



# Wisconsin Department of Transportation

## Division of Transportation Systems Development

Bureau of Project Development  
4822 Madison Yards Way, 4<sup>th</sup> Floor South  
Madison, WI 53705

March 26, 2019

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### NOTICE TO ALL CONTRACTORS:

**Proposal #18: 4140-19-72**  
**Gibraltar – Sister Bay**  
**Gibraltar Road – Country Walk Dr**  
**STH 42**  
**Door County**

### Letting of April 9, 2019

This is Addendum No. 01, which provides for the following:

#### Special Provisions:

Added Special Provisions	
Article No.	Description
33	QMP HMA Pavement Nuclear Density

#### Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
455.0605	Tack Coat	GAL	15,750	-180	15,570
460.2005	Incentive Density PWL HMA Pavement	DOL	20,141	-2,091	18,050
460.2010	Incentive Air Voids HMA Pavement	DOL	29,990	-2,830	27,160

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
460.2000	Incentive Density HMA Pavement	DOL	1,810	1.00	1,810

**Plan Sheets:**

<b>Revised Plan Sheets</b>	
<b>Plan Sheet</b>	<b>Plan Sheet Title (brief description of changes to sheet)</b>
63	Miscellaneous Quantities (Asphalt Quantity Table)

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. 01**

**4140-19-72**

**March 26, 2019**

**Special Provisions**

**33. QMP HMA Pavement Nuclear Density.**

**A Description**

*Replace standard spec 460.3.3.2 (1) and standard spec 460.3.3.2 (4) with the following:*

- (1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 except as modified in this special provision.
- (2) Provide and maintain a quality control program defined as all activities and documentation of the following:
  1. Selection of test sites.
  2. Testing.
  3. Necessary adjustments in the process.
  4. Process control inspection.
- (3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures.

<http://wisconsindot.gov/rdwy/cmm/cm-08-00toc.pdf>

- (4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's web site at:

<http://www.atwoodsystems.com/>

**B Materials**

**B.1 Personnel**

- (1) Nuclear gauge owners and personnel using nuclear gauges shall comply with WisDOT requirements according to 460.3.3 and CMM 8-15.

**B.2 Testing**

- (1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Conform to CMM 8-15.10.4 for test duration and gauge placement.

**B.3 Equipment**

**B.3.1 General**

- (1) Furnish nuclear gauges according to CMM 8-15.2.
- (2) Furnish nuclear gauges from the department's approved product list at

<http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/appr-prod/default.aspx>

**B.3.2 Comparison of Nuclear Gauges**

**B.3.2.1 Comparison of QC and QV Nuclear Gauges**

- (1) Compare QC and QV nuclear gauges according to CMM 8-15.7.

**B.3.2.2 Comparison Monitoring**

- (1) Conduct reference site monitoring for both QC and QV gauges according to CMM 8-15.

## **B.4 Quality Control Testing and Documentation**

### **B.4.1 Lot and Sublot Requirements**

#### **B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances**

- (1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.
- (2) Determine required number of tests according to CMM 8-15.10.2.1.
- (3) Determine random testing locations according to CMM 8-15.10.3.

#### **B.4.1.2 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts**

- (1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.
- (2) Determine required number of tests according to CMM 8-15.10.2.2.
- (3) Determine random testing locations according to CMM 8-15.10.3.

### **B.4.2 Pavement Density Determination**

#### **B.4.2.1 Mainline Traffic Lanes and Appurtenances**

- (1) Calculate the average sublot densities using the individual test results in each sublot.
- (2) If all sublot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.
- (3) If any sublot average is more than one percent below the target density, do not include the individual test results from that sublot when computing the lot average density and remove that sublot's tonnage from the daily quantity for incentive. The tonnage from any such sublot is subject to disincentive pay as specified in standard spec 460.5.2.2.

#### **B.4.2.2 Mainline Shoulders**

##### **B.4.2.2.1 Width Greater Than 5 Feet**

- (1) Determine the pavement density as specified in B.4.2.1.

##### **B.4.2.2.2 Width of 5 Feet or Less**

- (1) If all sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.
- (2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

#### **B.4.2.3 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts**

- (1) Determine the pavement density as specified in B.4.2.1.

#### **B.4.2.4 Documentation**

- (1) Document QC density test data as specified in CMM 8.15. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

### **B.4.3 Corrective Action**

- (1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.
- (2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec

460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted subplot. Testing in a previously accepted subplot will not be used to recalculate a new lot density.

