



# Wisconsin Department of Transportation

May 5, 2015

## Division of Transportation Systems Development

Bureau of Project Development  
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### NOTICE TO ALL CONTRACTORS:

**Proposal #42: 1602-10-61, WISC 2015 298**  
**Antigo - Monico**  
**Rusch Rd – CTH B**  
**USH 45**  
**Langlade County**

### Letting of May 12, 2015

This is Addendum No. 1, which provides for the following:

#### Special Provisions

Revised Special Provisions	
Article No.	Description
10.	Seal Coat Special

Added Special Provisions	
Article No.	Description
11	Prepare Existing Pavement for Seal Coat Special, Item SPV.0125.02

Deleted Special Provisions	
Article No.	Description
8	Prepare Existing Pavement for Seal Coat, Item SPV.0125.01

#### Schedule of Items

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
SPV.0125.02	Prepare Existing Pavement for Seal Coat Special	MI	0	6.77	6.77

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
SPV.0125.01	Prepare Existing Pavement for Seal Coat	MI	6.77	0	0

## Plan Sheets

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
2	General Notes (minimal size of the milling to be 2' x 20')
12	Miscellaneous Quantities – revised title

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

*Mike Coleman*

Proposal Development Specialist  
Proposal Management Section

**ADDENDUM NO. 1**

**1602-10-61**

**May 5, 2015**

**Special Provisions**

**8. DELETED**

**10. Seal Coat Special, Item SPV.0180.02.**

**B Materials**

*Replace with the following:*

Furnish asphaltic materials for seal coat conforming to standard spec 455.

Furnish polymer-modified cationic emulsified asphaltic material for fog seal conforming to standard spec 455.

Furnish emulsions diluted during manufacture. Field dilution is not allowed.

Furnish aggregate conforming to section 460 except as follows:

- Aggregate retained on the No. 8 sieve shall have 5%, by weight, or less flat & elongated pieces based on a 5:1 ratio.
- The percent wear, measured according to AASHTO T96, shall not exceed 30 after 500 revolutions.
- At least 70 percent, by count of the aggregate retained on the No. 8 sieve shall have 2 or more fractured faces.
- Conform to the following gradation.

SIEVE SIZE	PERCENT PASSING BY WEIGHT
3/8 inch (9.51 mm)	100%
No. 4 (4.75 mm)	95-100%
No. 8 (2.38 mm)	5-10%
No. 30 (.595 mm)	0-5%

Take all precautions to minimize contamination of the aggregate.

**C Construction**

*Replace the tenth paragraph with the following:*

Select and apply a polymer-modified cationic emulsion as fog seal over the completed and broomed seal coat at a residual rate of 0.05 to 0.20 gallons/square yard providing a uniform application of asphalt emulsion. Minimize the amount of overspray during the fog seal operation.

**11. Prepare Existing Pavement for Seal Coat Special, Item SPV.0125.02.**

**A Description**

This special provision describes the work necessary to prepare the existing pavement surface prior to application of the seal coat. Work includes rout and seal, clean and seal, and re-seal random

traverse, centerline, and longitudinal cracks in asphalt pavement as well as adequately preparing the existing pavement marking for adhesion of the Seal Coat Special.

#### **A.1 Rout and Seal**

Transverse and centerline cracks between 1/4" - 3/4" wide shall be routed, cleaned, and sealed.

#### **A.2 Re-Seal**

Existing sealed cracks exhibiting signs of failure such as missing or loss of existing sealant material, cracking of the existing sealant, loss of adhesion to existing pavement, and overband wear shall be routed, cleaned and sealed or cleaned and sealed without routing.

#### **A.3 Clean and Seal**

Transverse and centerline cracks between 1/8" and 1/4" wide shall be cleaned and sealed.

### **B Materials**

#### **B.1 Rout and Seal at Transverse Cracks**

Furnish material conforming to requirements of the standard specification for joint and crack sealants, hot applied, for concrete and asphalt pavements, ASTM designation: D6690, Type I, run at -20°F.

