



Paul R. LePage  
GOVERNOR

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

March 26, 2013

Subject: **LCPs – All WINS**

State WIN: 019900.00, 019901.00,  
019902.00, 019903.00, 019904.00,  
019905.00, 019906.00, 019908.00,  
019910.00, 019911.00, 019912.00,  
019913.00, 019914.00, 019915.00,  
019916.00

**Amendment No. 1**

David Bernhardt  
COMMISSIONER

Dear Sir/Ms:

Make the following changes to the Bid Document:

The below change applies to all LCP Bid Books;

In the Bid Book (page number varies) **REMOVE** “SPECIAL PROVISION, SECTION 401, (Light Capital Paving) 7 pages dated January 31, 2012 and **REPLACE** with the attached new “SPECIAL PROVISION, SECTION 401, (Light Capital Paving) 7 pages dated March 22, 2013.

The below change applies only to the Gardiner Area LCP WIN 019905.00;

In the Gardiner Area LCP Bid Book (pages 31 & 32) **REMOVE** the “Maintenance Mulch (HMM) Access file” two pages total and **REPLACE** with the attached new “Maintenance Mulch (HMM) Access file” two pages total.

Consider this change and information prior to submitting your bid on April 10, 2013.

Sincerely,

George M. A. Macdougall P.E.  
Contracts & Specifications Engineer



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**SPECIAL PROVISION**  
**SECTION 401**  
(Light Capital Paving)

Description The Contractor shall furnish aggregate and Performance Graded Asphalt Binder (PGAB) to produce, place, and compact one or more courses of Hot Mix Asphalt (HMA) for use as Light Capital Paving in accordance with the contract documents and placed in areas as directed by the Department. The Department will accept this work under the provisions outlined in this specification, except where otherwise referenced to in accordance with the State of Maine, Department of Transportation Division 400 – Pavements; Section 401- Hot Mix Asphalt Pavement, for use as directed by the Department in sections 401 and 703 of the specifications, and the Maine DOT Policies and Procedures for HMA Sampling and Testing.

**MATERIALS**

Bituminous Material The bituminous material shall meet the requirements of the State of Maine Department of Transportation Standard Specifications Revision of December 2002. The asphalt shall be a PG 64-28, or PG 58-28 grading, unless otherwise approved by the Department.

For bidding purposes, the bidder shall use a PGAB content of **6.4%** for all job mixes. The MaineDOT will determine the target PGAB content following submission of the Job Mix Formula and all related aggregates. Should the Department determine that the required PGAB content be adjusted from the **6.4%** target, the following payment adjustments shall be made:

- a.) The Contractor shall have the contract price per ton increased an additional fifty cents (\$0.50/ton) per ton for each one-tenth of one percent (0.1%) increase in the target PGAB content.
- b.) The Contractor shall have the contract unit price per ton decreased an additional fifty cents (\$0.50) per ton for each one-tenth of one percent (0.1%) decrease in the target PGAB content.

Aggregate Materials Materials shall meet the requirements specified in Section 700 - Materials:

Asphalt Cement	702.01
Aggregates for HMA Pavement	703.07

Aggregate shall consist of clean, tough, durable fragments free from an excess of flat, elongated, soft or disintegrated particles. In addition, the absorption of the fine aggregate, as determined by AASHTO T84, shall not exceed 3.0 percent by weight. It shall be processed from a gravel or stone source in such a manner that a uniformly graded stockpile of sufficient quantity for at least one day's normal production will be available at all times. Production of the mix will come from prepared stockpiles.

Recycled Asphalt Materials Recycled Asphalt Pavement (RAP) or Recycled Asphalt Shingles (RAS) may be introduced into the mixture at percentages approved by the Department. RAP shall meet the requirements outlined in the Composition of Mixtures section of this specification. If approved by the Department, the Contractor shall provide documentation stating the source, test results for average residual asphalt content, and stockpile gradations showing RAP materials have been sized to meet the maximum aggregate size requirements of each mix designation. The Department will obtain samples for verification and approval prior to its use.

