PROPOSAL

for

PROJECT NO. A459.540

WOLF CREEK ROAD RECONSTRUCTION

ALPENA COUNTY ROAD COMMISSION

1400 NORTH BAGLEY STREET

ALPENA, MI 49707

Bids will be opened at 3:30 p.m. on, Thursday, March 14, 2019, at the offices of the Alpena County Road Commission, 1400 North Bagley Street, Alpena, Michigan 49707.

The right is reserved to reject any or all proposals.
# ALPENA COUNTY ROAD COMMISSION
## PROJECT NO. A459.540—WOLF CREEK ROAD RECONSTRUCTION

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**Note:** MDOT 2012 Standard Specifications for Construction is incorporated herein by listing the following divisions:

- Division 1—General Provisions
- Division 2—Earthwork
- Division 3—Bases
- Division 4—Drainage Features
- Division 5—HMA Pavements and Surface Treatments
- Division 6—Portland Cement Concrete Pavements
- Division 7—Structures
- Division 8—Incidental Construction
- Division 9—Materials
- Errata
<table>
<thead>
<tr>
<th>Project:</th>
<th>Project No. A459.540—Bloom Road Reconstruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Work:</td>
<td>1.03 miles of earthwork, HMA surfacing, aggregate base, drainage improvements and other incidental work.</td>
</tr>
<tr>
<td>Location:</td>
<td>Ossineke Township, T29N, R7, Sections 31 and 32, Alpena County, Michigan. On Wolf Creek Road, from Hubert Road to Scott Road.</td>
</tr>
</tbody>
</table>
February 27, 2019

ADVERTISEMENT FOR BIDS
PROJECT NO. A459.540—WOLF CREEK ROAD RECONSTRUCTION
ALPENA COUNTY ROAD COMMISSION
ALPENA, MICHIGAN

Sealed proposals will be received by the Alpena County Road Commission at their offices at 1400 North Bagley Street, Alpena, Michigan, 49707, until 3:30 p.m. on Thursday, March 14, 2019, for the above project, at which time and place they will be publicly opened and read.

Approximate quantities of principal items of work are as follows:

- Embankment, CIP: 8,420 Cyd
- Excavation, Earth: 7,470 Cyd
- Subbase, CIP: 8,272 Cyd
- Aggregate Base, Mod: 6,955 Ton
- HMA, 13A: 2,528 Ton
- Slope Restoration: 22,000 Syd

Each proposal must be accompanied by a certified or cashier's check, bank money order, or bidders' bond in the amount equal to five percent (5%) of the amount of the proposal, payable to the Alpena County Road Commission, as a guarantee of good faith. This proposal guarantee shall be forfeited in case of failure of the successful bidder to execute the contract and furnish satisfactory bonds, as required, within ten (10) consecutive calendar days after being furnished with the necessary contract and bond forms.

The plans, proposal forms and instructions may be obtained at the office of the Road Commission at the above address or will be mailed upon request. No proposal will be received unless made on proposal forms furnished by and delivered to the Alpena County Road Commission prior to the scheduled closing time for receiving proposals set forth above. Each proposal must be sealed and plainly marked with the name of the project, bid opening date, and bid opening time on the outside of the envelope.

The Board reserves the right to reject any or all proposals, to waive any irregularities in any proposal, or to make the award as appears to be in the best interest of the Alpena County Road Commission.

BOARD OF COUNTY ROAD COMMISSIONERS
ALPENA COUNTY, MICHIGAN
Thomas J. Heise, Chairman
INSTRUCTIONS TO BIDDERS

The proposal shall be legibly prepared with ink.

All Unit Price, Lump Sum or One Each entries made on the BID ITEM pages by the bidder in the “Bid Price” column shall be handwritten in ink. Proposals containing typewritten Bid Price, Lump Sum or One Each entries by the bidder will be considered irregular and will be rejected.

The unit prices as stated will govern in determining the correct total of the bid.

If a unit price, one each or a lump sum bid already entered by the Bidder on the proposal form is to be altered, it shall be crossed out with ink, the new unit price, one each or lump sum bid entered above or below it and initialed by the Bidder, also with ink.

The proposal shall be legally signed and the complete address of the Bidder given thereon.

The proposal shall be submitted in its entirety with no modifications or changes except as indicated, and with no pages removed.
TO: Board of County Road Commissioners  
Alpena County, Michigan

Ladies and Gentlemen:

The undersigned has examined the plans, specifications and the location of the work described herein and is fully informed as to the nature of the work and the conditions relating to its performance and understands that the quantities shown are approximate only and are subject to either increase or decrease.

The undersigned 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 herein; and, for the unit prices or lump sums named in the itemized bid, to complete the work herein described in strict accordance with the plans therefore and in strict conformity with the requirements of the Michigan Department of Transportation 2012 Standard Specifications for Construction and such other special provisions and supplemental specifications as may be a part of this proposal.

The undersigned further proposes to do such extra work as may be authorized by the Board, 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 undersigned encloses a certified or cashier’s check, Bank Money Order or Bidder’s Bond in the amount of not less than 5% of the bid amount payable to the Alpena County Road Commission as a proposal guarantee of good faith. If the undersigned fails to execute the contract form or furnish satisfactory bonds to the Board of County Road Commissioners of Alpena County, Michigan, within ten (10) days after being furnished with the necessary contract and bond forms, said proposal guarantee shall be forfeited to the Board. The Board may, upon request by the undersigned based on valid considerations and made prior to expiration of the ten (10) day period, extend said period of time as the Board may deem appropriate. IT IS FURTHER UNDERSTOOD AND AGREED THAT IF THE BOARD, AFTER RECEIVING FROM THE UNDERSIGNED THE EXECUTED CONTRACT FORM AND SATISFACTORY BONDS, DETERMINES THAT IT IS NOT IN THE BEST INTEREST OF THE BOARD TO EXECUTE AND ENTER INTO SAID
CONTRACT, THEN IN THAT EVENT THE BID DEPOSIT WILL BE PROMPTLY RETURNED.
It is understood that the Bid Deposit of the undersigned will NOT be
returned until the Detailed Progress Schedule has been received and
approved and the contract form has been executed by the Board. The
proposal guarantees of all except the three lowest bidders will be
returned promptly.

The undersigned acknowledges receipt of addenda issued by the Board in
respect of the foregoing project(s), and being numbered _____,
_____ , _____, _____.

Dated and signed at ____________________________, State of
__________________________, this ______________________ day of
__________________________, 2019.

Contractor _____________________________________________
Signed By  _____________________________________________
Title      _____________________________________________
Address    _____________________________________________

Telephone  _____________________________________________
Fax/E-Mail _____________________________________________

----------------------------------------------------------

LEGAL STATUS OF BIDDER

1. A Corporation, duly organized and doing business under the laws
of the State of ___________________ , for whom ___________________ ,
bearing the official title of ___________________ , and
whose signature is affixed to this proposal, is duly authorized
to execute contracts.

2. A partnership, all of the members of which with addresses are:

_____________________________________________  ______________________
_____________________________________________  ______________________
_____________________________________________  ______________________

3. An individual, whose signature is affixed to this proposal.

_____________________________________________  ______________________

Business Name

_____________________________________________  ______________________

Owner Signature

(The bidder shall fill out the appropriate category and strike out the
other two.)
AFFIDAVIT

State of ______________________)

County of ______________________)

County Project No. A459.540—Wolf Creek Road Reconstruction

The undersigned __________________________________________________________
title _______________________________________ being duly sworn deposes and says
that ___________________________________________________ are/is the Contractor
submitting this bid, and that its agents, officers or employees have not directly or
indirectly entered into any agreements, participated in any collusion, or otherwise taken
any action in restraint of free competitive bidding in connection with this proposal for the
above project.

