to the end of the allowable work hours.
57. Any deficiencies related to temporary traffic control that are reported to the Contractor in writing shall be corrected within 24 hours or as directed by the Engineer. Corrective actions on severe deficiencies shall be taken immediately unless otherwise directed by the Engineer. Failure to comply will result in non-payment for those devices that are found to be deficient for the duration of the deficiency. Serious deficiencies that are not corrected immediately could result in possible suspension of work until items identified are brought back into compliance and/or the holding of the pay estimate until the serious deficiencies are corrected.
58. The use of millings and GABC in the travel way, temporary travel way, high volume entrances and access ramp for the purpose of providing a temporary roadway surface, pothole repair, tapered edge for utilities, butt joints, and longitudinal drop-offs (milling and paving operations) is prohibited unless it is otherwise designated to be used in the contract plans. Use cold patch, bituminous concrete, bituminous concrete wedge, or taper mill, as noted in the Contract Documents or approved by the Engineer. Payment for cold patch, bituminous concrete, or bituminous concrete shall be paid under the bituminous concrete milling item.

Millings or GABC shall be used at the following locations where access to a business residence, or edge drop off needs to be maintained unless otherwise noted in the plans or directed by the Engineer to use bitumionus concrete or cold patch. All milling and GABC will be rolled and compacted to help prevent the material from unraveling.

- a. Driveways
- b. Entrances
- c. Low volume access ramps (Identified in the contract documents)
- d. Edge drop-offs adjacent to live roadway (lane, shoulder, or turn lane) and the proposed road construction
- e. Edge of roadway dropoff

Grading and maintaining base course that is being used for roadway wedge/fillet between travel lanes and pavement box, edge of travel way, driveway or entrance access shall be incidental to Item No. 801000 - Maintenance of Traffic. The base course material shall be placed at no greater

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

than the slope specified in table 6G-1 and shall be compacted. Excess base course material shall be pushed ahead and used in the next segment and shall be incidental to the particular base course pay item. No separate payment shall be made for Millings or GABC temporary roadway material (TRM) used to protect edge drop-offs, unless the material is eventually utilized as part of a permanent roadway at which time the material would be paid for under the respective contract material item. Vertical differences shall be corrected in accordance with table 6G-1 of the Delaware MUTCD.

59. If the Contractor does not complete the contract work within the contract completion time as listed on the Work Order (including approved time extensions), the Contractor shall be responsible for providing the necessary temporary traffic control devices that are required to complete any remaining work. The cost of such temporary traffic control shall be borne by the Contractor. No additional payment will be made to the Contractor to maintain traffic in accordance with the Delaware MUTCD, specifications, and these Project Notes. Temporary traffic control items shall include, but not be limited to, warning lights, warning signs, barricades, plastic drums, P.C.C. safety barrier, flaggers, traffic officers, arrow panels, message boards, portable light assemblies and portable impact attenuators.
60. Pedestrian Maintenance of Traffic: This work shall consist of providing and maintaining an accessible pedestrian route throughout the project's limits in accordance with the Americans with Disabilities Act of 1990 (ADA) Title II, paragraph 35.130.

The contractor shall be required to review each curb ramp location and submit the appropriate maintenance of traffic detail and devices to the Engineer for each location at least 2-weeks before construction for review, comment, and approval.

The following considerations shall be taken into account when addressing accessible pedestrian maintenance of traffic:

- All pedestrians, including persons with disabilities, shall be provided with a reasonably safe, convenient and accessible path that replicates as much as practicable the existing pedestrian facilities.
- Maintain access to all business and residents at all times.
- Provide pedestrian access thru or around the work zone. If a detour is deemed necessary the Contractor must submit the detour route to the Engineer for review and approval by the Traffic Safety Section. The detour route must meet or exceed the current conditions.
- Work should be phased so that all areas of an intersection/sidewalk path are not under construction at the same time unless a clear path is provided and identified.
- Traffic control devices and other construction materials and features shall not intrude into the usable width of the sidewalk, temporary pathway or other pedestrian facility.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

- Signs and other devices mounted lower than 7 ft above the temporary pedestrian pathway shall not project more than 4 in. into accessible pedestrian route.
- A smooth, continuous hard surface shall be provided throughout the entire length and width of the pedestrian route throughout construction.
- There shall be no curbs or vertical elevation changes greater than $\frac{1}{4}$ in. in grade or terrain that could cause tripping or be a barrier to wheelchair use.