The use of RAS will require additional testing and material certification. The Contractor will be required to provide additional documentation for any RAS products used stating the source and test data showing that the material has been tested for asbestos content, and the percent found, if any.

A Bill of Lading and/or other documentation signed by a responsible party for the solid waste or recycling facility and asbestos sampling results indicating that no asbestos is present in the material, must accompany each pre-tested load. Additionally, the asbestos sampling documentation shall identify the name, address and license number of the person(s) collecting the samples and analytical laboratory that conducted the asbestos analysis. The Bill of Lading must identify the permitted facility and the date the load was shipped.

Pre-consumer loads shipped directly from the manufacturer will not require testing. Each load shall be accompanied by appropriate shipping document such as a trip ticket or receipt to demonstrate the point of generation of the load. The RAS processing facility shall maintain on file a Material Safety Data Sheet (or document indicating that a MSDS is not required for that material) for each type of material received for each manufacturer, which shall indicate that no asbestos is present in the material. If asbestos containing material is detected in any of the asphalt roofing materials, then the facility will reject the entire load and inform the supplier of their responsibility to properly dispose of the rejected load in accordance with all local, state and/or federal regulations. In the event that RAP or RAS source or properties change, the Contractor shall notify the Department of the change and submit new documentation stating the new source or properties a minimum of 72 hours prior to the change to allow for obtaining new samples and approval.

Composition of Mixtures The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. The Contractor may use a maximum of 20 percent RAP in mixtures used as Light Capital Paving if the RAP stockpile has been approved by the Department as a Class, I, II, or III source according to the Maine DOT Policies and Procedures for HMA Sampling and Testing. The Contractor may use a maximum of 15 percent RAP if the source has not been approved by the Department as a Class, I, II, or III source.

The Contractor may use a maximum of 5.0 percent RAS in addition to any RAP introduced into the mixture. If RAS is utilized, the combined RAP and RAS percentages shall not exceed 20% of the total mixture.

The Contractor shall size, uniformly grade, and combine the Aggregate fractions in proportions to provide a mixture meeting the requirements of Table 1: Mixture Limits, and a PGAB content of 6.4%.

The HMA supplier shall submit a proposed Job Mix Formula (JMF) to the Central Laboratory in Bangor, which shall include the following information:

- A. Plant data (make, size, type, location)
- B. PG binder data (grade, refiner, supplier)
- C. Aggregate data – Aggregate sizes, original source & owner, current location, percentage of each aggregate used, gradation of each aggregate and the target gradation of the mixture.

Table 1: Mixture Limits

<u>Square Mesh sieve</u>	<u>Standard Range</u>
1/2"	100
#4	75-90
#16	30-60
#50	10-30
#200	0-8.0
PGAB Content	Target +/- 0.4%

The Contractor shall submit stockpile samples of aggregate for Department approval to the Central Laboratory in Bangor, for each plant location. These samples shall establish a single percentage/target of aggregate passing each required sieve size within the limits shown in Table 1: Mixture Limits

Warm Mix Technology The Contractor shall have the option of using Warm Mix Asphalt Technology to produce the Light Capital Paving mixture for this contract. The following technologies would be considered by the Department. A Quality Control Plan shall be submitted for approval by the Department.

