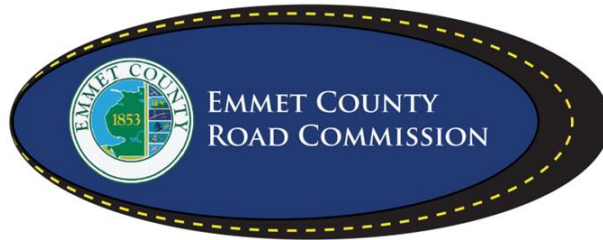


Wade Williams
Robert Notestine
Frank Zulski Jr.
Brian A. Gutowski, P.E.
Engineer-Manager
Lisa Kleeman
Finance Director -
Clerk of the Board



2265 E. Hathaway Road
Harbor Springs
Michigan, 49740
Office: 231 347-8142
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emmetcrc@emmetcrc.com

INVITATION TO BID

March 30, 2021

Sealed bids will be received by the Emmet County Road Commission, at their offices located at 2265 E. Hathaway Road, Harbor Springs, MI, until Tuesday, March 30, 2021 at 9:05 a.m., at which time they will be opened and read aloud for the ultra-thin asphalt overlay on the following road in West Traverse Township:

- 1.) Hughston Road, from Middle Road to Cemetery Road for 2.20 miles

- See attached specifications for details

The Contractor must submit the bid on the attached "Bid Sheet" and place in a sealed envelope clearly marked "Hughston Road – Ultra-thin Asphalt Projects".

The Board reserves the right to accept or reject any and all bids, to waive irregularities in the bid procedure, and to award in the best interest of the Road Commission. No contractual relationship shall exist between the undersigned and the Board for the work described herein until such a time as the full contract documents have been formally executed by both the contractor and the Board.

HMA Ultra Thin Overlay – Hughston Road

Project: Hughston Road

2.20 miles
HMA Ultra-Thin Overlay
Gravel Shoulders
Pavement Markings

- 1.) **Hughston Road**, from Middle Road to Cemetery Road for 2.20 miles

Project Dates:

Project Start Date: May 1, 2021
Project Completion Date: September 30, 2021

Project Submittals:

The following shall be submitted to the Road Commission Engineer for approval prior to project start:

1. Material Source List (MDOT Form 501)
2. Progress Schedule (must be submitted within 5 days of Contract award)

HMA Ultra-Thin Overlay:

Place HMA Ultra-thin overlay according to the attached specifications. Match existing pavement widths. The Contractor shall submit a JMF for the HMA Ultra-thin to the Engineer for approval prior to project start. The Engineer will provide written approval of the JMF to the Contractor before placement of any HMA Ultra-thin will be allowed.

Driveways and Approaches:

Gravel Driveways shall be blended when the shoulder material is placed. Material shall be flushed to the edge of pavement and blended to existing 2.0' to 4.0', or as directed by the Engineer, from the edge of pavement, paid for as part of Shoulder CI II.

Paved driveways shall be blended when the HMA Ultra Thin is placed. Material shall be placed 2.0' to 4.0', or as directed by the Engineer, outside the edge of pavement for the road, paid for as part of HMA, Ultra Thin Overlay.

Place HMA Ultra Thin Overlay on the approach for paved County Roads 30.0 feet, or as directed by the Engineer, from the edge of the mainline.

The Contractor is responsible to ensure positive drainage in all paved approaches. The Contractor will be responsible for repairing, at the Contractor's expense, standing water or other drainage related issues.

Gravel Shoulders:

Contractor shall place Shoulder, CI II material 2.0 feet wide or as specified by the Engineer. When placing shoulder aggregate, material shall be placed directly on the shoulder. Shoulder material may not be placed on the asphalt. Shoulder material shall be flushed to the edge of pavement and blended to the existing shoulder on the outside. Shoulders shall be wheel rolled with heavy equipment for density. Steel drum rollers shall not be used. The Contractor is responsible to ensure positive drainage on gravel shoulders. The Contractor will be responsible for repairing, at the Contractor's expense, standing water or other drainage related issues.

