



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
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August 9, 2013

Contract No. T201306701.01
Federal Aid Project No. ESTP-2013(17)
MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14
New Castle County

Ladies and Gentlemen:

Enclosed is Addendum No. 1 for the referenced contract consisting of the following:

- 1. The date for the receipt of bids has been moved to Tuesday, August 20, 2013.**
2. The Table of Contents page iii is revised, to be substituted for the same page in the proposal.
3. Item 403510 - POLYMER-MODIFIED EMULSION MICRO-SURFACING (SQUARE YARDS) has been deleted. The Special Provision for 403510, 4 pages, pages 64-67, has been deleted.
4. Item 403512 - POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED, (SQUARE YARDS) has been added. The Special Provision for 403512, 7 pages, has been inserted as pages 64 through 67C.
5. Locations number 6 and 9 have been removed. Location 3 has been revised.
6. Quantities on the following Item Numbers have been changed: 401823, 406001, 406507, 743004, 743010, 743056, 743065, 748015, 748026, 748032, 748530, 748548, 762001.
7. The following Plan Sheets have been revised: 1, 4, 5, 17, 19, 20, 21, 22, 23, 25, 26, 28, 29.

The following Plan Sheets have been deleted: 7, 10, 24, 27.

NOTE: All Plan Sheets have been re-issued with this Addendum, therefore, page numbers from the original Plan Sheet set may not match. All original Plan Sheets have been replaced.

8. (3) pages, Bid Proposal Forms, pages 1 through 2; and the Break-Out-Sheet are revised, to be substituted for the same pages in the Proposal.
9. For proposal holders with the electronic bid option only, Amendment Disk No. 1.

Please note the revisions listed above and submit your bid based upon this information.

Sincerely,

- signature on file -

James Hoagland
Contract Services Administrator

Enclosures

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION

BID PROPOSAL

for

CONTRACT T201306701.01

FEDERAL AID PROJECT NO. ESTP-2013(17)

MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

NEW CASTLE COUNTY

ADVERTISEMENT DATE: July 15, 2013

Completion Date 60 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
DELAWARE DEPARTMENT OF TRANSPORTATION
AUGUST 2001

Bids will be received in the Bidder's Room, Transportation Administration Center, 800 Bay Road, Dover, Delaware until 2:00 P.M. local time ~~Tuesday, August 13, 2013~~ **Tuesday August 20, 2013**

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403511 - POLYMER-MODIFIED EMULSION MICRO-SURFACING (TON)
403512 - POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED (SQUARE YARDS)

Description:

Furnish and construct a polymer-modified emulsion paving system on a prepared foundation as shown on the Plans and as directed by the Engineer.

In general, item 403511 is used where a variable thickness of material is required such as a leveling course; item 403512 is used where a uniform thickness of material is to be placed.

Materials:

A. Provide materials as specified:

Bituminous Materials	AASHTO M208 CSS 1hP, with the following modifications: AASHTO Test Specifications
	T49 @ 77 degree F; 40-90
	T59 62 % (minimum)
	T53 140 degree F (minimum)
Mineral Filler	AASHTO M 17, hydrated lime, or non-air-entrained portland cement Type I meeting AASHTO M 85
Field Control Additive	liquid additive compatible with the Bituminous emulsion used to control the set time of the microsurface mix in order to meet return to traffic time requirements
Tack Coat	Bituminous materials conforming to this specification that may be diluted in accordance with manufacturer recommendations at the rates in section C.8 of this specification
Water	Section 803

Aggregate. Use mineral aggregate that is the type specified for the particular application requirements of the micro surfacing. The aggregate shall be a crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate, or combination thereof. To assure the material is 100 percent crushed, the parent aggregate will be larger than the largest stone in the gradation used. The use of gravel or crushed gravel will not be permitted.

All aggregate should meet these minimum requirements:

TEST	AAHSTO TEST	SPECIFICATION
Sand Equivalent Value of Soils and Fine Aggregate	T 176	65 Minimum
Soundness of Aggregates by Use of Sodium Sulfate of Magnesium Sulfate	T 104	15% Maximum w/NA2SO4 25% Maximum w/MgSO4
Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine*	T 96	30% Maximum

*The abrasion test is run on the parent aggregate.

B. *Mix Design.* Prepare and submit a job mix formula (JMF) including all materials, methods and proportions to the Engineer for approval prior to the start of work. Submit test results for review a minimum of 10 days before application. Include aggregate type and gradation and percentages of polymer-modified emulsion, water, cement by dry aggregate weight (mass), and the design cure time.

1. JMF acceptance is subject to satisfactory field performance;
2. Unsatisfactory field performance requires re-design and re-submittal of the JMF design for approval.
3. Formulate with a minimum polymer content, based on asphalt weight, of 3 percent;
4. Formulate so a 1 in (25 mm) thick application, at a maximum 50 percent humidity and 75 F (25 C) minimum ambient air temperature, supports rolling traffic without surface damage after a 1-hour cure
5. Submit a revised JMF design when changes occur in the source or the qualities of the component materials.
6. The exact proportions used in the preparation of the micro-surfacing shall be determined by a testing laboratory, experienced in micro-surfacing JMF design procedures. Identify the proportions and gradations of all component materials for the JMF design with a single percentage.
 - a. *Bituminous Material.* Identify the type (such as natural latex rubber, styrene-butadiene rubber, styrene-butadiene-styrene, or ethylene-butadiene-styrene) and percentage of modifier on the certificate of analysis.
 - i. Ensure the mixed emulsified asphalt will not separate;
 - ii. Do not allow the temperature of the material to exceed 120° F (50°C);
 - iii. Accompany each shipment of emulsified asphalt with a certificate of analysis/ compliance from the manufacturer.
 - iv. The emulsion modifier shall be adjusted at the emulsion manufacturer's facility.
 - v. The specific gravity of each shipment of bituminous material shall be determined by the Contractor and provided with each shipment.
 - b. *Field Control Additive.* An additive may be added to the mixture in order to provide an altered set time.
 - i. The additive must be identified (such as the emulsifier type) and be included as part of the JMF design submission.
 - ii. Ensure with the certification of analysis that the additive was tested and demonstrated compatible with all the other components of the mixture.
 - c. *Gradation.* The JMF design aggregate gradation including the mineral filler must be within one of the following bands when tested in accordance with AASHTO T27 and AASHTO T11:

Sieve	Type II	Type III	STOCKPILE TOLERANCE
3/8" (9.5 mm)	100	100	
#4 (4.75 mm)	90 -100	70 - 90	± 5%
#8 (2.36 mm)	65 - 90	45 - 70	± 5%
#16 (1.18 mm)	45 - 70	28 - 50	± 5%
#30 (600 um)	30 - 50	19 - 34	± 5%
#50 (330 um)	18 - 30	12 - 25	± 4%
#100 (150 um)	10 - 21	7 - 18	± 3%
#200 (75 um)	5 - 15	5 - 15	± 2%

The JMF gradation shall be within the gradation band for the desired type. After the target gradation has been submitted (this should be the gradation that the JMF is based on), then the percent passing each sieve shall not vary by more than the stockpile tolerance shown in the above table for each individual sieve, and still remain within the gradation band. It is recommended that the percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

Screen the stockpile prior to delivery to the paving machine. Screen Type II through a 3/8-inch sieve. Screen Type III gradation shall be screened through a 1/2-inch sieve.

Submit laboratory test results ensuring that the proposed mixture conforms to the requirements of the following referenced International Slurry Surfacing Association standard test methods:

Test Method	Property	Requirements
TB100	Wet Track Abrasion Loss - 1 hour soak Wet Track Abrasion Loss - 6 day soak	50 g/sq ft max 75 g/sq ft max
TB102	Mixing, Setting, and Water Resistance	10 minute, maximum, clear water set time
TB113	Mix Time 77EF (25°C)	Controllable to 120 seconds, minimum
TB114	Wet Stripping	Pass, 90% minimum
TB139	Wet Cohesion - 30 Minutes Wet Cohesion - 60 Minutes	12 kg-cm, minimum 20 kg-cm, minimum
TB144	Classification Compatibility	11 grade points, minimum
TB147A	Loaded Wheel Test	5% lateral displacement, maximum 2.10 compacted specific gravity

The target JMF design quantity of the bituminous material shall be identified with a single percentage value which shall be within the range of 7.0 to 8.0 percent of the total weight of the aggregate. The allowable production tolerance for the bituminous material asphalt residue shall be 0.4 percent of the total weight of the aggregate.

The amount of field control additive, when used, shall be identified with a specific percentage value. If the amount is expected to change to another value for specific conditions anticipated on the project site, the mix proportions and the auxiliary value shall be considered a separate JMF. The specific conditions that will cause a change to the auxiliary JMF shall be identified with the submission of the proposed JMF. The allowable production tolerance for the amount of field control additive shall be based on acceptable performance in the field.

Water shall be added during the material mixing to produce the needed mix consistency. The optimum amount of water can be determined during mix design, however, it is understood that this value may be changed in the field due to ambient humidity, wind, air temperature, moisture absorbed by the pavement, etc. The mixture shall be homogeneous, free of excess water or emulsion, free of segregation of emulsion, and free of segregation of aggregate sizes.

