

NAME OF CONTRACTOR \_\_\_\_\_

PROPOSAL AND SPECIFICATIONS  
FOR  
HIGHWAY CONSTRUCTION

COUNTY PRIMARY ROAD SYSTEM

PROJECT NO. PH 3417 – Roadway rehabilitation consisting of placing HMA shoulders, construction of new 10'x5' concrete box culvert, salvaging guardrail, slope reconstruction, cross culverts, HMA resurfacing and restoration on 30<sup>th</sup> Street, from 132<sup>nd</sup> Avenue to 134<sup>th</sup> Avenue in Monterey Township, Allegan County.

MONTEREY TOWNSHIP

December 10, 2014

BOARD OF COUNTY ROAD COMMISSIONERS  
OF ALLEGAN COUNTY, MICHIGAN

1308 Lincoln Road, Allegan, MI 49010

ALLEGAN COUNTY ROAD COMMISSION  
ADVERTISEMENT FOR BIDS  
COUNTY PRIMARY ROAD CONSTRUCTION

Sealed bids will be received by the Allegan County Road Commission at their office at 1308 Lincoln Road (M-89), Allegan, Michigan until 11:00 A.M., Local Time, December 10, 2014, and, at such time, be publicly opened and read aloud for the following:

PROJECT NO. PH 3417 – Roadway rehabilitation consisting of placing HMA shoulders, construction of new 10'x5' concrete box culvert, salvaging guardrail, slope reconstruction, cross culverts, HMA resurfacing and restoration on 30<sup>th</sup> Street, from 132<sup>nd</sup> Avenue to 134<sup>th</sup> Avenue in Monterey Township, Allegan County.

Complete specifications and bid forms are available at the Road Commission office. Specifications are available for viewing on the Road Commission website [www.alleganroads.org](http://www.alleganroads.org) under the Projects link. Project plans will only be available at the Road Commission office.

All bids must be submitted on forms furnished by the Road Commission and sealed in envelopes with the name and address of the bidder, and the item bid upon clearly marked thereon.

A bid deposit of at least 5% of the bid amount will be required for this item. The bid deposit may be in the form of certified check, cashier's check or bid bond.

The Commission reserves the right to reject any or all bids, to waive minor technicalities, and to accept the bid that is deemed to be in the best interest of the County of Allegan.

BOARD OF COUNTY ROAD COMMISSIONERS  
OF ALLEGAN COUNTY, MICHIGAN

Bruce D. Culver, Chairman  
Robert Kaarlie, Vice-Chairman  
John Kleinheksel, Member

PROJECT NO. PH 3417 – Roadway rehabilitation consisting of placing HMA shoulders, construction of new 10'x5' concrete box culvert, salvaging guardrail, slope reconstruction, cross culverts, HMA resurfacing and restoration on 30<sup>th</sup> Street, from 132<sup>nd</sup> Avenue to 134<sup>th</sup> Avenue in Monterey Township, Allegan County.

BID and AWARD

Date \_\_\_\_\_

Board of County Road Commissioners  
Of Allegan County  
1308 Lincoln Road  
Allegan, MI 49010

Gentlemen:

The undersigned has examined the plans, specifications, and 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 in the estimate are approximate only and are subject to either increase or decrease; and hereby proposed to furnish all necessary machinery, tools, apparatus and other means of doing the work, do all the work, furnish all the materials except as otherwise specified herein, and, for the unit prices named in the accompanying unit price schedule, to complete work in strict accordance with the plans and specifications therefore.

The undersigned further proposes to such extra work as may be ordered by you, prices for that are not included in the itemized bid, compensation therefore to be made on the basis agreed upon before such extra work is begun.

The undersigned agrees to complete all items of work on or before June 27, 2015. The schedule for liquidated damages is located in the general specifications.

The contractor shall submit a progress schedule subject to approval of the project engineer prior to the award of the contract.

The undersigned encloses a certified check, cashier's check, or Bid Bond, representing 5% of the bid, in the amount of \$\_\_\_\_\_, payable to the Allegan County Road Commission as a guarantee of good faith. If the contract is awarded to the undersigned, and the undersigned fails to furnish satisfactory bonds to the Road Commission within fifteen (15) days after being given notice of award said check will be forfeited to the Allegan County Road Commission as liquidated damage.

THE CONTRACT

The Contract Documents consist of the bid documents, this Agreement, Conditions of the Contract (General Supplementary, Special and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement; these form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiation, representations or agreements, either written or oral. If anything in the other Contract Documents is inconsistent with this Agreement, this Agreement will govern.

PROJECT NO. PH 3417 – Roadway rehabilitation consisting of placing HMA shoulders, construction of new 10'x5' concrete box culvert, salvaging guardrail, slope reconstruction, cross culverts, HMA resurfacing and restoration on 30<sup>th</sup> Street, from 132<sup>nd</sup> Avenue to 134<sup>th</sup> Avenue in Monterey Township, Allegan County.

ALLEGAN COUNTY ROAD COMMISSION  
ALLEGAN, MICHIGAN  
ITEMIZED UNIT PRICE BID SCHEDULE

ITEM OF WORK	QUANTITY	UNIT PRICE	TOTAL
Clearing	1 LS		
Station Grading	1 LS		
Subbase, CIP	200 Cyd		
Topsoil Surface, Salv, LM	500 Cyd		
Culvert Fill	40 Cyd		
Subgrade Undercutting, Type II	100 Cyd		
Geotextile, Stabilization	300 Syd		
Pavt for Butt Joints, Rem	200 Syd		
Aggregate, 6A	50 Ton		
Culv, CI D, Conc, 30 inch	64 Ft		
Culv, CI F, 12 inch	200 Ft		
Culv, CI F, 18 inch	120 Ft		
Culv, CI E, 18 inch	40 Ft		
Culv, Slotted, 12 inch	180 Ft		
Culv, Downspout, 18 inch	300 Ft		
Culv End Sect, Conc, 18 inch	2 Ea		
Culv End Sect, Conc, 30 inch	2 Ea		
Precast Concrete Box Culvert, 10' x 5'	104 Ft		
Aggregate Base, 6 inch	700 Syd		
Approach, CI II	100 Ton		
Approach, 21AA	100 Ton		
HMA 3C, Mod	600 Ton		
HMA 4C, Mod	2,450 Ton		
Guardrail, Remove and Replace	2,600 Ft		