- a. The use of organic additives such as a paraffin wax and or a low molecular weight esterified wax. Wax derived additives shall be introduced at the rate recommended by the manufacture, typically 3 percent by weight (3%) of the mix to gain the desired reduction in viscosity, and should not exceed 4 percent due to the possible impact on the binder's low temperature properties. Wax derived additives shall be introduced into the hot asphalt binder at the asphalt plant and fully blended using a tank agitator / stirrer. Wax additives shall have a melting point of approximately 210° F. Minimum placement temperatures shall be as per manufactures recommendations.
- b. The use of a manufactured synthetic zeolite (Sodium Aluminum Silicate), available in a very fine powdered form in 25 or 50 kg bags, or in bulk for silos. Sodium aluminum silicate additives shall be introduced at a rate recommended by the manufacturer, typically 0.3 percent by mass of the mix. Sodium aluminum silicate additives shall be introduced into the hot mix plant mixing chamber by mechanical means that can be controlled and tied directly to the hot mix asphalt plants rate of production. Minimum placement temperatures shall be as per manufactures recommendations.
- c. The use of a chemical additive technology with a "Dispersed Asphalt Technology" delivery system shall be required. This process utilizes chemical technology delivered into a dispersed asphalt phase (emulsion). The asphalt emulsion with chemical package is used in place of the traditional asphalt binder. The emulsion is mixed with the aggregate in the HMA plant at a rate recommended by the manufacturer. This additive shall be introduced into the hot mix plant mixing chamber by mechanical means that can be controlled and tied directly to the hot mix asphalt plants rate of production. Minimum placement temperatures shall be as per manufactures recommendations.
- d. Asphalt foaming products / technology approved by the Department.

Hot Mix Asphalt Plant Requirements All Bituminous mixing plants shall conform to Special Provision 400 – Hot Mix Asphalt Pavement, section 401.07 – Hot Mix Asphalt Plant.

Mixing Operations The processing of the aggregate, handling of the asphalt binder, drying of aggregate, and mixing shall conform to acceptable practices of the paving Industry. Plant locations with a rated capacity of 110 tons/hour or above shall supply a minimum of 110 tons/hour at the paver. In locations where the Hot Mix Asphalt plant's maximum production rate is less than 110 TPH, the maximum production rate for that location shall determine the minimum rate of supply to the paver.

The Contractor shall provide an adequate supply of approved release agent, as well as the necessary application equipment to safely apply sufficient material to prevent the mixture from adhering to the truck beds. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents. Failure to provide an approved release agent will result in the suspension of paving until corrective actions have been taken and MaineDOT representatives are satisfied with the results. The Contractor shall provide silicon additive when requested by the Department.

Pre-Pave Conference The MaineDOT and Contractor shall hold a prepave conference prior to placing any Hot Mix Asphalt to discuss specifics related to the sections of highway being paved under the contract. Specifics discussed shall include, but are not limited to; work schedule for each section, Hot Mix Asphalt plants and JMFs to be used, and testing requirements. Production rates (tons per hour) and the number of trucks to be supplied for each location will be discussed and an agreement will be made regarding both issues. The MaineDOT will manage its trucks, and the use of private trucks to increase production rates where possible.

The Contractor shall notify the Department at this time of their intent to work a compressed 4 day week, or normal 5 day week. Meeting minutes shall be recorded and distributed by the Region MST manager.

Quality Control The Contractor will be responsible for Quality Control and will determine what is appropriate for Quality Control.

Should the Contractor utilize the option of using Warm Mix Asphalt technology to produce the Light Capital Paving mixture for this contract, the Contractor shall submit a plan to the Department at the prepave conference. The plan shall include a modified Quality Control Plan (QCP) outlining the production facility details, technology to be used, production and placement details, including the warm mix asphalt manufacturers' recommended additive percentages ( if applicable).

Should the Contractor utilize the option of using RAS to produce the Light Capital Paving mixture for this contract, the Contractor shall submit a plan to the Department at the pre-pave conference. As a minimum, the plan shall include a Quality Control Plan (QCP) outlining material source and stockpile management, percentages to be used, blending of the RAS with any supplemental aggregate or RAP, and method of introduction into the plant.

Acceptance For Hot Mix Asphalt items designated as LCP (Light Capital Paving), Pay Item 461.13, a lot size shall be 1500 tons. The first project identification number in the contract paving area will be used for the purpose of tracking paving Lots.

The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO T168 Sampling Bituminous Paving Mixtures, and the MDOT/ ACM Sampling Policy, which will then be transported by the contractor in approved transport containers to the designated acceptance laboratory within 48 hours. The Contractor shall notify the Department, in writing, with an alternative proposal for sample delivery if local conditions make adherence to the required timeframe impossible.

