



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
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November 27, 2012

Contract No. T201207402.01
Federal Aid Project No. IM-2012(22)
INTERSTATE BRIDGE MAINTENANCE, SOUTH
New Castle County

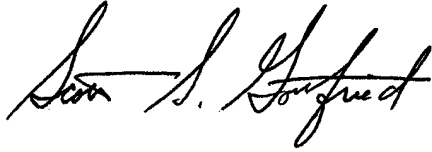
Ladies and Gentlemen:

Enclosed is Addendum No. 3 for the referenced contract consisting of the following:

1. Eight (8) pages, Special Provisions, 602757 - Thin Polymer Overlay, pages 97 through 103, revised, to be substituted for the same pages in the Proposal and page 103A, new, to be added to the Proposal.
2. Quantities for the following items have been revised:
602757
603000
604000
3. Twelve (12) pages, Bid Proposal Forms, pages 1 through 12, revised, to be substituted for the same page in the Proposal.
4. One (1) page, Breakout Sheet-1, revised, to be substituted for the same page in the Proposal.
5. Two (2) sheets, Construction Plans, sheets 2 and 17, revised, to be substituted for the same sheets in the Plan Set.
6. 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,

A handwritten signature in black ink, appearing to read "Scott S. Gottfried". The signature is fluid and cursive, with a prominent initial "S" and a long horizontal stroke.

Scott S. Gottfried
Competitively Bid Contracts Coordinator
:ssg
Enclosures

602757 – THIN POLYMER OVERLAY (L.S.)

Description:

This work shall consist of furnishing and placing a thin polyester polymer concrete (PPC) overlay with a high molecular weight methacrylate (HMWM) resin prime coat where a bridge deck overlay is required in the Contract Documents. The work shall also include the preparation of all receiving surfaces.

Note – This special provision is intended for use on Contract T201207402: Interstate Bridge Maintenance, South as a means for using the leftover materials from the Indian River Inlet Bridge project.

Materials:

A break-out sheet has been provided to show the amount of additional material that is anticipated. Also, see note at the end of this special provision.

Material requirements for the PPC overlay are as follows:

1. Primer. The prepared surface shall receive a wax-free low odor, high molecular weight methacrylate (HMWM) prime coat conforming to the following:

High Molecular Weight Methacrylate (HMWM) Resin		
Property	Requirement	Test Method
Volatile Content*	30 percent, maximum	ASTM D 2369
Viscosity* (Brookfield RVT with UL adapter, 50 RPM at 77°F)	0.025 Pa•s, maximum	ASTM D 2196
Specific Gravity* (at 77°F)	0.90 - 1.10	ASTM D 1475
Flash Point*	180-deg F, minimum	ASTM D 3278
Vapor Pressure* (mm Hg at 77°F)	1.0	ASTM D 323
Tack Free Time (minutes at 77°F)	400 min. maximum	ASTM C 679
PCC ^a Saturated Surface-Dry Bond Strength (at 24 hrs at 70±2°F)	500 psi, minimum	California Test Method 551
Absorption	Maximum of 1% at 24 hr	ASTM D 570
Thermal compatibility	No delamination of overlay	ASTM C 884

*Tested prior to adding initiator

^aPCC = Portland cement concrete

The prime coat promoter/initiator shall consist of a metal drier and peroxide. If supplied separately from the resin, **at no time shall the metal drier be mixed directly with the peroxide.** The containers shall be stored in a manner that will not allow leakage or spillage from one material to contact the containers or material of the other.

NOTE: Mixing the metal drier directly with the peroxide will result in a violent exothermic reaction.

2. Aggregate. Aggregate for polyester concrete and abrasive finishing sand shall conform to the following gradation requirements:

Combined Aggregate		
Sieve Size	3/8" Max. Percent Passing	#4 Sieve Max. Percent Passing
1/2"	100	100
3/8"	83-100	100
#4	65-82	62-85

Combined Aggregate		
Sieve Size	3/8" Max. Percent Passing	#4 Sieve Max. Percent Passing
#8	45-64	45-67
#16	27-48	29-50
#30	12-30	16-36
#50	6-17	5-20
#100	0-7	0-7
#200	0-3	0-3

Aggregate retained on the #8 sieve shall have a maximum of 45 percent crushed particles when tested in accordance with AASHTO Test Method T27. Fine aggregate shall consist of natural sand only.

The minimum Mohs scale hardness of the silica sand shall be 7.0, and all aggregates retained in the No. 8 sieve shall have a minimum hardness of 6.5.

Aggregate absorption shall not exceed one (1) percent as determined by AASHTO Test Methods T84 and T85.

At the time of mixing with the resin, the moisture content of the aggregate, as determined by AASHTO Test Method T 255, shall not exceed one half of the aggregate absorption.

Sand for abrasive sand finish shall be commercial quality blast sand having at least 95 percent passing the No. 8 sieve and at least 95 percent retained on the no. 20 sieve and conform to the dryness requirements for polyester concrete aggregate as specified in this special provision.

3. Polyester Binder. The polyester concrete shall consist of polyester resin binder and dry aggregate. The resin shall be an unsaturated isophthalic polyester-styrene co-polymer conforming to the following:

Polyester Resin Binder		
Property	Requirement ^a	Test Method
Viscosity* (RVT No. 1 Spindle, 20 RPM at 77°F)	0.075 to 0.20 Pa•s	ASTM D 2196
Specific Gravity*	1.05 to 1.10 at 77°F	ASTM D 1475
Elongation	35 percent minimum Type I at 0.45"/min. Thickness = 0.25" ± 0.03"	ASTM D 638
	Sample conditioning: 18/25/50 + 5/70	ASTM D 618
Tensile Strength	17.5 MPa 2500 psi minimum Type I at 0.45"/min. Thickness = 0.25" ± 0.03"	ASTM D 638
	Sample conditioning: 18/25/50 + 5/70	ASTM D 618
Styrene Content*	40 percent to 50 percent (by weight)	ASTM D 2369
Silane Coupler	1.0 percent, minimum (by weight of polyester styrene resin)	
PCC Saturated Surface Dry Bond Strength	3.5 MPa, 5000psi minimum at 24 hours and 70 ± 2-deg F	California Test Method 551
Static Volatile Emission	Maximum loss of 60 g/m ²	CA South Coast Air Quality Management District Standard Method 309-91
Absorption	Maximum of 1% at 24 hr	ASTM D 570
Thermal Compatibility (mixed with aggregate)	No delamination of overlay	ASTM C 884

*Tested prior to adding initiator

^a Values are based on specimens or samples cured or aged at 77°F unless otherwise indicated.

The silane coupler shall be an organosilane ester, gammamethacryloxypropyltrimethoxysilane. The promoter shall be compatible with methyl ethyl ketone peroxide (MEKP) and cumene hydroperoxide (CHP) initiators. The promoter shall be compatible with suitable peroxide initiators.

4. Samples. Samples of materials for all components of the overlay system shall be submitted by the manufacturer to the Materials and Research Section a minimum of five (5) days prior to the overlay application. Samples shall be representative of the materials to be used in the overlay application and shall consist of one four-liter sample for each liquid component and a 5 pound sample for each dry component.

5. Packaging and Shipment. A Material Safety Data Sheet shall be furnished prior to use for each shipment of polyester resin binder and high molecular weight methacrylate resin. All components shall be shipped in strong, substantial containers, bearing the manufacturer's label specifying date of manufacture, batch number, brand name, quantity, and date of expiration or shelf life. In addition, the mixing ratio shall be printed on the label of at least one of the system components. If bulk resin is to be used, the Contractor shall notify the Engineer in writing 10 days prior to the delivery of the bulk resin to the job site. Bulk resin is any resin that is stored in containers in excess of 55 gallons.