____________________________________

____________________________________

____________________________________

____________________________________

Taken, Subscribed, and Sworn before me this _____________ day of ________________
AD, 2019.

____________________________________

Notary Public in and for the
County of ___________________________
My commission expires ________________
Schedule of Items (Itemized Bid Sheet)

<table>
<thead>
<tr>
<th>Letting Date:</th>
<th>Thursday, March 14, 2019 3:30 PM</th>
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<tbody>
<tr>
<td>Contract ID:</td>
<td>A459.540</td>
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<tr>
<td>Location:</td>
<td>Wolf Creek Road Hubert Road to Scott Road</td>
</tr>
<tr>
<td>Description:</td>
<td>Earthwork, Subbase, CIP, Aggregate Base, HMA Paving, and Striping upgrades</td>
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</tbody>
</table>

| Project Number: | A459.540 | Project Engineer: | Rebecca E. Rivard |
| Estimate Number: | 1 | Date Created: | 11/1/2018 |
| Project Type: | Miscellaneous | Fed/State #: | |
| Location: | Wolf Creek Road | Fed Item: | |
| Control Section: | Hubert Road to Scott Road | |
| Description: | Earthwork, Subbase, CIP, Aggregate Base, HMA Paving, and Striping upgrades | |

**Instructions to Bidders:**

- The proposal shall be legibly prepared with ink.
- All Unit Price, Lump Sum or One Each entries made on the BIT ITEM pages by the bidder in the "Bid Price" column shall be handwritten in ink. Proposals containing typewritten Bid Price, Lump Sum or One Each entries by the bidder will be considered irregular and will be rejected.
- The unit prices as stated will govern in determining the correct total of the bid.
- If a Unit Price, One Each or a Lump Sum bid already entered by the Bidder on the proposal form is to be altered, it shall be crossed out with ink, the new Unit Price, One Each or Lump Sum bid entered above or below it and initialed by the Bidder, also with ink.
- The proposal shall be legally signed and the complete address of the Bidder given thereon.
- The proposal shall be submitted in its entirety with no modifications or changes except as indicated, and with no pages removed.
<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Units</th>
<th>Unit Price</th>
<th>Bid Amount</th>
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<tr>
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<td>2017002</td>
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<td>Cyd</td>
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<td>Ton</td>
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Contract # A459.540 (Wolf Creek Road Hubert Road to Scott Road)
MERL: 2018.11.1

2/21/2019 10:12:14 AM
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<th>Pay Item</th>
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<td>8120031</td>
<td>Channelizing Device, 42 inch, Oper</td>
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<td>8120170</td>
<td>Minor Traf Devices</td>
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<td>8120350</td>
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<td>Sft</td>
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<td>Syd</td>
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<td>8210001</td>
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<td>8210010</td>
<td>Monument Preservation</td>
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</tbody>
</table>

**Total Bid:**

Contractor: ____________________________________________________________

__________________________  ____________________________
(Signature)                 (Date)
The following deletions and additions are made to Sections 104, 108, and 109 of the 2012 Standard Specifications for Construction.

Subcontracting of contract work shall be in accordance with Section 108.01 of the Michigan Department of Transportation 2012 Standard Specifications for Construction except as modified herein.

References to Department and to the Michigan Department of Transportation shall be changed to the Board of County Road Commissioners of the County of Alpena (the “Board”).

Approval of the subletting of any portion thereof will not be given unless and until the competency of the subcontractor to bid on work of the type and magnitude proposed has been determined by the Board, nor until the contractor shall have filed with the Board a notarized or true copy of the subcontract. Competency of the subcontractor will be determined in accordance with the Special Provisions for Competency of Bidders.

At the time that a subcontractor is named in a bid to perform any of the Designated or Specialty Items, that subcontractor must be prequalified for the classification which includes the work it is to perform. If the subcontractor is not MDOT prequalified, the contractor will be required to provide the company name and address of a prequalified subcontractor or the Board will have the right to determine the competency of the subcontractor.

The principal contractor shall assure itself that the prospective subcontractor is experienced and qualified to perform the work to be subcontracted and that the subcontractor has sufficient equipment, workforce and supervision to complete the work to be subcontracted within the specified time limit.

The contractor may sublet the item or items of work stipulated below, provided the name of a qualified subcontractor, as determined by the Board, is listed in the space indicated, provided:

1. That the sum of the DESIGNATED and OTHER work subcontracted does not exceed 50 percent of the value of the work remaining after having subcontracted the value of SPECIALTY ITEMS from the original contract price and complies with the Standard Specifications and Special Provisions.
2. That the proposed subcontractor is determined competent to perform the work by the Board in accordance with the Special Provisions for Competency of Bidders.

If the contractor does NOT intend to do the work of any of the DESIGNATED or SPECIALTY ITEMS noted below, he MUST indicate the name of a proposed subcontractor in the space provided below and must sublet the appropriate items to the proposed subcontractor named, unless the named subcontractor is disqualified by the Board or unless the subcontracting of the items to another subcontractor determined competent by the Board is agreed to in writing by both the contractor and the named subcontractor. In the event that the named subcontractor is disqualified by the Board, the contractor may sublet the appropriate items to another subcontractor determined competent by the Board, provided that the same is agreed to in writing by both the contractor and the Board.

It is understood and agreed that neither the prequalification of the subcontractor by MDOT pursuant to 1933 P.A. 170 nor the approval of the subcontractor and/or subcontract by the Board is a guarantee or warranty of the subcontractor’s ability to perform or complete the work contained herein.

<table>
<thead>
<tr>
<th>DESIGNATED ITEMS</th>
<th>NAME OF PROPOSED SUBCONTRACTOR DOING WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>(cb) Plant-Mixed Hot Mix Asphalt/</td>
<td>Name ______________________________</td>
</tr>
<tr>
<td>Bituminous Paving</td>
<td>Address ______________________________</td>
</tr>
<tr>
<td></td>
<td>Phone No. ____________________________</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Name ______________________________</td>
</tr>
<tr>
<td></td>
<td>Address ______________________________</td>
</tr>
<tr>
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<td>Phone No. ____________________________</td>
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</tr>
<tr>
<td></td>
<td>Name ______________________________</td>
</tr>
<tr>
<td></td>
<td>Address ______________________________</td>
</tr>
<tr>
<td></td>
<td>Phone No. ____________________________</td>
</tr>
</tbody>
</table>
SPECIALTY ITEMS

_____________________________ Name ______________________________
Address ____________________________
___________________________
Phone No. __________________________

_____________________________ Name ______________________________
Address ____________________________
___________________________
Phone No. __________________________

NAMED SUBCONTRACTORS WHO ARE PREQUALIFIED BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION PURSUANT TO 1933 P.A. 1970 ARE REQUESTED TO ENCLOSE, WITH THIS PROPOSAL, A COPY OF THEIR CURRENT MDOT PREQUALIFICATION CLASSIFICATION AND NET NUMERICAL RATING AS EVIDENCE OF THEIR COMPETENCY TO PERFORM THE WORK BID ON.
SPECIAL PROVISIONS

TESTING OF MATERIALS

All materials must be tested and approved in accordance with Section 106 of the Standard Specifications, or as provided herein, before they enter into the construction of the project. Test results shall be reported to the Board of County Road Commissioners of Alpena County, Michigan. Testing may be performed by the Board or by a commercial testing company. Cost of testing shall be at the expense of the Board.

INSURANCE

The Contractor shall provide, for and in behalf of the Board, Owner’s Protective Liability Insurance. Such insurance shall provide coverage and limits the same as the Contractor’s Bodily Injury and Property Damage Liability Insurance specified in Subsection 107.10 of the Standard Specifications. Provide the following language on the proof of insurance:

Additional Named Insured: The Board of Alpena County Road Commissioners, Alpena County Road Commission, and all officers, agents and employees thereof, for claims arising out of, under, or by reason of operations of the Named Insured covered by a permit issued by the Board Commission.