The Department will take two (2) full sample boxes randomly for each lot for acceptance or informational testing. The Contractor may obtain split samples of all Department samples for Quality Control testing. The Contractor shall take immediate possession of acceptance samples once released by MaineDOT and deliver said samples to the designated acceptance laboratory.

The mixtures shall be tested for percent PGAB and gradation. Disputes will be allowed as provided for in Special Provision 401 – Hot Mix Asphalt Pavements; TABLE 10: DISPUTE RESOLUTION VARIANCE LIMITS for percent PGAB and the percent material passing the #200 sieve,

Each test result will represent the Lot, which will be evaluated for price adjustments based upon the list below.

	<u>Price Adjustments</u>	
# 200 Sieve	0% - 8.0%	Contract Unit Price
	8.1% -8.5%	-1% Pay Adjustment
	8.6% -9.0%	-2% Pay Adjustment
	> 9.0%	-3% Pay Adjustment
JMF %PGAB	Target +- 0.4%	Contract Unit Price
	0.5% below JMF	- 3% Pay Adjustment

There will be an additional 1% Deduct for every 0.1% PGAB below the 0.5% listed above.

There will be no deducts for PGAB content above the JMF.

In addition to the deductions for PGAB above, if the average of all test results (as calculated to the nearest hundredth) for the contract is 0.3 percent or lower than the target for the JMF an additional 2% deduct shall be applied to the entire tonnage produced under the contract.

The Contractor shall cease paving operations whenever two consecutive Acceptance tests fall outside the upper or lower limits for Percent PGAB or individual gradations on the 1/2", #4, #16, #50 and #200 sieves. Paving operations shall not resume until the Contactor and the Department determines that material meeting the Contract requirements will be produced.

Nothing in this section prevents the MaineDOT personnel from obtaining additional samples of products to assure the acceptability of the product.

## CONSTRUCTION REQUIREMENTS

Weather Limitations Weather conditions shall be satisfactory for the safety of the operation and shall be carried on only when the atmospheric temperature is above 45° F and pavement temperature is above 40° F.

Temperature Requirements After the JMF is established, the temperatures of the mixture shall conform to the following tolerances:

In the truck at the mixing plant	– allowable range 135° to 163°C [275 to 325°F]
At the Paver	– allowable range 135° to 163°C [275 to 325°F]

Tack Coat - A tack coat of RS-1 emulsified asphalt shall be applied to any existing pavement or recycled layer at a rate of 0.025 gal/yd<sup>2</sup> and at a rate of 0.05 gal/yd<sup>2</sup> on milled pavement prior to placing a new course. A tack coat of emulsified asphalt shall be applied between shim layers and subsequent layers at a rate not to exceed 0.025 gal/yd<sup>2</sup>. HFMS-1 emulsified asphalts may be used with approval of the Region LCP Manager.

Traffic Control The State will provide all necessary traffic control devices, flaggers and sweeping operations, except as noted in Special Provision 107 – Schedule of Work.

Hauling The State will haul all mixtures, unless otherwise outlined in Special Provision 107 or a contract trucking item is provided in the Schedule of Items.

Placing Operations The Contractor shall be responsible for the actual placing and rolling operations. Placing operations shall conform to acceptable paving practices. Mixtures produced under this contract shall be placed on the roadway with a highway class paver, equipped with a power adjustable main screed. Pavers shall meet the following minimum requirements.

- a. A track or rubber tire mounted highway class paver with a minimum tractor weight of 28,000 pounds, and a minimum main screed width of 8 feet.
- b. All paver screeds shall be outfitted with auger and tunnel extensions as recommended by the manufacturer, and have power extendible, activated, and heated screed extensions designed by the manufacturer for highway paving. Screeds shall be configured to place mixtures to the required width, crown, and breakpoints as directed by the Department.
- c. The paver must have a material receiving hopper size capable of accepting MaineDOT private haul trucks, and be of sufficient size and weight to maintain the required rate of placement, line of travel, depth, and cross section while engaged with a loaded tri-axle or trailer haul unit.