#### **B.2 Rout and Seal at Centerline Cracks**

Furnish material conforming to the requirements of the standard specification for joint and crack sealants, hot applied, for concrete and asphalt pavements, ASTM designation: D6690, Type I, run at -20°F.

#### **B.3 Re-Seal at Transverse, Centerline, and Longitudinal Cracks**

Furnish material conforming to the requirements of the standard specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements, ASTM Designation: D6690, Type I, run at -20°F.

#### **B.4 Sealant Requirements**

Deliver the sealant in the manufacturer's original sealed container legibly marked with the following information:

- Manufacturer's name
- Trade name of sealant
- Manufacturer's batch or lot number
- ASTM designation
- Minimum application temperature
- Maximum (or safe) heating temperature

Before applying the sealant, submit a manufacturer's certificate of compliance certifying the compound meets the requirements of this specification and a copy of the manufacturer's recommendations on heating, re-heating, and applying the sealant.

The temperature of the sealant in the field application equipment shall not exceed the safe heating temperature recommended by the manufacturer. Temperatures above the safe heating temperature will result in rejection of the sealant material and will require disposal of the sealant material.

Do not place sealant if the temperature of the material is below the manufacturer's recommended minimum application/pouring temperature.

Mixing of different manufacturer's brands or different types of sealants is prohibited.

Document locations where the material from each lot number of sealant is placed.

## **C Construction**

### **C.1 Weather Limitations**

Sealant materials shall only be placed during a period of rising temperature after the air and surface temperature in the shade and away from artificial heat sources has reached 40°F and indications are for a continued rise in temperature. During a period of falling temperatures, which may fall below 40°F, placement of the sealant material shall be suspended until the above conditions are met.

Do not place sealant material if weather conditions are raining or wet. Should the sealant be placed and rain should fall before the sealant has properly cured, remove and replace the wet/contaminated sealant.

### **C.2 Equipment Requirements**

#### **C.2.1 Melting Kettle**

The melting kettle shall be an oil jacketed double boiler type, equipped with both agitation and recirculation systems capable of starting at ambient temperature and bringing the sealant material to application temperature within one hour, while continuously agitating and recirculation the sealant. The melter shall be equipped with automatic thermostatic controls and temperature gauges to monitor the sealant temperature in the applicator lines and temperature of heat transfer oil in the kettle jacket. It shall be equipped with a pump to pressure fill cracks with the wand applicator. The melting kettle shall be properly insulated to ensure heat is not radiated to the pavement surface.

Furnish, for use by the engineer, an infrared temperature measuring gun accurate to 1°F at 400°F. The engineer may check the pouring temperature of the sealant at the point of discharge into the reservoir. If the sealant falls below the recommended application/pouring temperature, all production shall stop at that melting kettle until the recommended application/pouring temperature is obtained. Should the sealant temperature at the point of discharge exceed the maximum safe heating temperature, the melting kettle shall be emptied of all sealant, and the sealant shall be legally disposed of in an environmentally safe method.

#### **C.2.2 Router**

A minimum of two self-propelled routers will be required capable of providing a cut of uniform depth and width. An engine capable of achieving a minimum of 25 horsepower shall power the router. The router blade or blades shall be of such size and configuration to cut the desired joint reservoir in one pass of the route. The sealant reservoir created shall have vertical sides and a flat bottom. The router must be capable of following straight or meandering cracks. It must have an automatic depth control to ensure consistent and accurate routing depths.

#### **C.2.3 Air Compressor**

The air compressor shall be capable of producing a continuous stream of clean, dry air through the nozzle at 75-150 PSI and 225 CFM minimum. The compressed air unit shall be equipped with water and oil traps and must produce sufficient air volume and pressure to remove all debris from the crack, whether route or not, and all adjacent road surfaces in a safe manner such that the debris will not re-enter the crack prior to the sealing operation. The traps used to remove moisture and oil shall be checked by the contractor at least once per day of production and replaced when necessary.