Shoulder Gravel shall be a 100% crushed limestone Dense-Graded Aggregate 23A.

The Contractor shall provide a scale ticket for each load delivered to the job. All scale tickets shall meet MDOT requirements. The Contractor shall provide current scale certification to the Road Commission prior to hauling material. Loader scales will not be accepted. Any exceptions shall be noted on the bid sheet for the project.

Pavement Markings:

Pavement Markings shall be placed in accordance with the 2011 Michigan Manual of Uniform Traffic Control Devices. All zoning shall be the responsibility of the contractor. Payment for zoning shall be included in the items for pavement markings.

Traffic Control:

All traffic control, signing and traffic control items shall be paid for as **Traffic Control**. Traffic will be maintained by the Contractor in accordance with the 2011 Michigan Manual of Uniform Traffic Control Devices.

General Note:

All work shall be done in accordance with the Michigan Department of Transportation 2012 Standard Specification for Construction. All materials shall meet the requirements of the Michigan Department of Transportation Materials Source Guide.

For protection of underground utilities, and in conformance with Public act 53 of 1974, the contractor shall call MISS DIG a minimum of three full working days, excluding Saturdays, Sundays and Holidays, prior to beginning work in areas where public utilities have not been previously located. All MISS DIG participating members will be thus routinely notified. This does not relieve the Contractor from notifying utility owners who may not participate in the MISS DIG alert system.

Project Quantities:

Hughston Road – 2.20 mi. x 24'

HMA Ultra Thin Overlay	1,470 ton
Shoulder Cl. II	430 ton
Pavement Marking	11,616 ft.

QUANTITY TOTAL

Mobilization	1	LS
HMA Ultra Thin Overlay	1,470	ton
Shoulder, Cl. II	430	ton
Pavt. Mrkg., Waterborne, 4 inchYellow	11,616	Ft.
Traffic Control	1	LS

Bid Sheet

Board of Emmet County Road Commissioners
2265 East Hathaway Road
Harbor Springs, MI 49740

Gentlemen:

The undersigned proposes to furnish any and all materials, labor, and equipment necessary for the HMA Ultra-thin Paving of Hughston Road as spelled out in the "Invitation to Bid" for the prices below.

Project: **Hughston Road Ultra-Thin Asphalt**

Item	Quantity	Unit	Unit Price	Total
Mobilization	1	LS		
HMA Ultra Thin Overlay	1,470	Ton		
Shoulder, CL II	430	Ton		
Pavt Mrkg, Waterborne, 4 inch, Yellow	11,616	Ft		
Traffic Control	1	LS		
TOTAL PROJECT COST ESTIMATE =				

Bidder: _____

Address: _____

Signature: _____

Phone No.: _____

Printed Name: _____

Date: _____

Title: _____

E-mail _____

Emmet County Road Commission
Special Provision
For

Acceptance of HMA Mixtures on County/Township Projects

ECRC: BAG
12/20/17

a) Description

This Special Provision provides acceptance-testing requirements for use on this project. The HMA mixture shall be provided to meet the requirements of the standard specifications for construct except where modified herein. The HMA mixture quality assurance and acceptance shall conform to Section 501 of the 2012 Michigan Department of Transportation Standard Specifications for Construction except where modified herein. The MDOT HMA Production Manual, current edition, applies to this work.

b) Submittals

The contractor shall submit the following:

1. Job Mix Formula (MDOT Form 1911 or equivalent) for the project for review and approval by the Engineer. The Contractor shall not place any HMA without an approved JMF. Below are specific values that are required on the JMF (in addition to the normal requirements).
 - i. Fine Aggregate Angularity
 - ii. RAP Tiering based on JMF values
 - iii. Fines to Asphalt Ratio (based on Effective Asphalt Content)
 - iv. Soft Particle Percentage of each JMF Aggregate Type
2. Quality Control Plan.
3. A copy of all Contractor Quality Control Tests submitted within 7 working days of projection completion.
4. A copy of the Bill of Lading or Delivery Ticket for the Asphalt Binder for the project. The Bill of Lading must include the type of material that was previously hauled in the delivery tank.

c) Materials

Aggregates, mineral filler (if required), and asphalt binder shall be combined as necessary to produce a mixture proportioned within the master gradation limits and meeting the uniformity tolerances listed Table 1 and the quality assurance testing tolerances in Table 2 of this special provision. The master gradation range is to be used for establishing mix design only. Topsoil, clay or loam shall not be added to aggregates used in plant produced HMA mixtures.

The Maximum Percentage of Soft Particles for any given HMA mixture shall be 5%.

Table A: HMA Mixture Targets and Parameters

HMA Mix Type	VMA Minimum on any given Test (a,c)	VMA Target (c)	Asphalt Binder Content Minimum on JMF	Asphalt Binder Content Minimum on any given Test (a)	Fines to Asphalt Ratio Maximum on JMF (b)
4E1	14.0	Based on mix design parameter, the contractor shall establish & state their VMA Target on their mix design JMF, and shall adhere to the VMA Min. requirements	5.80	5.50	1.10
5E1	15.0		6.10	5.80	1.10
Ultra-Thin	15.0		6.00	5.70	1.20
a. The HMA parameter minimum is per any given QC/QA test, regardless of Tolerances listed in Table 2 of this Special Provision.					

- b. Value based on Pbe (Effective Asphalt Percent) for each given mix and JMF.
- c. VMA values are based on the Gsb (Bulk Specific Gravity) of the given HMA mixture not the Gse (Effective Specific Gravity).

Table B: HMA Mixture Targets and Parameters Cont'd (Ultra-Thin)

Superpave Air Voids (%)	4.5
Superpave Gyrations	35
Fine Aggregate Angularity (Min.)	40.0
Percent Crush (Min. %)	50.0
Aggregate Wear Index (AWI)	220
Sieve Size	Total % Passing
1/2 inch	100
3/8 inch	99-100
No. 4	75-95
No. 8	55-75
No.30	25-45
No. 200	3-8

d) **Asphalt Binder**

Liquid Asphalt Binder shall be a Performance Graded (PG) binder as specified in the bid documents and/or approved by the Road Commission.

e) **Air Voids**

Design Air Voids shall be 4.0% and shall be regressed to 3.0% in production **by the addition of virgin liquid asphalt (4E1 and 5E1).**

f) **Recycled Asphalt Materials**

Recycled Asphalt Pavement (RAP) is allowed in the HMA mixtures subject to the following requirements. The method for determining the binder range in HMA mixtures incorporating RAP is divided into two categories designated Tier 1 and Tier 2. Each tier has a range of percentages that represent the contribution of the RAP toward the total binder replacement. Binder replacement will be determined by weight. ***The use of Reclaimed Asphalt Pavement (RAP) shall be limited to Tier 1 (0% to 17%) RAP binder by weight of the total binder in the mixture, for all mixes (4E1, 5E1, and Ultra-Thin).***

Recycled Asphalt Shingles (RAS) will not be allowed in the HMA Mixtures.

Tier 1 – 0.0% to 17.0% RAP binder by weight of the total binder in the mixture

No binder grade adjustment is required to compensate for the stiffness of the asphalt binder in the RAP.