DEFINITIONS

Subsection 101.03 of the Standard Specifications is hereby amended to include the following definitions:

BOARD: The Board of County Road Commissioners of Alpena County, Michigan.

COMMISSION:
1. The Michigan State Transportation Commission.
2. The Board of County Road Commissioners of Alpena County, Michigan.

STANDARD SPECIFICATIONS:
Michigan Department of Transportation 2012 Standard Specifications for Construction, except where specifically identified otherwise on the Plans or in the Proposal.
PROGRESS CLAUSE: Submit a complete, detailed and signed MDOT Form 1130, Progress Schedule, to the Engineer within seven (7) calendar days of confirmation of low bid by the department, or prior to the preconstruction meeting, whichever occurs earlier.

The progress schedule submittal must include, as a minimum, the controlling work items for the completion of the project and the planned dates (or work days for a work day project) that the work items will be the controlling operations. When specified in the proposal or contract documents the date the project is to be opened to traffic, the final project completion date, all interim completion dates, and any other controlling dates must be included in the project schedule.

After receiving Notice of Award, Work shall start no earlier than 10 days after receiving the notice or on a date agreed upon with the engineer. In no case, shall any work be commenced prior to receipt of formal notice of award by the department.

The entire project must be completed and open to traffic on or before the final project completion date of **June 26, 2020**. Construction shall begin in 2019 and if not completed shall be substantially complete prior to seasonal suspension limits outlined in the MDOT Spec. Book. Substantially complete will be defined as having all pay items completed with the exception of Aggregate Base, Conditioning, HMA Paving and Shoulder Cl II. Once work has been started in 2019 contractor will have a total of 40 work days to bring the project to "substantially complete". Commencement of paving operations in 2020 will allow 10 Work Days for Aggregate Base, Conditioning, HMA Paving, and Shoulder Cl II. No additional payment will be allowed for temporary traffic control shall the contractor chose to complete paving operations in 2020. This will be provided under lane closure at the contractors expense.

Failure by the Contractor to meet interim, final and/or any stage completion dates will result in the assessment of liquidated damages in accordance with subsection 108.10 of the Standard Specifications for Construction.

Prior to the start of work, the confirmed low bidder or awarded Contractor for the work covered by this proposal must attend a preconstruction meeting with the Engineer. The schedule for this meeting will be set after the low bidder is determined or the project is awarded to a Contractor. The Engineer will arrange the day, time and place for the preconstruction meeting.

The named subcontractor(s) for, Designated and/or Specialty Items, as shown in the proposal, is recommended to be at the preconstruction meeting if such items materially affect the work schedule.
a. General - The work covered by this special provision consists of measures to protect and maintain traffic and to protect the work while the contract is in force, as shown on the plans and specified herein. Traffic shall be maintained in accordance with Sections 104.08C, 104.11 and 812 of the Michigan Department of Transportation 2012 Standard Specifications for Construction, including any Supplemental Specifications, Special Provisions, and as specified herein.

Traffic shall be detoured during the project. Construction of Hubert Road intersection shall take place under Traffic Regulator Control. Hubert Road intersection shall be open to two lane through traffic every evening after the days construction activities have been completed.

The Contractor shall furnish, erect, and maintain all signs and lights for traffic control as necessary for the project. Said devices shall also include those specified inside the Construction influence area (CIA). The Contractor shall provide, erect and maintain any additional sign and other traffic control devices as directed by the Project Engineer.

The Alpena County Road Commission maintenance crews may perform maintenance work within or adjacent to the CIA. They will coordinate their operations to minimize the interference to the Contractor. No additional payment will be made to the Contractor for the joint use of the traffic control items. The contractor shall also coordinate this work with any other contractors performing work within the CIA or adjoining areas to avoid conflicts in the maintenance of traffic, construction signing, and the orderly progress of work.

b. Traffic Restrictions - No work shall be permitted on Sundays, or during any holiday period as defined by the following schedule;

- 3:00PM on Friday May 24, 2019 to 6:00AM on Tuesday May 28, 2019
- 3:00PM on Wednesday July 3, 2019 to 6:00AM on Monday July 8, 2019
- 3:00PM on Friday August 30, 2019 to 6:00AM on Tuesday September 3, 2019

Access shall be provided for School Buses and Emergency Services at all times.

Commercial and residential driveways shall remain accessible at all times.

The Contractor shall maintain access to the residents at all times through the use of M0020a (Tables for ‘L’; ‘D’ and ‘B’ Values), M0140a (Lane Closure – No Speed Reduction), and WZD 125-E (Temporary Traffic Control Devices).

d. Temporary Signs - Figure M0020, Tables for "L", "D", and "B" values shall be used to determine appropriate location for temporary signs, subject to approval of the Engineer.

Distances shown between construction, warning, regulatory, and guide signs shown on the figures are approximate and may require field adjustment, as directed by the Engineer.

All diamond-shaped warning signs shall be 4 ft. x 4 ft. mounted at a 5 ft. minimum bottom height in uncurbed areas, and 7 ft. minimum bottom height in curbed or pedestrian areas.

All temporary signs shall be constructed with legends and symbols flush to the sign face and not extending beyond the sign borders or edges.

The contractor shall routinely maintain the traffic control devices. Routine maintenance includes, but is not limited to, maintaining proper placement, weighting with sand bags, cleaning, and replacing lost or damaged devices.

The contractor shall be responsible for protecting the work area and must supply the necessary traffic control devices apart from those called for on the plans to delineate the work area from the adjacent properties. This work will be included in the pay item, Minor Traf Devices.

e. Measurement and Payment - The completed work as measured will be paid for at the contract unit prices.

Any additional signing or maintaining traffic devices required to expedite the construction shall be at the Contractor's expense.
NOTES:
- ALL SIGNS SHALL HAVE A 5' BOTTOM HEIGHT.
- SIGNS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

<table>
<thead>
<tr>
<th>CODE NUMBER</th>
<th>DESCRIPTION</th>
<th>SIZE</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-1</td>
<td>TYPE III BARREL</td>
<td>24&quot; x 18&quot;</td>
<td>2</td>
</tr>
<tr>
<td>M1-2 (R)</td>
<td>DETOUR (RIGHT)</td>
<td>30&quot; x 24&quot;</td>
<td>4</td>
</tr>
<tr>
<td>M1-2 (L)</td>
<td>DETOUR (LEFT)</td>
<td>30&quot; x 24&quot;</td>
<td>4</td>
</tr>
<tr>
<td>D3-1</td>
<td>WOLF CREEK ROAD</td>
<td>48&quot; x 48&quot;</td>
<td>10</td>
</tr>
<tr>
<td>W20-1</td>
<td>ROAD WORK AHEAD</td>
<td>48&quot; x 48&quot;</td>
<td>2</td>
</tr>
<tr>
<td>W2O-3</td>
<td>ROAD CLOSED AHEAD</td>
<td>48&quot; x 48&quot;</td>
<td>2</td>
</tr>
<tr>
<td>R11-1</td>
<td>ROAD CLOSED TO THRU TRAFFIC</td>
<td>60&quot; x 30&quot;</td>
<td>2</td>
</tr>
</tbody>
</table>
### SIGN MATERIAL SELECTION TABLE

<table>
<thead>
<tr>
<th>SIGN SIZE</th>
<th>TYPE I</th>
<th>TYPE II</th>
<th>TYPE III</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 36&quot; X 36&quot;</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>&gt; 36&quot; X 36&quot; ≤ 96&quot; TO WIDE</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 96&quot; WIDE TO 144&quot; WIDE</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>&gt; 144&quot; WIDE</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TYPE I: ALUMINUM EXTRUSION  
TYPE II: PLYWOOD  
TYPE III: ALUMINUM SHEET

Rounding of corners is not required for Type I or II signs. Vertical joints are not permitted. Horizontal joints through sign legend or symbols are not permitted.

