

STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16 STATE HOUSE STATION AUGUSTA, MAINE 04333-0016

DAVID A. COLE

April 5, 2007

Subject: Beddington, Crawford and Wesley, Devereaux TWP, T26 ED BPP and T30 MD BPP
Project No's NH-1293(500)E, NH-1296(300)E, NH-1296(700)E & NH-1296(800)E
Pin No's 12935.00, 12963.00, 12967.00 & 12968.00

Amendment No. 1

Dear Sir/Ms:

Please make the following changes to the Bid Documents:

In the Bid Book, REMOVE the existing: "Contract Agreement, Offer & Award" two sets, eight pages total with the completion date of June 29, 2007 and REPLACE with the attached updated: "Contract Agreement, Offer & Award" two sets, eight pages total with the completion date of July 28, 2007.

REMOVE the existing: "Special Provision, Section 107, Time, (Contract Time)" one page total and REPLACE with the attached updated: "Special Provision, Section 107, Time, (Contract Time)" one page total dated April 4, 2007.

REMOVE the existing: "Special Provision, Section 107, Time, (Scheduling of Work-Projected Payment Schedule)" dated March 8, 2007 one page total and REPLACE with the attached updated: "Special Provision, Section 107, Time, (Scheduling of Work-Projected Payment Schedule)" dated April 5, 2007 one page total.

REMOVE the existing: "Special Provision, Section 410, Chip Seal, (Asphalt-Rubber Surface Treatment with Aggregate Cover)" dated January 23, 2007 five pages total and REPLACE it with the attached updated "Special Provision, Section 410, Chip Seal, (Asphalt-Rubber Surface Treatment with Aggregate Cover)" dated April 4, 2007 five pages total.



Consider these changes prior to submitting your bid on April 11, 2007.

Sincerely

Scott Bickford

Contracts & Specifications Engineer

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street, Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and a corporation or other legal entity organized under the laws of the State of _______, with its principal place of business located at _______

Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, NH-1293(500)E, NH-1296(300)E, NH-1296(700)E & NH-1296(800)E for the Asphalt Rubberized Chip Seals in the towns of Beddington, Crawford, Wesley, Devereaux TWP, T26 ED BPP and T30 MD BPP County of Washington, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before <u>July</u> <u>28, 2007</u>. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002.

C. Price.

The quantities giv	en in the Schedule of Items of the Bid Package will be used as the
basis for determin	ng the original Contract amount and for determining the amounts of
the required Perfo of this offer is	mance Surety Bond and Payment Surety Bond, and that the amount
\$	Performance Bond and Payment Bond each being
100% of the amou	at of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

- 1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
- 2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
- 3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: NH-1293(500)E, NH-1296(300)E, NH-1296(700)E & NH-1296(800)E for the Asphalt Rubberized Chip Seals in the towns of Beddington, Crawford, Wesley, Devereaux TWP, T26 ED BPP and T30 MD BPP County of Washington, State of Maine. on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

		CONTRACTOR	
Date		(Signature of Legally Authorized Representative of the Contractor)	
	Witness	(Name and Title Printed)	
G.	Award. Your offer is hereby accepted.	This award consummates the Contract, and the	
	documents referenced herein.	MAINE DEPARTMENT OF TRANSPORTATION	
	Date	By: David A. Cole, Commissioner	
	Witness		

CONTRACT AGREEMENT, OFFER & AWARD

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IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

		CONTRACTOR	
Date		(Signature of Legally Authorized Representative of the Contractor)	
	Witness	(Name and Title Printed)	
G.	Award. Your offer is hereby accepted.	This award consummates the Contract, and the	
	documents referenced herein.	MAINE DEPARTMENT OF TRANSPORTATION	
	Date	By: David A. Cole, Commissioner	
	Witness		

Pin 12935.00 Devereaux Twp. Pin 12963.00 T30 MD BPP Pin 12967.00 Wesley to Crawford Pin 12968.00 Wesley Route 9 CHIP SEALS

April 4, 2007

SPECIAL PROVISION <u>SECTION 107</u> TIME

(Contract Time)

- 1. The Contractor will be allowed to commence work any time on or after June 4, 2007.
- 2. Completion date is July 28, 2007.
- 3. For every weekday not worked after operations begin, the Contractor will be charged liquidated damages per calendar day (excluding inclement weather days) as the rate stated in 107.7.2
- 4. No work will be allowed on the contract from June 30, 2007 to July 8, 2007.