6. Basis of Acceptance. Project acceptance of the polyester overlay materials will be based on the following:

1. Delivery of the overlay materials to the project site in acceptable containers bearing all the label information as required above in **Packaging and Shipment**.
2. Receipt of a manufacturer's certification stating the primer, aggregate and polyester binder meet the material requirements of items 1 through 3 above.
3. Approval by the Materials and Research Section based on conformance with the material requirements above.

Submittals:

Prior to construction of the polymer overlay, the Contractor shall submit to the Department a Work Plan for constructing the overlay. The minimum plan review time provided to the Department shall be 7 days. The work plan shall include, but not be limited to, the following:

1. A schedule and sequence of all overlay work
2. Technical literature from the supplier including requirements for storage, handling, mixing, application, cleanup, and disposal of materials and containers
3. Description of materials and test reports for all overlay system materials to be used
4. Description of equipment for applying HMWM resin
5. Description of equipment for measuring, mixing, placing and finishing polyester concrete overlay
6. Method for isolating joints
7. Cure time for PPC overlay
8. Description of equipment for applying sand
9. Procedures for surface preparation, application, curing, and finishing

In addition, the supplier's technical representative who will be on site shall also review and approve the plan. Any deviations from the approved Work Plan shall be approved by the Engineer.

Construction Methods:

A. General.

The manufacturer's technical representative shall be made available on the job site for a minimum of two (2) working days to make recommendations to facilitate the overlay installation. This shall include, but not be limited to, surface preparation, overlay application and overlay cure.

During surface preparation and overlay application, precaution shall be taken to assure that traffic is protected from rebound, dust and construction activities. Appropriate shielding shall be provided as required and directed by the Department.

During overlay application, the Contractor shall provide suitable coverings (e.g. heavy duty drop cloths) to protect all exposed areas not to be overlaid, such as curbs, sidewalks, parapets, etc. All damage or defacement resulting from this application shall be cleaned and, or repaired to the Department's satisfaction, at no additional cost.

B. Storage of Materials. All materials shall be stored and handled in accordance with the manufacturer's recommendation to ensure their preservation until used in the work. Applicable fire codes may require special storage facilities for some components of the overlay system.

C. Equipment. Equipment shall be fitted with suitable traps, filters, drip pans, or other devices to prevent oil, fuel, grease, or other deleterious material from being deposited on the deck

1. Surface Preparation. All equipment to be used for surface preparation shall be as specified by the overlay manufacturer and approved by the Engineer. Unless otherwise specified, the Contractor shall use automatic shot blasting units to clean pavement surfaces. In those areas not accessible to this machinery, the surface may, with the Engineer's approval, be cleaned with blast cleaning equipment.

Automatic shot blasting units shall be self propelled and include a vacuum to recover spent abrasives. The abrasive shall be steel shot. Magnetic rollers shall be used to remove any spent shot remaining on the deck after vacuuming.

2. Application. Polyester concrete shall be mixed in mechanically operated mixers. Mixer size shall be limited to 9 cubic feet capacity. The binder shall be initiated and thoroughly blended just prior to mixing with aggregate. The polymer concrete shall be mixed a minimum of 2 minutes prior to placement.

A continuous mixer employing an auger screw/chute device with self-contained, separate aggregate, resin, and peroxide compartments may be used. The continuous mixer shall 1) be equipped with a metering device that automatically measures and records the aggregate volumes and the corresponding resin volumes and 2) have a readout gage, visible to the Engineer at all times, that displays the volumes being recorded. The volumes shall be recorded at no greater than five (5) minute intervals along with the time and date of each recording. A printout of the recordings shall be furnished to the Engineer at the end of each work shift.

A minimum of four Class B fire extinguishers, minimum 5 lb. in good working order shall be mounted approximately equidistant around the perimeter of each mixer unit. The capacity, operating speed, and all mix control constants shall be clearly and prominently mounted on the unit by the Manufacturer in a durable metal plate or plates.

3. Finishing and Texturing. Finishing shall be performed using a vibratory-type mechanical screed riding on preset rails or through the use of a polymer concrete paver.

Texturing shall be performed in accordance with DelDOT Standard Specifications Subsection 602.20.c-2, Manual Texturing.

D. Surface Preparation. All structural slab, curb and parapet surfaces that will be in contact with the overlay shall be prepared as follows:

1. The Contractor shall determine the size of shot, flow of shot, forward speed of shot blast machine and number of passes necessary to provide a surface capable of a tensile bond strength greater than or equal to 250 psi or a failure area, at a depth of 0.25" or more into the base concrete, greater than 50% of the test area. The acceptance testing shall be performed by the Department per ACI 503R-93, Appendix A of the *ACI Manual of Concrete Practice*. The Engineer will designate the location of the test patches. A test result shall be the average of three tests on a test patch of not less than 4.5 sq ft. One test result shall be obtained for each span. The test patches shall be located to provide for the evaluation of the range of surface conditions on the bridge, and one or more patches shall be placed on deck repairs. Test patches shall be installed at the same thickness, and with the same materials, equipment,

personnel, timing, sequence of operations, and curing period that will be used for the installation of the overlay. The cleaning practice, materials, and installation procedure will be approved if one passing test result is obtained from each test area when tested at an age of 24 hr or more. Tensile adhesion tests shall not be performed at surface temperatures above 80-deg F.

Before application of the primer, the entire deck surface shall be cleaned by shot blasting and other means using the approved cleaning practice to remove any epoxy resins, asphaltic material, oils, dirt, rubber, curing compounds, paint, carbonation, laitance, weak surface mortar and other potentially detrimental materials, which may interfere with the bonding or curing of the overlay. Scarifiers, scabblers, and milling machines shall not be used unless otherwise approved by the Department. Water may be used to aid in the cleaning prior to shotblasting. A vacuum shall be used to remove all dust, shot, mill slurry (if milling is approved) and other loose material. Brooms shall not be used.

If the Engineer determines that an approved cleaning practice has changed prior to the completion of the overlay application, the Contractor must return to the approved cleaning methods and re-clean the suspect areas or verify through tests at no additional cost to the Department that the practice is acceptable.

All patching and cleaning operations shall be inspected and approved prior to placing the overlay. Any contamination of the deck after initial cleaning shall be removed. The entire overlay system shall be applied following the cleaning and prior to opening the area to traffic.

Cleaned pavement surfaces shall not be exposed to vehicular or pedestrian traffic other than that required by the overlay operation. If the pavement is contaminated before being overlaid it shall be re-cleaned by abrasive blasting to the satisfaction of the Engineer. No additional payment will be made for re-cleaning work.

The concrete shall be dry at the time of application of the overlay primer. If deemed necessary, the Department shall test for the presence of deck moisture in accordance with ASTM D 4263. The Contractor's means and methods shall allow for placement of the primer within 24 hours of surface cleaning. Dryers shall be used, as necessary, to facilitate the timely placement of the primer and overlay materials.

2. All steel surfaces that will be in contact with the overlay shall be cleaned in accordance with SSPC-SP No. 10, Near-White Blast Cleaning, except that wet blasting methods shall not be allowed. Steel finger joints shall not be overlaid.

After the cleaning operation is completed there shall be no visible evidence of oil, grease, dirt, rust, loose particles, spent abrasives or other foreign material on any of the surfaces to be overlaid.