### POST SIZE REQUIREMENTS TABLE

<table>
<thead>
<tr>
<th>POST TYPE</th>
<th>POST SIZE REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-CHANNEL STEEL</td>
<td>1 - 3 lb/ft*</td>
</tr>
<tr>
<td>SQUARE TUBULAR STEEL</td>
<td>1 - 2&quot; 12 or 14 GA*</td>
</tr>
<tr>
<td>WOOD</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Signs 4 feet and greater in width require 2 posts. Signs greater than 8 feet in width require 2 or 3 wood posts depending on area of sign. A maximum of 2 posts within a 7' path is permitted.
DISTANCE BETWEEN OUTSIDE POSTS.

SPREAD POSTS SO AS TO HAVE A 8' MIN. TO 9' MAX.

FOR ALL 11' AND 12' LONG SIGNS ON 3 WOOD SUPPORTS,

SIGN

2 POST SIGN SUPPORT SPACING

1/6L 2/3L 1/6L

3 POST SIGN SUPPORT SPACING

1/6L 1/3L 1/3L 1/6L

* FOR ALL 11' AND 12' LONG SIGNS ON 3 WOOD SUPPORTS, SPREAD POSTS SO AS TO HAVE A 8'MIN. TO 9'MAX. DISTANCE BETWEEN OUTSIDE POSTS.
ROAD WORK AHEAD

DETOUR AHEAD

RURAL

RURAL WITH ADVISORY SPEED PLATE

ROAD CLOSED AHEAD

RIGHT LANE CLOSED AHEAD

URBAN

URBAN

WALKWAY

WALKWAY

(CURBED AREAS OR WHERE WALKWAYS ARE PRESENT)

(CURBED AREAS OR WHERE WALKWAYS ARE PRESENT)

BOTTOM HEIGHT AND OFFSET

NOT TO SCALE
3 lb. U - CHANNEL STEEL POST
(NO SPLICE)

MOUNT SIGN ON OPEN FACE OF U - CHANNEL STEEL POST

WEIGHT = 3 lbs/ft
SECT. MOD. X.-X. = 0.31 CUBIC INCHES MIN.
3 lb. U - CHANNEL STEEL POST
(WITH SPLICE)

MOUNT SIGN ON OPEN FACE OF
UPPER U - CHANNEL STEEL POST
NOTES:

1. THE SPACER THICKNESS SHALL BE 1/16" LESS THAN THE GAP BETWEEN THE POST WHEN POSITIONED IN THE UNBOLTED CONFIGURATION.

2. THE EXTERIOR BOLT (CLOSEST TO LAP), SPACER, WASHER, AND NUT SHALL BE INSTALLED IN A PREPUNCHED HOLE 1" TO 2" FROM THE END OF THE LAP.

3. THE INTERIOR BOLT (FARDEST FROM LAP), SPACER, WASHER, AND NUT SHALL BE INSTALLED IN THE NEXT PREPUNCHED HOLE.

4. THE DRIVEN POST SHALL ALWAYS BE MOUNTED IN FRONT OF THE UPPER POST WITH RESPECT TO THE ADJACENT ONCOMING TRAFFIC, REGARDLESS OF THE DIRECTION THE SIGN IS FACING.

5. THE SPLICE LAP SHALL BE FASTENED BY FOUR-5/16" DIA. GALVANIZED A449 BOLTS (SAE J429 GRADE 5) OR GALVANIZED A325 BOLTS.

3 lb. U - CHANNEL STEEL POST
(WITH SPLICE)
3 lb. U - CHANNEL STEEL POST SIGN CONNECTION

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

1. MATERIAL: 12 GAUGE CARBON STEEL.
2. TOLERANCE ON ALL DIMENSIONS ± 0.0625"
3. FINISH-AFTER STAMPING AND PUNCHING, GALVANIZE ACCORDING TO CURRENT SPECIFICATIONS FOR ZINC (HOT GALVANIZE) COATINGS ON PRODUCTS FABRICATED FROM PLATES OR STRIPS

STEEL SIGN REINFORCING PLATE
REQUIRED FOR TYPE III SIGNS ONLY
WOOD POST BREAKAWAY HOLES/ DIRECT EMBEDMENT DETAILS

SAW CUT DETAIL
(MULTIPLE POST INSTALLATIONS)

WOOD POST DETAILS

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
TYPE II AND TYPE III SIGNS

WOOD POST CONNECTIONS

END VIEW  REAR VIEW

TYPE I SIGN - ERECTION DETAILS

WOOD POST CONNECTIONS
SQUARE TUBULAR STEEL POST

ANCHOR SLEEVE
TUBE SIZE = 2\(\frac{1}{2}\)" X 2\(\frac{1}{2}\)"
WALL THICKNESS = 12 GA
HOLES OPTIONAL EXCEPT FOR ANCHOR/POST CONNECTION AND SIGN CONNECTION LOCATIONS.

SIGN POST
TUBE SIZE = 2" X 2"
WALL THICKNESS =12 OR 14 GA

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN
NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
GENERAL NOTES:

1. A MAXIMUM OF TWO POSTS WITHIN A 7 FOOT PATH IS PERMITTED.

2. ALL SIGN POSTS SHALL COMPLY WITH NCHRP 350.

3. ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 42”.

4. BRACING OF POST IS NOT PERMITTED.

5. SIGN SHALL BE LEVEL, AND UPRIGHT FOR THE DURATION OF INSTALLATION.

6. ERECT POSTS SO THE SIGN FACE AND SUPPORTS DO NOT VARY FROM PLUMB BY MORE THAN 3/16” IN 3’. PROVIDE A CENTER-TO-CENTER DISTANCE BETWEEN POSTS WITHIN 2 PERCENT OF PLAN DISTANCE.

7. NO MORE THAN ONE SPLICE PER POST, AS SHOWN, WILL BE PERMITTED.

8. POST TYPES SHALL NOT BE MIXED WITHIN A SIGN SUPPORT INSTALLATION.

9. NO VERTICAL JOINTS ARE PERMITTED IN SIGN. NO HORIZONTAL JOINTS THROUGH SIGN LEGEND OR SYMBOLS ARE PERMITTED IN SIGN.

10. REMOVE SIGN POSTS AND/OR POST STUBS IN THEIR ENTIRETY WHEN NO LONGER REQUIRED.

11. ALL LABOR, MATERIALS, AND EQUIPMENT, INCLUDING TEMPORARY SUPPORTS REQUIRED TO INSTALL, MAINTAIN, RELOCATE, AND/OR REMOVE THE TEMPORARY SIGN, INCLUDING SUPPORTS, ARE CONSIDERED TO BE INCLUDED IN THE COST OF THE TEMPORARY SIGN.

12. SAW CUTS IN WOOD POSTS ARE TO BE PARALLEL TO THE BOTTOM OF THE SIGN.

13. POSTS SHALL NOT EXTEND MORE THAN 4” ABOVE TOP OF SIGN.

14. TEMPORARY WOOD SUPPORTS DO NOT REQUIRE PRESERVATIVE TREATMENT.
PERFORATED SQUARE STEEL TUBE OPTION

ANGLE IRON OPTION

BARRICADE RAIL SHEETING OPTIONS

TYPE III BARRICADES

Other Type III Barricades meeting current NCHRP crash worthy criteria can be found on the FHWA Safety website at http://safety.fhwa.dot.gov/roadway_dept/road_hardware/wzd.htm
TEMPORARY SIGN SUPPORT

WARNING LIGHT HOUSING MUST PROTRUDE FROM EDGE OF SIGN A MINIMUM OF 1" AND BATTERY MUST BE PLACED IN OUTERMOST SLOT.