- The use of backpack blowers is not allowed.
- The use of vacuum cleaning equipment may be allowed after demonstrating to the engineer the vacuum equipment can successfully clean the cracks.

#### **C.2.4 Heat Lance**

Heat Lance shall operate with propane and compressed air in combination and be capable of achieving a temperature of heated air at the exit orifice of 1,800°F and a discharge velocity of 3,000 feet per second.

## **C.3 Preparation, Cleaning and Conditioning**

### **C.3.1 Preparation**

Transverse and centerline cracks measuring less than or equal to  $\frac{3}{4}$ " wide shall be routed to a width and depth of  $\frac{3}{4}$ ". The router shall at all times exhibit the capability of cutting the desired reservoir in one easy pass. Change cutters when it is evident the reservoir configuration specified is not being achieved. Demonstrate the cutters capability of following meandering cracks and maintaining centering of the reservoir over the crack within  $\pm\frac{1}{4}$ ". The resulting reservoir shall have vertical sidewalls and a uniform flat bottom. Anytime the contractor cannot meet these requirements, the production of that cutter shall cease until the requirements can be met.

### **C.3.2 Cleaning**

For all cracks to be sealed, immediately prior to conditioning, the cracks shall be thoroughly cleaned with a minimum of one pass of the air wand not more than 2 inches from each face of the reservoir/crack. Cleaning shall continue until the reservoir/crack is dry and all dirt, dust, or deleterious matter is removed. If the air compressor produced dirt or other residue, the contractor will be required to re-clean the reservoir/crack. Routing may be required on 're-seal' cracks to remove old sealant.

### **C.3.3 Conditioning**

For all cracks to be sealed, immediately prior to the placement of the crack sealant, the surfaces of a routed reservoir, as well as the adjacent pavement on either side of the reservoir or a crack shall be conditioned with hot compressed air from a heat lance. The heat lance shall be placed within 3 inches of each sidewall of the reservoir or crack. This treatment shall continue until the affected areas are conditioned. The heat lance shall not scorch the routed reservoir, crack, or adjacent pavement surface. The engineer reserves the right to randomly spot check the reservoirs/cracks to verify they are clean and dry. Anytime the engineer determines this requirement is not being met, modify operation to meet these requirements.

Provide protective screening if preparation, cleaning, and conditioning operations should cause damage to or interference with traffic in adjacent lanes.

### **C.4 Crack Sealing Operations**

The crack sealant shall be placed immediately after the completion of the preparation, cleaning, and conditioning with the heat lance. Racks shall be sealed when the sealant material is at the application/pouring temperature recommended by the manufacturer.

For 'rout and seal' cracks completely fill the reservoirs/cracks using multiple passes if necessary. The width of the overband, including the routed reservoir, should be about 3.0 inches wide with a maximum film thickness of the overband limited to .125 inches thick. The contractor may be required to use a squeegee to force the sealant material into narrow cracks if the sealant material is not flowing into the crack properly.

For 're-seal' cracks, sealant shall be applied using an application wand followed by a "V" shaped squeegee or using a round application head having a concave underside or other methods that meets the requirements for size and shape. The maximum width of the application head shall be 3 inches for standard coverage and 6 inches for multi-crack locations. The maximum film thickness of the overband is limited to .125 inches thick.

Care shall be taken in the sealing of the cracks so the cracks are not overfilled and the final appearance shall present a neat, fine line. The applicator wand shall be returned to the machine and the joint sealant material re-circulated immediately upon completion of each crack sealing.

Sealants shall not be removed from their packaging until immediately before it is placed in the melter. Feed additional sealant into the melter at a rate equal to or less than the rate of placement of the sealant in the reservoirs/cracks.

After the sealant has been placed and cured and prior to opening the road to traffic, any additional debris left on the roadway surface shall be removed. Any method used to complete this work shall

not damage the newly placed sealant; repair any damage to the sealant. The contractor may apply toilet paper or a light coating of sand, dust, or an approved de-tacking agent for use with the specified sealant to the surface of the newly placed sealant if traffic results in tracking of the crack sealing material. Repair any damage by traffic to treated pavement areas.