E. Application.

1. Prime Coat

Prior to applying the prime coat, the area shall be dry and shall be blown clean with oil-free compressed air. The surface temperature during application and curing shall satisfy the manufacturer's requirements.

The prime coat shall be uniformly applied to completely cover the surface to receive the polyester concrete. The rate of spread shall be approximately 2.3 ounces per square foot of deck surface or as recommended by the manufacturer. The prime coat shall be allowed to cure a minimum of 15 minutes before placing polyester polymer concrete.

2. Polyester Concrete

Test Patches

Prior to constructing the overlay, one or more trial overlays shall be placed on a previously constructed concrete base to determine initial set time and to demonstrate the effectiveness of the mixing, placing, and finishing equipment proposed as well as curing period. Each trial overlay shall be the same width as the normal single-lane paving width, at least 6 feet long and the same thickness as the overlay to be constructed. Conditions and equipment used during the construction of the trial overlay shall be similar to those expected and to be used for the construction of the permanent PPC overlay. If the cleaning practice, materials and installation procedure are not acceptable, the Contractor must remove the failed test patches and make the necessary adjustments and retest all test areas at no additional cost to the Department until satisfactory test results are obtained.

The test patch shall have minimum bond strength of 250 psi as determined by ACI 503R-93, Appendix A to assure that the overlay adheres to the prepared surface. Adhesion testing required for acceptance shall be performed by the Department.

All material used in the trial overlay, including the concrete test patch shall become the property of the Contractor and shall be removed (if required) and disposed of at the Contractor's expense.

Calibration and general mixer operation shall be demonstrated on-site a minimum of 5 working days prior to anticipated use. The calibration will consist of a weight/volume determination made in a 0.25 cu yd container, filled with the polymer concrete to be used, struck off, and the volume compared to the mixer output record or reading. When no longer required, as determined by the Engineer, the container and contents shall be disposed of by the Contractor.

The polyester concrete shall be placed within 120 minutes after the prime coat has been applied.

The polyester concrete shall contain approximately 10 percent polyester resin by weight of dry aggregate; the exact percentage is dependent on the aggregate chosen and will be determined by the manufacturer's technical representative during placement to enable proper finishing and texturing of the overlay surface.

The target nominal thickness for the polyester polymer overlay shall be 7/8-inch on average with a minimum final in place overlay thickness of 3/4-inches over all finished deck surfaces receiving an overlay.

Termination edges of the overlay may require application and finishing by hand trowel due to obstructions such as a curb. All hand troweling shall be followed by broadcasting aggregate or surface texturing while the resin is still wet to provide acceptable surface friction characteristics.

When multiple passes of the screed or paver are required to overlay the full bridge width, longitudinal termination edges shall be located at the edge of travel lane(s) and/or within two (2) feet of the curblines. All expansion joints shall be adequately isolated prior to overlaying.

The amount of initiator used in polyester concrete shall be sufficient to produce an initial set time between 20-120 minutes during placement. The initial set time will be determined by using an initial-setting time Gillmore needle in accordance with the requirements of ASTM C 266. Accelerators or inhibitors may be required to achieve proper set times and shall be used as recommended by the resin supplier.

The resin binder shall be initiated and thoroughly blended just prior to mixing with aggregate. The polyester concrete shall be mixed a minimum of 2 minutes prior to placing.

Polyester concrete shall be placed prior to gelling and within 15 minutes following addition of initiator, whichever occurs first. Polyester concrete that is not placed within this time shall be discarded. Placing includes the broadcasting of finish sand below.

The surface temperature of the area to receive polyester concrete shall be the same as specified above for the prime coat and shall satisfy the manufacturer's recommendations.

The finishing equipment used shall strike off the polyester concrete to the established grade and cross section. Finishing equipment shall be fitted with vibrators or other means of consolidating the polyester concrete to the required relative compaction of not less than 97 percent in accordance with California Test Method 552. Compaction testing required for acceptance shall be performed by the Department as deemed necessary by the Department.

The surface shall be textured with an abrasive sand finish. The finish sand shall be applied by either mechanical means or hand broadcasting immediately after strike-off, before gelling occurs, at a minimum rate of 2.75 ounces per square foot.

F. Surface and Thickness Requirements. The smoothness of the polyester concrete surface will be tested with a straightedge. The surface shall not vary more than ¼" from the lower edge of a 12' ± 0.2' long straight edge placed in any direction. Any surfaces which fail to conform to the required tolerances shall be removed by grinding.

To ensure adequate pavement friction, the completed overlay surface shall be free of any smooth or "glassy" areas such as those resulting from insufficient quantities of surface aggregate. Any such surface defects shall be repaired in the manner recommended by the manufacturer and approved by the Engineer.

The minimum ¾-inch thickness of the overlay shall be checked prior to its initial set using a ruler. If the Engineer determines that the minimum thickness has not been attained, the limits of the deficient area shall be documented and an additional layer shall be applied after the overlay hardens. The thickness of this layer shall be as specified by the manufacturer and as required to achieve the minimum total overlay thickness specified. Any additional overlay needed to satisfy the minimum thickness requirement shall be applied by the Contractor at no additional cost to the Department.

The finished surface of the polymer concrete overlay shall conform to the requirements of the Department for new bridge decks.

G. Curing. Traffic and equipment shall not be permitted on the overlay for a minimum of four (4) hours following final finishing. Overlays shall be protected from moisture for not less than four (4) hours after finishing. The polyester overlay shall be allowed to reach final cure before subjecting it to traffic loads. Cure time is dependent upon the ambient and deck temperatures. Actual degree of cure and suitability of the overlay for traffic shall be as determined by the Engineer.

Method of Measurement:

The quantity of "Thin Polymer Overlay" will not be measured.

Basis of Payment:

The quantity of "Thin Polymer Overlay" will be paid at the contract lump sum price. Price and payment will constitute full compensation for furnishing all labor, materials, tools, equipment, and necessary incidentals to complete the work involved in constructing the "Thin Polymer Overlay", complete in place, including application of prime coat and furnishing, constructing and disposing of test patch overlays and base. The contract price bid shall also include the cost of having the polymer manufacturer's representative present as required.

NOTE:

A breakout sheet attached to the Proposal lists the work to be completed under this item. The Contractor shall fill in a price for each item. The lump sum bid for Item 602757 – Thin Polymer Overlay shall be the sum of the cost for all items listed. The breakout sheet shall be attached to the Bid Proposal. Failure to submit the breakout sheet with the Bid Proposal will result in the Bid Proposal being declared non-responsive and rejected.

The Department reserves the right to delete from the Contract one or more of the items and right to add or subtract from the quantity of each item. The lump sum to be paid will be adjusted in accordance with the Contractor's unit prices as required above. There will be no extra compensation if such additions and/or deletions are made.

An inspection of the material stored at the Indian River Inlet site after Hurricane Sandy showed that it is not in the Department's interest to use that material as part of this contract. However, the manufacturer for that project, Kwik-Bond Polymers, owes the Department enough polyester resin binder to construct 80 CY of the thin polymer overlay. The Contractor shall be responsible to coordinate the shipment and storage of this material, with payment being incidental to this item. The total final complete in place volume is estimated at 85 CY, but there is an amount of waste anticipated so the items being furnished have been increased.