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DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

QUANTITY SUMMARY

| ITEM # | ITEM DESCRIPTION | UNIT | Quantity |
|--------|--|------|-----------|
| 202000 | Excavation and Embankment | CY | 1500.00 |
| 202001 | Rock Excavation for Roadways | CY | 10.00 |
| 204000 | Test Hole | CY | 50.00 |
| 208000 | Flowable Fill | CY | 50.00 |
| 209001 | Borrow, Type A | CY | 100.00 |
| 209004 | Borrow, Type C | CY | 200.00 |
| 209005 | Furnishing Borrow, Type C For Pipe And Utility Trench Backfill | CY | 50.00 |
| 209006 | Borrow, Type F | CY | 100.00 |
| 211001 | Removal of Existing PCC Pavement, Curb, Sidewalk, etc | SY | 3,000.00 |
| 211002 | Removal of Structures and Obstructions (Guardrail) | LF | 300.00 |
| 211500 | Tree Removal, 6" to 15" Diameter | EACH | 10.00 |
| 211501 | Tree Removal, Greater Than 15" to 25" Diameter | EACH | 5.00 |
| 211502 | Tree Removal, Greater Than 25" to 37" Diameter | EACH | 5.00 |
| 211503 | Tree Removal, Greater Than 37" to 49" | EACH | 5.00 |
| 211504 | Tree Removal, Greater Than 49" | EACH | 2.00 |
| 301002 | Graded Aggregate Base Course, Type B, Patching | CY | 50.00 |
| 302002 | Delaware No. 3 Stone | TON | 200.00 |
| 302005 | Delaware No. 57 Stone | TON | 1,000.00 |
| 401026 | WMA, Superpave, Type C, 160 Gyration, Patching | TON | 100.00 |
| 401027 | WMA, Superpave, Type B, 160 Gyration, Patching | TON | 100.00 |
| 403000 | Bituminous Concrete And/Or Cold-Laid Bituminous (TRM) Concrete | TON | 50.00 |
| 601000 | Cleaning Drainage Pipe 15-24" Diameter | LF | 10,000.00 |
| 601001 | Cleaning Drainage Pipe Greater than 24" Diameter | LF | 10,000.00 |
| 601002 | Heavy Cleaning of Drainage Pipe | HOUR | 500.00 |
| 601003 | Pressure Grouting Pipe Joints, 15"-24" Diameter | EACH | 10.00 |
| 601004 | Pressure Grouting Pipe Joints, Greater than 24" Dia | EACH | 10.00 |
| 601032 | RCP, 15" Class IV | LF | 1,000.00 |
| 601033 | RCP, 18" Class IV | LF | 1,000.00 |
| 601034 | RCP, 21", Class IV | LF | 500.00 |
| 601035 | RCP, 24", Class IV | LF | 1,000.00 |
| 601037 | RCP, 30", Class IV | LF | 300.00 |
| 601039 | RCP, 36", Class IV | LF | 300.00 |