The mixture shall also have satisfactory workability and performance when placed in a test strip. Requirements for the test strip construction are in the Equipment section of this specification. If a change occurs in the source or the qualities of the component materials, a revised JMF shall be submitted. When unsatisfactory results or other conditions make it necessary, a revised JMF shall be developed and submitted by the Contractor.

Construction Methods:

A. *Weather Limitations.* Place micro surfacing material when the following conditions apply:

1. Minimum air temperature is 50 F (10 C) and rising;
2. The surface must be dry;
3. 24 hour forecast predicts temperatures above 40 F (4 C) after application;
4. Surface temperature is at least 50 F (10 C); and
5. Rain is not imminent within 24 hours.

If the temperature is expected to be over 95 degree F the contractor must inform the Engineer of their methods to control set times and must obtain approval from the Engineer prior to placing material.

B. *Aggregate and Asphalt.* Weigh aggregate before delivery to roadway. Proportion emulsified asphalt by weight (mass).

Submit the following signed, written reports to the Engineer for each staging location:

1. A report indicating the amount of aggregate and emulsion delivered, aggregate and emulsion used on the project, and the amount of area in square yards completed.
2. A report indicating the percentage of emulsion used to aggregate used and the application rate in pounds of aggregate applied per square yard of area covered. This report will verify compliance with the mixture of materials to the mix design and the specified aggregate application rate.

Submit to the Engineer, from the aggregate and emulsion suppliers, an original copy of the bill of lading weekly for each delivery of material to be used on the project. Submit with each emulsion bill of lading a certificate of analysis from the emulsion supplier verifying that each delivery of emulsion is in compliance with the contract requirements.

C. *Preparing Existing Surface.*

1. Clean/clear the roadway surface of all loose aggregate, rubber from skid marks, vegetation, dirt, mud, free water, and any other foreign material.
2. Clear vegetation and debris from edges of road.
3. Scrub and remove extensive grease spots or saturated oil from the pavement surface with industrial detergent and/or use acrylic sealers for severe problem areas.
4. Fill/seal cracks greater than 1/4 in. (6 mm).
5. Completely remove thermoplastic markings.
6. Grind all traffic paint lines to remove paint not tightly bonded to the surface or to reduce the thickness of paint lines with excessive build up. Care should be taken to not damage crack sealing.
7. Where necessary use the micro surfacing material to fill potholes, utility cuts, and ruts with the mixture to restore roadway cross section.
 - a. Use of a rut-filling box is required to fill ruts/cuts of 0.5 in (12.7 mm), or greater in depth.
 - b. Ruts in excess of 1.5 in (38 mm) in depth require multiple applications with the rut-filling box to restore the cross-section.
 - c. When rutting or deformation is less than 0.5 in (12.7mm), a full width scratch course

may be applied with the spreader box using a metal or stiff rubber strike-off. Apply at a sufficient rate to level the pavement surface.

- d. All rut-filling and level-up material should cure under traffic for at least twenty-four (24) hours before additional material is placed.
8. Apply tack coat on each location to receive microsurfacing. The emulsified asphalt should be the micro surfacing emulsion or CSS type emulsion. Other grades of emulsion may be considered but it is the contractor's responsibility to demonstrate and ensure the tack emulsion is compatible with the micro surfacing emulsion prior to use. The tack coat may consist of one part emulsified asphalt/one part water. Consult with the micro surfacing emulsion supplier to determine dilution stability. Apply tack with a standard distributor capable of applying the dilution evenly at a rate of 0.10 gal/SY minimum. Allow tack to cure sufficiently before the application of micro surfacing.

- D. *Equipment.* The mixing and placement equipment must be approved prior to use. The material shall be mixed by an automatically sequenced, self-propelled machine; it shall be capable of accurately proportioning and delivering all component materials to a revolving multi blade twin shaft pug mill type mixer; thoroughly mixing the component materials; and it shall be capable of discharging the mixture on a continuous flow basis.

The rate of water and field control additive shall be easily adjusted. Sufficient storage capacity shall be provided on the equipment for aggregates, bituminous material, mineral filler, field control additive, and water of adequate supply to the proportioning devices to maintain a continuous operation.

Calibrate and properly mark proportioning controls for easy verification, at a DelDOT approved location; to the JFM proportion targets in the presence and to the satisfaction of the Engineer prior to the start of the work. Check calibration whenever there is a question about the accuracy of the proportioning. Documentation is to be generated for the Engineer, including individual calibrations of each material at various settings. A minimum of 3 runs for each material shall be performed. During calibration of the aggregate and the asphalt emulsion a minimum of 250 pounds of each material shall be dispensed continuously for each of the calibration runs. The controls for proportioning the mixture, including the components of water and field control additive, shall be readily visible to the Engineer in order evaluate whether a change to the calibrated settings has occurred.

For each combination of equipment and JMF, prior to performing work measured for payment, an approved test strip shall be constructed. The minimum size of the test strip for each combination must be of 100 ft long and 12 ft wide and demonstrate the required specification conformance. It shall be placed in the same equipment, methods, mixes, and number of passes and spread rate specified for each location. If a test section proves to be unsatisfactory, the necessary adjustments to the mix design, equipment, and placement methods shall be made and a new test strip shall be made to verify conformance.

Proportion emulsified asphalt by weight (mass).

Equip the mixing machine with a pressure water system and nozzle-type spray bars to provide a water spray to the tacked surface immediately ahead of and outside the spreader box.

Add filler at the loading facility or at the roadway. Provide a documented record of filler weight (mass). Add Field Control additives according to the manufacturer's recommendations to meet field conditions and/or return to traffic times.

The mixing equipment shall also have an attached spreader box which is equipped with augers that

agitate and spread the material evenly throughout the box. A front seal shall be provided to insure no loss of the mixture at the road contact point. A rear seal shall act as primary strike off and shall be height adjustable. The spreader box and rear strike off shall be designed so that a uniform pavement surface consistency is achieved; these shall be clean and not excessively worn. The spreader box shall be kept clean and buildup of asphalt and aggregate on the box shall not be permitted.

A secondary strike off shall be provided to improve surface texture. The secondary strike off shall have the same adjustments as the spreader box.

Roller

Pneumatic rollers with all tires inflated to manufacturer recommended pressures. Tires will be clean, smooth, and free of any deformation that would leave marks in the finished surface.

- E. *Applying Mixture.* The mixture shall be uniformly spread at a final total mix application rate of a minimum of 30 lbs/SY. This may be accomplished by placing two separate layers of material with each layer being placed on the same or successive days at the sole discretion of the Engineer. When necessary, the materials shall be spread in variable thick cross sections, to fill in ruts and minor deformations, and to create a smooth riding, high skid resistant, roadway surface having a well draining cross slope.

Any area of the constructed surface which has a deviation, higher or lower that is greater than 3/16 in from a 10 ft straightedge placed on the surface is unacceptable. No streaks, scratch marks, drag marks, tears, rippling, streaks, lumps, segregation, or other surface irregularities will be acceptable.

Handwork will be permitted only for those areas that cannot be reached with the mixing machine. Handwork must produce a surface finish and appearance similar to that produced by the spreader box.

No excess buildup, uncovered areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. Transverse joints shall appear neat and uniform. The contractor shall provide suitable width spreading equipment to produce a minimum number of longitudinal joints throughout the project. Partial width passes will only be used when necessary and shall not be the last pass of any paved area. A maximum of 3.0 in shall be allowed for overlap of longitudinal joints. Also, the joint shall have no more than a 0.25 in difference in elevation when measured by placing a 10 ft straight edge over the joint and measuring the elevation difference. The edge lines shall be straight, no more than 2 inch variance in any 100 ft length.

The mix shall be placed to allow traffic on the constructed pavement surface within one hour without any pick up of material by the traffic. At intersections, or other points requiring earlier opening, the Contractor shall shorten the road closure time to a maximum of 15 minutes; a different amount of field control additive in the mixture may be used by the Contractor to meet this requirement.

Micro-surfacing shall be compacted with a smooth pneumatic tire roller with a minimum weight of 10 tons. Allow the micro surfacing to set sufficiently that it does not pick up on the pneumatic tires. Roll all areas a minimum of 3 passes or until a uniform surface profile meeting the requirements of this specification is obtained.

- F. *Maintaining Traffic.* Meet traffic control plan.

Protect the micro surfacing material from traffic damage until the mixture cures and will not be damaged by traffic. Repair traffic damage to the micro surfacing application before acceptance and at no cost to the Department.

Method of Measurement:

The quantity of item 403512 - Polymer-Modified Emulsion Micro-Surfacing, will be measured as the actual number of square yards of polymer-modified emulsion micro-surfacing placed and accepted. The quantity will be determined by computations based on field measurements taken on and along the completed finished surfaces and verified by items 1 and 2 in part B. of the Construction Methods section of this specification. Multiple layers will not be measured separately.