11/19/12

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- 605510 - PREFABRICATED EXPANSION JOINT SYSTEM 2"**
- 605511 - PREFABRICATED EXPANSION JOINT SYSTEM 3"**
- 605512 - PREFABRICATED EXPANSION JOINT SYSTEM 4"**
- 605513 - PREFABRICATED EXPANSION JOINT SYSTEM 5"**
- 605647 - PREFABRICATED EXPANSION JOINT SYSTEM 1 1/2"**

Description:

This work consists of furnishing of all materials and necessary labor to fabricate, assemble, construct and install prefabricated strip seal expansion joint systems of the size(s) specified on the Plans, including extrusions, neoprene strip seal, angles, studs, and sliding plates on roadway and/or sidewalks as specified on the Plans, in accordance with these Specifications.

Materials:

Steel members of the types, size and configurations shown on the plans shall conform to AASHTO M 270/M 270M Grade 36 (Grade 250) or Grade 50 (Grade 345) or Grade 50W (Grade 345W), unless specified otherwise on the Plans. All steel of the joint system shall be painted with the 3 coat urethane paint system with a minimum total thickness of 9 mils (225 µm), and all screws shall be stainless steel ASTM A276, Type 304.

The elastomeric material shall be 100% virgin Polychloroprene (Neoprene). The strip seal shall be an extruded neoprene material meeting the requirements of AASHTO M 220 modified to omit the recovery test. The elastomeric material shall have the following physical properties as determined by applicable ASTM tests:

<u>ASTM Standard</u>	<u>Physical Properties</u>	<u>Performance Requirements</u>
D2240 (Modified) D412	Hardness Tensile Strength	60±7 points, Durometer (Type A) 2000 psi (13.8 MPa), min. 250%, min.
D395 (Method B)	Ultimate Elongation Compressive Set 70 hr. @ 212 F (100 C).	40%, max.
D573	Compressive Set 212 F (100 C)	40%, max.
D1630 D1149	Abrasion Resistance Oxone Resistance 20 percent strain 300 pphm in air, 70h @ 140 F (60 C) (wiped) with toluene to remove surface contamination)	Index of 200 or greater Permissible No cracks
D471	Oil Swell, ASTM Oil #3, 70 h @ 212 F (100 C), Weight change	45%, max.
D2240	Low Temperature Stiffening max. 7 days @ 14 F (-10 C)	+15 points Durometer (Type A)

Construction Methods:

Installation of the prefabricated expansion joint system, to include strip seal, steel extrusion and application of adhesives, shall be in accordance with the manufacturer's written recommendations and instructions and as specified herein. Special tools for insertion of seals shall be provided by the manufacturer as may be required. The Contractor shall make arrangements for a technical representative of the manufacturer to be available for advice and inspection during construction of strip seals to ensure satisfactory installation. The strip seal shall be furnished in one piece for the full length of the joint.

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 1
DATE:

CONTRACT ID: T201207402.01 PROJECT(S): IM-2012(22)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 PROJECT ITEMS						
0010	201000 CLEARING AND GRUBBING	LUMP	LUMP			
0020	202001 EXCAVATION AND EMBANKMENT	LUMP	LUMP			
0030	209003 BORROW, TYPE C	CY	1.000			
0040	211000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP	LUMP			
0050	251001 REINFORCED SILT FENCE	LF	960.000			
0060	302008 GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	CY	1427.000			
0070	302012 DELAWARE NO. 57 STONE	TON	6.000			
0080	401821 WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22, PATCHING	TON	321.000			
0090	401822 WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, PATCHING	TON	511.000			

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 2
DATE:

CONTRACT ID: T201207402.01 PROJECT(S): IM-2012(22)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0100	401823 WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	1303.000 TON				
0110	401830 WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 70-22 (NON- CARBONATE STONE)	1022.000 TON				
0120	406001 HOT-MIX PATCHING	68627.000 SYIN				
0130	406507 CRACK SEALING	584.000 LF				
0140	602013 PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	76.000 CY				
0150	602014 PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	26.000 CY				
0160	602015 PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	27.000 CY				
0170	602017 PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	259.000 CY				
0180	602518 WATER BASED ACRYLIC CONCRETE SEALER	20080.000 SF				

CONTRACT ID: T201207402.01 PROJECT(S): IM-2012(22)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0190	602546 WATERPROOFING P.C. C. MASONRY	9266.000				
		SF				
0200	602549 FORM LINERS	1446.000				
		SF				
0210	602572 REPAIRING EXISTING P.C.C. STRUCTURES	12490.000				
		LB				
0220	602575 DECK REPAIR, 1" TO 3" DEPTH	319.000				
		SF				
0230	602577 DECK REPAIR, FULL DEPTH	2.000				
		SF				
0240	602578 REPAIRING JOINTS AND CRACKS WITH MORTAR	8769.000				
		LF				
0250	602579 DRILLING HOLES AND INSTALLING DOWELS	3455.000				
		EACH				
0260	602580 PARTIAL REMOVAL OF P.C.C. MASONRY	391.000				
		CY				
0270	602586 REHABILITATION OF CONCRETE STRUCTURE	120.000				
		CF				
0280	602611 REPAIR OF CONCRETE STRUCTURES BY EPOXY INJECTION	422.000				
		LF				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 4
DATE:

CONTRACT ID: T201207402.01 PROJECT(S): IM-2012(22)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0290	602612 ACCESS AND CONTAINMENT FOR BRIDGE REPAIRS	LUMP	LUMP			
0300	602620 CRACK SEALING BRIDGE DECKS, APPROACH SLABS, SIDEWALKS, ETC.	SF 189.000				
0310	602626 ROUT AND SEAL CRACKS	LF 422.000				
0320	602629 CRACK SEALING BRIDGE DECKS, APPROACH SLABS, SIDEWALK, ETC.	LF 866.000				
0330	602646 SILICONE ACRYLIC CONCRETE SEALER	SF 19217.000				
0340	602757 THIN POLYMER OVERLAY	LUMP	LUMP			
0350	603000 BAR REINFORCEMENT	LB 96.000				
0360	604000 BAR REINFORCEMENT, EPOXY COATED	LB 53142.000				
0370	605002 STEEL STRUCTURES	LUMP	LUMP			
0380	605511 PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF 399.000				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

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All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0390	605533 CLEANING EXISTING STEEL STRUCTURES, HAZARDOUS BASE, (L.S.)	LUMP	LUMP			
0400	605582 CLEANING BRIDGE SCUPPER	3.000 EACH				
0410	605607 JACKING BRIDGE	LUMP	LUMP			
0420	605616 MOISTURE CURED URETHANE PAINT SYSTEM (RECOATING), L.S.	LUMP	LUMP			
0430	605620 MOISTURE CURED URETHANE PAINT SYSTEM (RECOATING), S.F.	5350.000 SF				
0440	605629 CLEANING EXISTING STEEL STRUCTURES, HAZARDOUS (S.F.)	5350.000 SF				
0450	605636 CLEAN AND LUBRICATE BRIDGE BEARINGS	193.000 EACH				
0460	605655 BEARING ANCHOR BOLT REPLACEMENT	4.000 EACH				
0470	605659 STRIP SEAL EXPANSION JOINT, 3"	144.000 LF				
0480	605692 SILICONE JOINT SEAL	194.000 LF				