Guardrail Approach Terminal, Type 2B	5 Ea		
Restoration	1 LS		
Extended Restoration	1 LS		
Seeding, Mixture CR	300 Lb		
Sign, Type B, Temp, Modified	199 Sft		
Plastic Drum, High Intensity, Lighted, Modified	50 Ea		
Barricade Type III, High Intensity, Dbl Sided, Ltd, Modified	4 Ea		
Portable Changeable Message Boards	2 Ea		
Riprap, Plain	200 Syd		
Riprap, Heavy	300 Syd		
Mulch Blanket	1,000 Syd		
Mulch Blanket, High Velocity	3,000 Syd		
Erosion Control, Silt Fence	3,000 Ft		
Erosion Control, Check Dam	100 Ft		
Project Cleanup	1 LS		
Pavement Marking, Waterborne, 4 inch, White	5,600 Ft		
Pavement Marking, Waterborne, 4 inch, Yellow	3,800 Ft		

TOTAL OF BID \$ \_\_\_\_\_

The undersigned bidder agrees that the following is a complete and accurate list of all sub-contractors to be utilized is awarded this contract and any change from this list will be permitted only with the consent of the Board of County Road Commissioners of Allegan County. **LIST NAME OF EACH SUB-CONTRACTOR AND BRIEF DESCRIPTION OF WORK TO BE DONE.**

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I hereby state that all of the information I have provided is true, accurate and complete. I hereby state that I have the authority to submit this bid, which will become a binding contract if accepted by the Board of County Road Commissioners of Allegan County. I hereby state that I have not communicated with nor otherwise colluded with any other bidder, nor have I made any agreement with nor offered or accepted anything of value from an official or employee of the Board of County Road Commissioners of Allegan County that would tend to destroy or hinder free competition.

In case the bidder is a co-partnership, each member must sign this proposal.

In case the bidder is a Corporation, this proposal must be executed by its duly authorized officials in accordance with its articles of incorporation and a certified copy of such articles must be attached hereto.

I hereby state that I have read, understand and agree to be bound by all the terms of this bid document.

SIGNATURE: \_\_\_\_\_ NAME: \_\_\_\_\_  
(Type or Print)

TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

FIRM NAME: \_\_\_\_\_ PHONE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
(Street Address) (City) (State) (Zip)

**FOR COUNTY USE ONLY – DO NOT WRITE BELOW**

ACCEPTED BY: BOARD OF COUNTY ROAD COMMISSIONERS  
OF THE COUNTY OF ALLEGAN, MICHIGAN

\_\_\_\_\_  
Chairman

\_\_\_\_\_  
Vice-Chairman

\_\_\_\_\_  
Member

\_\_\_\_\_  
Date

STANDARD SPECIFICATIONS

The Standard Specifications for Construction of the Michigan Department of Transportation, 2012 Edition shall apply. Nothing herein will be construed to create any obligation or duty on the part of the Board of County Road Commissioners of Allegan County, including obligations or duties which may be expressed or implied in the Standard Specifications for Construction of the Michigan Department of Transportation, unless specifically set forth in the contract documents.

The quantity for all pay items will not exceed more than 5% of the plan quantity unless the Contractor has received a written work order from the Allegan County Road Commission. Amounts in excess of the plan quantity will not be considered for payment unless the increase was directed by the Engineer or an error in calculations is proven.

CLEARING: The contractor will remove all trees and brush that are marked or are entirely or partially within the right-of-way (including easement areas) or within the slope stake line as shown on the plans and all stumps within five (5) feet of the right-of-way or within the slope stake line unless instructed otherwise by the Engineer. Trees will remain the property of the adjacent landowner, if they want them. If not, the contractor will dispose of them. The contractor will dispose of all stumps. Where called for on the plans or when directed by the engineer in the field, the contractor shall grind stumps to avoid disturbing underground facilities. The tree and stump removal will be done in accordance with Section 201 & 202 of the 2012 Standard Specifications for Construction.

The Contractor will not receive any additional compensation due to delays caused by utility companies.

METHOD OF PAYMENT FOR CLEARING: The item of "Clearing" will be paid for as a lump sum. No tree count is provided. It is the contractor's responsibility to inspect the site and verify accuracy of trees, stumps, and brush shown on the plans. No change in payment will be made for variances. Clearing stakes have been set. Direct any questions to the Allegan County Road Commission. Limits are from 132<sup>nd</sup> Avenue to 134<sup>th</sup> Avenue.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Clearing	Lump Sum

STATION GRADING: The item of "Station Grading" will include all culvert removal, fence removal, fence relocation regardless of fence type, obliterating roadway, rock excavation, concrete removal, earth excavation, embankment, HMA removal and saw cuts required. The contractor will place ditches and slopes as shown on the project cross section sheets. The earth excavation quantity does include the existing topsoil and pavement that must be stripped. The embankment quantity does include material to replace stripped topsoil and pavement in fill sections. The embankment quantity does not reflect shrinkage. Some excavation and embankment will be required to make a smooth transition into driveways; this is included in the earthwork figures. Additional driveway changes in slopes or ditch depths will not result in extra payment on this item.

Some material excavated from ditches will not be suitable for embankment and will be disposed of at the contractor's expense.

All slopes in yard areas will be finished to Class A tolerance. Slopes not in yards will be trimmed to Class B tolerance.

The Controlled Density Method (Section 205.03 page 135) of the Standard Specifications for Construction will apply. The engineer will run density tests at his discretion.

Any salvaged gravel required to maintain local traffic will be included in the item of Station Grading.