The quantity of item 403511 - Polymer-Modified Emulsion Micro-Surfacing will be measured as the actual number of tons of polymer-modified emulsion micro-surfacing placed and accepted. The quantity will be based on the combined tonnage of aggregate, mineral filler, and emulsion used and accepted in place. The quantities will be computed as follows:

1. Aggregate. Measure the quantity of aggregate using the calibrated, dry weight of aggregate control device.
2. Mineral Filler. Compute this quantity from a count off the calibrated metering device for mineral filler.
3. Emulsion. Compute the quantity of polymer-modified asphalt emulsion by weight used, as determined by the calibrated metering device.

The amount of field control additive will not be measured separately.

Basis of Payment:

The quantity of item 403512 - Polymer-Modified Emulsion Micro-Surfacing, will be paid for at the Contract unit price per square yard. The quantity of item 403511 - Polymer-Modified Emulsion Micro-Surfacing will be paid for at the Contract unit price per ton. Price and payment will constitute full compensation for designing the mixture; mobilizing and furnishing all equipment, materials, and labor; preparing the foundation, cleaning the roadway surface, and clearing the debris from the edge of the road; placing the materials; protecting and repairing damage to the surface; and for all labor, equipment, tools and incidentals necessary to complete the work.

Unsatisfactory test strips will not be measured for payment.

Required repairs will not be measured for payment.

Grinding of striping is incidental

Tack coat is incidental.

Thermoplastic marking removal will be paid under the respective items.

NOTE:

The Asphalt Cement Cost Adjustment for this item will be applied when the total emulsified asphalt used exceeds 15,850 gal. This note supersedes the Note with item 401502 - Asphalt Cement Cost Adjustment.

Microsurfacing will not be placed between September 30th and May 1st without approval from the engineer.

08/1/2013

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

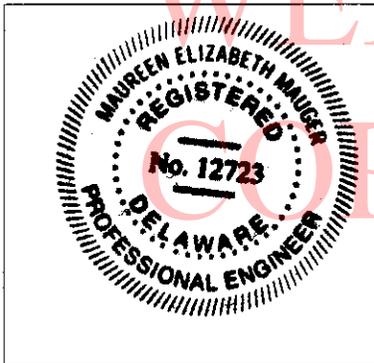


PLANS AND SPECIFICATIONS FOR

Contract Number: T201306701

Federal Aid Project Number: ESTP-2013(17)

MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

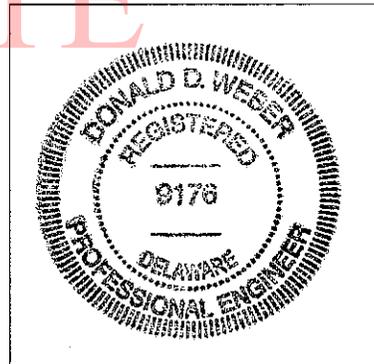


RECOMMENDED:

North District Design Engineer

2 AUGUST 2013

Date



APPROVED:

North District Engineer,
Maintenance and Operations

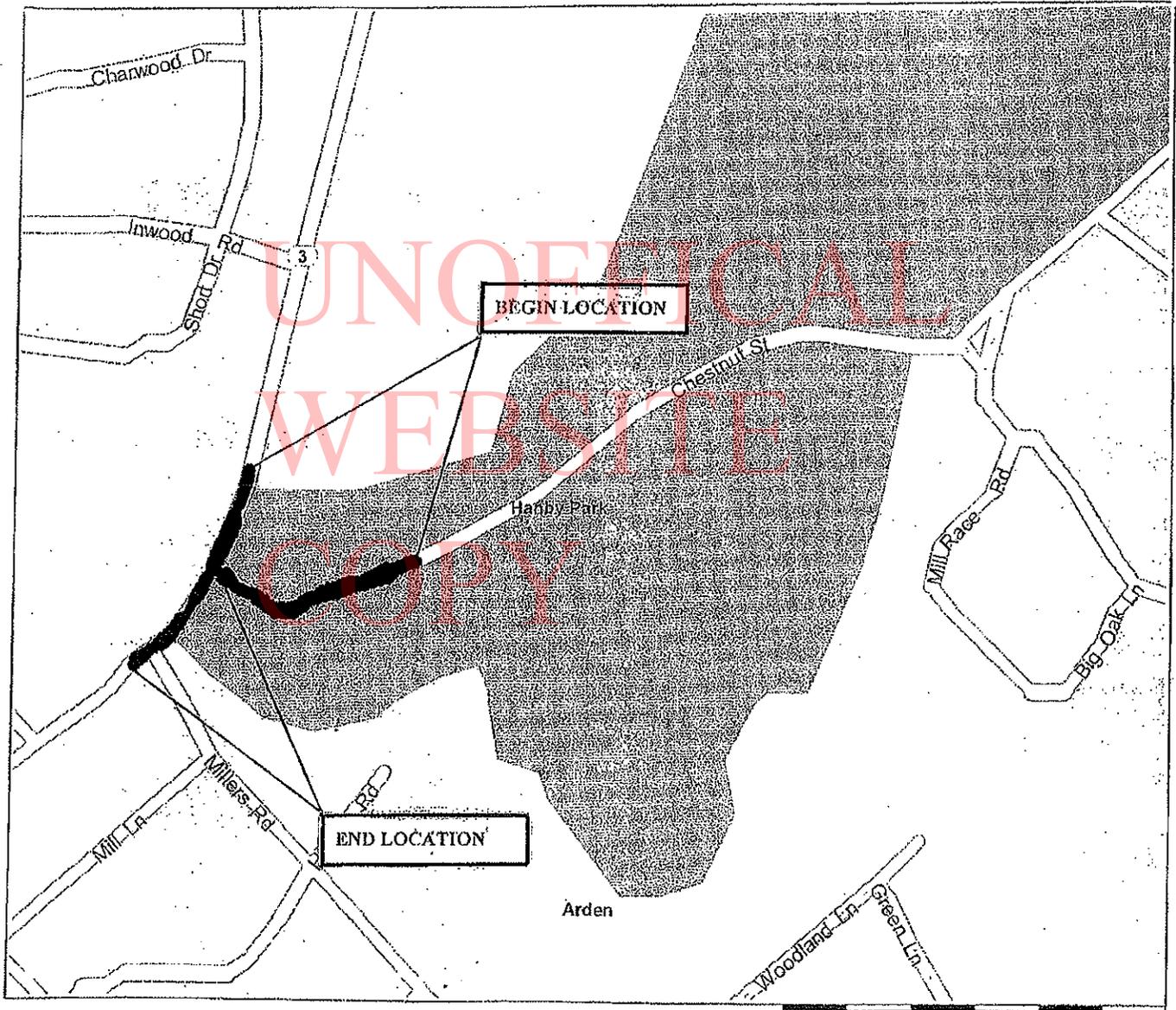
8/2/13

Date

VARIOUS ROADS IN NORTH DISTRICT

LOCATION MAP

Location #1 - Chestnut Lane, from Marsh Rd to 500 feet from Marsh Rd;
and Marsh Road, 500 feet at intersection