### **C.5 Documentation**

Melting kettle production data sheets shall be developed, completed, and submitted daily for each kettle on the project with the following information:

- Date, county, highway route number, and highway segment.
- Weather conditions at morning, mid-day, and afternoon intervals.
- Kettle number, ambient air and pavement temperature in °F at the beginning, mid-day and end of the day.
- Kettle temperature in °F once an hour during working production
- Sealant material temperature in °F at the wand once an hour during working production.
- Beginning and ending locations on project for the day, including lane and direction.
- The amount of materials used for the day in pounds, including lot numbers.
- Unique or atypical situations on the project which may affect the placement or performance of the sealed cracks.
- The contractor's authorized signature.

### **C.6 Workmanship**

During crack sealing operations, the engineer may review the sealant temperatures at the melting kettle intermittently. If the temperatures are above the manufacturer's specified safe heating temperature, the sealant will be rejected. Empty the kettle of the over-heated material and legally dispose of it in an environmentally safe method.

Asphalt cracks, whether sealed by the 'rout and seal', 'clean and seal', or 're-seal' method, will be observed on a crack-by-crack basis for acceptable workmanship. Unsealed cracks will be brought to the attention of the contractor. Fill all unsealed cracks before re-opening the roadway to traffic.

Sealed cracks shall be rejected if there is evidence of poor workmanship or obvious defects, including, but not limited to:

- Routed reservoir not filled completely and over-banded.
- Lack of bond to the sidewalls of the joint reservoir, crack, or asphalt pavement.
- Excessive debris or moisture in the joint reservoir or crack.
- Contamination of the sealant.
- Excessive pools of sealant on the pavement or shoulder surface.
- Excessively wide, thick sealant overband.

Rejected sealed cracks shall be repaired, the sealant removed and disposed of in a legal and appropriate manner and the cracks resealed as necessary.

### **D Measurement**

The department will measure Prepare Existing Pavement for Seal Coat by mile of the project, acceptably completed. A mile is defined as a linear measurement taken along the centerline to the nearest tenth of a mile and will include the sealing of asphalt cracks in the traffic lanes, auxiliary lanes, and paved shoulders as well as preparing the existing pavement marking for adhesion of the Seal Coat Special.

For a divided highway the mile will be measured separately in each direction.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0125.02	Prepare Existing Pavement for Seal Coat Special	MI

Payment is full compensation for completing all work detailed in this section, and for furnishing all materials.

**Schedule of Items**

Attached, dated May 5, 2015, are the revised Schedule of Items Pages 1 – 3.

**Plan Sheets**

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:  
Revised: 2 and 12.

END OF ADDENDUM



GENERAL NOTES

DIMENSIONS GIVEN FOR EXISTING FEATURES SHALL BE CONSIDERED AS APPROXIMATE AND SHOULD BE MEASURED  
 FOR THE PROJECT. DIMENSIONS FOR THE REMOVAL OF EXISTING FEATURES SHALL BE APPROXIMATE AND SHOULD BE MEASURED  
 REMOVING ASPHALTIC SURFACE MILLING AREA TO BE A MINIMUM OF 2 FEET WIDE BY 20 FEET LONG WITH A  
 1.75" DEPTH.

THESE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE  
 CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A  
 DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF  
 DIGGERS HOTLINE.