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0490	612534 CORRUGATED POLYETHYLENE PIPE, TYPE S, 8"	16.000 LF				
0500	701011 PORTLAND CEMENT CONCRETE CURB, TYPE 2	1586.000 LF				
0510	701012 PORTLAND CEMENT CONCRETE CURB, TYPE 1-4	2563.000 LF				
0520	701013 PORTLAND CEMENT CONCRETE CURB, TYPE 1-2	600.000 LF				
0530	705002 P.C.C. SIDEWALK, 6"	10805.000 SF				
0540	710001 ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	11.000 EACH				
0550	712020 RIPRAP, R-4	65.000 TON				
0560	712526 CONCRETE BLOCK SLOPE PAVING REPAIR, 6"	275.000 SY				
0570	713003 GEOTEXTILES, RIPRAP	30.000 SY				
0580	720050 GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	2800.000 LF				

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0590	720500 BULLNOSE END TREATMENT	2.000 EACH				
0600	720585 GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	5.000 EACH				
0610	720586 GUARDRAIL END TREATMENT ATTENUATOR, TYPE 2-31	1.000 EACH				
0620	725001 GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE 31)	2.000 EACH				
0630	725002 GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	6.000 EACH				
0640	725006 GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-27	4.000 EACH				
0650	726001 END ANCHORAGE 31	2.000 EACH				
0660	732002 TOPSOIL, 6" DEPTH	1168.000 SY				
0670	734013 PERMANENT GRASS SEEDING, DRY GROUND	1168.000 SY				
0680	743000 MAINTENANCE OF TRAFFIC	LUMP		LUMP		

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0690	743003 ARROWPANELS, TYPE C	788.000 EADY				
0700	743004 FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	1092.000 EADY				
0710	743005 FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	239.000 EADY				
0720	743006 PLASTIC DRUMS	57617.000 EADY				
0730	743007 TRAFFIC OFFICERS	3570.000 HOUR		75.00000		267750.00
0740	743008 REFLECTOR PANELS	267.000 EACH				
0750	743010 FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	317.000 EADY				
0760	743013 FURNISH PORTABLE PCC STRUCTURE MOUNTED SAFETY BARRIER	2924.000 LF				
0770	743014 RELOCATING PORTABLE PCC STRUCTURE MOUNTED SAFETY BARRIER	2988.000 LF				
0780	743015 FURNISH AND MAINTAIN PORTABLE PCC SAFETY BARRIER	5370.000 LF				

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0790	743016 RELOCATION PORATBLE SAFETY BARRIER	864.000 LF				
0800	743023 TEMPORARY BARRICADES, TYPE III	9384.000 LFDY				
0810	743024 TEMPORARY WARNING SIGNS AND PLAQUES	13951.000 EADY				
0820	743025 INSTALL TEMPORARY IMPACT ATTENUATOR	37.000 EACH				
0830	743029 FURNISH TEMPORARY IMPACT ATTENUATOR - NON-GATING, REDIRECTIVE, TEST LEVEL 3	29.000 EACH				
0840	743030 RELOCATE TEMPORARY IMPACT ATTENUATOR	9.000 EACH				
0850	743031 ATSSA CERTIFIED TRAFFIC CONTROL SUPERVISOR	1800.000 HOUR				
0860	743056 FLAGGER, NEW CASTLE COUNTY, FEDERAL	3920.000 HOUR	52.90000		207368.00	
0870	743065 FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	604.000 HOUR	76.71000		46332.84	
0880	744505 ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL	1.000 EACH				

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			DOLLARS	CTS	DOLLARS	CTS
0890	745500 GALVANIZED CONDUIT IN/ON STRUCTURE, 1"	36.000 LF				
0900	745506 GALVANIZED CONDUIT IN/ON STRUCTURE, 2"	833.000 LF				
0910	745507 EXPANSION FITTING CONDUIT IN/ON STRUCTURE, 2"	12.000 EACH				
0920	746509 RELOCATING LIGHT POLE	8.000 EACH				
0930	746525 ALUMINUM LIGHTING STANDARDS	1.000 EACH				
0940	746594 LUMINAIRE (HPS), 250 WATT	1.000 EACH				
0950	746596 JUNCTION BOX ON STRUCTURE	6.000 EACH				
0960	748015 PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	16.000 SF				
0970	748027 PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 12"	35.000 LF				
0980	748513 RETROREFLECTIVE PREFORMED PATTERNED MARKINGS, 12"	115.000 LF				

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0990	748518 BLACKOUT TAPE, 6"	5900.000 LF				
1000	748525 TEMPORARY MARKINGS, TAPE, 4"	17377.000 LF				
1010	748530 REMOVAL OF PAVEMENT STRIPING	1727.000 SF				
1020	748548 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	8846.000 LF				
1030	748557 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 3"	3217.000 LF				
1040	748559 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 5"	310.000 LF				
1050	749502 SIGN PANEL OVERLAY ON EXISTING SIGN	20.000 SF				
1060	758000 REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	201.000 SY				
1070	760001 PAVEMENT - MILLING CONCRETE	3042.000 SYIN				
1080	760507 PROFILE MILLING, HOT-MIX	17974.000 SYIN				

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1090	763000 INITIAL EXPENSE	LUMP	LUMP			
1100	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
	SECTION 0001 TOTAL					
	TOTAL BID					

SECTION 1		BREAKOUT SHEET - 1		CONTRACT NO. T201207402	
ITEM 602757 - THIN POLYMER OVERLAY (L.S.)					
ITEM NO.	APPROX. QTY.	UOM	DESCRIPTION	UNIT PRICE	AMOUNT
1	85	CY	CONSTRUCTING THIN POLYMER OVERLAY	\$	\$
2	95	CY	FURNISHING PRIMER FOR THIN POLYMER OVERLAY	\$	\$
3	95	CY	FURNISHING AGGREGATE FOR THIN POLYMER OVERLAY	\$	\$
4	15	CY	FURNISHING POLYESTER RESIN BINDER FOR THIN POLYMER OVERLAY	\$	\$
TOTAL ITEM 602757 - THIN POLYMER OVERLAY (L.S.) \$ _____ (LUMP SUM BID PRICE FOR ITEM 602757)					

GENERAL NOTES

- THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.
- THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
- THE ENDS OF ALL CURBS SHALL BE DEPRESSED FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" INSIDE MINIMUM DIAMETER, 6" INSIDE MAXIMUM DIAMETER) IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE MATERIAL. THE COST SHALL BE INCIDENTAL TO THE CONTRACT.
- STAGING AREAS - PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 732, 734 AND 735, FOR TOPSOIL, SEED AND MULCH RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPECIFICATIONS OF SECTION 734 FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

EROSION POTENTIAL FOR THIS PROJECT	SITE REVIEWER REQUIREMENT
() INSIGNIFICANT	NONE
(X) MINOR	CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
() MEDIUM	AT THE TIME OF BID OF THE CONTRACT, EITHER THE SUPERINTENDENT OR A SEPARATE INDIVIDUAL FROM THE CONTRACTOR'S STAFF SHALL BE A CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 12 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
() MAJOR	SUPERINTENDENT AND AN INDIVIDUAL FROM CONTRACTOR'S STAFF SHALL BE CCR. ONE INDIVIDUAL FROM THE CONTRACTOR'S STAFF MUST BE A CCR AT THE TIME OF BID OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

- ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR INCLUDE:

(X)	NONE
()	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
()	RASTER FILES, IN .CAL FILE FORMAT, FOR ALL PLAN SHEETS.
()	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
()	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
()	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

- AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

()	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR.
(X)	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR.