DEPARTMENT OF TRANSPORTATION

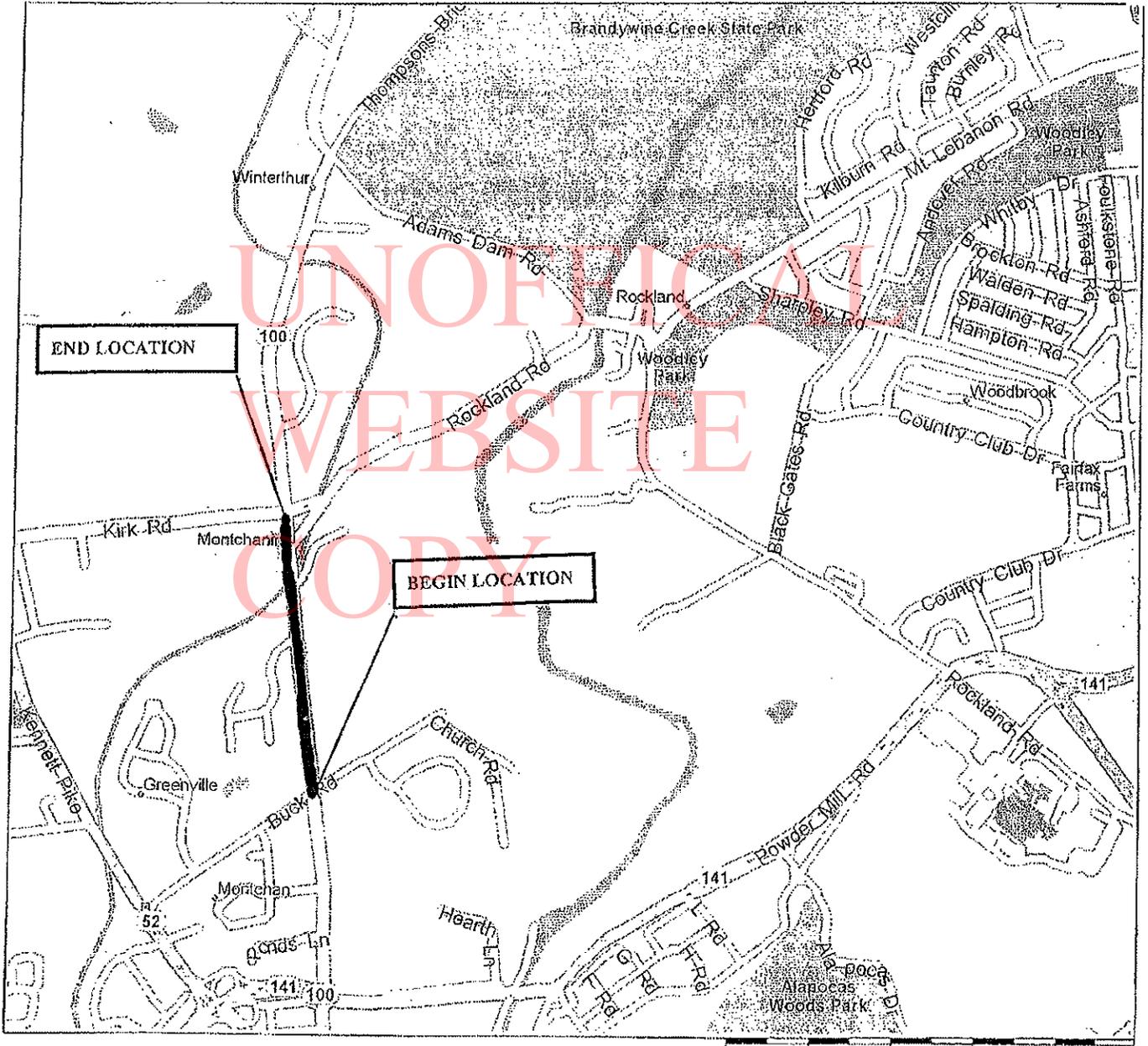
CONTRACT NUMBER- T201306701

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VARIOUS ROADS IN NORTH DISTRICT

LOCATION MAP

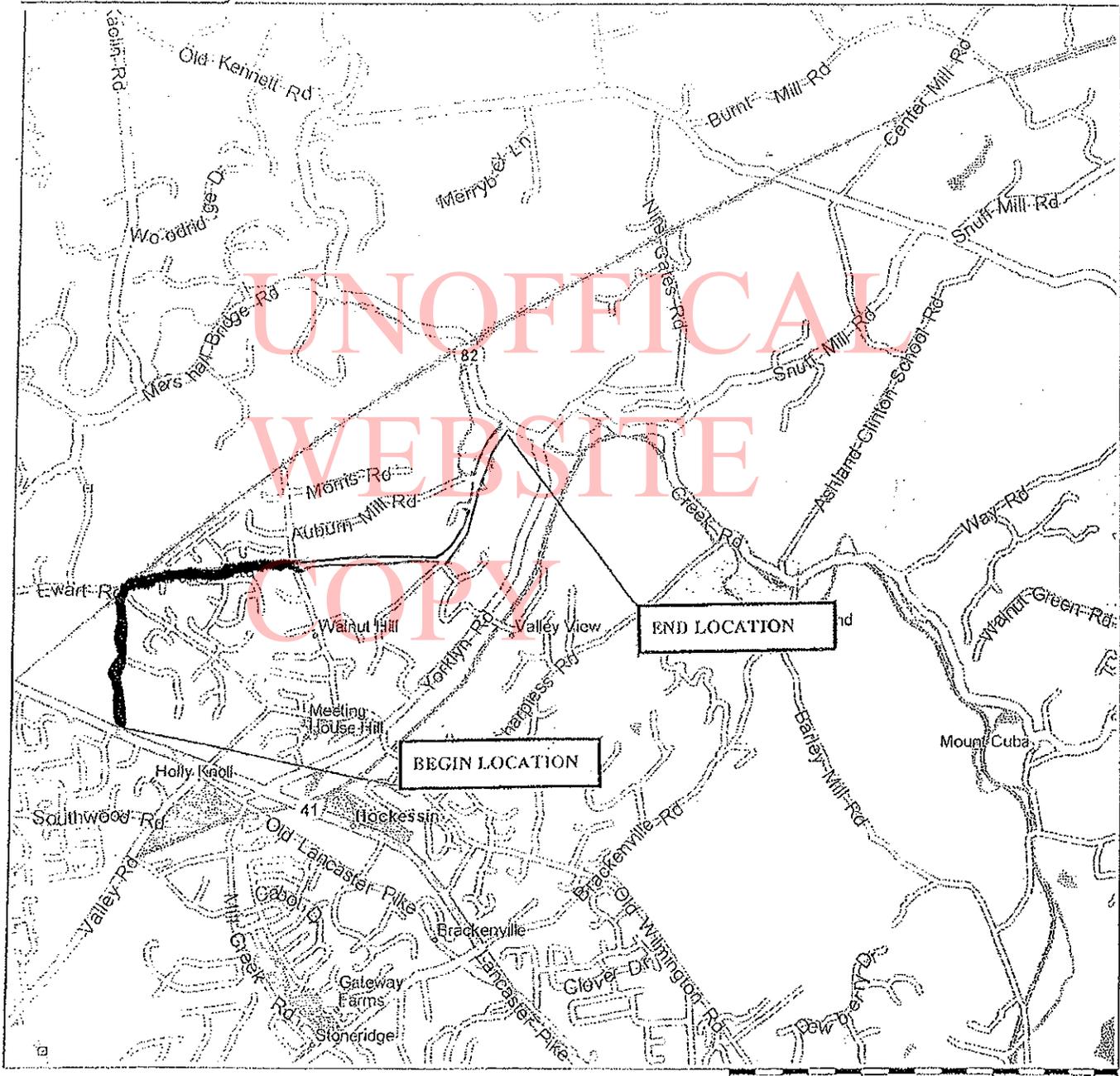
Location #2 - Montchanin Rd, from Buck Rd to Kirk Rd



