



Antrim County Road Commission

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January 22, 2019

HMA PAVING BID REQUEST LOCAL ROADS No. 1

Sealed bids will be received until 1:00 PM, Tuesday, February 12, 2019 at which time they will be publicly opened and read. Bids shall be received at the office of the Antrim County Road Commission, PO Box 308, 319 E. Lincoln St, Mancelona, Michigan 49659-0308. Bids will be tabulated and a recommendation will be made to the Board of County Road Commissioners at their next regular meeting.

The Antrim County Road Commission (ACRC) requests bids for the following:

- 1) Bailey Road:** In Custer Township, beginning at County Line Road thence north to Elder Road, approximately 10,730'. Overlay existing pavement @ 220 lbs/syd using 5E1.

Bid Item 1) 5E1 Top: 2,980 tons

- 2) Cedar River Road:** In Mancelona Township, beginning at Scholl Road thence north approximately 7,315'. Pave scratch and wedge course over existing 22' wide pavement @ 110 lbs/syd (est. 983 tons) using either 4E1 or 5E1 and then overlay @ 165 lbs/syd (est. 1,475 tons) using 5E1. 25 tons additional for approaches.

Bid Item 2a) 4E1 or 5E1 Leveling: 983 tons
2b) 5E1 Top: 1,500 tons

- 3) Southwood Road:** In Mancelona Township, beginning at Montrose Drive thence easterly to Pineview Drive, approximately 4,855'. Pave scratch and wedge course over existing 20' wide pavement @ 110 lbs/syd (est. 593 tons) using either 4E1 or 5E1 and then overlay @ 165 lbs/syd (est. 890 tons) using 5E1.

Bid Item 3a) 4E1 or 5E1 Leveling: 593 tons
3b) 5E1 Top: 890 tons

- 4) Timberlake Drive:** In Elk Rapids Township, beginning at Williams Drive thence north to end, approximately 3,300'. Pave overlay existing pavement approximately 21' wide @ 83 lbs/syd using Ultra-thin HMA. 15 tons additional for cul-de-sac. 50 tons additional for wedging select areas prior to overlay.

Bid Item 4) HMA Ultra-thin: 385 tons

All 5E1 mix shall contain PG 58 -28 liquid asphalt and shall comply with the enclosed Antrim County Road Commission Special Provision for Acceptance of HMA Mixture on Non-Federal Aid Projects 02/09/18.

All Ultra-thin mix shall contain PG 58 -34 liquid asphalt and shall comply with the enclosed Antrim County Road Commission Special Provision for HMA Ultra-thin Overlay 03/21/2018.

Bid price shall include mobilization, mixing, hauling, placing and compacting the mix. Bid price shall also include traffic control in accordance with the current Michigan Manual of Uniform Traffic Control Devices.

Each Bid Item 1) through 4) will be awarded separately. All items will be paid for by the ton. Please specify mix type for leveling course on bid submittal.

Paving shall be completed by September 30, 2019 unless otherwise agreed to by the contractor and road commission.

The successful bidder shall enter into a contract with and provided by the road commission.

Label bid "**HMA PAVING NO. 1 BID**" plainly on the outside of a sealed envelope.

Burt R. Thompson, P.E.
Engineer-Manager

encl: Bid Submittal
SP for Acceptance of HMA Mixture on Non-Federal Aid Projects 02/09/18
SP for HMA Ultra-thin Overlay 03/21/2018
Sample Contract

ANTRIM COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
**ACCEPTANCE OF HOT MIX ASPHALT MIXTURE ON NON-FEDERAL AID
PROJECTS**

ACRC:BRT

1 of 4

02/09/18

- a. Description.** This special provision provides acceptance-testing requirements for use on this project. The HMA mixture and mixture quality assurance and acceptance shall conform to section 501 of the Michigan Department of Transportation 2012 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 (JMF) (MDOT Form 1911 or equivalent) for the project for review and approval by the Engineer. The JMF shall be designed in accordance with Table A. 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. Fines to Asphalt Ratio (based on Effective Asphalt Content)
 2. Quality Control Plan.
 3. A copy of all Contractor Quality Control Tests submitted within 7 working days of project 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.