STATION GRADING (CON'T):

The removal of material from the shoulders to allow for the HMA 3C shoulder paving is included in the item of Station Grading.

The shaping and grading of the roadside shoulder from 132<sup>nd</sup> Avenue to 134<sup>th</sup> Avenue is also included in the scope of the project and paid for as Station Grading.

The following is an approximate list of earthwork quantities (Note: Quantities below are compacted in place units, Subbase not included). Earthwork does not include quantities for grading the shoulder berm beyond the shoulder widening limits.

<u>STATION</u>	<u>EARTH EX.</u>	<u>EMBANKMENT</u>
30 <sup>th</sup> Street	2,100 CYD	740 CYD

METHOD OF PAYMENT FOR STATION GRADING: The item of "Station Grading" will be paid for as a lump sum. The quantities listed above are approximate; any changes in quantity will not alter the lump sum pay quantity for Station Grading.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Station Grading	Lump Sum

SUBBASE, CIP: Section 301 of the Standard Specifications will apply. The contractor will furnish, place, compact and shape the material to obtain a minimum depth of 18 inch of Subbase over the box culvert area. Subbase will be Class II material.

The Subbase material will be compacted to not less than 95% of the maximum unit weight. Density tests will be done at the discretion of the Engineer.

METHOD OF PAYMENT FOR STRUCTURE, REM: The item of "Subbase, CIP" will be paid by the cubic yard, compacted-in-place.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Subbase, CIP	Cubic Yard

TOPSOIL SURFACE, SALV, LM: The existing topsoil will be stripped from the areas within the right-of-way or grading limits shown or as directed in the field, adjacent to roadway as detailed in the project description. The salvaged topsoil will be stockpiled for measurement. The item includes picking up, stockpiling, replacing and shaping the topsoil.

Prior to seeding, the Contractor will be required to drag all front and back slopes that are 1 on 3 or flatter. Slopes that are steeper than 1 on 3 must be left in a relatively smooth condition. Slope preparation will be included in the item of Topsoil Surface.

TOPSOIL SURFACE, SALV, LM (CON'T):

METHOD OF PAYMENT FOR TOPSOIL SURFACE, SALV, LM: The item of "Topsoil Surface, Salv, LM" will be paid for by the cubic yard as measured in the stockpile. The plan quantity is the maximum Cubic Yards that will be paid.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Topsoil Surface	Cubic Yard



CULVERT FILL: The item of “Culvert Fill” will include filling the culvert floor with material matching that of the stream bottom upstream and downstream of the culvert. This item is to be placed inside the proposed box culvert as shown on the plans.

METHOD OF PAYMENT FOR CULVERT FILL: The item of “Culvert Fill” will be paid for by the cubic yard as measured in place.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Culvert Fill	Cubic Yard

SUBGRADE UNDERCUTTING, TYPE II: The item of “Subgrade Undercutting, Type II” will consist of cutting out undesirable material below the Subgrade and will include backfilling with Class II material (Section 205 Standard Specifications for Construction). Subgrade undercutting will be done only if requested by the engineer. Backfill of Subgrade Undercutting will be compacted to not less than 95% of the Maximum Unit Weight. Tests will be run at the discretion of the engineer. This item will also include all muck, morrow and peat excavation and backfill required up to 6 feet deep.

METHOD OF PAYMENT FOR SUBGRADE UNDERCUTTING, TYPE II: The item of “Subgrade Undercutting, Type II” will be paid for by the cubic yard as measured from the area actually excavated from the roadway. Backfill for the undercutting is included in the price for Subgrade Undercutting, Type II. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Subgrade Undercutting, Type II	Cubic Yard

GEOTEXTILE, STABILIZATION The item of “Geotextile, Stabilization” will include all labor, material and equipment to place material as instructed by the Engineer. Material will be in accordance with section 308 of the Standard Specifications.

METHOD OF PAYMENT FOR GEOTEXTILE, STABILIZATION: The item of “Geotextile, Stabilization” will be paid by the square yard as measured in place.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Geotextile, Stabilization	Square Yard

PAVEMENT FOR BUTT JOINTS, REM

When a butt joint is specified, the Contractor will mill the existing bituminous surface to the thickness of the proposed overlay. The material will be removed for the full width of the joint. The removal will be tapered up to the original surface over a distance specified by the engineer. This item will also include disposing of the material milled.

METHOD OF PAYMENT FOR PAVEMENT FOR BUTT JOINTS, REM

The item of "Pavement for Butt Joints, Rem" will be paid for by the square yard.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Pavement for butt Joints, Rem	Square Yard

AGGREGATE, 6A: The item of "Aggregate, 6A" will include furnishing, hauling, placing, and shaping of the material. Material will meet MDOT 6A Specifications. This item is not shown on the plans, and will be used at the discretion of the Engineer. The item is intended to be used for pipe bedding over Geotextile Stabilization (separate item).

METHOD OF PAYMENT FOR AGGREGATE, 6A: The item of "Aggregate, 6A" will be paid for by the ton. Weight slips will be required.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Aggregate, 6A	Ton

CULVERT AND END SECTIONS: The items of culvert and end section will include all labor and material for placing the new culverts, end sections, and/or salvaging existing end sections. Excavating and backfilling will be included in the item of Culverts. If any material more than 0.5 feet below the culvert is ordered to be removed by the Project Engineer, it will be paid for as "Subgrade Undercutting, Type II".

All culverts and end sections will be laid true to the lines and grades given, bells or grooves upgrade, ends fully and closely jointed, and each section will have a full, firm bearing throughout its length. All pipe sections/joint assemblies for use in culvert will be selected from the Qualified Products List for Watertight Sewer and Culvert Joint Systems. Pipe with diameters greater than 24 inch will have the pipe joints wrapped with a non-woven Geotextile fabric. The fabric will have a minimum width of 36 inch and will be centered on the joint.

It is the Contractor's responsibility to protect all new culverts and existing culverts to be left in place from damage by heavy equipment by ramping or other means necessary. All cross culverts and sewer will be placed prior to the machine grading.