If it is determined by the Department that the 8 foot paver supplied is not adequate in meeting the material receiving hopper size, not of sufficient size and weight to maintain the required rate of placement, line of travel, depth and cross section, then a replacement paver meeting the requirements of the contract shall be supplied before work progresses.

Immediately after the material is spread it shall be rolled and compacted by two or more 7 - 10 ton steel 2-axle wheel (one being vibratory) rollers.

The MaineDOT will provide a number of State owned trucks as outlined under Special Provision 107.

During placing operations, the paver shall be operated at a rate of speed not to exceed the mixture delivery rate. The paver speed shall be adjusted in relation to the amount of material actually being delivered to the paver, based on project conditions, plant production, and ability to finish the Hot Mix Asphalt mixture without pushing, shoving or cracking the mixtures.

Increasing placement rates may require additional rollers as determined by the Department or authorized representative. If mixture temperatures during interruptions in mix delivery are determined to be outside the specification temperature range outlined in this contract, the Contractor may be directed to halt placement operations. The defective materials shall be immediately removed and replaced with material that meets contract specifications at no cost to the Department.

Trucking and placing operations shall be scheduled to provide continuous placement of the mixture regardless of haul distance. The Contractor shall provide sufficient personnel at the paver to assure placement of the pavement in an orderly, safe, and efficient manner so as to assure a quality mat and proper overall yield.

The Contractor shall spot shim in locations as directed by the Department.

The Contractor shall close exposed longitudinal joints within two (2) working days and prior to weekends and holidays.

Dust Control The Contractor is responsible for dust control on the access roads for the bituminous plant as described in Section 637 of the Standard Highway Specifications, Revision of December 2002. This work shall be incidental to the contract.

Method of Measurement Light Capital Paving will be measured by the ton, at the contract price, according to delivery slips. Material not placed and compacted satisfactorily due to Contractor's equipment failure, daylight limitations, or weather will not be measured for payment. The delivery slips shall conform to the requirements of the Standard Highway Specifications Revision of December 2002. Cover slips will be required to be delivered on the next working day after each paving day. Cover slips shall have the Item number, date and quantity listed.

Basis of Payment Light Capital Paving will be paid for at the contract unit price per ton, adjusted by any applicable material escalator or disincentives based on Acceptance test results. Such payment shall be full compensation for the following: obtaining, furnishing and processing all aggregate; supplying the specified PGAB bituminous material; processing, heating, mixing, weighing, placing, and compaction of the HMA mixtures; supplying and applying RS-1 emulsified asphalt to the existing pavement prior to placing any HMA; furnishing all labor, equipment, tools and all incidentals necessary to complete the work; and performing quality control testing. The maximum composite pay factor for mixes evaluated under this special provision shall be 1.00.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
461.13	Light Capital Paving	Ton

