

MIDLAND COUNTY ROAD COMMISSION

BID FORM

Sealed Proposals will be received at the office of the Board of Road Commissioners, County of Midland, at 2334 N. Meridian Road, Sanford, Michigan, 48657, until:

DATE: Wednesday, April 15th, 2015, at 2:00 p.m.

Item No. 12

a. STABILIZATION/PULVERIZATION

Estimated Quantity **55,000** SYDS

DESCRIPTION

This work shall consist of crushing existing bituminous pavement or seal coat. Additional aggregate will be placed by others prior to crushing. Aggregate added shall be mixed into the full crushed depth to obtain a reasonably uniform mixture. This mixture shall be compacted with a pneumatic-tired or sheep foot roller for the initial rolling. The finished grading and rolling will be provided by county forces. Section 305 of the 2012 MDOT specs shall apply.

ITEM 1

Contractor to furnish all necessary equipment and appurtenance to pulverize up to 8" depth, grade and compact the existing bituminous pavement or seal coat.

_____/Equipment rental per hour
_____/SYD

ITEM 2

Contractor to furnish all necessary equipment and appurtenances to pulverize a previous pulverized road.

_____/Equipment rental per hour
_____/SYD

ITEM 3

Contractor to furnish all necessary equipment and appurtenance to pulverize up to 14" depth, grade and compact the existing bituminous pavement or seal coat.

_____/Equipment rental per hour
_____/SYD

ITEM 4

Contractor to furnish all necessary equipment and appurtenance to pulverize up to 18" depth, grade and compact the existing bituminous pavement or seal coat.

_____/Equipment rental per hour
_____/SYD

Item No. 12
b. ASPHALT CEMENT STABILIZED BASE COURSE
Estimated Quantity **30,000** SYDS

DESCRIPTION

This work shall consist of construction of crushing and shaping the existing asphalt surface into an aggregate base course. Some locations to also include stabilization. This work will include all necessary labor, equipment and material to perform the following:

This work shall be accomplished in place and shall consist of crushing an existing bituminous or sealcoat surface to the depth specified, combining this crushed material with a portion of the underlying aggregate base and where specified, blending this combined material with hot asphalt cement, shaping to the proper elevation and slope then compacting to the proper density.

Asphalt Cement Stabilized Base Course, 4” _____/SYD

Asphalt Cement Binder _____/GAL.

Fog Seal _____/GAL.

MATERIALS

The bituminous material shall be as follows:

Asphalt Cement – PG 52-28 (or equivalent)

Fog Coat – CSS-1h (Cationic)

The bituminous material for stabilizing shall be applied at the rate as determined by the Engineer, so that the residual bitumen added will be between two (2) and five (5) percent by weight of the bituminous material. The temperature of the bituminous material for stabilizing shall be applied at a minimum of 350°F.

CONSTRUCTION

The proposal will specify crushing depth, crushing and shaping width and stabilization limits. The Road Commission will provide centerline offset stakes. Coordination between the Contractor and Road Commission shall be required to have all government corners witnessed, protected, and monument boxes removed prior to commencing work.

EQUIPMENT

1. Crushing: The crushing machine shall be a self-propelled rotary reduction machine capable of crushing the pavement to the required size and mixing the crushed material with the underlying aggregate base to the required depth while mixing in additional aggregate, where required.
2. Grading: Final grading equipment shall include automatic cross slope (crown) control and an automated grade referencing system for longitudinal control unless otherwise approved by the Engineer. Tuscola County Road Commission to spot check final grading operation. Contractor to coordinate.

3. **Compaction:** Rollers must meet the requirements as specified under Roller, Section 501.03.A of Michigan Department of Transportation 2012 Standard Specifications for Construction.
 4. **Stabilizing Equipment:** All equipment to be approved by the Engineer prior to beginning construction. The stabilizing plant shall be a single-pass, multi-drum, self-propelled machine combining a cutter rotor, a blending rotor and two mixing rotors in the mixing chamber. The mixing chamber shall have a positive depth control to insure a uniform depth of stabilized material and must be capable of loosening the base materials to the depth called for without disturbing the subbase. The stabilizing plant shall add the asphalt in predetermined and accurately metered quantities, while maintaining a constant and fixed rate of forward motion, thoroughly blending the asphalt with the road materials, and spreading the mixture uniformly on the roadway. The spray bar shall have nozzles spaced at increments not to exceed six (6) inches and shall operate in such a manner that all asphalt will be uniformly applied throughout the mixing chamber at the time of injection. The asphalt additive system shall consist of a positive displacement pump and shall display the temperature, pressure, and flow rate to accurately check the rate of application of the asphalt at any time. Note: Full width processing is required to eliminate longitudinal joints in the stabilized material necessitating the use of two (2) or more stabilizing machines; depending on the width of road to be processed.
- A. **Traffic Control.** The Road Commission will install a detour route for thru traffic and “Road Work Ahead” signs at each intersection within the project limits. Any additional signing needed to protect the motoring public from situations that have occurred due to unfinished work Bump Sign W8-1, Pavement Ends W8-3, etc. will be the responsibility of the contractor to supply, sandbag, and maintain. All costs will be considered included in other items of work.
- B. **Crushing and Grading.** Unless otherwise specified, the longitudinal crushed grade shall be referenced from the existing pavement surface and the centerline offset stakes.

Prior to crushing, the existing HMA or seal coat material on the shoulders may be bladed onto the mainline pavement to be processed into crushed material. Existing HMA pavement shall be uniformly crushed to the required width and depth, including a minimum of 2 inches of the aggregate base. After crushing, 95 percent of the crushed material shall have a maximum particle size of 1½ inch, with no particle size exceeding 4 inches.