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
<p>a. The HMA parameter minimum is per any given QC/QA test, regardless of Tolerances listed in Table 2 of this Special Provision.</p> <p>b. Value based on Pbe (Effective Asphalt Percent) for each given mix and JMF.</p> <p>c. VMA values are based on the Gsb (Bulk Specific Gravity) of the given HMA mixture not the Gse (Effective Specific Gravity).</p>					

- 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.
- f. **Recycled Asphalt Materials.** Recycled Asphalt Pavement (RAP) is allowed in the HMA mixtures. Recycled asphalt pavement (RAP) percentage that represents the contribution of the RAP binder toward the total binder, by weight, shall not exceed 17%. No binder grade adjustment is required to compensate for the stiffness of the asphalt binder in RAP.
- g. **Recycled Asphalt Shingles.** Recycled Asphalt Shingles (RAS) will not be allowed in the HMA.
- h. **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 and Number
- 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 those values listed in Section e. of this special provision. 		

4. **Density.** Pavement density will be measured by the Engineer with either a nuclear or non-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% to 98.0% of the density control target. The Engineer may cut cores for determining density, density verification and/or gauge calibration. Density testing and frequency will be determined by the Engineer. Density testing may be waived by the Engineer.

a) **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.

ANTRIM COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
HMA ULTRA-THIN OVERLAY

ACRC: BRT

03/21/2018

1. **Description.** This special provision provides acceptance testing requirements for use on HMA Ultra-Thin Overlay mixture.
2. **Materials.** The HMA and materials shall meet the following requirements:
 - a. **Bond Coat.** The bond coat material will be an emulsified asphalt conforming to the requirements of Section 904 of the Standard Specifications for Construction, Type SS-1h.
 - b. **HMA Ultra-Thin Overlay.** The Ultra-Thin HMA Overlay shall be composed of a mixture of aggregate, asphalt binder, and if required, mineral filler, as listed in Table 1.

Table 1 - HMA Ultra-Thin Overlay Mixture Requirements

	Medium Volume Comm. ADT
Marshall Air Voids %	4.5
VMA % (min.) based on Gsb	15.5
Fines/Binder % Max.	1.4
Flow (0.01 in.)	8-16
Stability Min. (lbs)	1200

- c. **Aggregate Gradation and Physical Properties.** The combined gradation of the aggregate portion of the mixture, including the mineral filler, shall be within the limits of Table 2. The physical properties of the combined aggregates shall meet the criteria of Table 3.

Table 2 - HMA Ultra-Thin Overlay Aggregate Gradation

Sieve Size	Total Passing Percent by Weight
½ inch	100
3/8 inch	99-100
No. 4	75-95
No. 8	55-75
No. 30	25-45
No. 200	3-8

Table 3 - HMA Ultra-Thin Overlay Aggregate Physical Requirements

Parameter	Medium Volume Comm. ADT 380 - 3400
Percent Crush (min.)	75%
Angularity Index (MTM 118) (min.)	3.0
L.A abrasion loss (max.)	35
Aggregate Wear Index (AWI)	260

In addition, the sum of the shale, siltstone, ochre, coal, clay-ironstone and particles which are structurally weak or are found to be non-durable in service shall not exceed 8.0 percent.

- d. Performance Graded (PG) Asphalt Binder shall be as specified in the bid request. The PG binder shall meet all the requirements in Section 904 of the Standard Specifications for Construction.
- e. Recycled asphalt pavement and recycled asphalt shingles will NOT be allowed in mix.

3. Construction.

- a. Bond Coat Application. The bond coat material will be applied to completely cover the prepared surface at a rate of 0.11 - 0.15 gal/yd².

- b. Mixture Application Rate. The target application rate shall be 83 lb/yd².
 - c. Density. Thoroughly compact the mixture immediately after placement.
 - d. Mix Design. The Contractor shall submit to the Engineer a complete mix design according to the Procedures Manual for Mix Design Processing following the Express Marshall Mix Design Procedures prior to the start of production.
4. **Quality Control (QC).** The Contractor shall provide and follow a QC plan for the Ultra Thin HMA Overlay that will maintain adequate QC for production and construction processes applicable to this specifications and the contract documents. For QC purposes, the Contractor is allowed to take informational cores for density and application rates. The Engineer shall be provided a copy of the QC plan for review, prior to mix production and placement. The elements of the QC plan shall be as listed in Section 503 of the Standard Specifications for Construction.
5. **Payment.** Payment for HMA, Ultra-Thin includes all materials, equipment, labor for preparing the surface, placing temporary pavement markings, placing the HMA Ultra-Thin Overlay mixture and complying with all requirements. The placement includes placement of a single course of mixture for full width coverage as specified.

AGREEMENT FOR SERVICES

THIS AGREEMENT shall be deemed effective on _____, between the Antrim County Road Commission, a Michigan municipal corporation, whose address is 319 E. Lincoln St., P.O. Box 308, Mancelona, Michigan 49659 (Road Commission) and _____, whose address is _____ (Contractor).