- THE DISTURBED AREA FOR THIS PROJECT IS N/A ACRES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.
- THE EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE EROSION AND SEDIMENT CONTROL PLANS ARE VALID FOR A THREE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE THREE YEARS, THE CONTRACTOR SHALL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL. DELDOT WILL REVIEW THE CURRENT EROSION AND SEDIMENT CONTROL PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

PROJECT NOTES

SECTION 100

- THE DEPARTMENT RESERVES THE RIGHT TO INCREASE OR DECREASE THE QUANTITIES OF PAY ITEMS SPECIFIED FOR THE STRUCTURES LISTED IN THIS CONTRACT. SUCH ADDITIONS OR DELETIONS SHALL NOT BE CAUSE FOR AN INCREASE OR DECREASE IN ANY CONTRACT UNIT BID PRICES. THE "CHANGE" THRESHOLD OF PLUS OR MINUS 25%, AS DESCRIBED IN SECTION 104.05 OF THE DELDOT STANDARD SPECIFICATIONS, SHALL NOT APPLY TO THIS CONTRACT.
- ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

SECTION 200

- THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG PROPOSED DRAINAGE RUNS, AT POINTS OF POSSIBLE UTILITY CONFLICTS, TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPANY INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLE SHALL BE INCIDENTAL TO ITEM 202001 - EXCAVATION AND EMBANKMENT.
- ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - EXISTING GUARDRAIL
 - EXISTING UTILITY SUPPORT STEEL

SECTION 300

SECTION 400

SECTION 500

SECTION 600

PCC MASONRY - ABUTMENTS, PIERS, WINGWALLS, ETC.

- SUBMITTALS FOR WET AND DRY APPLICATIONS ARE REQUIRED FOR ITEM 602611, REPAIR OF CONCRETE STRUCTURE BY EPOXY INJECTION.
- POWER WASHING OF HORIZONTAL SURFACES (PIER CAPS AND ABUTMENTS) SITE SPECIFIC PROJECT NOTES REQUIRE SEALING OF HORIZONTAL SURFACES ON PIER CAPS AND ABUTMENTS. PRIOR TO APPLICATION OF SEALANT, THE HORIZONTAL SURFACES MUST BE PREPARED IN ACCORDANCE WITH THE SPECIFIED SPECIAL PROVISION. WHEN USING PRESSURE WASH, CONTRACTOR SHALL PROTECT ROADSIDE DRAINAGE INLETS AND ABOVE GROUND DRAINAGE SYSTEMS AS NECESSARY TO COMPLY WITH DELDOT NPDES ENVIRONMENTAL PERMIT (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM).
- WHEN PERFORMING SPALL REPAIRS ON VERTICAL CONCRETE SURFACES UNDER PAY ITEM 602586, THE PRODUCT DATA SHEET FOR PROPOSED MATERIAL MUST STATE THAT THE MATERIAL IS SUITABLE FOR REPAIRS ON VERTICAL SURFACES.
- WHEN REPAIRING CONCRETE VERTICAL SURFACES, SUCH AS ABUTMENTS, PIER CAPS AND COLUMNS, AND WHEN REPAIRING CONCRETE DECK HAUNCHES, PERFORM REPAIRS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
 - REPAIR ALL SPALLS AS PER THE "SPALL REPAIR" DETAIL SHOWN ON THE PLANS.
 - SPALLS WITH SURFACE AREA LESS THAN 1.0 SF, SHALL BE PAID UNDER ITEM 602572.
 - PERFORM SOUNDING FOR DELAMINATION OF CONCRETE AROUND VISIBLE CRACKS, SPALLS AND OTHER DETERIORATION. SOUNDING OF CONCRETE SHALL BE INCIDENTAL TO THE APPROPRIATE SPALL REPAIR ITEM.
 - CRACK WIDTHS LARGER THAN ONE HALF INCH SHALL BE REPAIRED BY GROUTING. PAYMENT WILL BE UNDER ITEM 602572, REPAIR OF EXISTING PCC STRUCTURES.
 - ALL CONCRETE SPALL REPAIR PERFORMED UNDER PAY ITEM 602572 OR 602586 SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AS STATED IN THE RESPECTIVE SPECIAL PROVISION, AND IN ACCORDANCE WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:
 - PERFORM ABRASIVE BLASTING OF REINFORCING STEEL AS NECESSARY TO REMOVE CORROSION AND OTHER CONTAMINANTS PRIOR TO PLACEMENT OF PATCHING MORTAR OR CONCRETE.
 - PREPARED CONCRETE SURFACE SHALL BE ROUGHENED BY ABRASIVE BLASTING PRIOR TO PLACEMENT OF PATCH MORTAR OR CONCRETE. THIS ROUGHENING IMPROVES THE MECHANICAL BOND WHEN PATCH MATERIAL IS APPLIED.

PCC MASONRY - DECKS

- EPOXY OR METHACRYLATE BASED CRACK SEALER SHALL BE APPLIED TO BRIDGE DECKS UNDER PAY ITEM 602620 OR 602629 WHEN SPECIFIED IN THE SITE SPECIFIC PROJECT NOTES FOR EACH BRIDGE. THE CONTRACTOR SHALL SUBMIT THE PRODUCT DATA SHEET FOR THE PROPOSED MATERIAL FOR USE PRIOR TO COMMENCEMENT OF WORK. THE PRODUCT DATA SHEET SHALL SPECIFY DRYING TIME FOR CRACK SEALER. THE PRODUCT DRYING TIME SHALL ALLOW FOR LANE OPENING TO TRAFFIC WITHIN SIX HOURS (OR LESS) OF APPLICATION.
- WHEN REPAIRING BOTTOM SIDE OF CONCRETE DECKS, PERFORM REPAIRS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS, UNLESS SPECIFIED OTHERWISE IN SITE SPECIFIC PROJECT NOTES:
 - FOR SPALL AND DELAMINATION REPAIRS LESS THAN 3" DEPTH, USE PAY ITEM 602572. FOR REPAIRS GREATER THAN OR EQUAL TO 3" DEPTH, PAY ITEM 602586 OR 602577 SHALL BE USED AS DETERMINED BY DELDOT ENGINEER. CONSULT WITH ENGINEER PRIOR TO PERFORMING DEEP SPALL REPAIRS ON BOTTOM SIDE OF DECK. LANE CLOSURES ON BRIDGE DECK MAY BE REQUIRED.
 - PERFORM SOUNDING FOR DELAMINATION OF CONCRETE AROUND VISIBLE CRACKS, SPALLS AND OTHER DETERIORATION. SOUNDING OF CONCRETE SHALL BE INCIDENTAL TO THE APPROPRIATE SPALL REPAIR ITEM.
 - PREPARE ALL SPALLS AS PER THE "SPALL REPAIR" DETAIL SHOWN ON THE PLANS. ALL EXPOSED STEEL SHALL BE THOROUGHLY CLEANED OF RUST AND OTHER CONTAMINANTS. PAYMENT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEMS 602572, 602586 AND 602577.
 - CONCRETE DECK SPALLS SHALL BE REPAIRED IN ACCORDANCE WITH ITEMS 602575 OR 602577, UNLESS SPECIFIED OTHERWISE IN THE SITE SPECIFIC PROJECT NOTES. PREPARE ALL SPALLS AS PER THE "SPALL REPAIR" DETAIL SHOWN ON THE PLANS. APPLY AN EPOXY BONDING COAT TO ROUGHENED CONCRETE SURFACE. THOROUGHLY CLEAN THE SURFACE PRIOR TO APPLICATION OF BONDING COAT. WHERE EXISTING DECK OVERLAYS ARE PRESENT, SAW CUT TO A DEPTH NECESSARY TO PENETRATE THE ENTIRE OVERLAY DEPTH (TYPICALLY 2" TO 3" DEEP). ALL WORK DESCRIBED IN THIS PROJECT NOTE SHALL BE INCLUDED IN THE BID PRICE FOR THE APPLICABLE DECK SPALL REPAIR PAY ITEM.
 - ~~THE DEPARTMENT CURRENTLY HAS ENOUGH MATERIAL TO CONSTRUCT APPROXIMATELY 80 G.Y. OF ITEM 602757 THIN POLYMER OVERLAY STORED AT THE INDIAN RIVER INLET BRIDGE PROJECT LOCATION. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE PROPER EQUIPMENT AND TO PICK UP THE MATERIAL FROM THE JOB SITE. CARE MUST BE TAKEN DURING HANDLING TO PREVENT DAMAGING THE PACKAGING. ANY ASSOCIATED DAMAGE, CLEANUP, SALVAGING, DISPOSAL, AND/OR REPLACEMENT OF MATERIALS SHALL BE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BECOME FAMILIAR WITH LOCATION AND CONDITION PRIOR TO BID. ANY EXCESS MATERIALS WHETHER FURNISHED BY THE DEPARTMENT OR PURCHASED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR WHO WILL BE RESPONSIBLE FOR THEIR DISPOSAL.~~