VARIOUS ROADS IN NORTH DISTRICT

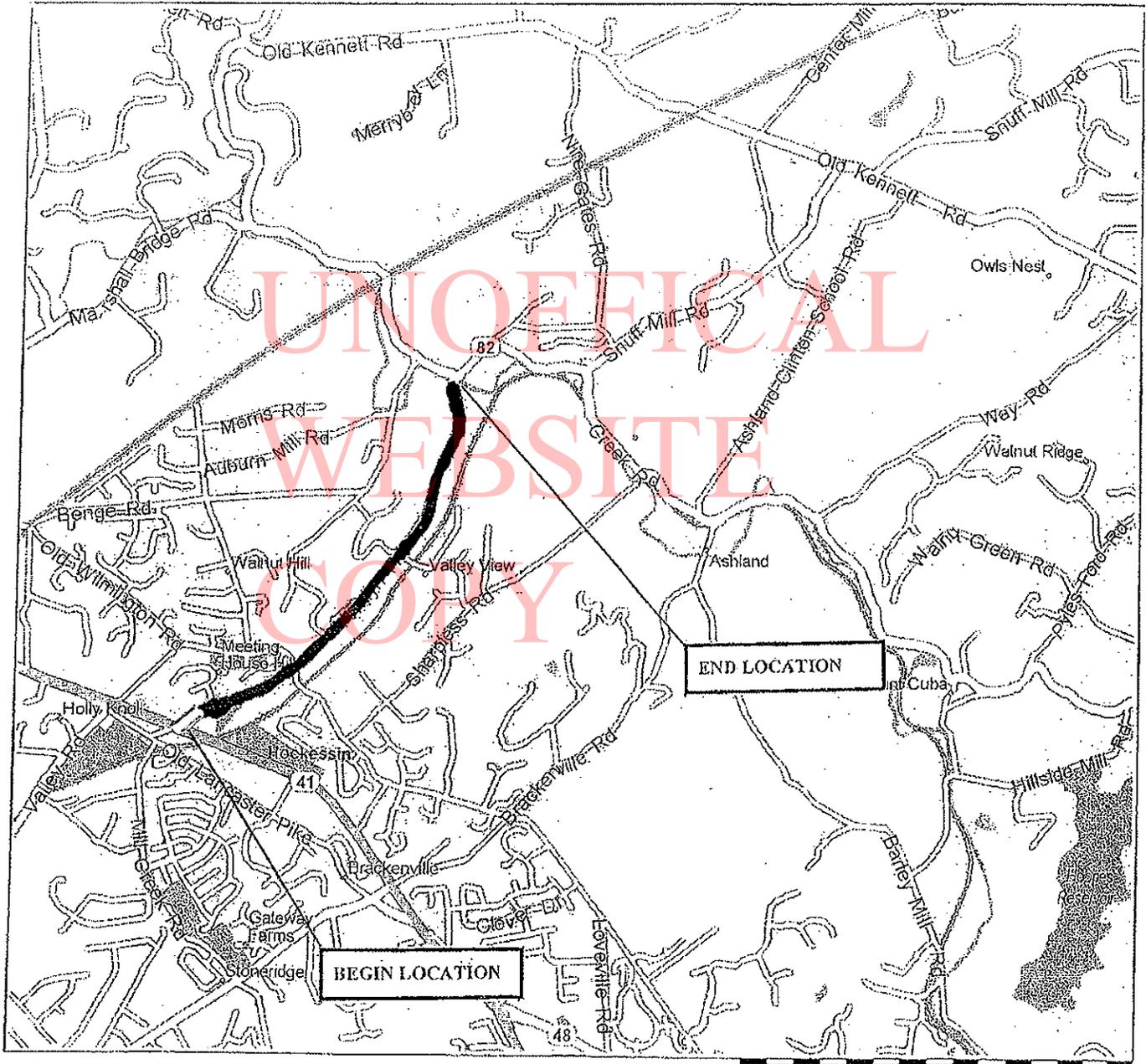
LOCATION MAP

Location #3 - McGovern Rd, from Lancaster Pike to Meeting House Road / Lee Road



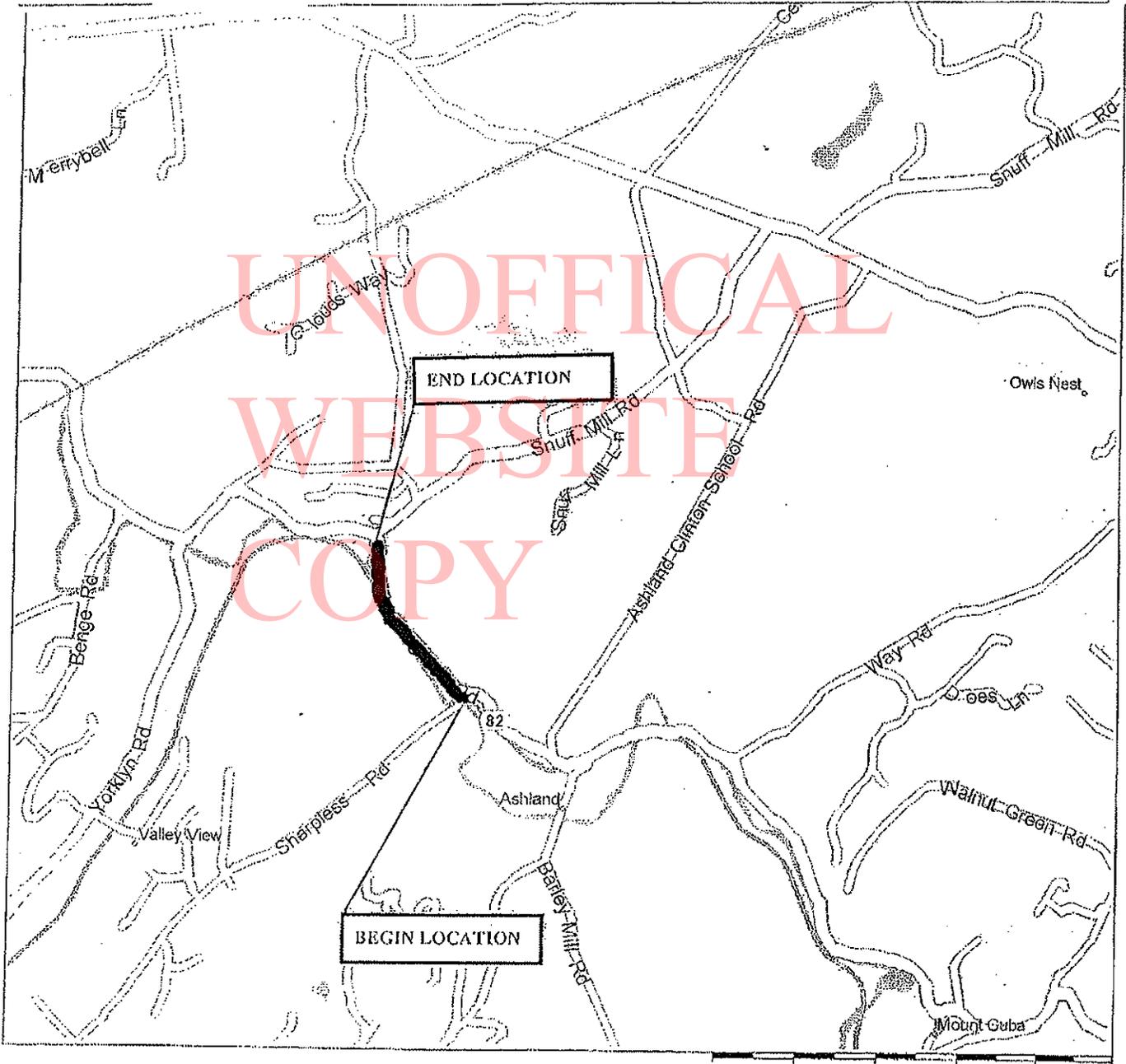
LOCATION MAP

Location #4 - Yorklyn Rd, from Lancaster Pike to Red Clay Creek Bridge



LOCATION MAP

Location #5 - Rt 82 (Creek Rd), from Sharpless Rd to Snuff Mill Rd



DEPARTMENT OF TRANSPORTATION

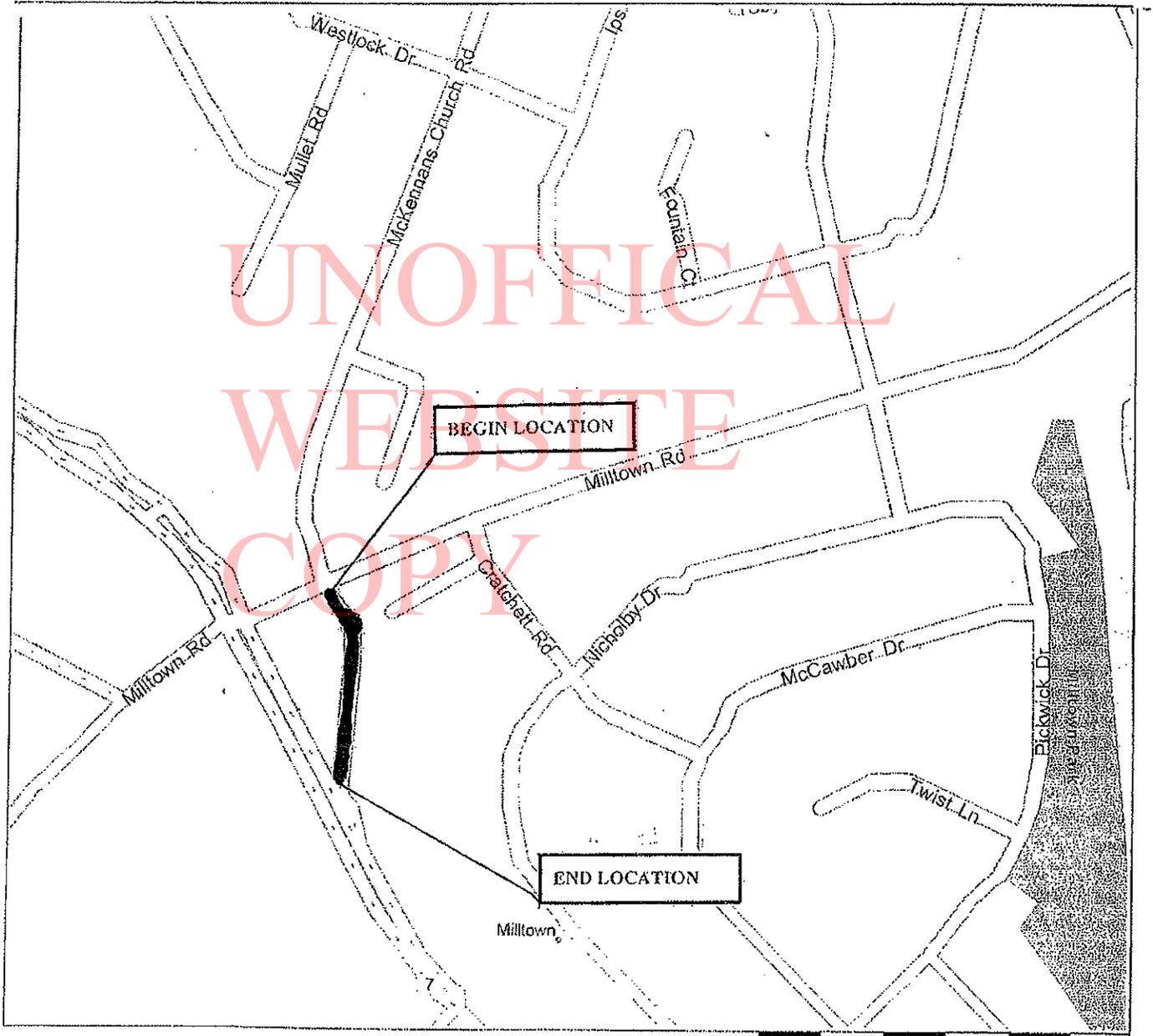
CONTRACT NUMBER- T201306701

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VARIOUS ROADS IN NORTH DISTRICT