SPECIAL PROVISION <u>SECTION 107</u> TIME

(Scheduling of Work – Projected Payment Schedule)

<u>Description</u> The Contractor shall also provide the Department with a Quarterly Projected Payment Schedule that estimates the value of the Work as scheduled, including requests for payment of Delivered Materials. The Projected Payment Schedule must be in accordance with the Contractor's Schedule of Work and prices submitted by the Contractor's Bid. The Contractor shall submit the Projected Payment Schedule as a condition of Award.

SPECIAL PROVISION <u>SECTION 410</u> CHIP SEAL

(ASPHALT-RUBBER SURFACE TREATMENT WITH AGGREGATE COVER)

<u>Description</u> The Contractor shall furnish and place one or more courses of Asphalt Rubber Surface Treatment with Aggregate Cover on an approved base in accordance with the Contract Documents and in reasonably close conformity with the lines, grades, and thicknesses and typical Cross sections shown on the plans or otherwise established.

1.0 MATERIALS

- 1.1 <u>Performance graded binder</u> Performance graded binder for the asphalt-rubber mixture shall be PG 58-28 OR PG 64-28 conforming to the requirements of AASHTO M 320, Section 700 Materials: 702.01 Asphalt Cement, and 703.07 Aggregates for HMA Pavement. The grade selected shall be based on laboratory testing by the asphalt-rubber supplier.
- 1.2 <u>Anti-stripping Agent</u> If required by the job-mix formula to produce appropriate water resistance, an anti-stripping agent that is heat stable and approved for use by the Department shall be incorporated into the asphalt-rubber material at the dosage required by the job-mix formula (up to 1.0% by weight of asphalt). It shall be added to the asphalt cement prior to blending with the granulated rubber.
- 1.3 <u>Rubber</u> The granulated rubber shall be vulcanized rubber product from the ambient temperature processing of scrap, pneumatic tires. The granulated rubber shall meet the following gradations: No substitutions will be accepted.

Sieve Size	% Passing
2.00 mm, [#10]	100
1.18 mm, [#16]	90 – 100
0.60 mm, [#30]	25 – 75
0.18 mm, [#80]	0 - 20

The use of rubber of multiple types from multiple sources is acceptable provided that the overall blend of rubber meets the gradation requirements. The length of the individual rubber particles shall not exceed 3 mm, [1/8"]. The rubber shall be accepted by certification from the rubber supplier.

1.4 <u>Aggregate</u> The aggregate shall be of quarried stone and conform to the requirements of Section 703.07 Aggregates for HMA Pavements. Crushed gravel stone will not be permitted. Percentage of wear as determined by the Los Angeles Abrasion Test (AASHTO-T96) shall be a maximum of 30. The aggregate shall be pre-heated to a temperature between 93°C and 149°C, [200°F and 300°F], and be pre-coated with 0.4% to 0.8% (by weight of aggregate) of PG 64-28, or PG 58-28 prior to application. It is required that the gradation of the aggregate shall meet the following limits:

Sieve Size	% Passing – Nominal Size	
	9.5 mm, [3/8"]	12.5 mm, [1/2"]
15.8 mm, [5/8"]	100%	100%
12.5 mm, [1/2"]	100%	85 – 100%
9.5 mm, [3/8"]	85 – 100%	15 – 60%
4.75 mm, [#4]	0 - 25%	0 - 20%
2.36 mm, [#8]	0 – 5%	0 - 7%
0.30 mm, [#50]	0 - 2%	0 - 2%
0.075 mm, [#200]	0 - 2%	0 - 2%

1.5 <u>Materials Testing</u> A minimum of 30 days prior to construction the Maine DOT or contractor (if asphalt-rubber supplier is acting as a sub-contractor) shall send a representative sample of the Performance graded binder and the aggregate proposed for use to the asphalt-rubber supplier for testing. Testing for stripping and asphalt content will be performed to assure that appropriate characteristics are achieved when blended with the granulated rubber.

2.0 ASPHALT-RUBBER MIXING AND REACTION

2.1 <u>Mixing and Reaction</u> The percent of rubber shall be a minimum of 15% by weight of total asphalt-rubber mixture. The exact granulated rubber content shall be determined by the mix design submitted by the asphalt-rubber supplier based on laboratory testing.

The temperature of the asphalt shall be between 177°C and 218°C, [350°F and 425°F], at the time of addition of the granulated reclaimed rubber. The asphalt and rubber shall be combined and mixed together in a blender unit and reacted for a minimum of one hour. The temperature of the asphalt-rubber mixture shall be above 163°C, [325°F], during the reaction period.