13. CONTRACTOR SHALL REFERENCE SPECIAL PROVISION FOR ITEM 602757 FOR INFORMATION PERTAINING TO THE THIN POLYMER OVERLAY. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ANY EXCESS MATERIAL.

BRIDGE DECK JOINTS

- CLEAN STRIP SEAL JOINTS ON DECKS OF ALL BRIDGES. CLEANING OF DECK JOINTS SHALL BE INCIDENTAL TO ITEM 602546, AND SHALL INCLUDE REMOVAL OF ALL DEBRIS AND SEDIMENT FROM JOINTS. IF THE GLAND MATERIAL OF SEALED JOINTS IS NOT DESIGNATED FOR REPLACEMENT, THEN THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM JOINT AND DECK SURFACE. CLEANING SHALL NOT BE PERFORMED WITH ANY METHOD THAT MAY DAMAGE THE EXISTING GLAND MATERIAL AND CONNECTIONS IN STRIP SEAL JOINTS.

BRIDGE BEARINGS

- MATERIAL SPECIFICATION FOR PAY ITEM 605636 (CLEAN AND LUBRICATE BRIDGE BEARINGS) SHALL COMPLY WITH THE FOLLOWING GREASE APPLIED TO STEEL BRIDGE BEARINGS SHALL BE TEXACO, TYPE L, SHELL RHODINA GREASE SDX 2, OR EXXON MOBIL CENTAUR MOLY GREASE, OR APPROVED EQUAL.

STRUCTURAL STEEL PAINTING

- THE PAINT SYSTEM USED FOR THE STRUCTURAL STEEL SHALL BE APPLIED IN A THREE (3) COAT SYSTEM APPLICATION.
- ALL STRUCTURES IN THIS CONTRACT ARE ASSUMED TO CONTAIN LEAD BASED PAINT ON ALL OF THE STRUCTURAL STEEL. FOR BRIDGES REQUIRING SPOT PAINTING, THE CONTRACTOR SHALL USE PAY ITEM 605629 FOR THE PAINT REMOVAL ON THE STRUCTURES. FOR BRIDGES REQUIRING PAINTING OF ALL STRUCTURAL STEEL, ITEM 605533 SHALL BE USED.
- PRIOR TO APPLYING NEW PAINT SYSTEM, ALL EXISTING COATINGS ON THE STRUCTURAL STEEL SHALL BE COMPLETELY REMOVED, IN ACCORDANCE WITH ITEMS 605629 OR 605533 (AS SPECIFIED IN THE SITE SPECIFIC PROJECT NOTES). THERE SHALL BE NO OVER COATING OF EXISTING PAINT OR SEALANT SYSTEMS. THIS APPLIES TO SPOT PAINTING OF STEEL, AS WELL AS BRIDGES TO BE COMPLETELY RE-COATED IN ENTIRETY.
- IF ANY CLEANING TO BE PERFORMED REQUIRES PRE-CLEANING BY PRESSURE WASHING, THEN THIS PRESSURE WASHING SHALL BE INCIDENTAL TO ITEM 605629 OR 605533 (AS APPLICABLE).
- FOR BRIDGES WITH EXISTING STEEL STRUCTURAL COMPONENTS PAINTED GREEN, THE COLOR OF PAINT SHALL BE GREEN (*24172) AS FEDERAL STANDARD 595C. THE COLOR SHALL BE SUBMITTED TO DELDOT FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
- HAZARDOUS WASTE GENERATED DURING STEEL CLEANING OPERATIONS SHALL BE DISPOSED OF IN ACCORDANCE WITH REQUIREMENTS STATED IN 605533/605629, AND IN ACCORDANCE WITH ALL STATE, FEDERAL AND LOCAL REGULATIONS. CONTRACTOR SHALL SUBMIT COPIES OF ALL HAZARDOUS WASTE MANIFESTS AND TICKETS TO DELDOT. PRIOR TO APPLYING NEW PAINT SYSTEM, ALL EXISTING COATINGS ON THE STRUCTURAL STEEL SHALL BE COMPLETELY REMOVED, IN ACCORDANCE WITH ITEMS 605629 OR 605533 (AS SPECIFIED IN THE SITE SPECIFIC PROJECT NOTES). THERE SHALL BE NO OVER COATING OF EXISTING PAINT OR SEALANT SYSTEMS. THIS APPLIES TO SPOT PAINTING OF STEEL, AS WELL AS BRIDGES TO BE COMPLETELY RE-COATED IN ENTIRETY.



DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS
3 REVISED NOTE 13. MAA, 11/16/2012