2" SQUARE STEEL TUBE 6' HIGH 12 GAUGE FOR INSERTING UPRIGHT

ATTACH STUB TO ANGLE IRON BY ¼" x 2" WELDS ON THREE SIDES

2½" x 2½" ANGLE OR 2½" x 2½" ANGLE

OTHER temporary sign supports meeting current NCHRP crash worthy criteria can be found on the FHWA Safety website at http://safety.fhwa.dot.gov/roadway_dept/road_hardware/wzd.htm

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDAR PLAN
SPECIAL DETAIL
T.A.E.66. APPROVAL
WZD-125-E SHEET 2 OF 3
PLASTIC DRUM

NOTES:

- PLASTIC DRUM
- APPROX. 3'-0"
- REMAINDER OF DRUM 2" MAX.
- NON-REFLECTORIZED ORANGE
- REFLECTORIZED ORANGE
- REFLECTORIZED WHITE
- 30" MAX.

SYMBOLS TO BE USED ON PLANS

- REFLECTORIZED ORANGE
- REFLECTORIZED WHITE
- NON-REFLECTORIZED ORANGE

NOTE:

- DRUMS SHALL HAVE AT LEAST 4 HORIZONTAL REFLECTORIZED STRIPES - 2 ORANGE AND 2 WHITE - OF 6" UNIFORM WIDTH. ALTERNATING IN COLOR WITH THE PERIOD REFLECTORIZED STRIPES BEING ORANGE. NON-REFLECTORIZED SPACES BETWEEN THE HORIZONTAL REFLECTORIZED ORANGE AND WHITE STRIPES SHALL BE ORANGE IN COLOR AND EQUAL IN WIDTH.

PLASTIC DRUM
Subsection 102.01 of the Standard Specifications is hereby deleted and replaced as follows:

Bids are solicited only from responsible contractors known to be experienced and regularly engaged in work of similar character and scope to that covered by the Proposal.

The Board may make such investigations as it deems necessary to determine the ability of the bidders to perform the work, and the bidder shall furnish to the Board all such information and data for this purpose as the Board may request. The Board reserves the right to reject any bid if that evidence submitted by, or investigation of, such bidder fails to satisfy the Board that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

BIDDERS AND PROPOSED SUBCONTRACTORS WHO ARE PREQUALIFIED BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION PURSUANT TO 1933 P.A. 1970 ARE REQUESTED TO ENCLOSE, WITH THIS PROPOSAL, A COPY OF THEIR CURRENT MDOT PREQUALIFICATION CLASSIFICATION AND NET NUMERICAL RATING AS EVIDENCE OF THEIR COMPETENCY TO PERFORM THE WORK BID ON.
CONSIDERATION OF PROPOSALS

Add the following paragraph to Subsection 102.13 of the Standard Specifications:

When the work covered by a single proposal is divided into two or more projects, the total bid for all work included in each individual project will be used in consideration of the proposals. When a Contractor is determined to be the low Bidder on one or more projects covered by a single proposal and it is determined that he was properly issued the bidding documents by the Board, he may be considered eligible for award of a contract which includes only those projects for which he is the determined low Bidder. A single contract and bond forms will be prepared and executed covering all of the projects included in the proposal for which the Contractor is determined to be the low Bidder. In subsequent control of the work, the group awarded to a single Contractor will be considered as a single project.

EXECUTION AND AWARD OF CONTRACT

Subsections 102.07, 102.08, and 102.09 of the Standard Specifications are hereby deleted and replaced as follows:

Acceptance of the proposal of the determined lowest Bidder and the rejection of the other proposals, except those of the three lowest Bidders, will be made by the Board as soon as practicable. This acceptance does not constitute the award of the contract. The Board will transmit to the determined lowest Bidder, at the address given on his proposal, contract and bond forms which will be fully executed and returned to the Board within ten (10) days from the date of such transmission, unless such period is extended by approval of the Board upon request made prior to the expiration of the stated period. If the determined lowest Bidder fails or refuses to execute and return the contract and bond forms within ten (10) days from the date of such transmission, or within the extended period approved by the Board, he will be considered to have abandoned all his rights and interests in the award and his proposal guaranty may be declared forfeited to the Board and work may be awarded to another. In the event the contract form is not executed by the Board within 49 days after the opening of the proposals, the determined three lowest Bidders shall have the right to withdraw their bids without penalty. The project will be deemed awarded and a binding contract shall arise only when the contract form has been fully executed by both the successful Bidder and the Board.
RETURN OF PROPOSAL GUARANTY

The proposal guaranties of all Bidders, except those of the three determined lowest Bidders, will be returned promptly. The Board will hold the proposal guaranties of the three determined lowest Bidders until the Detailed Progress Schedule and the required insurance policies and certificates have been received and approved and the contract and bond forms have been fully executed by the successful Bidder and the Surety and the contract forms executed by the Board.

REQUIREMENTS OF CONTRACT BOND

Subsection 102.16 of the Standard Specifications is hereby deleted and replaced as follows:

The determined lowest Bidder shall furnish satisfactory performance and payment bonds each in the amount of not less than 100 percent of the total contract price. Such bonds shall be on the forms provided and shall meet the regulations of the Board and the requirements specified in the laws of Michigan.
It may become necessary to temporarily remove, salvage and replace locally-owned road and street signs, along with their supports, that presently exist within the construction limits of this project. The Engineer will notify the Contractor of the specific signs and supports which must be removed.

Prior to the start of construction, the Contractor shall carefully remove the signs and supports in such a way as to avoid damage to either and carefully store them outside the construction limits at a protected location near the project. Following completion of the construction work, the Contractor shall reinstall the salvaged signs and supports at or near their original location as directed by the Engineer.

Any road or street signs, or their supports, damaged or injured by the Contractor shall be repaired or restored, at the Contractor’s expense, in accordance with Subsection 107.07 of the Standard Specifications.

The cost of removing, salvaging, storing and replacing road and street signs and their supports shall be considered to be included in other items of work and will not be paid for separately.
SPECIAL PROVISION
FOR
PROGRESS PAYMENT FOR COMPLETED WORK
(CONTRACTS OF $30,000 OR MORE)

Subsection 109.04 of the Standard Specifications is hereby deleted and replaced as follows:
Progress payments and retainage shall be in accordance with the provisions of Act 524 of 1980, as amended, being MCL 125.1561 et. seq., and as follows:

Progress payments will be made monthly on the basis of the value of the work completed during the estimate period, less the percentage retained as specified herein, provided the work is progressing in accordance with the Progress Clause, provided the written orders of the Engineer have been or are being fulfilled, provided the time for completion has not elapsed, and provided that a minimum of at least one-half of the contract amount or $1,000.00 has been earned during the estimate period. Such payments will be based upon estimates prepared by the Engineer or Road Commission representative of the work items completed. No progress payment made to the contractor by the Board shall be deemed or construed as an acceptance of any part of the work under this contract.

The Board will deduct and retain 10 percent of the dollar value of all work in place until work is 50 percent in place, after which no additional retainage will be withheld unless the Board determines that the contractor is not making satisfactory progress or is not performing under other specific terms of the contract. If the Board so determines, the Board will deduct and retain 10 percent of the dollar value of the work more than 50 percent in place. The Board shall have the option to submit any matters in dispute regarding the above allowed retainage to an agent pursuant to the provisions of Act 524 of 1980, as amended, being MCL 125.1564, including specifically the option to refer to the agent those matters as allowed by, and utilize the procedures as provided by Section 4 of Act 524 of 1980, as amended, being MCL 125.1564.