- 2.2 <u>Delays</u> If a job delay occurs after full reaction, the asphalt-rubber asphalt blend may be allowed to cool. The asphalt-rubber shall be reheated slowly in the tank just prior to application, but not to a temperature exceeding 204°C, [400°F]. An additional quantity of granulated rubber or additive not exceeding 3% by volume of the hot asphalt-rubber mixture will be added after reheating.
- 2.3 <u>Viscosity</u> Each load of blended asphalt-rubber shall be tested by the supplier using a Haake type field viscometer. The viscosity of the final product shall be in the range of 1,500 to 5,000 centipoise.

3.0 EQUIPMENT

3.1 <u>Mechanical Blender</u> A mechanical blender for proper proportioning and thorough mixing of the asphalt-cement and granulated rubber is required. This unit shall be equipped with: an asphalt totaling meter (liters or gallons); a flow rate meter (liters per minute or gallons per minute); a positive displacement auger to feed the rubber properly to mixing chamber at the specified rate; and a static motionless mixer. Blender will have a separate asphalt cement feed pump and finished product pump to maximize production. Blender shall be capable of providing 100% proportional mix at any given time during the blending cycle and documentation from the manufacturer, supporting this, shall be submitted to the Maine DOT if requested.

3.2 <u>Distributor Truck</u> On projects exceeding 31.8 metric tons, [35 tons], of liquid asphalt rubber, at least two pressure-type bituminous distributor trucks in good condition will be required. The distributor shall be equipped with an internal heating device capable of heating the material evenly up to 218°C, [425° F]; an internal mixing unit capable of maintaining a proper mixture of asphalt cement and granulated rubber; have adequate pump capacity to maintain a high rate of circulation in the tank and to spray the asphalt-rubber at a viscosity of 1,000 to 3,500 centipoise; have adequate pressure devices and suitable manifolds to provide constant positive cut-off to prevent dripping from the nozzles. Distributor shall be equipped with an electronically controlled computerized compensation unit for controlling application rates at various width and speed changes. The application unit shall have electronic controls and a digital read out installed and operated from the inside of the cab of the distributor. The distribution bar on the distributor shall be fully circulating. **Any distributor that produces a streaked or irregular distribution of the material shall be promptly repaired or removed from the project.**

Distributor equipment shall include a tachometer, pressure gauges, volume measuring devices, and a thermometer for reading temperature of tank contents. Controls for spray bar shall be located in cab of truck, for controlling width and rate of spray of product. It shall be so constructed that uniform applications may be made at the specified rate per square meter with a tolerance of plus or minus 0.2 liters per square meter, [0.05 gal. / Sq. Yd].

- 3.3 <u>Hauling Equipment</u> Trucks for hauling cover material shall be rear discharge conveyor-fed or "live bottom" trucks and shall be equipped with a device to lock onto the hitch at the rear of the chip spreader to prevent aggregate spillage. A sufficient number of hauling vehicles will be available to ensure continuous operation of the distributor and chip spreader.
- 3.4 <u>Aggregate Spreader</u> The aggregate spreader shall be hydrostatically driven and self propelled. It must be equipped with a hydraulically controlled variable adjustable head that is capable of spreading stone in widths from 1.4 to 5.4 meters, [4.5 to 18 feet]. The spreader shall be mounted on pneumatic tires, and shall apply the stone on the road surface in a manner that ensures that the tires do not contact the road surface until after the stone has been applied. The unit shall be equipped with an electronic radar type sensor used to measure ground speed and will automatically adjust the stone application rate depending on width of application and the speed of chip spreader. It shall have the ability to apply stone on any grade from 0 6%. The spreader shall be equipped with an integral hopper with a minimum capacity of 4.5 metric tons, [5 tons], of stone which shall be filled by trucks in a manner which ensures that the truck tires never come in contact with asphalt treated road surfaces until the stone has been properly applied. To maintain constant stone application, a self-locking truck hitch will permit towing of aggregate trucks without stopping the chip spreader. It will be capable of maintaining positive engagement over irregular terrain.
- 3.5 <u>Pneumatic-Tired Roller</u> Two (2) self-propelled, multiple wheel, pneumatic-tired rollers shall be used and shall weigh between 6.5 and 10.9 metric tons, [7 and 12 tons], each roller shall have a total compacting width of at least 1.4 meters, [56 inches], have a minimum tire pressure of 414 kPa, [60 psi], and be equipped with a watering system.
- 3.6 <u>Steel-Wheel Roller</u> One (1) self-propelled, 2-axle (tandem) steel-wheel roller shall be used and shall weigh between 7.3 and 10.9 metric tons, [8 and 12 tons], and be equipped with scrapers, wetting pads and watering system. Combination pneumatic and steel drum-type rollers are acceptable, as one unit only.