Cross Culverts will be placed at the following locations:

<u>STATION</u>	<u>TYPE</u>	<u>END SECTIONS</u>	<u>LENGTH</u>
35+66	Culv, CI D, Conc, 30 inch	2	64

METHOD OF PAYMENT FOR CULVERT AND END SECTION: The item of "Culvert" will be paid by the linear foot and the item of "End Section" will be paid for by the individual unit.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Culv, CI E, Conc, 18 inch	Foot
Culv, CI D, Conc, 30 inch	Foot
Culv, CI F, _ inch	Foot
Culv, Downspout, _ inch	Foot
Culv End Sect, Conc, 18 inch	Each
Culv End Sect, Conc, 30 inch	Each

CULVERT SLOTTED DRAIN: The item of “Culv, Slotted Drain,12” will include all labor, material and equipment to place the culvert as specified on the drawings. Excavating, concrete and backfilling will be included in the item of Culv, Slotted Drain, 12 inch..

Granular bedding, concrete support and backfill will be included in the item of “Culv, Slotted Drain, 12 inch”.

Culvert shall be a St. Regis Slotted Drain Culvert, Hancor Dura Slot, or approved equal culvert.

Section 302 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR CULVERT SLOTTED DRAIN: The item of “Culv, Slotted Drain, 12 inch” will be paid by the linear foot.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Culv, Slotted Drain, 12 inch	Foot

PRECAST CONCRETE BOX CULVERT The item of “Precast Concrete Box Culvert” will include all labor, material, and equipment necessary to install the precast concrete box culvert as shown on the plans. This work shall be done in accordance with the requirements of Sections 406, 701 and 909 of the 2012 Michigan Department of Transportation Standard Specifications for Construction and as specified herein. The work of “Precast Concrete Box Culvert” shall consist of the following:

- Furnishing the precast concrete box culvert, footings and joint material as shown on the plans.
- Installing the precast concrete box culvert and footings as shown on the plans.
- Installing all grout, joint sealers, shims, gaskets, geotextile wrap, inserts and underdrain required.
- Dewatering the area to allow construction of the footings and culvert.
- Maintaining stream flow during construction.
- Performing the channel excavation as shown on the plans and as directed by the engineer including required stream relocation and backfill of abandoned stream channel.
- Performing any excavation or backfill that is required due to the type of culvert provided.
- Furnishing, excavating for, placing and grading 6A bedding stone up to 2’ deep and 2’ wider than the culvert as required.
- Furnishing, placing and compacting structure backfill (est. 950 Cyds).

METHOD OF PAYMENT FOR PRECAST CONCRETE BOX CULVERT: The item of “Precast Concrete Box Culvert” will be paid for by the linear foot.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Precast Concrete Box Culvert, 10’ x 5’	Foot

AGGREGATE BASE, 6 INCH: The item of “Aggregate Base, 6 inch” will include all labor, material and equipment to place, and compact the base course.

The contractor may use 22A gravel; 22A slag; 22A limestone; 22A recycled concrete; or cold-milled bituminous material, which approximates the gradation for 22A material; 21AA gravel; 21AA slag; 21AA crushed concrete or 21AA limestone. When milled bituminous material is used as aggregate base, the density provisions of Standard Specifications are not waived. Milled bituminous material may be used full depth or on top of 22A gravel to obtain the specified thickness. 22A gravel shall not be placed on top of bituminous millings.

Section 302 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR AGGREGATE BASE, 6 INCH: The item of “Aggregate Base, 6 inch” will be paid for by the square yard, compacted in place.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Aggregate Base, 6 inch	Square Yard

APPROACH, CL II: The item of “Approach, Cl II” will include all labor, material and equipment to place and compact the material specified on the plans. Section 307 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR APPROACH, CL II: The item of “Approach, Cl II” will be paid for by the ton. Weight slips will be required.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Approach, Cl II	Ton

APPROACH, 21AA: The item of “Approach, 21AA” will include all labor, material and equipment to place and compact the material specified on the plans. This material will meet the requirements for dense graded 21AA in accordance with Section 902 of the Standard Specifications for Construction. This item may be utilized for driveway approaches throughout the project at the discretion of the Engineer.

Section 307 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR APPROACH, 21AA: The item of “Approach, 21AA” will be paid for by the ton. Weight slips will be required. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission. Amounts in excess of the plan quantity will not be considered unless an error in calculations is proven.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Approach, 21AA	Ton

## HMA

This item includes furnishing, hauling, and placing the required HMA mixture as indicated below. This work will also include furnishing and applying bond coat, cleaning and sweeping as required and placing mixes around catch basins and downspouts. No additional payment will be made for HMA valley curb. HMA material used on driveways, side roads, and intersections will also be included in this item and paid for as the HMA mixture used, no additional payment will be made. Driveway construction may be single course over HMA drives and shall be two courses where the concrete approach is removed.

### MIX DESIGNS

#### HMA 3C, MOD

1. The contractor shall submit a mix design with a range of 4.5 to 7.0 percent (effective bitumen) of bitumen content. Target air voids of 3.0% through regression.
2. The limits for the bitumen content of Range 1 shall be  $\pm 0.30$  from the optimum mix design.
3. PG 64-22 Performance Grade Asphaltic Cement Bituminous Material shall be combined with the mineral aggregate.
4. The Contractor shall submit a mix design and test results of the aggregates to be used at least two weeks before commencing paving. The mix design shall be submitted to an approved testing laboratory for design compliance tests. The Road Commission shall require a 1 point Marshall Test Mix Design.
5. All mix designs must be approved by the engineer.

#### HMA 4C, MOD

1. The Contractor shall submit a mix design with a range of 5.0 to 8.0 percent (effective bitumen) of bitumen content. Target air voids of 3.0% through regression.
2. The limits for the bitumen content of range 1 shall be  $\pm 0.30$  from the optimum mix design.
3. PG 64-22 Performance Grade Asphaltic Cement Bituminous Material shall be combined with the mineral aggregate.
4. The Contractor shall submit a mix design and test results of the aggregates to be used at least two weeks before commencing paving. The mix design shall be submitted to an approved testing laboratory for design compliance tests. The Road Commission shall require a 1 point Marshall Test Mix Design.
5. All mix designs must be approved by the engineer.

