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Cheboygan County Road Commission

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MATTHEW HALL
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PROPOSAL

Project: **I-75 Overpass at Topinabee Mail Route Overlay**

Type of Work: Mobilization, Waterproofing Membrane, HMA Leveling Course, HMA Overlay, and Pavement Markings.

The Cheboygan County Road Commission will accept Bids until **2:30 p.m.** local time on **May 2, 2022** at: 5302 South Straits Highway, Indian River, MI 49749. Bid packages are available at the Cheboygan County Road Commission.

ALL BIDS WILL BE SEALED AND PLAINLY MARKED AS TO THE PROJECT AND PROJECT NUMBER.

The bidder has examined the plans, specification, special provisions and related materials in the proposal, as well as the location of the work described in the proposal for this project, and is fully informed as to the nature of the work and conditions relating to its performance and understands that the quantities shown are approximate only and are subject to either increase or decrease.

The bidder hereby proposes to furnish all necessary machinery, tools, apparatus and other means of construction, do all the work, furnish all the materials except as otherwise specified and, or each unit price, lump sum, or one each named in the itemized bid, to complete the work in strict conformity with the plans therefore and the entire proposal which is incorporated by reference in these pages, and in strict conformity with the requirements of the 2020 Standard Specifications for Construction, Michigan Department of Transportation and such other special provisions and supplemental specifications as may be part of the proposal for this project.

The bidder further proposes to do such extra work as may be authorized by the Cheboygan County Road Commission, prices for which are not included in the itemized bid. Compensation shall be made on the basis agreed upon before such extra work is begun.

THE BIDDER UNDERSTANDS AND AGREES THAT THE CHEBOYGAN COUNTY ROAD COMMISSION RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS AND NO CONTRACTUAL RELATIONSHIP SHALL EXIST BETWEEN THE BIDDER AND THE CHEBOYGAN COUNTY ROAD COMMISSION FOR THE WORK DESCRIBED HEREIN UNTIL SUCH TIME AS THE CONTRACT HAS BEEN FORMALLY EXECUTED BY BOTH THE BIDDER AND THE CHEBOYGAN COUNTY ROAD COMMISSION.

I-75 Overpass at Topinabee Mail Route Overlay

Project Information:

Job Location: I-75 Overpass at Topinabee Mail Route

Type of Work: Mobilization, Waterproofing Membrane, HMA Leveling Course, HMA Overlay, and Pavement Markings

Owner: MDOT/Cheboygan County Road Commission

Project Dates:

Project Start Date: June 13, 2022 (see Project Coordination Section below)

Project Completion Date: September 2, 2022

The project shall be completed within fifteen (15) days of starting date.

A pre-construction meeting will be scheduled by the Cheboygan County Road Commission prior to project start. All project submittals are to be submitted for review at this meeting.

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)
3. See the Special Provision for Acceptance of HMA Mixtures on Township Projects for submittal requirements (must be submitted prior to paving).

Project Coordination:

Contractor shall coordinate all work to be after MDOT Maintenance Personnel have completed all necessary repairs to the Overpass Structure. Once MDOT work is completed, CCRC Engineer Technician will notify Contractor.

Structure Weight Limit

The Overpass Structure is weight limited. Single Unit Truck is limited to 42 Ton, Standard Semi Truck is 64 Ton and a Combination Truck is 74 Ton. See attached picture of Bridge Posting Sign.

Waterproofing Membrane:

The Overpass is at a skew to Topinabee Mail Route and the Waterproofing Membrane shall extend 10' before and after the bridge deck. Waterproofing Membrane shall be installed over bridge expansion joints. Waterproofing Membrane shall be installed in accordance with Section 710 of the 2020 Standard Specifications for Construction, Michigan Department of Transportation.

Location:

Right Lane: 14' wide x 415' long (19+01 to 23+16)

Left Lane: 14' wide by 415' long (18+86 to 23+01)

HMA Paving:

See the attached Special Provision for Acceptance of HMA Mixture for HMA mixture specifications.