# Hot Maintenance Mulch (HMM) Access file

Gardiner		AREA	LIGHT CAPITAL PAVING (LCP)		REGION:	2	
PIN	Map ID	TOWNS	ROUTE	Project Description	MILES	Tons	Mix Type
019905.00 2013	15	Hallowell	Winthrop Street	Winthrop Street, From the Manchester/Hallowell town line, to the intersection of Rte. 27 and 201 in Hallowell.	2.74	1370	LCP
				LAT <input type="text"/> LNG <input type="text"/>			
019905.00 2013	6	Hallowell	Whitten Rd	Whitten Rd, From the jct. of Winthrop Street extending, to the Augusta compact urban line.	0.38	190	LCP
				LAT <input type="text"/> LNG <input type="text"/>			
019905.00 2013	5	Wiscasset, Alna	West Alna Rd	West Alna Rd, From the jct. of Rte 218 (Federal St.) in Wiscasset extending northerly, to the jct. of Rte 218 in Alna.	6.90	3450	LCP
				LAT <input type="text"/> LNG <input type="text"/>			
019905.00 2013	9	Bowdoin	Storehouse Rd	Storehouse Rd, From the jct. of Rte. 125 extending northerly, to the Lisbon T/L.	0.81	405	LCP
				LAT <input type="text"/> LNG <input type="text"/>			
019905.00 2013	11	Hallowell	Second St	Second St, From the Intersection of Winthrop St. in Hallowell extending northerly, to the Augusta compact urban line	0.69	345	LCP
				LAT <input type="text"/> LNG <input type="text"/>			
019905.00 2013	4	Bowdionham, Richmond	Post Rd/Lancaster Rd	Post Rd, Beginning at the jct. of Rte. 125 and 138 in Bowdionham extending northerly, to the jct. of Rte. 138 & 201 in Richmond.	7.23	3615	LCP
				LAT <input type="text"/> LNG <input type="text"/>			
019905.00 2013	14	Litchfield, West Gardiner, Manchester	Pond-Neck Rds	Pond\Neck Rd, Beginning at the jct. of Pond Road & 202 in Manchester to, the intersection of Hallowell - Litchfield Road in Litchfield.	8.42	4210	LCP
				LAT <input type="text"/> LNG <input type="text"/>			
019905.00 2013	8	Litchfield, Gardiner	Plains\Pond Rds	Plains\Pond Rds, Beginning at the Hallowell- Litchfield Road, extending 9.58 miles to Rte 126.	9.54	4770	LCP
				LAT <input type="text"/> LNG <input type="text"/>			
019905.00 2013	2	Dresden	Indian Trail Rd	Indian Trail Rd, From the jct of Rte 128 extending easterly, to the jct of Rte 127.	0.54	270	LCP
				LAT <input type="text"/> LNG <input type="text"/>			

## Hot Maintenance Mulch (HMM) Access file

019905.00 2013	<input type="text" value="10"/>	West Gardiner	High St	High St, From the jct. of Hallowell-Litchfield Rd. in West Gardiner, to the West Gardiner/Gardiner T/L.	4.71	2355	LCP
	LAT <input type="text"/>		LNG <input type="text"/>				
019905.00 2013	<input type="text" value="13"/>	Litchfield, Farmingdale, Hallowell	Hallowell\Litchfield Rd	Hallowell\Litchfield Rd, Beginning at the intersection with Rte. 197 extending north, to intersection of Winthrop St. Hallowell	15.34	7670	LCP
	LAT <input type="text"/>		LNG <input type="text"/>				
019905.00 2013	<input type="text" value="7"/>	Litchfield, Bowdoin, Sabattus	197	Rte 197, Beginning at the Jct. of Rte. 9/126 extending 10.53 miles, to the Jct. of Rte. 201.	10.53	5265	LCP
	LAT <input type="text"/>		LNG <input type="text"/>				
019905.00 2013	<input type="text" value="12"/>	Monmouth, Winthrop	135	Rte 135, From the intersection of Rte. 132 in Monmouth, to the intersection of Rte.17	13.95	6975	LCP
	LAT <input type="text"/>		LNG <input type="text"/>				
019905.00 2013	<input type="text" value="1"/>	Dresden, Woolwich	128	Rte 128, From the jct. of Rte. 27 extending southerly, to the jct. of Rte. 127.	15.20	7600	LCP
	LAT <input type="text"/>		LNG <input type="text"/>				
19905.00 2013	<input type="text" value="3"/>	Dresden	197	Route 197, Beginning 0.13 miles westerly of the Intersection of Route 197 and Cedar Grove Road and extending, easterly 0.30 miles to a point 0.07 miles westerly of the Intersection of Route 197 and Perry Road	0.30	150	LCP
	LAT <input type="text"/>		LNG <input type="text"/>				
					<i>total miles</i>	<i>total tons</i>	
					97.28	48640	

[View Report w/o Z1](#)