- (3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full subplot width within the traffic lanes or shoulders.
- (4) Retesting and acceptance of replaced pavement will be as specified in standard spec 105.3.
- (5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the subplot and lot densities.
- (6) If 2 consecutive subplot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

## **B.5 Department Testing**

### **B.5.1 Verification Testing**

- (1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one subplot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.
- (2) The QV tester will test each selected subplot using the same testing requirements and frequencies as the QC tester.
- (3) If the verification subplot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.
- (4) If the verification subplot average is more than one percent below the specified target density, compare the QC and QV subplot averages. If the QV subplot average is within 1.0 lb/ft<sup>3</sup> of the QC subplot average, use the QC tests for acceptance.
- (5) If the first QV/QC subplot average comparison shows a difference of more than 1.0 lb/ft<sup>3</sup> each tester will perform an additional set of tests within that subplot. Combine the additional tests with the original set of tests to compute a new subplot average for each tester. If the new QV and QC subplot averages compare to within 1.0 lb/ft<sup>3</sup>, use the original QC tests for acceptance.
- (6) If the QV and QC subplot averages differ by more than 1.0 lb/ft<sup>3</sup> after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

### **B.5.2 Independent Assurance Testing**

- (1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

## **B.6 Dispute Resolution**

- (1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge comparison according to B.3.2.1.
- (2) The testers may use comparison monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.
- (3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV subplot density test results or retesting of the subplot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

- (4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

**B.7 Acceptance**

- (1) The department will not accept QMP HMA Pavement Nuclear Density if a non-compared gauge is used for contractor QC tests.

**C (Vacant)**

**D (Vacant)**

**E Payment**

**E.1 QMP Testing**

- (1) Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the Non-performance of QMP administrative item.

**E.2 Disincentive for HMA Pavement Density**

- (1) The department will administer density disincentives as specified in standard spec 460.5.2.2.

**E.3 Incentive for HMA Pavement Density**

- (1) The department will administer density incentives as specified in standard spec 460.5.2.3.  
stp-460-020 (20181119)

**Schedule of Items**

Attached, dated March 26, 2019, are the revised Schedule of Items Pages 2 and 7.

**Plan Sheets**

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

Revised: 63.

END OF ADDENDUM

Addendum No. 01  
ID 4140-19-72  
Revised Sheet 63  
March 26, 2019

465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*		465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*		465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*								
CATEGORY	STA.	OFFSET	TON	CATEGORY	STA.	OFFSET	TON	CATEGORY	STA.	OFFSET	TON	
0010	163+72	RT	2	0010	393+00	LT	3	0010	492+01	RT	2	
0010	164+95	RT	2	0010	394+30	RT	2	0010	493+17	RT	2	
0010	167+70	RT	3	0010	395+20	LT	1	0010	496+68	LT	6	
0010	169+02	RT	3	0010	395+62	RT	3	0010	497+31	RT	3	
0010	171+85	RT	3	0010	396+78	RT	3	0010	498+14	RT	3	
0010	175+58	RT	3	0010	397+56	RT	3	0010	498+14	LT	2	
0010	179+69	RT	5	0010	398+75	RT	2	0010	498+82	RT	3	
0010	189+16	RT	1	0010	398+92	LT	7	0010	499+79	LT	4	
0010	195+27	RT	1	0010	399+62	RT	1	0010	500+65	RT	4	
0010	196+67	RT	3	0010	401+05	RT	2	0010	501+73	LT	1	
0010	202+23	RT	5	0010	410+26	LT	1	0010	502+38	LT	1	
0010	206+78	RT	3	0010	413+65	RT	5	0010	506+52	RT	11	
0010	229+31	RT	1	0010	414+76	RT	6	0010	508+01	LT	5	
0010	242+25	RT	4	0010	415+66	RT	2	0010	512+66	LT	2	
0010	244+98	RT	5	0010	422+56	RT	4	0010	514+45	RT	2	
0010	256+75	RT	2	0010	427+51	LT	3	0010	514+52	LT	1	
0010	259+13	RT	2	0010	427+59	RT	3	0010	516+03	LT	2	
0010	263+39	LT	2	0010	428+86	RT	3	0010	516+03	RT	3	
0010	264+23	LT	2	0010	429+11	LT	4	0010	519+34	LT	2	
0010	269+74	LT	1	0010	430+79	LT	2	0010	521+87	RT	3	
0010	271+39	LT	4	0010	431+64	LT	2	0010	525+08	LT	2	
0010	273+98	LT	4	0010	433+85	LT	3	0010	526+12	LT	2	
0010	278+03	LT	5	0010	436+68	LT	1	0010	527+01	RT	3	
0010	288+32	LT	2	0010	440+42	RT	4	0010	527+42	LT	2	
0010	295+80	LT	1	0010	441+37	LT	1	0010	528+20	RT	4	
0010	302+02	RT	1	0010	447+23	LT	2	0010	528+39	LT	2	
0010	304+27	RT	1	0010	447+72	RT	2	0010	529+81	LT	2	
0010	305+58	RT	1	0010	448+33	RT	3					
0010	384+15	RT	4	0010	448+46	LT	2					
0010	385+29	RT	3	0010	450+54	RT	2					
0010	385+82	LT	17	0010	454+64	RT	6					
0010	387+36	LT	2	0010	455+28	LT	4					
0010	388+61	LT	2	0010	457+02	RT	7					
0010	389+64	LT	2	0010	467+83	RT	5					
0010	390+94	LT	2	0010	490+57	RT	3					
			TOTAL	30				TOTAL	286			