If requested, the Board will deposit the retainage withheld under this contract in a separate interest bearing account in a financial institution regulated by the State of Michigan. When the project has been satisfactorily completed and accepted, and upon Board approval of the final progress payment, and except as provided in Section 4 of Act 524 of 1980 (MCL 125.1564), as amended, the Board will release the retainage and interest on retainage to the contractor together with the final progress payment, provided that prior to the release of the retainage, the interest on retainage, and the final progress payment, the contractor shall file with the Board the written consent of the Surety for such release and shall furnish an affidavit that all indebtedness by reason of the contract has been paid in full or satisfactorily secured.

Except as specified herein, Final Inspection, Acceptance, and Final Payment will be in accordance with Subsection 109.07 of the Michigan Department of Transportation 2012 Standard Specifications for Construction.
a. **Description** - The item of Clearing, Special shall be in accordance with Section 201 of the 2012 Michigan Department of Transportation Standard Specification for Construction except as hereinafter modified.

The work of Clearing, Special shall consist of cutting, grubbing, removing and disposal of trees, fences, brush, roots, stumps, shrubs and other vegetation from the Right-of-Way except as indicated on the plans or as directed by the engineer. Clear to the grading limits if within a Temporary Grading Permit.

Wood 6 inches and greater from removed trees shall be stockpiled outside the Right-of-Way if desired by the property owners; otherwise the Contractor shall dispose of it in accordance with the 2012 Michigan Department of Transportation Standard Specification for Construction.

This item includes removing fence as directed by the engineer.

b. **Material**: In accordance with section 201.02.

c. **Measurement and Payment** Measurement for Clearing, Special shall be in stations along the centerline of Wolf Creek Road (one side being included in one station), with no deductions for driveways or intersections. Any clearing required for drives and intersections is considered part of the pay item along the mainline and shall not be cause for an increase in the plan quantity.

The completed work as measured for Clearing, Special will be paid for at the contract unit price for the following contract item (pay item):

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing, Special</td>
<td>Station</td>
</tr>
</tbody>
</table>
ALPENA COUNTY ROAD COMMISSION
SPECIAL PROVISION
FOR
AGGREGATE BASE, MODIFIED

a. Description - This work shall be done in accordance with the requirements of Section 302 of the Michigan Department of Transportation 2012 Standard Specifications for Construction except as herein specified.

b. Materials - In accordance with Section 902 of the Michigan Department of Transportation 2012 Standard Specifications for Construction, except that in table 902-1 Grading Requirements for Coarse Aggregates, Dense-Graded Aggregates, and Open-Graded Aggregates, delete Note (d). The maximum limit for loss by washing will be 8.0 percent.

Crushed concrete will not be allowed.

c. Measurement and Payment- Measurement and payment shall be at the contract unit price per ton.

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate Base, Modified</td>
<td>Ton</td>
</tr>
</tbody>
</table>
a. **Description.**-This work shall be done in accordance with the requirements of Division 5 of the Michigan Department of Transportation 2012 Standard Specifications for Construction except as herein specified.

b. **Construction Methods.**- The Roller Method shall apply for Density testing. The nuclear gauge method of density testing is hereby waived.

c. **Materials.**-The HMA, 13A (Identity 1) for Top Course shall have a yield of 165 pounds per square yard.

The HMA, 13A (Identity 2) for Leveling Course shall have a yield of 165 pounds per square yard.

The HMA Approach, Modified (Identity 3), consisting of HMA, 13A, for driveways shall have a yield of 250 pounds per square yard.

The Aggregate Wear Index for all top course applications shall be 220.

The Performance Grade Asphalt Binder Range for the Mixture shall be 58-28.

Target Air Voids shall be reduced to 3.0%.

Recycled Asphalt Pavement (RAP). RAP binder content shall not exceed 3% by weight of the total binder in the mixture.

Use of Recycled Asphalt Shingles (RAS) is prohibited.

At no time shall the asphalt binder content fall below 5.0% regardless of the tolerance listed.

The HMA Bond Coat material shall be per Section 501.02. The uniform rate of application shall be 0.05 to 0.15 gallons per square yard, included in payment for associated items.

d. **Measurement and Payment.**-Measurement and Payment shall be at the contract unit price for the related items of work.
a. **Description.** Furnish hot mix asphalt (HMA) mixture, designed using Marshall Mixture Design Methods, according to the requirements of the Standard Specifications for Construction except as modified by this special provision.

b. **Mix Design.** Submit the mix design for evaluation according to the Department’s Hot Mix Asphalt Procedures Manual. Use a 50 blow Marshall hammer when compacting mixtures for developing Marshall mix designs.

c. **Recycled Mixtures.** Substituting reclaimed asphalt pavement (RAP) for a portion of the new material required to produce HMA mixture is allowed provided that the mixture is designed and produced to meet all criteria specified herein. RAP materials must conform to the standard specifications.

d. **Materials.** Table 1 provides the mix design criteria and volumetric properties. Table 2 provides the required aggregate properties. Use aggregates of the highest quality available to meet the minimum specifications. Use the mixture designation number shown in the contract item name when determining mix design properties from Tables 1 and 2.

e. **Measurement and Payment.**

<table>
<thead>
<tr>
<th>Contract Items (Pay Items)</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMA, (type)</td>
<td>Ton</td>
</tr>
</tbody>
</table>

---

**Table 1: Mix Design Criteria and Volumetric Properties**

<table>
<thead>
<tr>
<th>Mixture No.</th>
<th>2C</th>
<th>3C</th>
<th>4C</th>
<th>13A</th>
<th>1100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Air Void, % (a)</td>
<td>3.0</td>
<td>4.0</td>
<td>4.0</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>VMA (min) (b)</td>
<td>11.0</td>
<td>13.0</td>
<td>14.0</td>
<td>14.0</td>
<td>13.5</td>
</tr>
<tr>
<td>VFA</td>
<td>65-78</td>
<td>65-78</td>
<td>65-78</td>
<td>65-78</td>
<td>65-78</td>
</tr>
<tr>
<td>Fines to Binder Ratio (max) (c)</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Flow (0.01 inch)</td>
<td>8-16</td>
<td>8-16</td>
<td>8-16</td>
<td>8-16</td>
<td>8-16</td>
</tr>
<tr>
<td>Stability (min), lbs</td>
<td>1200</td>
<td>1200</td>
<td>1200</td>
<td>900</td>
<td>1100</td>
</tr>
</tbody>
</table>

a. Lower target air voids by 1.0% if used in a separate shoulder paving operation. Consider reducing air void targets to 3% for lower traffic volume roadways when designing 13A and 36A mixtures for local agency use.

b. VMA calculated using Gsb of the combined aggregates.

c. Ratio of the weight of aggregate passing the No. 200 sieve to total asphalt binder content by weight; including fines and binder contributed by RAP.
### Table 2: Aggregate Properties