LOCATION MAP

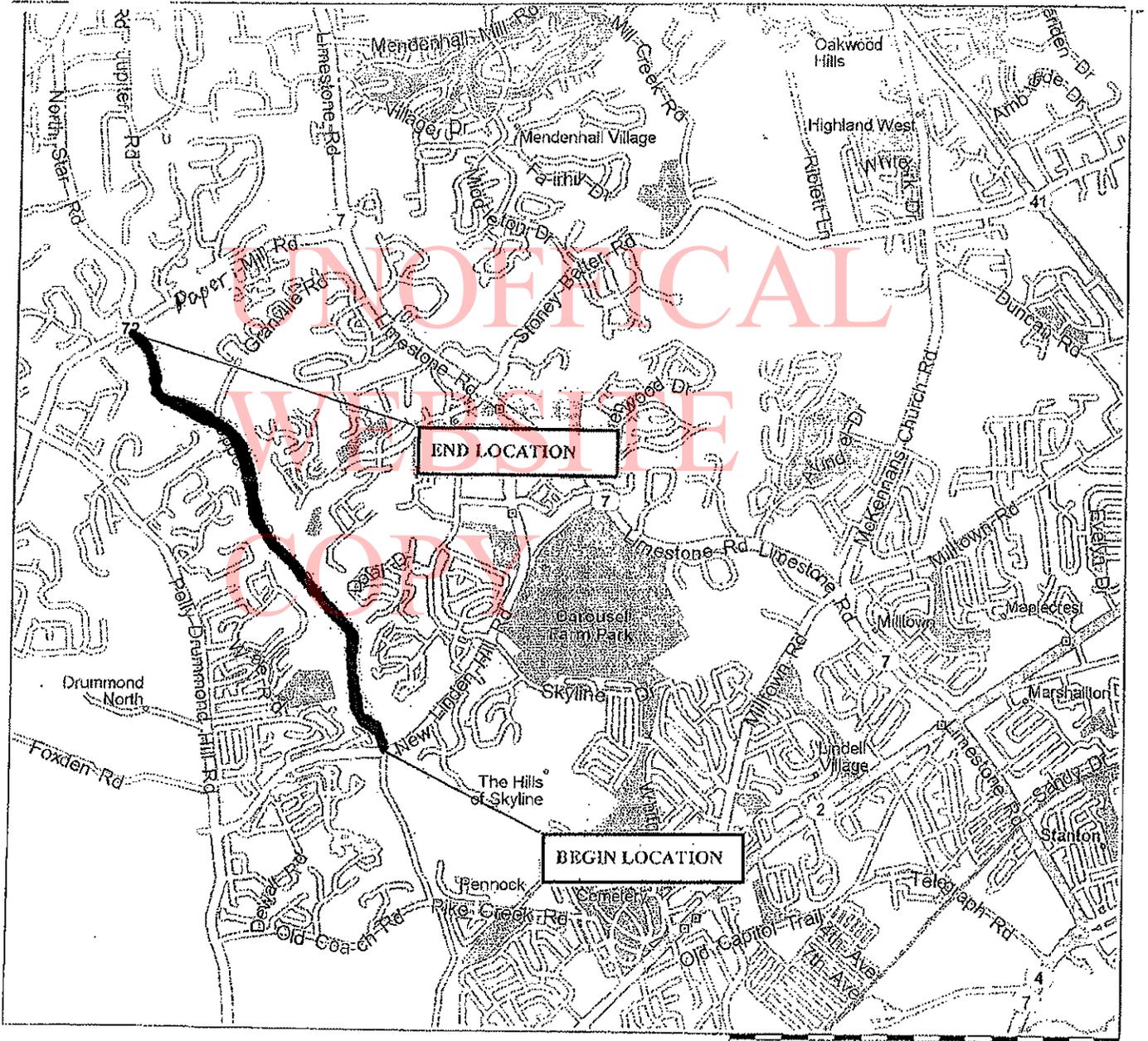
Location #6 - McKennans Church Rd, from Milltown Rd to Limestone Rd



VARIOUS ROADS IN NORTH DISTRICT

LOCATION MAP

Location #7 - Upper Pike Creek Rd, from New Linden Hill Rd to Paper Mill Rd



MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

GENERAL CONTRACT PLAN NOTES

GENERAL CONTRACT NOTES

GENERAL

1. Construction of this contract shall conform to Delaware Department of Transportation Standard Specifications dated August 2001, as amended by the Supplemental Specifications, the Special Provisions, the most recent Standard Construction Details, and these Notes.
2. The purpose of this contract is to perform micro-surfacing and repairs to roads and/or streets within the North District. Depending on fund availability, the Department reserves the right to add or delete locations and/or quantities for this contract. Such location or quantity additions or deletions shall not be cause for an increase or decrease in any contract unit bid prices. No item prices are to be renegotiated due to either an increase or decrease in quantity usage resulting from said additions or deletions.
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).
5. Location listings indicate general limits of construction, major types of improvements, and estimated quantities. During the bidding period, any questions pertaining to the locations shall be directed to the contract administrator. After the award, such questions shall be referred to the North District Engineer or his representative.
6. The Contractor shall submit the required copies of a detailed progress schedule as outlined in Standard Specification 108.04 prior to or at the preconstruction meeting. Details shall include a description of each work activity, the planned days of work, multiple crews of shifts, and scheduled working hours. During the contract, the Contractor shall submit two week (or as required) "look ahead" schedules to the DelDOT Engineer no later than noon of each Thursday. Failure to comply will result in suspension of all contract work with the time charges continuing to be assessed.
7. 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 of proposed work dates.
8. The Contractor is reminded that Section 105.07 of the Standard Specifications requires the General

MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

GENERAL CONTRACT PLAN NOTES

Contractor to have a competent superintendent or foreman on the project at all times.

9. The Contractor shall protect all driveways from damage due to Contractor's equipment and shall be responsible for all such damage done by Contractor's equipment.

10. All costs for the following work shall be incidental to the bid price for micro-surfacing Pay Item 403510 as applicable: Clipping back vegetation from the edges of the roadway, shoulders, and the first 3 feet of paved driveway entrances; picking up and disposing of waste and excess material; and cleaning the existing pavement prior to the micro-surfacing.

11. 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 expense

12. For Pay Item 401823 (WMA Superpave BCBC), the maximum allowable lift thickness is 6 inches depth. Minimum allowable lift thickness is 3 inches.

13. 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).

14. All milled material shall remain the property of the Contractor.

15. Removal of all warm-mix, base course material, and unsuitable soil shall be paid under Item 406001 (Warm-Mix Patching).

16. Removal of material under Pay Item 406001 (Warm-Mix Patching) shall be performed by use of a milling machine, unless directed otherwise by the Engineer. The Engineer may require use of other removal methods for small patching locations, at the sole discretion of the Engineer. The minimum width for pavement repair is 6 feet, unless directed otherwise by the Engineer. All warm mix materials shall be placed utilizing a paving machine.

17. Excavated material not needed on the project shall be removed from the site at Contractor's expense.

18. All milled patch areas must be backfilled with Superpave B.C.B.C. the same day.

19. Proper disposal of construction related wastes shall be the sole responsibility of the Contractor.

20. After pavement milling, all raised edges of manholes, drainage inlets, water valve boxes, and similar objects shall be ramped with Warm-mix temporary roadway material (TRM) at a 20:1 slope or flatter. Payment shall be incidental to Item 406001 (Warm-Mix Patching). Pavement milling or cold patch

MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

GENERAL CONTRACT PLAN NOTES

material will not be allowed for this purpose. All warm-mix TRM shall be removed prior to paving operations.

21. The Contractor shall take care in removing pavement around utilities, butt joints, curbs, and similar objects, so that existing pavement beyond the specified depths is not damaged. Any damage caused by the Contractor's operations may result in placing leveling courses at the Contractor's expense. The removal and clean-up of the warm-mix residue wedge remaining after milling operations shall be incidental to Item 406001 (Warm-Mix Patching). The removal of existing raised pavement markers shall be incidental to Item 406001.

22. The Contractor shall submit detailed drawings that show the existing pavement markings for each project work location. The drawings shall be submitted to the Engineer at the Preconstruction meeting. The drawings shall include, but not be limited to, the existing striping lengths, lane and shoulder widths, turn lane lengths, location of stop bars, turn arrows, crosswalks, and railroad crossings. These drawings will be reviewed by the DelDOT Traffic Section to determine if any changes to the final pavement markings are required. Final pavement markings shall conform to all existing patterns unless otherwise directed by the Engineer.

The Department will provide striping layout at locations where no pavement markings previously exist. If Department personnel must provide a striping layout on locations where markings previously existed, then the Contractor shall reimburse the Department for the layout costs.

Unless otherwise directed by the Engineer, white edge lines shall wrap around the radius of all side streets and major commercial entrances to a tangent point. Yellow centerlines shall be continuous around median islands.

The Contractor shall be required to show proof that he has sufficient approved striping materials on hand, to ensure striping is completed prior to opening roadway to traffic.