SPECIAL PROVISION  
FOR  
**MARSHALL HOT MIX ASPHALT MIXTURE**

1 of 2

**2. 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 for Construction.

**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.** The completed work as described will be paid for at the contract unit price for the following contract item (pay item):

<b>Contract Item (Pay Item)</b>	<b>Pay Unit</b>
HMA, <u>(type)</u> .....	Ton

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

	Mixture No.				
	2C	3C	4C	13A	36A
Target Air Void, % (a)	3.00	3.00	3.00	3.00	4.00
VMA (min) (b)	11.00	13.00	14.00	14.00	15.00
VFA	65-78	65-78	65-78	65-78	65-78
Fines to Binder Ratio (max) ©	1.2	1.2	1.2	1.2	1.2
Flow (0.01 inch)	8 -16	8 -16	8 -16	8 -16	8 -16
Stability (min), lbs	1200	1200	1200	900	900
a. Lower target air voids by 1.00% if used in a separate shoulder paving operation. Consider reducing air void targets to 3.00% 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**

	Mixture No.				
	2C	3C	4C	13A	36A
	Percent Passing Indicated Sieve or Property Limit				
1 ½ inch	100				
1 inch	91-100	100			
¾ inch	90 max.	91-100	100	100	
½ inch	78 max.	90 max.	91-100	75-95	100
⅜ inch	70 max.	77 max.	90 max.	60-90	92-100
No. 4	52 max.	57 max.	67 max.	45-80	65-90
No. 8	15-40	15-45	15-52	30-65	55-75
No. 16	30 max.	33 max.	37 max.	20-50	
No. 30	22 max.	25 max.	27 max.	15-40	25-45
No. 50	17 max.	19 max.	20 max.	10-25	
No. 100	15 max.	15 max.	15 max.	5-15	
No. 200	3-6	3-6	3-6	3-6	3-10
Crushed (min), % (MTM 117)	90	90	90	25	60
Soft Particle (max), % (a)	12.0	12.0	8.0	8.0	8.0
Angularity Index (min) (b)	4.0	4.0	4.0	2.5	3.0
L.A. Abrasion (max), % loss (c)	40	40	40	40	40
Sand Ratio (max) (d)	-	-	-	50	50
<p>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.</p> <p>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 fine material contributed by RAP if present in the mixture.</p> <p>c. Los Angeles abrasion maximum loss must be met for the composite mixture, however, each individual aggregate must be less than 50.</p> <p>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.</p>					

SPECIAL PROVISION  
FOR  
**ACCEPTANCE OF HMA MIXTURE**

1 of 2

**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 alterations in the plant to bring the mixture to 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. 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.

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.

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.



**Table 1: Uniformity Tolerance Limits for HMA Mixtures**

PARAMETER	TOP & LEVELING COURSE		BASE COURSE	
	* Range 1	Range 2	* Range 1	Range 2
Binder Content	± 0.40	± 0.50	± 0.40	± 0.50
% Passing # 8 and Larger Sieves	± 5.0	± 8.0	± 7.0	± 9.0
% Passing # 30 Sieve	± 4.0	± 6.0	± 6.0	± 9.0
% Passing # 200 Sieve	± 1.0	± 2.0	± 2.0	± 3.0

\*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.

**d. 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 (split sample) 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 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.

ROLLING OF THE HMA MIXTURE

Nuclear gauge testing requirements will be waived; the rolling operation will be controlled by the “Number of Rollers Method” shown below.

Average Laydown Rate, Square Yards per Hour	Number of Rollers Required	
	Compaction Rollers	Finish Rollers
Less than 800	1	*1
800-1800	1	1
1800-4000	2	1
4000-7000	3	1

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

METHOD OF PAYMENT FOR HMA MIXTURES

The item of “HMA Mixtures” will be paid for by the Ton.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
HMA 3C, MOD	Ton
HMA 4C, MOD	Ton

GUARDRAIL: The item of “Guardrail, Remove and Replace” will include all labor, material and equipment required to remove the existing guardrail, terminals, posts, and reflectors; stockpile materials; and reinstall the salvaged guardrail, terminals, posts, reflectors, and/or supply new guardrail, posts, terminals, and reflectors. Posts shall be 8 foot long. New approach terminals will be required.

Estimated quantities are: 75 ft of Curved Guardrail, Type B (25’ radius); 5 Ea Guardrail Approach Terminal, Type 2B; 1 Ea Guardrail Buffered End; and 2,213 Ft of Guardrail, Type B.

Section 807 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR GUARDRAIL: The item of “Guardrail, Remove and Replace” will be paid by linear foot of guardrail installed including approach terminals, curved rail, posts and reflectors.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Guardrail, Remove and Replace	Foot
Guardrail Approach Terminal, Type 2B	Each

RESTORATION: The item of “Restoration” will include all labor, material and equipment required to do the restoration. Restoration will consist of placing Seeding, Mixture TUF (220#/acre); Fertilizer, Chemical Nutrient, CI A (228#/acre); Mulch (2 ton/acre); and Mulch Anchoring. Place Mulch and Mulch Anchoring within one calendar day after seeding.

Section 816 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR RESTORATION: The item of “Restoration” will be paid for as a lump sum.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Restoration	Lump Sum

EXTENDED RESTORATION: The item of “Extended Restoration” will include all labor, material and equipment required to maintain the restoration of the construction site. The contractor shall be responsible for the permanent establishment of turf and maintaining the temporary and permanent soil erosion control measures for a period of one year from the date of final approval or when the site is stabilized and approved by the engineer. This may include reseeding, maintaining check dams and spillways, and fixing erosion on site.