It is at the Contractor's discretion to perform the overlay over the waterproofing membrane using one of the two options listed: Option 1 is to perform L & T, or Option 2 is T*

HMA Leveling Course (L):

Match existing width of 28', 18+61 to 23+41, this will consist of a leveling & wedging to achieve 2% cross slope. The Leveling Course shall start and end by being wedged onto existing pavement prior to waterproofing membrane. The leveling course shall be tapered 25' +/- before reaching and when leaving waterproofing membrane. The goal is to achieve a 110 lbs/Syd. The Waterproofing Membrane at its most outer extremities is 18+86 to 23+16.

HMA Overlay (T):

Match existing width of 28', 18+02 to 24+00. The Overlay shall start and end by being wedged onto existing pavement, and be tapered 50' +/- before reaching full depth of 1" (full depth shall be between 18+52 and 23+50). The goal is to achieve a 110 lbs/Syd.

HMA Overlay (T*):

Match existing width of 28', 18+02 to 24+00. The Overlay shall start and end by being wedged onto existing pavement, and be tapered 50' +/- before reaching full depth of 2" (full depth shall be between 18+52 and 23+50). The goal is to achieve a 220 lbs/Syd.

HMA APPLICATION TABLE					
Label	Mix	Application Rate (Lbs/Syd)	Design Performance Grade	Comments	Pay Item
T*	HMA, 5EL	220	58-28	Top Course	HMA, 5EL
T	HMA, 5EL	110	58-28	Top Course	HMA, 5EL
L	HMA, 5EL	110	58-28	Leveling Course	HMA, 5EL
1	AWI = 220 for all HMA, 4EL, HMA, 5EL and Ultra-thin.				
2	Apply HMA Bond Coat at 0.10 gallons per square yard between paving courses or as directed by the Engineer. Paid for as part of other HMA items.				

Gravel Shoulders:

All shoulder gravel will be completed by The Cheboygan County Road Commission.

Pavement Markings:

All pavement markings, shapes and dimensions shall conform with the Michigan Department of Transportation Pavement Marking Typical PAVE-905-SERIES, unless otherwise indicated.

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:

Traffic Control will be supplied by CCRC. Contractor must coordinate with CCRC for traffic control operations, at least 2 weeks prior to work starting. Road Commission contact for coordinating Traffic Control is Travis Horrocks, (231) 420-1158 or Mat MacGregor, (231) 420-1156.

Traffic Control will consist a Detour by closing the Topinabee Mail Route from S. Extension Road to Service Road. The Detour Route will be from Topinabee Mail Route to S. Extension Road to Mullutt-Burt Road to Topinabee Mail Route.

General Note:

All work being performed will be conducted in the safest manner possible and appropriate PPE shall be used at all times. All work shall be done in accordance with the Michigan Department of Transportation 2020 Standard Specification for Construction. Contractor assumes all responsibilities for Quality Control (QC) to assure the plans and specifications are met per the contract and to provide professional craftsmanship in each task being

performed. Any errors in plans or discrepancies found in the field shall be brought to the engineer's attention immediately.

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 174 of 2013, 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.

Insurance Requirements:

The Contractor shall furnish proof of general liability insurance in amounts not less than \$2,000,000 each occurrence and general aggregate, proof of automobile liability in amounts not less than \$2,000,000 combined single limit for each accident, bodily injury per accident, and property damage per accident, and in amount not less than \$1,000,000 for bodily injury per person. Such proof of insurance shall include a valid certificate of insurance demonstrating that the Cheboygan County Road Commission is additional insured party on the policy. Such insurance shall cover a period not less than the term of the project and shall provide that it cannot be cancelled without 30 days advanced written notice to the Cheboygan County Road Commission, by certified mail, first class, return receipt requested. The Contract/Project Agreement will be invalid if insurance expires during the authorized period of work described.

In addition to any liability or obligation by the Contractor that may otherwise exist, Contractor shall, to the fullest extent permitted by law, indemnify and hold harmless the Cheboygan County Road Commission and its commissioners, officers, agents and employees from and against any and all claims, actions, proceedings, liabilities, losses, and damages thereof, and any and all costs and expenses, including legal fees, associated therewith which the Cheboygan County Road Commission may sustain by reason of claims for or allegations of negligence or violation of the terms and conditions of the Contract/Project Agreement, arising out of the work which is subject of the Contract.

Bonding Requirements:

The successful Contractor shall furnish a performance bond equal to the contract price as assurance for faithful contract performance.