23. DelDOT will not compensate the Contractor for erroneous pavement markings. Any erroneous pavement markings placed by the Contractor shall be corrected immediately by the Contractor at Contractor's expense. Erroneous markings or shadows that exceed one (1) inch in width shall be removed by either sand or water blasting as directed by the Engineer. No other removal methods will be allowed. A flat black paint or driveway sealer shall be applied in the area of the removed marking to mask the repair. Any damage to the pavement caused by the removal of erroneous markings shall be repaired/replaced to the satisfaction of the Engineer at Contractor's expense.

24. Final pavement markings shall conform to all existing patterns, and shall be placed within five (5) calendar days (maximum) after placement of the final course of micro-surface. Failure to comply will result in suspension of all other contract work, with time charges continuing to be assessed. If the

MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

GENERAL CONTRACT PLAN NOTES

Contractor fails to document the existing pavement markings in an acceptable manner, he shall be required to provide at his own expense, a new pavement marking plan, signed and sealed by a Professional Engineer in the State of Delaware.

25. At the end of each work day and before traffic is returned to unrestricted roadway use, temporary striping shall be placed at locations that require permanent striping. Placement of temporary markings shall receive prior approval from the Engineer. Temporary pavement striping must match the permanent striping in all regards. Temporary pavement markings shall be paid at the applicable contract unit price. The Contractor is responsible for maintaining the temporary markings in good condition, such that the pavement is properly delineated at all times. Any refreshing of the markings will be at the Contractor's expense.

26. The Contractor shall provide all residents and businesses who live adjacent to the work zone a minimum 48 hour written notice prior to the start of construction work. This notification shall include the scope of work, working hours, anticipated start and completion dates, Contractor name and address, and DelDOT contact numbers. Failure to give proper notice will result in a suspension of the work requiring notice, until proper notice is provided. Access to all business and residences within the project limits shall be maintained throughout the duration of this contract. Any temporary closure of a driveway for tie-in purposes shall be coordinated with the Engineer and/or property owner in advance of the closure.

27. All paving for warm-mix patching is to be completed within seven (7) calendar days from the time the existing pavement was removed, unless directed otherwise by the Engineer. Failure to comply will result in suspension of all other contract work, with time charges continuing to be assessed.

28. The Contractor shall submit certified weight tickets to DelDOT for all aggregate, mineral filler, and emulsion delivered to the job site. These tickets will be checked against the measured yields to ensure final yields meet those stated in the specification.

29. 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.

MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

GENERAL CONTRACT PLAN NOTES

Maintenance of Traffic

30. Temporary traffic control devices shall be furnished and placed in accordance with the most recent version of the **Delaware Manual of Uniform Traffic Control Devices (MUTCD)**. The Contractor shall refer to the configuration requirements for each Typical Application scenario at each work location. The proposed traffic control device configuration will be addressed the Contractor's Traffic Control Plan.

31. All **warning signs** shall be diamond grade **retroreflective** on aluminum panels, and made up of NCHRP 350 compliant rigid material.

32. The Contractor, with the Engineer's representative, shall **inventory all signs** on all roads subject to improvements. Necessary signs shall be maintained in operation during construction, and any other signs shall be properly stored with the Contractor, who shall be responsible for loss or damage. Immediately prior to final inspection, the Contractor and Engineer shall again inventory the traffic signs and account for any lost or damaged signs. Lost or damaged signs shall be replaced by the Contractor at Contractor's expense.

33. 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 on Uniform Traffic Control Devices, Part 6, including revisions up to the date of advertisement for bids.

34. The Contractor shall prepare and submit a site-specific **Traffic Control Plan** for each work location. The Traffic Control Plan shall be submitted to DelDOT for approval five working days before the start of work at each location. The Traffic Control Plan must clearly indicate orientation of traffic control devices to be used for each site. The Contractor shall submitted Traffic Control Plans for all work locations, including certification documentation for all traffic control devices, prior to the Preconstruction Meeting. The Plans must be approved by the DelDOT Safety Officer and DelDOT Engineer prior to commencement of work at each site. Costs for preparation of the Traffic Control Plan shall be included in the bid price for Item 763643 (Maintenance of Traffic, All Inclusive).

35. All traffic control devices shall be in new or refurbished condition, and shall be in compliance with the Delaware Manual on Uniform Traffic Control Devices and NCHRP 350 as defined in Part 6 of the Manual. The devices shall be approved by the District Safety Officer prior to use and shall be maintained in good condition for the duration of the Contract.

36. If a road closure is required, the Contractor shall be required to submit the proposed detour route to the DelDOT Safety Officer for approval. The Contractor shall coordinate the road closure with the Engineer. The Engineer will coordinate with the DelDOT Safety Section, and be responsible for the

MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

GENERAL CONTRACT PLAN NOTES

necessary emergency notifications. The detour route requires approval by the Engineer prior to closure. The Engineer will coordinate with the DeIDOT Team Support Section for notification requirements prior to road closure. A two week lead time for detour plan review shall be required for any requested detour. The Contractor shall be responsible for furnishing and maintaining the Maintenance of Traffic apparatus at the closure (such as Type III barricades, road closure signs, etc) and all advanced warning signs. The Contractor shall be responsible for placement of detour trailblazers. Payment for detour trailblazers shall be under Item 763643 (Maintenance of Traffic).

37. All open excavations shall be secured with plastic **drums with retroreflective** fluorescent orange and white prismatic sheeting and orange plastic snow fence. If the construction activity results in a vertical difference or drop-off along, adjacent to, or across a travelway, the Contractor shall eliminate or remedy this hazard by the methods detailed in Table 6G-1 of the Delaware Manual on Uniform Traffic Control Devices (DEMUTCD) as directed by the Engineer. The snow fence, tie wire, and associated items shall be incidental to Item 763643 (Maintenance of Traffic, All Inclusive).

38. **Drums** with fluorescent sheeting will be required in work areas where completion time will extend beyond one daylight operation. All drums shall consist of fluorescent orange and white prismatic reflective sheeting. Lights shall not be used on drums.

39. All **flaggers** utilized by the Contractor for this project shall be ATSSA certified by a Department approved certification program. All flaggers shall have certification cards and photo identification with them while working. Absence of a certification card will be justification for flagger dismissal from the site, and corresponding suspension of work. All garments worn by the flaggers shall comply with the applicable regulations for visibility and reflectivity. All construction and Contractor vehicles and self-propelled equipment shall be equipped with an operating roof mounted amber flashing light.

40. All workers shall wear a retro reflective safety vest while they are within the right-of-way or adjacent to it. All retro-reflective safety vests must be minimum ANSI Class 2.

41. Work hours shall be from **8:00 AM to 4:00 PM**, Monday through Friday, unless directed otherwise by the Engineer. The Contractor shall comply with these time restrictions.

42. Costs for adjustment in position of traffic control devices due to variances from the standard MOT case numbers, or for any other reason, shall be included in unit price for each respective MOT pay item 763643 (Maintenance of Traffic, All Inclusive).

43. A **Truck mounted attenuator**, Type II (Item 743010) shall be required on roads for shoulder work, travel lane work and other operations as outlined in the Delaware MUTCD, or as directed by the Engineer.

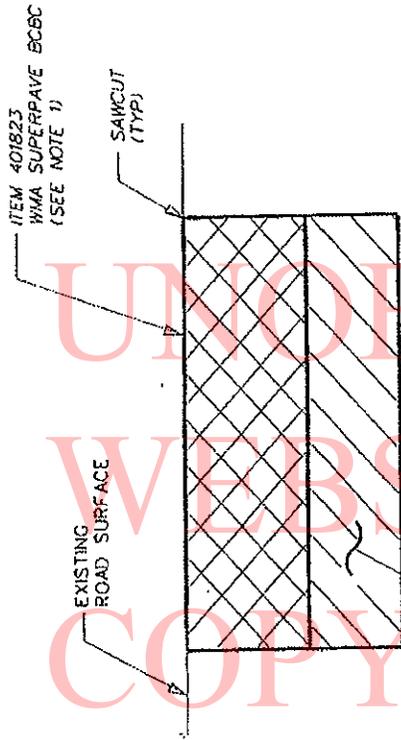
MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

GENERAL CONTRACT PLAN NOTES

44. No lane closures will be permitted unless applicable work activity is taking place.
45. Do not perform microsurfacing, crack sealing or patching within Railroad right-of-way.
46. All removal of epoxy striping is incidental to Item 403512 (Polymer-Modified Emulsion Micro-Surfacing, Rolled). However, any removal of thermoplastic symbols/legends will be paid under Item 748530 (Removal of Pavment Striping).

UNOFFICIAL
WEBSITE
COPY

DETAILS SHEET



UNDERCUT EXCAVATION
(WHEN DIRECTED
BY THE ENGINEER)
(SEE NOTE 1 AND NOTE 2)

**WARM-MIX PATCH
TYPICAL SECTION**

NOT TO SCALE

NOTES

1. DEPTH WILL VARY, AS DIRECTED BY THE DELDOT ENGINEER
2. BACKFILL FOR UNDERCUT EXCAVATION SHALL BE WMA SUPERPAVE B.C.B.C. (ITEM 401823). LIFT THICKNESS SHALL BE 3" (MINIMUM) AND 6" (MAXIMUM) FOR SUPERPAVE B.C.B.C.