<table>
<thead>
<tr>
<th>Mixture No.</th>
<th>2C</th>
<th>3C</th>
<th>4C</th>
<th>13A</th>
<th>1100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Percent Passing Indicated Sieve or Property Limit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 ½ inch</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1 inch</td>
<td>91-100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>¾ inch</td>
<td>90 max.</td>
<td>91-100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>½ inch</td>
<td>78 max.</td>
<td>90 max.</td>
<td>91-100</td>
<td>75-95</td>
<td>90-100</td>
</tr>
<tr>
<td>3/8 inch</td>
<td>70 max.</td>
<td>77 max.</td>
<td>90 max.</td>
<td>60-90</td>
<td>65-95</td>
</tr>
<tr>
<td>No. 4</td>
<td>52 max.</td>
<td>57 max.</td>
<td>67 max.</td>
<td>45-80</td>
<td></td>
</tr>
<tr>
<td>No. 8</td>
<td>15-40</td>
<td>15-45</td>
<td>15-52</td>
<td>30-65</td>
<td>45-70</td>
</tr>
<tr>
<td>No. 16</td>
<td>30 max.</td>
<td>33 max.</td>
<td>37 max.</td>
<td>20-50</td>
<td></td>
</tr>
<tr>
<td>No. 30</td>
<td>22 max.</td>
<td>25 max.</td>
<td>27 max.</td>
<td>15-40</td>
<td>20-45</td>
</tr>
<tr>
<td>No. 50</td>
<td>17 max.</td>
<td>19 max.</td>
<td>20 max.</td>
<td>10-25</td>
<td></td>
</tr>
<tr>
<td>No. 100</td>
<td>15 max.</td>
<td>15 max.</td>
<td>15 max.</td>
<td>5-15</td>
<td></td>
</tr>
<tr>
<td>No. 200</td>
<td>3-6</td>
<td>3-6</td>
<td>3-6</td>
<td>3-6</td>
<td>3-10</td>
</tr>
<tr>
<td><strong>Crushed (min), % (MTM 117)</strong></td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td><strong>Soft Particle (max) % (a)</strong></td>
<td>12.0</td>
<td>12.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Angularity Index (min) (b)</strong></td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>L. A. Abrasion (max), % loss (c)</strong></td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td><strong>Sand Ratio (max) (d)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

a. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 8.0 percent for aggregates used in top course. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 12.0 percent for aggregates used in base and leveling courses.

b. The fine aggregate angularity of blended aggregates, determined by MTM 118, must meet the minimum requirement. In mixtures containing RAP, the required minimum fine aggregate angularity must be met by the virgin material. NAA fine aggregate angularity must be reported for information only and must include the find material contributed by RAP if present in the mixture.

c. Los Angeles abrasion maximum loss must be met for the composite mixture, however, each individual aggregate must be less than 50.

d. Sand ratio for 13A and 36A no more than 50% of the material passing the No. 4 sieve is allowed to pass the No. 30 sieve.
a. **Description.** This special provision provides acceptance testing requirements for use on local agency projects that do not include the QC/QA special provision. The HMA mixture shall be provided to meet the requirements of the standard specifications for construction except where modified herein.

b. **Materials.** Aggregates, mineral filler (if required), and asphalt binder shall be combined as necessary to produce a mixture proportioned within the master gradation limits shown in the project documents, and meeting the uniformity tolerances listed in Table 1. The master gradation range is to be used for establishing mix design only. Topsoil, clay, or loam shall not be added to aggregates which are to be used in plant mixed HMA mixtures.

c. **Construction.** After the job-mix-formula is established, the aggregate gradation and the binder content 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 the contractor to bring the mixture into conformance with the job-mix-formula. If two consecutive aggregate gradations on one sieve, or binder contents 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.

Acceptance sampling and testing will be performed by the Engineer using the sampling method and testing option selected by the Engineer. Each day of production, a minimum of two samples will be obtained for each mix type. The minimum of one sample shall be tested per day. Acceptance testing will be performed at the frequency specified by the Engineer. No less than three samples shall be obtained for each mix type. Quality control measures to insure job control are the responsibility of the Contractor. Mixture may be accepted by visual inspection up to 500 tons total mixture quantity, with a minimum of 1 sample per mix type, per job.

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.
Table 1: Uniformity Tolerance Limits for HMA Mixtures

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>TOP &amp; LEVELING COURSE</th>
<th>BASE COURSE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>* Range 1</td>
<td>Range 2</td>
</tr>
<tr>
<td>Binder Content</td>
<td>± 0.40</td>
<td>± 0.50</td>
</tr>
<tr>
<td>% Passing # 8 and Larger Sieves</td>
<td>± 5.0</td>
<td>± 8.0</td>
</tr>
<tr>
<td>% Passing # 30 Sieve</td>
<td>± 4.0</td>
<td>± 6.0</td>
</tr>
<tr>
<td>% Passing # 200 Sieve</td>
<td>± 1.0</td>
<td>± 2.0</td>
</tr>
</tbody>
</table>

*This range allows for normal mixture and testing variations. The mixture shall be proportioned to test as closely as possible to the Job-Mix-Formula.

When the number of roller method is not specified, then the pavement density will be measured by the Engineer with a Nuclear Density Gauge using the Gmm from the Job Mix Formula (JMF) for the density control target. The required in place density of the HMA mixture shall be 92.0 - 96.0% of the density control target. The Contractor is responsible for establishing a rolling pattern that will achieve the required in place density.

d. **Roller Method.** Testing will be at the discretion of the engineer. The Rollers Method shall apply as detailed below.

<table>
<thead>
<tr>
<th>Average Laydown Rate, Square Yards Per Hour</th>
<th>Number of Rollers Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Compaction Rollers</td>
</tr>
<tr>
<td>Less than 600</td>
<td>1</td>
</tr>
<tr>
<td>600 - 1200</td>
<td>1</td>
</tr>
<tr>
<td>1200 - 2400</td>
<td>2</td>
</tr>
<tr>
<td>2400 – 3600</td>
<td>3</td>
</tr>
<tr>
<td>3600 and More</td>
<td>4</td>
</tr>
</tbody>
</table>

*The compaction roller may be used as the finish roller also.

Rolling of the Mixture shall begin as soon after placement as it will bear the roller without undue displacement or cracking. Rolling shall start longitudinally at the extreme sides of the lanes and proceed towards the center of the pavement, overlapping on successive trips by at least half the width of the drum. Each required roller will be 8 tons minimum in weight (or as directed by the engineer). The initial breakdown roller will be capable of vibratory compaction, and in no case will be more than 500' behind the laydown operations. The maximum allowable speed of each roller shall be 3 mph or 4.5'/sec. All compaction rollers will complete a minimum of 2 complete rolling cycles prior to the mat temperature reaching 180 degrees Fahrenheit. Finish rolling shall continue until all roller marks are eliminated and no further compaction is possible. The engineer or
representative will verify that the roller pattern has been adhered to and document same on the daily inspection logs.

e. Construction. The Engineer shall run and document a density frequency curve for each half day of production to determine the roller pattern and number of passes to achieve the maximum density. A density frequency curve is defined as the measurement and documentation of each pass of the finished roller until the in place density results indicate a decrease in value. The previous recording will be deemed the optimal density. The Engineer shall perform density tests using an approved non-nuclear gauge (per the manufacturer’s recommended procedures) or a nuclear density gauge in the 60 second mode with the JMF Gmm.

f. Rejected Mixtures. If for any one mixture, two consecutive aggregate gradations on one sieve or binder contents as determined by field tests exceed the uniformity tolerance of Range 2 under Table 1, or do not meet the minimum requirements for crushed particle content specified in the project documents, the mixture will be rejected. If such mixtures are placed in a pavement, the remaining portions of the failing field samples (minimum sample size taken shall be 10,000 grams) will be sent to the MDOT Central Laboratory to confirm the field test results. If the Laboratory’s results do not confirm the field test results and there are no price adjustments required due to test failures on the asphalt binder, then no price adjustments will be made for the mixture involved. If the Laboratory’s results confirm the field test results and if, in the Engineer’s judgment, the defective mixture can remain in place and there are no price adjustments required due to test failures on the asphalt binder, the contract unit price for the defective mixture involved, as determined from field tests, will be decreased on the following basis:

The contract unit price for material outside of Range 2 or with a crushed particle content below that specified in the project documents will be decreased 25 percent.

If three consecutive aggregate gradations on one sieve, or bitumen contents as determined by field tests are outside Range 1 but within Range 2 tolerance limits, the mixture produced from the time the third sample was taken until the gradation, or bitumen content is corrected back into Range 1 will be decreased in contract unit price by 10 percent. Field tests indicating that mixtures are subject to the 10 percent penalty will be confirmed in the same manner as mixtures subject to the 25 percent penalty as described herein.
a. Description - This work shall be done in accordance with the requirements of Section 501 of the Michigan Department of Transportation 2012 Standard Specifications for Construction except as herein specified.

b. Construction – This item includes shaping the existing subsurface prior to placement of approach material.

c. Measurement and Payment- Measurement and payment shall be at the contract unit price per Ton.