NOT TO SCALE

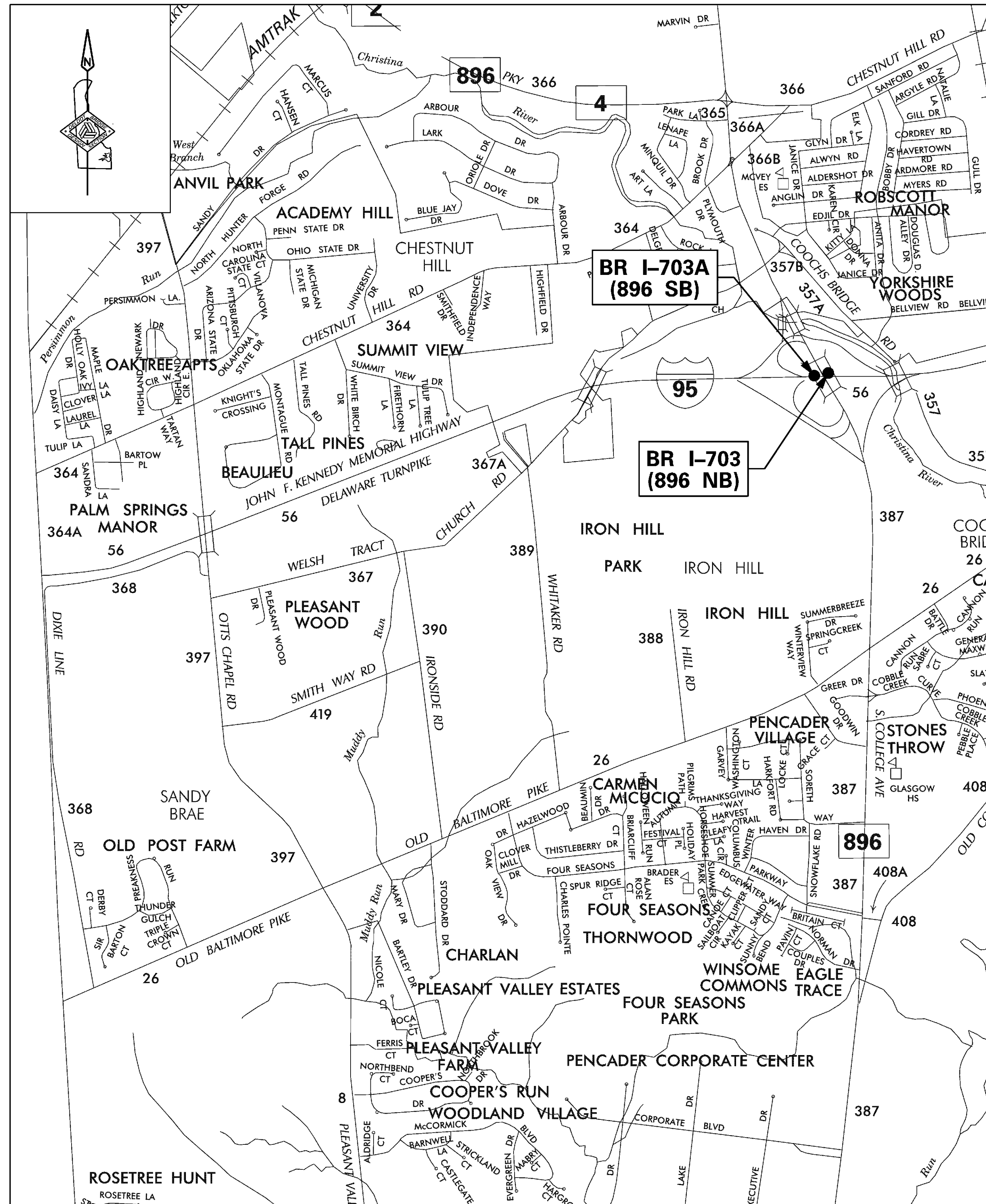
INTERSTATE BRIDGE
MAINTENANCE,
SOUTH

CONTRACT	BRIDGE NO.	VARIOUS
T201207402	DESIGNED BY: AJF	
COUNTY	CHECKED BY: MAA	
NEW CASTLE		

NOTES

SHEET NO.
2
TOTAL SHEETS.
89

BR 1-703 QUANTITIES



LOCATION PLAN
BR I-703

ITEM	U.O.M.	ITEM DESCRIPTION	QUANTITY
201000	L.S.	CLEARING AND GRUBBING	1
202001	L.S.	EXCAVATION AND EMBANKMENT	1
211000	L.S.	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1
251001	L.F.	REINFORCED SILT FENCE	440
302008	C.Y.	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	542
401821	TON	WMA, SUPERPAVE TYPE C, 160 GYRATIONS, PG 64-22, PATCHING	242
401822	TON	WMA, SUPERPAVE TYPE B, 160 GYRATIONS, PG 64-22, PATCHING	325
401823	TON	WMA, SUPERPAVE, BCBC, 160 GYR., PG 64-22, PATCHING	698
406001	S.Y.-IN	HOT-MIX PATCHING	40098
406507	L.F.	CRACK SEALING	196
602013	C.Y.	P.C.C. MASONRY, SUPERSTRUCTURE, CLASS D	45
602014	C.Y.	P.C.C. MASONRY, APPROACH SLAB, CLASS D	14
602015	C.Y.	P.C.C. MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	15
602017	C.Y.	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	136
602518	S.F.	WATER BASED ACRYLIC CONCRETE SEALER	7369
602549	S.F.	FORM LINERS	725
602572	L.B.	REPAIRING EXISTING P.C.C. STRUCTURES	6695
602575	S.F.	DECK REPAIR, 1" TO 3" DEPTH	39
602578	L.F.	REPAIRING JOINTS AND CRACKS WITH MORTAR	2847
602579	EACH	DRILLING HOLES AND INSTALLING DOWELS	1784
602580	C.Y.	PARTIAL REMOVAL OF P.C.C. MASONRY	248
602586	C.F.	REHABILITATION OF CONCRETE STRUCTURE	11
602611	L.F.	REPAIR OF CONCRETE STRUCTURES BY EPOXY INJECTION	69
602612	L.S.	ACCESS AND CONTAINMENT FOR BRIDGE REPAIRS	1
602620	S.F.	CRACK SEALING BRIDGE DECKS, APPROACH SLABS, SIDEWALKS, ETC.	189
602626	L.F.	ROUT AND SEAL CRACKS	69
602629	L.F.	CRACK SEALING BRIDGE DECKS, APPROACH SLABS, SIDEWALKS, ETC.	540
602646	S.F.	SILICONE ACRYLIC CONCRETE SEALER	8076
602757	L.S.	THIN POLYMER OVERLAY (APPROX. 1540 SY-IN)	1
603000	LB	BAR REINFORCEMENT	26260
604000	LB	BAR REINFORCEMENT, EPOXY COATED	4266
605002	L.S.	STEEL STRUCTURES	340
605511	L.F.	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	216
605533	L.S.	CLEANING EXISTING STEEL STRUCTURES, HAZARDOUS BASE (L.S.) - (APPROX. 37,140 S.F.)	1
605616	L.S.	MOISTURE CURED URETHANE PAINT SYSTEM RECOATING, (L.S.) - (APPROX. 37,140 S.F.)	1
605636	EACH	CLEAN AND LUBRICATE BRIDGE BEARINGS	77
605655	EACH	BEARING ANCHOR BOLT REPLACEMENT	2
605692	L.F.	SILICONE JOINT SEAL	102
701012	L.F.	PORTLAND CEMENT CONCRETE CURB, TYPE 1-4	580
701013	L.F.	PORTLAND CEMENT CONCRETE CURB, TYPE 1-2	50
710001	EACH	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	8
712526	S.Y.	CONCRETE BLOCK SLOPE PAVING REPAIR, 6"	100
720050	L.F.	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	625
720500	EACH	BULLNOSE END TREATMENT	1
720585	EACH	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	1
725001	EACH	GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE 31)	1
725002	EACH	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	1
725006	EACH	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-27	2
726001	EACH	END ANCHORAGE 31	1
732002	S.Y.	TOPSOIL, 6" DEPTH	534
734013	S.Y.	PERMANENT GRASS SEEDING, DRY GROUND	534
743000	L.S.	MAINTENANCE OF TRAFFIC	1
743003	EA-DY	ARROWPANELS, TYPE C	286
743004	EA-DY	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	412
743005	EA-DY	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	127
743006	EA-DY	PLASTIC DRUMS	21981
743007	HR	TRAFFIC OFFICERS	1660
743008	EACH	REFLECTOR PANELS	102
743010	EA-DY	FURNISH AND MAINTAIN TRUCK-MOUNTED ATTENUATOR, TYPE II	155
743013	L.F.	FURNISH PORTABLE P.C.C. STRUCTURE MOUNTED SAFETY BARRIER	1292
743014	LF	RELOCATING PORTABLE P.C.C. STRUCTURE MOUNTED SAFETY BARRIER	1428
743015	L.F.	FURNISH AND MAINTAIN PORTABLE P.C.C. SAFETY BARRIER	2344

48
27479

11/16/2012

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