METHOD OF PAYMENT FOR EXTENDED RESTORATION: The item of “Extended Restoration” will be paid for as a lump sum.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Extended Restoration	Lump Sum

SEEDING, MIXTURE CR: The item “Seeding, Mixture CR” will include all labor, material and equipment to place the seed as instructed by the engineer. When directed by the Engineer, cereal rye seed will be placed at a rate of 70 pounds per acre.

METHOD OF PAYMENT FOR SEEDING, MIXTURE CR: The item of “Seeding, Mixture CR” will be paid for by the pound.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Seeding, Mixture CR	Pound

SIGN, TYPE B, TEMP, MODIFIED: The item of “Sign, Type B, Temp, Modified” will include supplying all materials, equipment and labor required to erect and maintain construction signs as designated by the project engineer. Materials and placement will conform to the MDOT Standard Specifications for Construction and the Michigan Manual of Uniform Traffic Control Devices. Signs will be placed as instructed by the project engineer. All “CONSTRUCTION AHEAD” and “ROAD CLOSED AHEAD” signs SIGN, TYPE B, TEMP, MODIFIED (CON’T):

will be 48” x 48” mounted on two posts with one steady burn light. (Steady burn light and posts are included in the Sign, Type B, Temp, Modified item).

METHOD OF PAYMENT FOR SIGN, TYPE B, TEMP, MODIFIED: The item of “Sign, Type B, Temp, Modified” will be paid for by the square foot of Sign Face.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Sign, Type B, Temp, Modified	Square Foot

PLASTIC DRUM, HIGH INTENSITY, LIGHTED, MODIFIED: The item of “Plastic Drum, High Intensity, Lighted, Modified” will include all labor, equipment and material to furnish, set up, move and maintain the drums as required by the engineer. Drums will be equipped with one light.

Section 812 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR PLASTIC DRUM, HIGH INTENSITY, LIGHTED, MODIFIED: The item of “Plastic Drum, High Intensity, Lighted, Modified” will be paid for by the individual unit.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Plastic Drum, High Intensity, Lighted, Modified	Each

BARRICADE ,TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED, MODIFIED: The item of “Barricade, Type III, High Intensity, Double Sided, Lighted, Modified” will include all labor, equipment and material to furnish, set up, move and maintain the barricades.

The Contractor will furnish and maintain Barricades, Type III with three lights and an R-11-4 Sign (ROAD CLOSED TO THRU TRAFFIC) mounted above the barricade when indicated on the plans. The R-11-4 sign will comply with and be paid as “Sign, Type B, Temp, Modified’.

Section 812 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED, MODIFIED: The item of “Barricade, Type III, Double Sided, Lighted” will be paid for as individual units.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Barricade, Type III, High Intensity, Double Sided, Lighted, Modified	Each

PORTABLE CHANGEABLE MESSAGE BOARD: This item will include all equipment, labor, and material required to place and maintain the message boards according to Section 922 of the Standard Specifications.

Place one message board two weeks prior to road closure approximately 500’ north and south of 132<sup>nd</sup> Avenue and 134<sup>th</sup> Avenue. Message to be approved by the engineer.

METHOD OF PAYMENT FOR PORTABLE CHANGEABLE MESSAGE BOARDS

The item of “Portable Changeable Message Boards” shall be paid for as individual units.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Portable Changeable Message Boards	Each

RIPRAP, PLAIN: The item of “Riprap, Plain” will include all labor, equipment and material to place the Riprap as instructed by the engineer.

Section 813 of the Standard Specifications for Construction will apply to this item.

The Riprap will be placed over Geotextile Fabric, included in this item.

METHOD OF PAYMENT FOR RIPRAP, PLAIN: The item of “Riprap, Plain” will be paid for by the square yard. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission. Amounts in excess of the plan quantity will not be considered for payment unless an error in calculations is proven.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Riprap, Plain	Square Yard

RIPRAP, HEAVY: The item of “Riprap, Heavy” will include all labor, equipment and material to place the Riprap as instructed by the engineer.

Section 813 of the Standard Specifications for Construction will apply to this item.

The Riprap will be placed over Geotextile Fabric, included in this item.

METHOD OF PAYMENT FOR RIPRAP, HEAVY: The item of “Riprap, Heavy” will be paid for by the square yard. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission. Amounts in excess of the plan quantity will not be considered for payment unless an error in calculations is proven.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Riprap, Heavy	Square Yard

MULCH BLANKET: The item of “Mulch Blanket” will include all labor, material and equipment to place the mulch blanket as instructed by the engineer.

Section 816 of the Standard Specifications for Construction will apply to this item. The material for Mulch Blanket will meet the specifications set on page 853 (Section 917.15) of the 2012 MDOT Standard Specifications for Construction.

METHOD OF PAYMENT FOR MULCH BLANKET: The item of “Mulch Blanket” will be paid for by the square yard.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Mulch Blanket	Square Yard

MULCH BLANKET, HIGH VELOCITY: The item of “Mulch Blanket, High Velocity” will include all labor, material and equipment to place the mulch blanket as instructed by the engineer.

Section 816 of the Standard Specifications for Construction will apply to this item. The material for Mulch Blanket will meet the specifications set on page 853 (Section 917.15) of the 2012 MDOT Standard Specifications for Construction.

The contractor will also seed following placement of Mulch Blanket, High Velocity with Seeding, Mixture TUF at the rate of 400 pounds per acre (included in this item).

METHOD OF PAYMENT FOR MULCH BLANKET, HIGH VELOCITY: The item of “Mulch Blanket, High Velocity” will be paid for by the square yard.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Mulch Blanket, High Velocity	Square Yard

EROSION CONTROL, SILT FENCE: The item of “Erosion Control, Silt Fence” will include all labor, material and equipment to place silt fence as instructed by the engineer.

Section 208 of the Standard Specifications for Construction will apply to this item.

METHOD OF PAYMENT FOR EROSION CONTROL, SILT FENCE: The item of “Erosion Control, Silt Fence” will be paid for by the linear foot. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Erosion Control, Silt Fence	Foot

EROSION CONTROL, CHECK DAM: The item of “Erosion Control, Check Dam” will include all labor, material and equipment to place the check dam as instructed by the engineer.