The Contractor shall also furnish a separate **surety bond** equal to the contract price as security for payment to all persons performing labor and furnishing materials in connection with this contract. The Contractor shall pay the premium for all bonds.

The bonds must meet requirements of Michigan Law.

Bonds shall be submitted and approved before contract execution.

Liquidated Damages:

Liquidated damages will be assessed for failure to complete this project by the specified date due to lack of effort, poor organization or ability to perform on the Contractor's part. Liquidated Damages may be waived by the Project Engineer. Liquidated damages will be assessed according to the table below:

Project Award Amount	Liquidated Damages
\$0 - \$150,000	\$500 per Calendar Day
\$150,001 - \$500,000	\$750 per Calendar Day
Over \$500,000	\$1,000 per Calendar Day

Soil Erosion and Sediment Control (SESC):

The Contractor shall implement and maintain the soil erosion control measures before and at all times during construction of this project. All SESC measures shall conform to current MDOT standards, manufacture guidelines and established best practices.

Daily inspections shall be made by the Contractor; periodic inspections shall be made by the Engineer to determine the effectiveness of the SESC measures. Any required corrections shall be made without delay.

All permanent erosion control measures shall be permanently maintained by the Cheboygan County Road Commission.

Stations:

0+00	Centerline of South Extension Road
18+02	P.O.B.
19+11	End of Bridge at centerline of Topinabee Mail Route
22+91	End of Bridge at centerline of Topinabee Mail Route
24+00	P.O.E.
34+88	Centerline of Service Road

Project Quantities:

Mobilization, 10% Max	1	LSUM
HMA, 5EL	230	Ton
Membrane, Performed Waterproofing	11620	Sft
Pavt Mrkg, Waterborne, 4 inch, White	1250	Ft
Pavt Mrkg, Waterborne, 4 inch, Yellow	1250	Ft

Bid Sheet

Board of Cheboygan 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 reconstruction of ROAD as spelled out in the "Invitation to Bid" for the prices below.

The Cheboygan County Road Commission reserves the right to reject any and/or all bids based on what is in the best interest of Cheboygan County.

Contractor Name: _____

Project:
Road

Item	Quantity	Unit	Unit Price	Total
Mobilization, 10% Max	1	LSUM		
HMA, 5EL	230	Ton		
Membrane, Preformed Waterproofing	11620	Sft		
Pavt Mrkg, Waterborne, 4 inch, White	1250	Ft		
Pavt Mrkg, Waterborne, 4 inch, Yellow	1250	Ft		
TOTAL PROJECT COST ESTIMATE =				

Bidder: _____

Address: _____

Signature: _____

Phone No.: _____

Printed Name: _____

Date: _____

Title: _____

Email: _____

Cheboygan County Road Commission
Special Provision

For
HMA Mixture Acceptance

CCRC: RBS
12/30/21

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 construction except where modified herein. The HMA mixture quality assurance and acceptance shall conform to Section 501 of the 2020 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).
 - a. Fine Aggregate Angularity
 - b. RAP Tiering based on JMF values
 - c. Fines to Asphalt Ratio (based on Effective Asphalt Content)
 - d. 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%.

The Minimum Fine Aggregate Angularity for any given HMA mixture shall be 40.0.

The Minimum Crush Percentage for 4EL and 5EL HMA mixtures shall be 65%.

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)
4EL	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
5EL	15.0		6.10	5.80	1.10
Ultra-Thin	15.5		6.00	5.70	1.20
<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>					

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

Superpave Air Voids (%)	4.5
Superpave Gyration	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 HMA Application Table in the bid specifications and/or as included on the plans. If not specified, then the following apply:

Table C: Asphalt Binder Selection

4EL	PG 58-28
5EL	PG 58-28
Ultra-Thin	PG 58-34

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 (4EL and 5EL).**

f) Recycled Asphalt Materials

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

Recycled Asphalt Pavement (RAP) is allowed in the HMA mixtures subject to the following requirements. 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 (4EL, 5EL, and Ultra-Thin).***

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.

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 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.

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

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.

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, 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 when collecting the sample from 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

- 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.

WEIGHT
LIMIT

 42T

 64T

 74T