The crushed material shall be uniformly spread and compacted. When additional material is needed to attain the proper cross section, MCRC will provide dense-graded aggregate. The Contractor shall spread added aggregate uniformly before crushing or place aggregate on the crushed surface and remix to the full crushed depth to obtain a uniform mixture. Midland County Road Commission to spot check final grading operation. Contractor to coordinate.

- C. **Dust Palliative and Water.** When required to aid in compaction and/or dust control, dust palliative and/or water shall be uniformly applied by the Contractor as approved by the Engineer. Source of dust/palliative must be approved by the Engineer prior to crushing operation.
- D. **Stabilized Base Course.** Where stabilization is specified, the crushed base material shall be combined with the proper amount of liquid asphalt cement prior to compaction. The bituminous material shall be added through the mixer at a rate of 1.5 gallons per square yard or recommended optimal rate to fit site conditions. Shaping and compacting shall be done while the bituminous is in a workable state.
- E. **Compacting and Shaping.** The crushed material, at a moisture content not greater than optimum, shall be compacted to not less than 98 percent of the maximum unit weight as obtained by the Michigan Modified T 180 Test in the Density Control Handbook.
- F. **Curing.** Any areas showing instability, not caused by base problems, will be re-mixed, regarded, and compacted at no additional cost, prior to other work proceeding. If the bituminous aggregate pavement is to be left unsurfaced for more than seven (7) days, a fog coat of CSS-1h shall be applied at the rate of 0.20-0.30 gallons per square yard.
- G. **Excess Crushed Material.** Excess crushed material (with proper gradation) shall be disposed of onsite as directed by the Engineer. Oversize material shall be properly disposed of offsite by the Contractor. This will be considered included in other items of work.
- H. **Weather Limitations.** HMA pavement shall not be crushed when anticipated precipitation may make the prepared base unstable. Seasonal requirements for crushing shall coincide with seasonal limitation for placing HMA mixture.
- I. **Acceptance Criteria.** The Engineer shall use the following criteria to accept the crush and shape work.
1. Crushed material meets particle size requirements.
 2. After final shaping, the maximum allowable variance between the surface and a 10-foot straightedge (any two contacts with the surface), shall be ½ inch.
 3. Just prior to paving, any undulations or variations from the criteria specified in subsections 305.03.B and 305.03.C of the Michigan Department of Transportation 2012 Standard Specifications for Construction have been corrected.
 4. Required density shall be maintained until the material has been surfaced. HMA surface to be applied within 7 to 10 days of base acceptance. HMA surface by others. Contractor to coordinate.

MEASUREMENT AND PAYMENT

<u>Contract Item (Pay Item)</u>	<u>Pay Unit</u>
HMA Base Crushing and Shaping and Compaction, ___ inch min.	Square Yard
Water.....	Unit
Dust Palliative, Applied.....	Ton
Asphalt Cement Stabilized Base Course, 4”.....	Square Yard
Asphalt Cement Binder.....	Gallon
Fog Seal.....	Gallon

- A. Payment for HMA Base Crushing and Shaping and Compaction, 6 inch min. will be measured by completed width and length as stated in this specification. Includes the scarifying, crushing, grading, disposal of excess material, remixing, shaping, rolling and compacting of existing HMA surface course or portions thereof.

Any unstable base caused by rain, over watering or the non-uniform application of water shall be repaired at the Contractor’s expense.

- B. When Water is required, it will be paid for separately as Water, per Unit. Water shall be measured in 1,000 gallon increments(units). Payment includes all costs for pro-curing, hauling, and placing on the crushed surface.
- C. When Dust Palliative is required, it will be paid for separately as Dust Palliative, Applied, per Section 812 of the Michigan Department of Transportation 2012 Standard Specifications for Construction.
- D. Payment for Asphalt Cement Stabilized Base Course, 4” includes the furnishing, hauling, placing, mixing of the asphalt cement into the crushed base material, shaping and compacting the mixture. This item will be measured by completed width and length as stated in this specification.

When additional aggregate is required, it will be hauled by the Midland County Road Commission. The Contractor shall coordinate and is responsible for placement and leveling of the material onsite. Payment will be considered included in other items of work.

- E. Payment for Asphalt Cement Binder shall be paid by the gallon applied to the base course. Load tickets shall be provided.

LIABILITY:

The Contractor shall at all times exercise extreme care and shall assume all liability for any damages resulting from his operations and shall hold the Midland County Road Commission harmless from any such claims or damages.

The successful bidder must also furnish certificates or policies giving satisfactory evidence of insurance coverage to the minimum extent of \$500,000.00 property damage and \$1,000,000.00 personal liability to insure adequate payment for any damage caused by his operations.

The contractor shall, prior to the start of work, file with the Midland County Road Commission a certificate of Workmen's Compensation Insurance. The attached certificate of insurance is required for the successful bidder or bidders.

NON-COMPLIANCE WITH PROJECT SPECIFICATION PROVISIONS

Any variation from the specifications of the project herein without written approval from the Midland County Road Commission and/or its authorized representative may result in, at the discretion of the Road Commission, the voiding and/or canceling of the acceptance of any bid and/or contract, resulting from this project.

The Board reserves the right to accept or reject any or all proposals and to re-advertise or to accept the proposal, which in their opinion, is in the best interest of Midland County.

COMPANY BIDDING _____

CONTACT PERSON _____

ADDRESS _____

PHONE/FAX _____

AUTHORIZED SIGNATURE

TITLE

INDICATE ON ENVELOPE: Company Name, Item Number, Bid Item, Time and Date