Section 208 of the Standard Specifications for Construction will apply to this item. Stone or a permeable plastic berm, such as *Nilex, Inc. Geo-Ridge* or Equal will be allowed.

METHOD OF PAYMENT FOR EROSION CONTROL, CHECK DAM: The item of “Erosion Control, Check Dam” will be paid for by the linear foot.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Erosion Control, Check Dam	Foot

PROJECT CLEANUP: The item of “Project Cleanup” will include all labor, material and equipment to pick up stone, sticks, branches, roots and other debris from the project.

This item will also include moving all mailboxes to a temporary location to be approved by the mail carrier and to reset the boxes permanently on the project. If new boxes or posts are required, they will be supplied by the Road Commission. Project Cleanup also includes placing a 1” x 3” with the respective property address written on it in the front yard of each residence to assist with identification for emergency vehicles.

METHOD OF PAYMENT FOR PROJECT CLEANUP: The item of “Project Cleanup” will be paid for as a lump sum.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Project Cleanup	Lump Sum

PAVEMENT MARKING, WATERBORNE, 4 INCH, WHITE: The item of “Pavement Marking, Waterborne, 4 inch, White” will include all labor, material and equipment to place the pavement markings according to Section 811 of the MDOT Standard Specifications.

METHOD OF PAYMENT FOR PAVEMENT MARKING, WATERBORNE, 4 INCH, WHITE: The item of “Pavement Marking, Waterborne, 4 inch, White” will be paid for by the linear foot.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Pavement Marking, Waterborne, 4 inch, White	Foot

PAVEMENT MARKING, WATERBORNE, 4 INCH, YELLOW: The item of “Pavement Marking, Waterborne, 4 inch, Yellow” will include all labor, material and equipment to place the pavement markings according to Section 811 of the MDOT Standard Specifications.

METHOD OF PAYMENT FOR PAVEMENT MARKING, WATERBORNE, 4 INCH, YELLOW: The item of “Pavement Marking, Waterborne, 4 inch, Yellow” will be paid for by the linear foot.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Pavement Marking, Waterborne, 4 inch, Yellow	Foot

ALLEGAN COUNTY ROAD COMMISSION  
ALLEGAN, MICHIGAN

GENERAL SPECIFICATIONS

MICHIGAN DEPARTMENT OF TRANSPORTATION-STANDARD SPECIFICATIONS

The work covered by the plans and specifications will be done in accordance with the 2012 Michigan Department of Transportation Standard Specifications for Construction, except as qualified in supplemental specifications and special conditions of the Allegan County Road Commission or as agreed to in writing at the time of the award of the contract.

DEFINITION OF TERMS

See Section 101 of Michigan Department of Transportation Standard Specifications for Construction.

SPECIAL CONDITIONS

Special requirements, regulations or directions applying to a particular project may be made a part of these specifications.

THE WORK

The work consists of the completed services, construction and/or paving by the Contract Documents and includes all materials and labor incorporated or to be incorporated therein.

RESPONSIBILITIES OF CONTRACTOR

- A. Responsibility for and Supervision of Construction. Unless otherwise stated herein, Contractor will be solely responsible for all construction under this Contract, including the methods, techniques, sequences, procedures, and means, and for coordination of all work. Contractor will supervise and direct the work to the best of Contractor's ability, and give it all attention necessary for such proper supervision and direction.
- B. Discipline and Employment. Contractor will maintain at all times strict discipline among Contractor's employees, and contractor agrees not to employ for work on the project any person unfit for without sufficient skill to perform the job for which he or she was employed.
- C. Furnishing of Labor, Materials, etc. Unless otherwise stated herein, Contractor will provide and pay for all labor, materials, and equipment, including tools, construction equipment, and machinery, utilities, including water, transportation, and all other facilities and services necessary for the proper completion of work on the project in accordance with the Contract Documents.
- D. Payment of Taxes; Procurement of Licenses and Permits. Contractor will pay all taxes required by law in connection with work on the project in accordance with this agreement including sales, use, and similar taxes, and will secure all licenses and permits necessary for proper completion of the work, paying the fees for such licenses and permits.
- E. Compliance with Laws and Regulations. Contractor will comply with all laws and ordinances, and the rules, regulations or orders of all public authorities relating to the performance of the work under and pursuant to this Agreement including, but not limited to, the Occupational Safety and Health Act of 1970, the Michigan Occupational Safety and Health Act, and the rules and regulations of the Michigan Construction Safety Commission.



RESPONSIBILITIES OF CONTRACTOR (CON'T):

F. Responsibility for Negligence of Employees and Subcontractors. Contractor assumes full responsibility for acts, negligence or omissions of all of Contractor's employees on the project, for those of Contractor's subcontractors and their employees, and for those of all other persons doing work under a contract with Contractor.

G. Responsibility for Safety. Unless otherwise stated herein, at Contractor's expense, Contractor will take all necessary precautions (including, without limitation, the furnishing of traffic control, barricades, traffic control devices, flaggers, warning lights, signs, warning signs, safety channels, channelization devices, guards, fences, walks, flags, cables and lights) for the safety of, and the prevention of injury, loss and damage to, persons and property (including, without limitation, in the term persons, members of the public, employees, Contractor's subcontractors and their respective employees, other contractors, their subcontractors and respective employees) on, about or adjacent to the location where the work is being performed, and will comply with all applicable provisions of safety rules, ordinances, codes, regulations, and orders of duly-constituted public authorities including, but not limited to, the Michigan Manual of Uniform Traffic Control Devices.

H. Responsibility of Subcontractors. The Contractor will require any subcontractor hired by the Contractor for the purpose of performing any of the work described by the Contract documents to be bound by all of the terms and conditions of the Contract documents and to perform the work in accordance with the Contract documents. Each and every condition of the Contract documents, including without limitation, the RESPONSIBILITIES OF THE CONTRACTOR, will be made a condition of each subcontract entered into by the Contractor in conjunction with the performance of the work.