465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*		465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*		465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*								
CATEGORY	STA.	OFFSET	TON	CATEGORY	STA.	OFFSET	TON	CATEGORY	STA.	OFFSET	TON	
0010	492+01	RT	2	0010	502+38	LT	1	0010	514+52	LT	1	
0010	493+17	RT	2	0010	506+52	RT	11	0010	516+03	LT	2	
0010	496+68	LT	6	0010	508+01	LT	5	0010	516+03	RT	3	
0010	497+31	RT	3	0010	512+66	LT	2	0010	519+34	LT	2	
0010	498+14	RT	3	0010	514+45	RT	2	0010	521+87	RT	3	
0010	498+14	LT	2	0010	514+52	LT	1	0010	525+08	LT	2	
0010	498+82	RT	3	0010	516+03	LT	2	0010	526+12	LT	2	
0010	499+79	LT	4	0010	516+03	RT	3	0010	527+01	RT	3	
0010	500+65	RT	4	0010	519+34	LT	2	0010	527+42	LT	2	
0010	501+73	LT	1	0010	521+87	RT	3	0010	528+20	RT	4	
0010	502+38	LT	1	0010	525+08	LT	2	0010	528+39	LT	2	
0010	506+52	RT	11	0010	526+12	LT	2	0010	529+81	LT	2	
0010	508+01	LT	5	0010	527+01	RT	3					
0010	512+66	LT	2	0010	527+42	LT	2					
0010	514+45	RT	2	0010	528+20	RT	4					
0010	514+52	LT	1									
0010	516+03	LT	2									
0010	516+03	RT	3									
0010	519+34	LT	2									
0010	521+87	RT	3									
0010	525+08	LT	2									
0010	526+12	LT	2									
0010	527+01	RT	3									
0010	527+42	LT	2									
0010	528+20	RT	4									
0010	528+39	LT	2									
0010	529+81	LT	2									
			TOTAL	286				TOTAL	286			

\*SEE CONSTRUCTION DETAIL FOR DRIVEWAY DEPTH

465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*		465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*		465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*								
CATEGORY	STA.	OFFSET	TON	CATEGORY	STA.	OFFSET	TON	CATEGORY	STA.	OFFSET	TON	
0010	492+01	RT	2	0010	502+38	LT	1	0010	514+52	LT	1	
0010	493+17	RT	2	0010	506+52	RT	11	0010	516+03	LT	2	
0010	496+68	LT	6	0010	508+01	LT	5	0010	516+03	RT	3	
0010	497+31	RT	3	0010	512+66	LT	2	0010	519+34	LT	2	
0010	498+14	RT	3	0010	514+45	RT	2	0010	521+87	RT	3	
0010	498+14	LT	2	0010	514+52	LT	1	0010	525+08	LT	2	
0010	498+82	RT	3	0010	516+03	LT	2	0010	526+12	LT	2	
0010	499+79	LT	4	0010	516+03	RT	3	0010	527+01	RT	3	
0010	500+65	RT	4	0010	519+34	LT	2	0010	527+42	LT	2	
0010	501+73	LT	1	0010	521+87	RT	3	0010	528+20	RT	4	
0010	502+38	LT	1	0010	525+08	LT	2	0010	528+39	LT	2	
0010	506+52	RT	11	0010	526+12	LT	2	0010	529+81	LT	2	
0010	508+01	LT	5	0010	527+01	RT	3					
0010	512+66	LT	2	0010	527+42	LT	2					
0010	514+45	RT	2	0010	528+20	RT	4					
0010	514+52	LT	1									
0010	516+03	LT	2									
0010	516+03	RT	3									
0010	519+34	LT	2									
0010	521+87	RT	3									
0010	525+08	LT	2									
0010	526+12	LT	2									
0010	527+01	RT	3									
0010	527+42	LT	2									
0010	528+20	RT	4									
0010	528+39	LT	2									
0010	529+81	LT	2									
			TOTAL	286				TOTAL	286			