Recitals

- A. The Road Commission desires to engage the services of Contractor to perform construction services in compliance with the proposal submitted by Contractor, dated _____ and attached hereto as Exhibit A. (Project)
- B. Contractor has the time, skills, and desire to complete the Project under the terms and conditions of this Agreement.
- C. The parties, therefore, desire to specify their respective rights and obligations in this Agreement.

Agreement

NOW THEREFORE, in consideration of the mutual promises contained herein, the parties hereby agree as follows:

- 1. **Engagement of Services.** The Road Commission hereby engages Contractor to perform construction services in compliance with the proposal submitted by Contractor, dated _____ and attached hereto and incorporated herein by reference as Exhibit A. (Project)
- 2. **Duties.** Contractor shall perform the construction services necessary to complete the Project in a workmanlike manner. The work to be performed under this Agreement shall begin no later than _____, and shall be fully completed by no later than _____.
- 3. **Acceptance of Work.** Upon completion of the work to be performed under this Agreement, the Road Commission shall inspect the work and shall accept the work in writing when the Road Commission is satisfied the Project was performed as required under this Agreement.
- 4. **Warranty of Workmanship.** Contractor hereby warrants to the Road Commission that the work to be performed under this Agreement shall be free of defects in labor and materials for a period of one (1) year from the date the Road Commission accepts the work under paragraph 3 above. If a defect in labor or materials arises in connection with the work performed under this Agreement, the Road Commission shall notify Contractor of the defect in writing. Contractor shall then at its sole expense correct or repair the defect in a timely manner.

5. Manufacturers' Warranties. Upon completion of the work performed under this Agreement, Contractor shall transfer any manufacturers' warranties covering the material installed to the Road Commission.
6. Payment. The Road Commission shall pay Contractor following the Road Commission's written acceptance of the work as provided in paragraph 3 above a total of \$_____.
7. Independent Contractor. The parties hereby acknowledge and agree that Contractor is performing the services contemplated by this Agreement as an independent contractor and is not acting as an employee or agent of the Road Commission. As a result of Contractor' status as an independent contractor, the Road Commission shall not be responsible for any state or federal income tax withholdings and shall not be responsible for providing worker's compensation insurance coverage for Contractor or any of its employees.
8. Insurance. Throughout the time work is being performed under this Agreement, Contractor shall obtain and maintain public liability insurance in the sum of not less than ONE MILLION and 00/100 DOLLARS (\$1,000,000.00) for damages relating to any one person or for damages relating to any one occurrence. This insurance policy shall name the Road Commission as an additional named insured and shall contain a provision that the policy cannot be terminated, canceled, or substantially altered without thirty (30) days written notice to the Road Commission. Contractor shall provide notice of compliance with this insurance provision before beginning the work to be performed under this Agreement.
9. Indemnification. Contractor shall indemnify and hold harmless the Road Commission, its officers, board members, assigns, agents, servants, employees, and insurance companies from any and all damages, legal fees or expenses, losses, claims and actions which may arise out of performing the services contemplated by this Agreement.
10. No Assignment without Written Consent. Contractor shall not assign this Agreement to any other person or entity without first obtaining the written consent of the Road Commission.
11. Termination. The Road Commission may terminate this Agreement by giving to Contractor seven (7) days written notice of the intent to terminate this Agreement. In the event this Agreement is terminated as provided herein, Contractor shall only be paid the pro rata compensation based on the percentage of work completed as required in this Agreement to the date of termination.
12. Notice. Any notice required under this Agreement by either party shall be in writing to the party to be so notified and sent by certified mail, return receipt requested, to such address as noted herein, unless such address is changed and both parties have been notified consistent with this paragraph.
13. Governing Law. The parties agree that the validity, construction, enforcement and interpretation of this Agreement shall be governed by the laws of the State of Michigan.

- 14. Amendments. This Agreement may be amended by the mutual consent of both parties that is documented in writing and signed by both parties.
- 15. Entire Agreement. The Agreement contains the entire Agreement of the parties hereto and supersedes all prior agreements and understandings, oral or written, if any, between the parties.
- 16. Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the other provisions, and this Agreement shall be construed as if such invalid or unenforceable provision were omitted.

IN WITNESS WHEREOF, the parties have executed this Agreement to be effective the day and year first above written.

ANTRIM COUNTY ROAD COMMISSION, a Michigan municipal corporation

By: _____
Burt R. Thompson, P.E.

Its: Engineer-Manager

Dated: _____

Contractor

Dated: _____

Sample