Addendum No. 1  
 ID 1602-10-61  
 Revised Sheet 2  
 May 5, 2015

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646.0406  
REMOVING  
PAVEMENT  
MARKING  
(LF)

STATION - STATION	LOCATION	NOTES
227+15 - 229+50	RT	SEE PAVEMENT MARKING DETAIL
TOTAL		235

SPV.0060  
TEMPORARY PAVEMENT  
MARKING REFLECTIVE TABS  
(EACH)

STATION - STATION	LOCATION	NOTES
63+50 - 248+00	TWLT	YELLOW
63+50 - 121+50	-	WHITE
TOTAL		972

SPV.0125  
PREPARE EXISTING  
PAVEMENT FOR SEAL COAT  
SPECIAL

STATION - STATION	LOCATION	(MI)
63+50 - 244+20	Southbound	3.45
63+50 - 237+30	Northbound	3.32
TOTAL		6.77

STATION - STATION	LOCATION
63+50 - 244+20	Southbound
63+50 - 237+30	Northbound
TOTAL	

SPV.0180.01  
SEAL COAT SPECIAL  
(SY)

STATION - STATION	LOCATION
63+50 - 248+00	-
TOTAL	

SPV.0180.02  
SPRAY PATCHING  
(SY)

STATION - STATION	LOCATION
Undistributed	-
TOTAL	

Addendum No. 1  
ID 1602-10-61  
Revised Sheet 12  
May 5, 2015

ALL ITEMS AND QUANTITIES ON  
THIS SHEET ARE CATEGORY 0010  
UNLESS OTHERWISE NOTED

## SCHEDULE OF ITEMS

REVISED:

CONTRACT:  
20150512042PROJECT(S):  
1602-10-61FEDERAL ID(S):  
WISC 2015298

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS

## SECTION 0001 Contract Items

0010	204.0120 Removing Asphaltic Surface Milling	3,075.000 SY	.	.	.	.
0020	213.0100 Finishing Roadway (project) 01. Project 1602-10-61	1.000 EACH	.	.	.	.
0030	465.0110 Asphaltic Surface Patching	325.000 TON	.	.	.	.
0040	618.0100 Maintenance And Repair of Haul Roads (project) 01. Project 1602-10-61	1.000 EACH	.	.	.	.
0050	619.1000 Mobilization	1.000 EACH	.	.	.	.
0060	628.7015 Inlet Protection Type C	26.000 EACH	.	.	.	.
0070	643.0100 Traffic Control (project) 01. Project 1602-10-61	1.000 EACH	.	.	.	.
0080	643.0300 Traffic Control Drums	9,000.000 DAY	.	.	.	.
0090	643.0420 Traffic Control Barricades Type III	228.000 DAY	.	.	.	.
0100	643.0705 Traffic Control Warning Lights Type A	456.000 DAY	.	.	.	.

## SCHEDULE OF ITEMS

REVISED:

CONTRACT:  
20150512042PROJECT(S):  
1602-10-61FEDERAL ID(S):  
WISC 2015298

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0110	643.0800 Traffic Control Arrow Boards	24.000 DAY	.	.	.	.
0120	643.0900 Traffic Control Signs	696.000 DAY	.	.	.	.
0130	646.0106 Pavement Marking Epoxy 4-Inch	83,640.000 LF	.	.	.	.
0140	646.0126 Pavement Marking Epoxy 8-Inch	2,100.000 LF	.	.	.	.
0150	646.0600 Removing Pavement Markings	235.000 LF	.	.	.	.
0160	647.0166 Pavement Marking Arrows Epoxy Type 2	32.000 EACH	.	.	.	.
0170	647.0356 Pavement Marking Words Epoxy	4.000 EACH	.	.	.	.
0180	647.0726 Pavement Marking Diagonal Epoxy 12-Inch	575.000 LF	.	.	.	.
0190	SPV.0060 Special 01. Temporary Pavement Marking Reflective Tabs	972.000 EACH	.	.	.	.
0210	SPV.0180 Special 01. Spray Patching	3,075.000 SY	.	.	.	.
0220	SPV.0180 Special 02. Seal Coat Special	100,257.000 SY	.	.	.	.

SCHEDULE OF ITEMS

REVISED:

CONTRACT:  
20150512042

PROJECT(S):  
1602-10-61

FEDERAL ID(S):  
WISC 2015298

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0230	SPV.0125 Special 02. Prepare Existing Pavement for Seal Coat Special	MI 6.770	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	