ASPHALT ITEMS

465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*		465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*		465.0120 ASPHALTIC SURFACE FIELD ENTRANCES*							
CATEGORY	FROM	TO	LOCATION	CATEGORY	FROM	TO	LOCATION	CATEGORY	FROM	TO	LOCATION
0010	159+00	-	306+00	0010	159+00	-	331+27	0010	159+00	-	331+27
0010	384+00	-	384+00	0010	384+00	-	384+00	0010	384+00	-	384+00
0010	384+00	-	531+27	0010	384+00	-	531+27	0010	384+00	-	531+27
			SUBTOTAL 0010				SUBTOTAL 0010				SUBTOTAL 0010
			TOTAL				TOTAL				TOTAL

(1) EXCLUDES EMBANK RECONSTRUCT FROM STA. 317+25 - 343+19.  
 (2) PREPARE FOUNDATION FOR ASPHALTIC SHOULDERING = STA. 423+23-459+20 & STA. 474+67-486+25.  
 \*\*TONNAGE IS ELIGIBLE FOR INCENTIVE DENSITY PHL 460.200'S.  
 \*\*TONNAGE IS ELIGIBLE FOR INCENTIVE AIR VOIDS 460.2010 AND DENSITY IS TESTED FOR ACCEPTANCE IN THOSE AREAS.

PREPARE FOUNDATION FOR ASPHALTIC PAVING

CATEGORY	FROM	TO	LOCATION	CATEGORY	FROM	TO	LOCATION
0010	159+00	-	331+27	0010	159+00	-	331+27
			SUBTOTAL 0010				SUBTOTAL 0010
			TOTAL				TOTAL

STATION 159+00 - 331+27  
 LOCATION STH 42  
 PROJECT LIMITS  
 REMARKS  
 211.0100.01  
 LS  
 1



Proposal Schedule of Items

Proposal ID: 20190409018 Project(s): 4140-19-72

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0034	211.0400 Prepare Foundation for Asphaltic Shoulders	50.000 STA	_____.	_____.
0036	213.0100 Finishing Roadway (project) 01. 4140-19-72	1.000 EACH	_____.	_____.
0038	305.0110 Base Aggregate Dense 3/4-Inch	5,220.000 TON	_____.	_____.
0040	305.0120 Base Aggregate Dense 1 1/4-Inch	2,705.000 TON	_____.	_____.
0042	305.0500 Shaping Shoulders	52.000 STA	_____.	_____.
0044	315.0100 Asphaltic Base	70.000 TON	_____.	_____.
0046	455.0605 Tack Coat	15,570.000 GAL	_____.	_____.
0048	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	2.000 EACH	_____.	_____.
0050	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	2.000 EACH	_____.	_____.
0052	460.2005 Incentive Density PWL HMA Pavement	18,050.000 DOL	1.00000	18,050.00
0054	460.2007 Incentive Density HMA Pavement Longitudinal Joints	13,853.000 DOL	1.00000	13,853.00
0056	460.2010 Incentive Air Voids HMA Pavement	27,160.000 DOL	1.00000	27,160.00
0058	460.5223 HMA Pavement 3 LT 58-28 S	14,800.000 TON	_____.	_____.
0060	460.5224 HMA Pavement 4 LT 58-28 S	15,190.000 TON	_____.	_____.
0062	465.0120 Asphaltic Surface Driveways and Field Entrances	286.000 TON	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20190409018 Project(s): 4140-19-72

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0192	650.4000 Construction Staking Storm Sewer	5.000 EACH	_____.	_____.
0194	650.4500 Construction Staking Subgrade	3,047.000 LF	_____.	_____.
0196	650.5000 Construction Staking Base	3,047.000 LF	_____.	_____.
0198	650.6000 Construction Staking Pipe Culverts	1.000 EACH	_____.	_____.
0200	650.8000 Construction Staking Resurfacing Reference	34,633.000 LF	_____.	_____.
0202	650.9910 Construction Staking Supplemental Control (project) 01. 4140-19-72	LS	LUMP SUM	_____.
0204	650.9920 Construction Staking Slope Stakes	3,047.000 LF	_____.	_____.
0206	690.0150 Sawing Asphalt	4,953.000 LF	_____.	_____.
0208	740.0440 Incentive IRI Ride	13,118.000 DOL	1.00000	13,118.00
0210	SPV.0060 Special 01. Reconnecting Storm Sewer Laterals	2.000 EACH	_____.	_____.
0212	SPV.0060 Special 02. Inlets Median 1 Grate Special	1.000 EACH	_____.	_____.
0214	460.2000 Incentive Density HMA Pavement	1,810.000 DOL	1.00000	1,810.00
<b>Section: 0001</b>			<b>Total:</b>	_____.
			<b>Total Bid:</b>	_____.