4.0 CONSTRUCTION PROCEDURES

4.1 <u>Preparation</u> Potholes, other areas of pavement failure, and major depressions in the existing pavement surface shall be repaired under the appropriate contract items, if required. A leveling course shall be placed on planed, milled, or existing surface under the appropriate contract items, if required.

Immediately prior to application of the asphalt-rubber, the surface shall be thoroughly cleaned by sweeping. Contractor shall be responsible for covering all utility irons just prior to application and uncovering after aggregate is spread.

- 4.2 <u>Seasonal and Weather Limitations</u> The asphalt-rubber shall not be applied prior to May 30th, after the Saturday following September 1th, or when weather conditions are unfavorable to obtaining a uniform spread. Construction shall proceed only when the atmospheric temperature is at least 15°C, [60°F], and rising. No water shall be present on the road surface.
- 4.3 <u>Application</u> The asphalt-rubber mixture shall be applied at a temperature of 170° to 215°C, [338°F to 419°F], at a rate of 2.5 to 2.9 liters per square meter, [0.55 to 0.65 gallons per square yard]. Exact rate to be determined by the aggregate gradation, traffic volume and pavement condition. The asphalt-rubber shall not be spread further in advance of the aggregate spread than can be immediately covered.

Longitudinal joints shall be reasonably true to line and parallel to centerline. Where any construction joint occurs, the edges shall be broomed back and blended so there are no gaps and the elevations are the same, and free from ridges and depressions. Longitudinal joints shall be overlapped from 10.2 to 15.2 centimeters, [4 to 6 inches].

During application, adequate provision shall be made to prevent marring and discoloration of adjacent pavements, structures, vehicles, foliage or personal property. The Contractor shall provide a person to continuously monitor the application of the asphalt-rubber. This person shall have an unobstructed view of the spray bar at all times, and shall be responsible for assuring a uniform application of the asphalt-rubber material.

- 4.4 <u>Aggregate Application</u> The application of aggregate shall follow as close as possible behind the application of the hot asphalt-rubber. Construction equipment or other vehicles shall not drive on the uncovered asphalt-rubber. The hot-precoated aggregate shall be spread uniformly by a self-propelled spreader at a rate of spread directed by the Agency, generally between 16.3 to 21.7 kilograms per square meter, [30 to 40 lb/yd²]. Any deficient areas shall be covered with additional material.
- 4.5 <u>Rolling</u> A minimum of three (3) rollers shall be used for aggregate compaction into the hot asphalt-rubber. Two rollers must be pneumatic-tired and one must be steel-wheel unless otherwise directed by the Department.

Rolling shall commence immediately following the spreading of the aggregate. There shall be at least three coverages by the pneumatic-tired rollers to embed the aggregate particles firmly into the asphalt-rubber. A coverage shall be as many passes as are necessary to cover the entire width being spread with a pass being one movement of a roller in either direction. Additional coverage of the steel-wheel roller will follow. Water shall be applied to the tires or wheels as required to limit sticking of the asphalt-rubber and aggregate to the rollers.

4.6 <u>Sweeping</u> When the maximum amount of aggregate has been embedded into the asphalt-rubber and the pavement has cooled, all loose material shall be swept or otherwise removed. This will be done at a time and in a manner which, will not displace any embedded aggregate or damage the asphalt-rubber. Pre and post sweeping is the responsibility of the Prime Contractor. Your bid form shows this as an option

5.0 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

- 5.1 <u>Method of Measurement</u> The Department will measure Asphalt Rubber Surface Treatment with Aggregate Cover (Chip Seal) by the square the yard. Payment will be for the actual number of square yards applied in accordance with the typicals and Standard Specifications Section 109 Measurement and Payment. Payment shall be full compensation for all labor, materials and equipment required to complete the work in accordance with these specifications.
- 5.2 <u>Basis of Payment</u> The Department will pay for the Work, in place and accepted, in accordance with the applicable sections of the Special Provisions at the contract unit price per square yard applied.

Payment will be made under:

Pay Item Pay Unit

410.25 Asphalt-Rubber Surface Treatment With Aggregate Cover Square Meter [square yard]