Tier 2 – 18.0% to 27.0% RAP binder by weight of the total binder in the mixture

The required asphalt binder grade must be at least one grade lower for the low temperature than the design binder grade required for the specific project mixture. For example, if the design binder grade for the mixture type is PG 58-28, the required grade for the binder in the HMA mixture containing >17.0% RAP would need to be PG 58-34.

g) **Construction**

After the Job Mix Formula is established, the aggregate gradation of the HMA mixture furnished for the work shall be maintained within the Range 1 uniformity tolerance limits permitted for the job-mix-formula specified in Table 1. However, if deviations are predominantly either below or above the job-mix-formula, the Engineer may order alterations in the plant to bring the mixture to the job-mix-formula. If two consecutive aggregate gradations on one sieve as determined by the field tests are outside Range 1 but within Range 2 tolerance limits, the Contractor shall suspend all operations. Contract time will continue during these times when the plant is down. Before resuming any production, the Contractor shall propose, for the Engineer's approval, all necessary alterations to the materials or plant so that the job-mix-formula can be maintained. The Engineer, after evaluating for effects on AWI and mix design properties, will approve or disapprove such alterations.

Random Liquid Asphalt Binder samples will be witnessed by the Engineer or Consulting Firm. The Engineer reserves the right to test any or all samples taken.

The crushed particle content of the aggregate used in the HMA mixture shall not be more than 10 percentage points above or below the crushed particle content used in the job-mix-formula nor less than the minimum specified for the aggregate in the project documents.

Quality Assurance and Acceptance testing will be as follows:

1. **Asphalt Mixture Sampling**

Acceptance sampling and testing will be performed by the Engineer using the sampling method and testing option agreed upon by the Engineer and Contractor. Each day of production, random samples will be obtained for each mix type. Acceptance testing will be performed at a frequency specified by the Engineer.

For each given day of production, if the daily mix tonnage per HMA mix type is under 500 tons, the Engineer reserves the right to test one sample and obtain a second sample for future testing if necessary. If the daily mix tonnage per HMA mix type is over 500 tons, the Engineer reserves the right to test one sample. If the first sample meets the Range 1 tolerances in Table 1 and Table 2, the Engineer can obtain a second sample and perform any of the following actions:

- a) Perform Full Quality Assurance testing
- b) Perform Volumetric Testing Only (Ignition, Extracted, or Calculated AC/Gmm, Air Voids, VMA)
- c) Retain custody of the sample for future testing if necessary

2. **Asphalt Binder Sampling**

The Contractor shall obtain the asphalt binder sample, correctly label the sample container, and complete a Sample Identification (Bituminous Material Form 1923B). The form must be filled out correctly and completely, and signed before the sample is given to the Engineer. The daily asphalt binder sample must be taken from a sampling spigot located on the pipeline supplying asphalt binder to the plant, in a position between the asphalt binder pump and the point where the asphalt binder is introduced to the aggregate mixture. Personnel safety is critical in selection the position of the sampling spigot. Give the binder sample and completed Form 1923B to the Engineer.

Daily Asphalt Binder Sample are to be in 1 pint (16 ounce), slip top, seamless ointment tins. The tin must be at least three quarters full. All containers must be labeled in a legible format with the following information provided:

- a. Project Name
- b. Binder Grade
- c. Binder Supplier Certification Number

- d. Supplier Name, City, and State
- e. Date Sampled
- f. Mixture Type

The Engineer may request to witness the sampling of the asphalt binder upon visit to the HMA Plant. The Engineer will complete the 1923B Form for the witness sample. The witness sample will be recorded as the daily asphalt binder sample. Any other asphalt binder samples from that same day will be discarded.

The Engineer may request a copy of the MDOT Binder Certification Documents. These copies must be presented to the Engineer when the respective daily binder samples and the 1923B Forms are picked up at the plant. The Engineer will review these documents and communicate any problems that may arise.

3. Mixture Testing

Mixture samples will be tested to verify gradation, binder content, and volumetric properties per Table 1 and Table 2 listed below.

If the Engineer elects not to perform Quality Assurance testing on a given day or a given project. The Contractor is required to still perform testing in accordance with Table 1 and Table 2 below. The Contractor’s Quality Control test results shall be sent to the Engineer within 2 working days of each day’s productions for a given HMA mixture.