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

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|--------|---|------|-----------|
| 601041 | RCP, 48", Class IV | LF | 300.00 |
| 601141 | Reinforced Concrete Flared End Section, 15" | EACH | 3.00 |
| 601143 | Reinforced Concrete Flared End Section, 21" | EACH | 3.00 |
| 601144 | Reinforced Concrete Flared End Section, 24" | EACH | 3.00 |
| 601146 | Reinforced Concrete Flared End Section, 30" | EACH | 3.00 |
| 601148 | Reinforced Concrete Flared End Section, 36" | EACH | 3.00 |
| 601150 | Reinforced Concrete Flared End Section, 48" | EACH | 3.00 |
| 601220 | Corrugated Polyethylene Pipe, Type S, 15" | LF | 1,000.00 |
| 601221 | Corrugated Polyethylene Pipe, Type S, 18" | LF | 1,000.00 |
| 601221 | Corrugated Polyethylene Pipe, Type S, 21" | LF | 1,000.00 |
| 601223 | Corrugated Polyethylene Pipe, Type S, 24" | LF | 1,000.00 |
| 601224 | Corrugated Polyethylene Pipe, Type S, 30" | LF | 500.00 |
| 601225 | Corrugated Polyethylene Pipe, Type S, 36" | LF | 500.00 |
| 601500 | Pipe Video Inspection | LF | 20,000.00 |
| 602002 | Drainage Inlet, 34" x 18" | EACH | 10.00 |
| 602003 | Drainage Inlet, 34" x 24" | EACH | 10.00 |
| 602004 | Drainage Inlet, 48" x 30" | EACH | 8.00 |
| 602005 | Drainage Inlet, 48" x 48" | EACH | 8.00 |
| 602006 | Drainage Inlet, 66" x 30" | EACH | 8.00 |
| 602100 | Replacing Drainage Inlet Grate(s) | EACH | 20.00 |
| 602101 | Replace Drainage Inlet Frame(s) | EACH | 20.00 |
| 602130 | Adjusting and Repairing Existing Drainage Inlet | EACH | 20.00 |
| 602131 | Adjust and Repair Existing Double Drainage Inlet(s) | EACH | 10.00 |
| 602132 | Adjusting and Repairing Existing Manhole | EACH | 5.00 |
| 610009 | Portland Cement Concrete Masonry, Class B | CY | 25.00 |
| 610019 | High Early Strength Concrete | CY | 50.00 |
| 628040 | Shallow Spall Repair | CF | 150.00 |
| 628041 | Deep Spall Repair | CF | 150.00 |
| 628042 | Rehabilitation Of P.C.C. Masonry | CY | 5.00 |
| 701011 | PCC Curb, Type 1-4 | LF | 200.00 |
| 701012 | PCC Curb, Type 1-6 | LF | 200.00 |
| 701013 | PCC Curb, Type 1-8 | LF | 200.00 |
| 701031 | Curb Opening, 2' Opening | EACH | 5.00 |
| 701032 | Curb Opening, 4' Opening | EACH | 5.00 |
| 707001 | Rip Rap, R-4 | SY | 500.00 |
| 707002 | Rip Rap, R-5 | SY | 500.00 |
| 707003 | Rip Rap, R-6 | SY | 300.00 |

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT No. : T201703401

Drainage Improvements, Interstate, North, Open End, FY18-20

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|--------|--|-------|-----------|
| 708003 | Geotextiles, Rip Rap | SY | 1,000.00 |
| 709001 | Perforated Pipe Underdrains, 6" | LF | 150.00 |
| 762000 | Saw Cutting, Hot-Mix | LF | 750.00 |
| 762001 | Saw Cutting, Concrete, Full Depth | LF | 700.00 |
| 763000 | Initial Expense | LS | 1.00 |
| 801000 | Maintenance of Traffic | LS | 1.00 |
| 802003 | Arrow Panel, Type C | EADY | 150.00 |
| 803001 | Furnish & Maintain Portable Changeable Message Sign | EA-DY | 100.00 |
| 804001 | Furnish & Maintain Portable Light Assembly | EA-DY | 50.00 |
| 805001 | Plastic Drums | EADY | 15,000.00 |
| 808002 | Furnish & Maintain Truck Mounted Attenuator, Type II | EADY | 150.00 |
| 810001 | Temporary Warning Signs and Plaques | EADY | 1,000.00 |
| 813001 | Temporary Barricade, Type III | LF-DY | 50.00 |
| 817013 | Permanent Pavement Striping, Epoxy Resin Paint, White/Yellow, 5" | LF | 500.00 |
| 905001 | Silt Fence | LF | 500.00 |
| 908010 | Topsoil, 6" Depth | SY | 9,000.00 |
| 908016 | Permanent Grass Seeding, Dry Ground | SY | 25,000.00 |
| 908020 | Erosion Control Blanket Mulch | SY | 8,000.00 |
| 908021 | Turf Reinforcement Mat, Type I | SY | 1,000.00 |

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