	DELAWARE DEPARTMENT OF TRANSPORTATION		WARM-MIX PATCH BENEATH MICROSURFACING
DRAWN BY: RCG FEB 2011			

DELAWARE DEPARTMENT OF TRANSPORTATION

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MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

LOCATION 1 208(CHESTNUT LANE) FROM RD 23 MARSH RD TO 500 FEET FROM MARSH RD

LENGTH 0.1287 km 0.08 MILE AADT 3046

GENERAL IMPROVEMENTS

MICROSURFACING, CRACK SEALING

COMMENTS:

Chestnut Lane is also known as Chestnut Street. Scope of work for this Location includes microsurfacing and crack sealing 500 ft of Chestnut St, and 500 ft of Marsh Rd, at intersection.

MATERIAL ESTIMATE FOR LOCATION 1

403512	POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED	1,300.00 S.Y.
406507	CRACK SEALING	900.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	200.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	20.00 HOUR
748032	TEMPORARY MARKINGS, PAINT, 5"	950.00 L.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	1,750.00 L.F.

** DENOTES FIXED PRICE ITEM

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NORTH
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MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

LOCATION 2 225(MONTCHANIN ROAD) FROM RD 265 BUCK RD TO RD 236 KIRK RD

LENGTH 1.1263 km 0.7 MILE AADT 4910

GENERAL IMPROVEMENTS
CHANGE PAY ITEM

COMMENTS:

MATERIAL ESTIMATE FOR LOCATION 2

403512	POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED	9,100.00 S.Y.
406507	CRACK SEALING	4,000.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	200.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	260.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	260.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	30,600.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	260.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	15,300.00 L.F.

** DENOTES FIXED PRICE ITEM

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MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

LOCATION 3 253(MCGOVERN ROAD) FROM RD 237 LANCASTER PIKE TO RD 247 CREEK RD

LENGTH 3.8777 km 2.41 MILE AADT 1746

GENERAL IMPROVEMENTS

COMMENTS:

MATERIAL ESTIMATE FOR LOCATION 3

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	300.00 TON
403512	POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED	15,600.00 S.Y.
406001	WARM-MIX PATCHING	5,325.00 SY-IN
406507	CRACK SEALING	17,500.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	200.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	25.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	25.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	12,500.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	25.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	5,850.00 L.F.
762001	SAW CUTTING, HOT MIX	550.00 L.F.

** DENOTES FIXED PRICE ITEM

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NORTH
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MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

LOCATION 4 **257(YORKLYN ROAD) FROM RD 237 LANCASTER PIKE TO RED CLAY CREEK BRIDGE**

LENGTH 3.0732 km 1.91 MILE AADT 7319

GENERAL IMPROVEMENTS
CHANGE PAY ITEM

COMMENTS:

There is a subdivision project occurring on Yorklyn Road just west of the bridge. Coordinate this work with Public Works.

MATERIAL ESTIMATE FOR LOCATION 4

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	50.00 TON
403512	POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED	24,700.00 S.Y.
406001	WARM-MIX PATCHING	900.00 SY-IN
406507	CRACK SEALING	15,000.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	300.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	30.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLASTIC	200.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	200.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	50,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	200.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	43,000.00 L.F.
762001	SAW CUTTING, HOT MIX	100.00 L.F.

** DENOTES FIXED PRICE ITEM

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NORTH
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MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

LOCATION 5 261(MOUNT CUBA ROAD) FROM RD 251 SHARPLESS RD TO RD 247 SNUFF MILL
RD

LENGTH 0.8206 km 0.51 MILE AADT 1785

GENERAL IMPROVEMENTS

COMMENTS:

MATERIAL ESTIMATE FOR LOCATION 5

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	125.00 TON
403512	POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED	6,600.00 S.Y.
406001	WARM-MIX PATCHING	2,200.00 SY-IN
406507	CRACK SEALING	13,200.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	200.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLASTIC	200.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	200.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	30,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	200.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	16,000.00 L.F.
762001	SAW CUTTING, HOT MIX	100.00 L.F.

** DENOTES FIXED PRICE ITEM

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MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

LOCATION 6 **280A(MCKENNANS CHURCH ROAD) FROM RD 280 MILLTOWN RD TO RD 31 LIMESTONE RD**

LENGTH 0.1609 km 0.1 MILE AADT 660

GENERAL IMPROVEMENTS

COMMENTS:

Coordinate with the funeral home located on this portion of McKennans Church Road to avoid impacts.

MATERIAL ESTIMATE FOR LOCATION 6

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	25.00 TON
403512	POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED	1,300.00 S.Y.
406001	WARM-MIX PATCHING	500.00 SY-IN
406507	CRACK SEALING	1,250.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	200.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	25.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	25.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	1,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	25.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	600.00 L.F.
762001	SAW CUTTING, HOT MIX	50.00 L.F.

** DENOTES FIXED PRICE ITEM

DELAWARE DEPARTMENT OF TRANSPORTATION

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NORTH
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MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

LOCATION 7 295(UPPER PIKE CREEK ROAD) FROM RD 321 NEW LINDEN HILL RD TO RD 13
PAPER MILL RD

LENGTH 3.3467 km 2.08 MILE AADT 7775

GENERAL IMPROVEMENTS
CHANGE PAY ITEM

COMMENTS:

MATERIAL ESTIMATE FOR LOCATION 7

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	50.00 TON
403512	POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED	26,900.00 S.Y.
406001	WARM-MIX PATCHING	900.00 SY-IN
406507	CRACK SEALING	10,000.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	400.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	40.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	25.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	25.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	45,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	25.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	23,000.00 L.F.
762001	SAW CUTTING, HOT MIX	100.00 L.F.

** DENOTES FIXED PRICE ITEM

DELAWARE DEPARTMENT OF TRANSPORTATION

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NORTH
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MICRO-SURFACING B, NORTH DISTRICT, FY13-FY14

CONTRACT QUANTITIES SUMMARY SHEET

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	550.00 TON
403512	POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED	85,500.00 S.Y.
406001	WARM-MIX PATCHING	9,825.00 SY-IN
406507	CRACK SEALING	61,850.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	70.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	28.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	1,700.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	170.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	735.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	735.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	170,050.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	735.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	105,500.00 L.F.
762001	SAW CUTTING, HOT MIX	900.00 L.F.
763000	INITIAL EXPENSE	LUMP SUM
763643	MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP SUM

** DENOTES FIXED PRICE ITEM

CONTRACT ID: T201306701.01

PROJECT(S): ESTP-2013(17)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 Category 0001						
0010	401823 WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	550.000 TON				
0030	406001 WARM-MIX PATCHING	9825.000 SYIN				
0040	406507 CRACK SEALING	61850.000 LF				
0050	743004 FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	70.000 EADY				
0060	743010 FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	28.000 EADY				
0070	743056 FLAGGER, NEW CASTLE COUNTY, FEDERAL	1700.000 HOUR	50.66000		86122.00	
0080	743065 FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	170.000 HOUR	73.46000		12488.20	
0090	748015 PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	735.000 SF				
0100	748026 TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	735.000 SF				

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CONTRACT ID: T201306701.01

PROJECT(S): ESTP-2013(17)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0110	748032 TEMPORARY MARKINGS, PAINT, 5"	170050.000 LF				
0120	748530 REMOVAL OF PAVEMENT STRIPING	735.000 SF				
0130	748548 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	105500.000 LF				
0140	762001 SAW CUTTING, HOT MIX	900.000 LF				
0150	763000 INITIAL EXPENSE	LUMP	LUMP			
0160	763643 MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP	LUMP			
0161	403512 POLYMER-MODIFIED EMULSION MICRO-SURFACING, ROLLED	85500.000 SY				
	SECTION 0001 TOTAL					
	TOTAL BID					

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SECTION 1

BREAKOUT SHEET - 1

CONTRACT NO. T201306701

ITEM 763643 - Maintenance of Traffic, All Inclusive

Location No.	Location Description	Working Hours	Primary MOT Typical Application	UOM	Amount
1	Chestnut Lane (Rd 208) and Marsh Rd (Rd 023)	Daytime	10 & 20	LS	\$
2	Montchanin Rd (Rd 225)	Daytime	10	LS	\$
3	McGovern Rd (Rd 253)	Daytime	10	LS	\$
4	Yorklyn Rd (Rd 257)	Daytime	10	LS	\$
5	Creek Rd (Rd 261), from Rd 251 to Rd 247	Daytime	10	LS	\$
6	McKennans Church Rd (Rd 280A)	Daytime	10	LS	\$
7	Upper Pike Creek Rd (Rd 295)	Daytime	20	LS	\$
ITEM 763643 - Maintenance of Traffic, All Inclusive					TOTAL = \$
(LUMP SUM BID PRICE FOR ITEM 763643)					

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