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMA Approach, Modified</td>
<td>Ton</td>
</tr>
</tbody>
</table>
a. **Description** - The items of Culv, Cl E, 24 inch, Modified, Culv, Cl E, 18 inch, Modified, Culv, Cl F, 15 inch, Modified, and Culv, Cl A, CSP, 18 inch, Modified shall be in accordance with Section 401 and 909 of the 2012 Michigan Department of Transportation Standard Specification for Construction except as hereinafter modified.

b. **Material**  In accordance with section 401 and 909. This item includes removal of existing culverts and headwalls encountered where a culvert is installed or removed.

c. **Measurement and Payment**  The completed work will be paid for at the contract unit price for the following contract item (pay item) and shall include removal of existing culverts and headwalls within the project limits:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culv, Cl E, 24 inch, Modified</td>
<td>Foot</td>
</tr>
<tr>
<td>Culv, Cl E, 18 inch, Modified</td>
<td>Foot</td>
</tr>
<tr>
<td>Culv, Cl F, CSP, 15 inch, Modified</td>
<td>Foot</td>
</tr>
<tr>
<td>Culv, Cl A, CSP, 18 inch, Modified</td>
<td>Foot</td>
</tr>
</tbody>
</table>
a. **Description** - This work consists of moving existing private owned gates and supporting posts. All work shall be in accordance with section 808 of the Michigan Department of Transportation 2012 Specifications for Construction.

b. **Materials** – Provide materials in accordance with section 808 of the Michigan Department of Transportation 2012 Specifications for Construction.

c. **Construction** – Move existing gate and supporting posts from existing locations to the edge of the Right of Way. Re-installation of moved posts shall be as directed by the engineer.

d. **Measurement and Payment**- Measurement and payment shall be at the contract unit price of Each. If a gate has an existing fence attached to it, additional payment will not be made for un-attaching the fence from the gate posts.

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gate, Moving</td>
<td>Each</td>
</tr>
</tbody>
</table>
a. **Description.** The work of Slope Restoration shall consist of restoring all disturbed areas and shall include preparation of the foundation as well as furnishing and applying topsoil 3”, seed, fertilizer, mulch and mulch anchor in accordance with Section 816 of the Michigan Department of Transportation 2012 Standard Specifications for Construction and as directed by the Engineer.

b. **Materials.** All materials shall be as specified in Section 816 of the Michigan Department of Transportation 2012 Standard Specifications for Construction. Seed shall be Mixture THV and fertilizer shall be Class A. Topsoil used shall be screened topsoil.

c. **Construction Operations.** The Contractor shall restore all areas as described in Section 816 of the Standard Specifications. Materials shall be placed at the rates described in Section 816. Restore to Class A slopes in lawn areas and Class B slopes in other areas as defined in Section 205.03N of the Standard Specifications.

d. **Measurement and Payment.** The completed work as measured for Slope Restoration will be paid for at the contract unit price for the following contract item (pay item).

Payment for Slope Restoration includes furnishing and placing Class A or Class B slopes, 3” topsoil, Seed THV, 100 lbs/acre of rye, chemical fertilizer nutrient Class A, mulch and mulch anchor. No separate payment shall be made for these items. Slope Restoration will be measured in place by area in square yards.

Measurement of Slope Restoration is to take place once the topsoil is placed and prior to seeding in order to provide an accurate quantity of materials required to properly restore the project. Slope Restoration measurements are to be performed and agreed upon by one each representative of the engineer and the contractor. The method of measurement is to be approved by the engineer prior to measuring.

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slope Restoration</td>
<td>Square Yard</td>
</tr>
</tbody>
</table>
a. **Description** - This work shall be done in accordance with the requirements of Section 807 of the Michigan Department of Transportation 2012 Standard Specifications for Construction except as herein specified.

b. **Materials** - Whenever mailboxes are encountered along the project, within the construction limits, the Contractor shall maintain all such existing mailboxes at or near their present location, in such a manner as to permit the uninterrupted delivery of the mail. As the progress of the work permits, the Contractor shall relocate the existing mailboxes to the outside edge of the new shoulder and reset them permanently in compliance with the requirements of the United States Postal Service.

The Contractor shall replace all mailboxes damaged by him during the conduct of the work with a new mailbox, similar in size and construction to the original, and which complies with the requirements of the United States Postal Service. All mailbox posts seriously damaged or destroyed by the Contractor during the conduct of the work shall be replaced with a new mailbox post, similar in size and construction to the original, or in accordance with the provisions of Section 807 of the 2012 Michigan Department of Transportation Standard Specifications for Construction, as directed by the Engineer.

When newspaper boxes, other boxes, reflectors, or other items are connected to a mailbox post they shall be replaced.

Contractor shall coordinate with the post office for maintenance of mail service.

Payment for maintaining mailboxes, relocating mailboxes, and replacing mailboxes and mailbox posts damaged by the Contractor, shall be considered as included in payment for other items of work and will not be paid for separately.
NOTICE TO BIDDERS

SPECIFICATIONS

This project shall be constructed in accordance with the Michigan Department of Transportation 2012 Standard Specifications for Construction, and all Errata, unless otherwise indicated on the plans or in the proposal.
NOTICE TO BIDDERS

PERMITS

A Department of Environmental Quality (DEQ) permit has been applied for to address wetland impact on this project. This notice serves as formal notice of the contractors responsibility to adhere to all requirements regarding this permit. No additional cost is anticipated nor implied.
The contractor shall cooperate and coordinate construction activities with any contractors that may be working adjacent to this project. A Local Agency project beginning at Scott Rd going north to Nicholson Hill Road is planned for construction this year. Please be advised that this is scheduled for a late summer letting date and is slated to be constructed under a Thru Traffic Closure. This may impact material hauling and as a condition of this notice no additional compensation shall be considered due to this.
NOTICE TO BIDDERS
UTILITY COORDINATION

The contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in Section 104.08 of the 2012 Michigan Department of Transportation Standard Specifications for Construction. In addition, for the protection of underground utilities, the contractor shall follow the requirements in Section 107.12 of the 2012 Michigan Department of Transportation Standard Specifications for Construction. Contractor delay claims, resulting from a utility, will be determined based upon Section 109.05 of the 2012 Michigan Department of Transportation Standard Specifications for Construction.

Public Utilities
The following Public Utilities have facilities located within the Right-of-Way:

Frontier Communications, 3249 Forest Road, Gaylord, MI 49735: Contract: Chuck Hardin, ph: 989-732-8575.

Alpena Power Company, 401 N. Ninth Street, Alpena, MI 49707: Contact: Jon Bullis, ph: 989-358-4949

Consumers Energy, 4100 W. M-76, West Branch, MI 48661: Contact: Rob Lockman, ph: 989-516-4101

LINN Operating, Inc, 3860 County Road 491, Lewiston, MI 49756: Contact: Mary Lucas, ph: 989-786-7046

The owners of existing service facilities that are within grading or structure limits will move them to locations designated by the Engineer or will remove them entirely from the highway Right-of-Way. Owners of Public Utilities will not be required by the County to move additional poles or structures in order to facilitate the operation of construction equipment unless it is determined by the Engineer that such poles or structures constitute a hazard to the public or are dangerous to the Contractor’s operations.

For protection of underground utilities and in conformance with Public Act 174, 2013, the Contractor shall dial 811 a minimum of three full working days, excluding Saturdays, Sundays, and holidays prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus far be routinely notified. This does not relieve the contractor of the responsibility of notifying utility owners who may not be a part of the “Miss-Dig” alert system.