Table 1: Quality Assurance/Control Tolerance Limits for HMA Mixtures

Parameter	Action Limits (Range 1)	Suspension Limits (Range 2)
% Passing the #8 and Larger Sieves	+/- 5.0%	+/- 8.0%
% Passing the #30 Sieve	+/- 4.0%	+/- 6.0%
% Passing #200 Sieve	+/- 1.0%	+/- 2.0%

Table 2: Quality Assurance/Control Testing Tolerance (+/-) from JMF or Target Values

Parameter	Action Limits (Range 1)	Suspension Limits (Range 2)
Binder Content (a)	0.30% (a)	0.50% (a)
Maximum Specific Gravity (Gmm)	0.013	0.020
Voids in Mineral Aggregate VMA (a,b)	0.75% (a,b)	0.80% (a,b)
Air Voids (c)	0.60%	0.90%
Fines to Effective Asphalt Ratio	0.65-1.20	0.60-1.25
<ul style="list-style-type: none"> a. Refer to minimum parameters in Table A of this special provision. b. These given limits are (+/-) from given targets in Table A of this special provision. c. Limits are (+/-) from JMF/Target Values listed in Section e. and Table B of this special provision. 		

4. **Density**

Pavement density will be measured by the Engineer, with a Nuclear Density Gauge, using the Gmm from the JMF for the density control target. The in-place density of the HMA mixture shall be at least 92.0% of the density control target. In-place density will be calculated by averaging four QA density test locations. Test locations will not be taken within 12 inches of any pavement edges or pavement joints.

h) **Rejected Materials**

1. **Gradation**

Action Limits - Range of values established in Table 1 – Quality Assurance/Control Tolerance Limits for HMA Mixtures. If exceeded on two consecutive tests, Contractor is required to take corrective action to bring the mixture produced into conformance with the specifications.

Suspension Limits – Range of values established in Table 1 – Quality Assurance/Control Tolerance Limits for HMA Mixtures. If exceeded on a single test, Contractor is required to suspend operations and determine, document, and correct the cause before resuming production. Prior to resuming production, the Engineer must be notified of the findings and approve correction action prior to resuming production.

2. **Asphalt Binder**

If a liquid asphalt binder sample does not meet the required specification, the mix produced from the point of the last liquid asphalt binder sample meeting specification to the failed sample shall be considered defective and shall be replaced at the sole expense of the Contractor.

3. **Volumetric Properties**

The acceptable tolerance for Binder Content, Gmm, VMA, Air Voids, and Fines to Pbe are listed in Table 2 above. Any HMA Mixture produced outside of these tolerances or any HMA Mixture that does not meet the requirements listed in the sub notes of Table 2 above will be subject to a negative adjustment or rejected. The resulting penalty will be a negative adjustment of 10% to 50% or remove/replace, to be determined by the Engineer.

4. **Pavement Density**

A negative 10% adjustment in the HMA Mixture contract price will be imposed if the pavement density (average of all gauge readings) is less than 92%, but equal to or greater than 91%; or if 2 or more readings are less than 91%.

A negative 25% adjustment in the HMA Mixture contract price will be imposed if the pavement density (average of all gauge readings) is less than 91%, but equal to or greater than 90%; or if 2 or more readings are less than 90%.

If the average density is less than 90% (for all gauge readings), the Contractor shall remove and replace the pavement at no cost to the Owner.

Subcontractor Certification
For
HUGHSTON ROAD ULTRA THIN ASPHALT

This project will not have any work completed by subcontractor(s).

Contractor Name

Contractor Representative Printed Name

Date

Contractor Representative Signature

Subcontractor: _____

Items of Work:

_____	_____
_____	_____
_____	_____
_____	_____

Subcontractor: _____

Items of Work:

_____	_____
_____	_____
_____	_____
_____	_____