INDEMNIFICATION

To the fullest extent permitted by law, the Contractor will indemnify, defend, and hold harmless The Board of County Road Commissioners of Allegan County, its officers, employees, representatives and agents from and against any and all claims, damages, demands, payments, suits, actions, recoveries, judgements, losses and expenses, including attorney fees, interest, and court costs, which are made, brought or recovered against the Board of County Road Commissioners of Allegan County, arising out of or resulting from performance of the Contractor's work under this Contract, provided that such claims, damages, losses, demands, payments, suits, actions, recoveries, judgements and/or expenses are attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including loss of use resulting therefrom, but only if caused in whole or in part, by the act, omissions, fault, negligence or breach of the conditions of this Contract by negligent acts or omissions of the Contractor, the Contractor's sub-subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. The Contractor will not, however, be obligated to indemnify the Board of County Road Commissioners of Allegan County, for any damage or injuries caused by or resulting from the sole negligence of the Board of County Road Commissioners of Allegan County. Such obligation will not be construed to negate, abridge or otherwise reduce other rights or obligations of indemnity which would otherwise exist as a party or person described in this paragraph.

In claims against any person or entity indemnified under this Agreement by an employee of the Contractor, the Contractor's sub-subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this paragraph will not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or the Contractor's subcontractors under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

## INSURANCE

A. Contractor's Insurance. Prior to start of the Contractor's work, the Contractor will procure for the Contractor's work and maintain in force until the completion of the work, workers' compensation insurance, employer's liability insurance, comprehensive general liability insurance and all insurance required of the contract under the contract documents.

The Board of County Road Commissioners of Allegan County will be named as an additional insured on each of these policies except for worker's compensation.

The insurance will include contractual liability insurance covering the Contractor's obligations under its agreement of indemnification as set forth herein.

B. Minimum Limits of Liability. The Contractor's comprehensive general and automobile liability insurance as required herein, will be written with limits of liability not less than the following:

a. Comprehensive general liability including completed operations

(1) \$ 500,000 each occurrence

b. Property damage

(1) \$ 500,000 each occurrence

C. Number of Policies. Comprehensive general liability insurance and other liability insurance may be arranged under a single policy for the full limit required or by combination of underlying policies with the balance provided by an excess or umbrella liability policy.

D. Cancellation, Renewal or Modification. The Contractor will maintain in effect all insurance coverage required under this Agreement at the Contractor's sole expense and with insurance companies acceptable to the Board of County Road Commissioners of Allegan County.

All insurance policies will contain a provision that the coverage afforded thereunder will not be cancelled or not renewed nor restrictive modifications added at any time after a certificate of insurance required under agreement has been issued and before the work; as defined herein, has been completed, until at least thirty (30) days prior thereto written notice has been given to the Board of County Road Commissioners of Allegan County unless otherwise specifically required in the Contract Documents.

Certificates of insurance or certified copies of policies acceptable to the Board of County Road Commissioners of Allegan County will be filed with the Board of County Road Commissioners of Allegan County prior to the commencement of the Contractor's work.

In the event that the Contractor fails to obtain or maintain any insurance coverage required under this Agreement, the Board of County Road Commissioners of Allegan County may:

1. Purchase such coverage and charge the expense thereof to the Contractor, and
2. Withhold from any payment due or to become due to the Contractor an amount sufficient to protect the Board of County Road Commissioners of Allegan County from such claims, damages, demands, payments, suits, actions, recoveries, judgements, losses and expenses, including attorney fees, interest and court costs, and
3. Terminate this agreement.

Nothing contained in this Agreement, nor the Board of County Road Commissioners of Allegan County's compliance therewith, will relieve the Contractor from its obligations under the Contract to purchase and maintain required insurance or to indemnify the Board of County Road Commissioners of Allegan County.

### PROGRESS CLAUSE

The successful bidder will be required to submit a Progress Schedule, giving an outline of his proposed order of work and to indicate the dates for completion of the work. This outline, when approved by the Road Commission, will become a part of the contract.

### PROSECUTION OF THE WORK

The Contractor will begin the work within five (5) days after being notified by the Road Commission of the award of the contract, unless this is inconsistent with the Progress Schedule, in which case the Progress Schedule will govern. He will prosecute the work in the order given in the Progress Schedule, with force and equipment adequate to complete the sections within the time limit therein fixed for completion. In case of failure to proceed with the work as rapidly as is provided in the Progress Schedule, or if it appears at any time that such work is not being prosecuted in such a manner as to insure its completion within time specified, the Road Commission will have the right to require the contractor to furnish and place in operation such additional force and equipment as the Road Commission will deem necessary to bring the work up to the Progress Schedule; and in case of the Contractor's neglect to do so, the Road Commission may place such working force and equipment on the work and charge the Contractor the cost of the labor and such rental and depreciation rates for the plan and equipment as in its judgment is reasonable, and for such time as the plant and equipment are in service.

### ESTIMATED QUANTITIES

The quantities listed in the proposal are the estimated quantities. Increases or decreases in quantities will not be considered as a basis for adjustment in unit prices and Articles 104.02 of M.D.O.T. Standard Specifications for Construction will not apply in this regard.

### FINAL PAYMENT

Final payment will not be made until the contractor will have filed with the Board of County Road Commissioners the consent of the Surety of the payment of the final estimate and satisfactory evidence by affidavit or otherwise that all his indebtedness by reason of the contract has been fully paid or satisfactorily secured. In case such evidence is not furnished, the Road Commission may retain out of any amount due said contractor sums sufficient to cover all lienable claims unpaid.

### AFFIRMATIVE ACTION POLICY (EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER)

The Allegan County Road Commission will require the Contractor to submit an Affirmative Action Policy stating that they are an equal employment opportunity employer and will recruit, hire and promote in all job classifications without regard to race, color, religion, sex or national origin, except where sex is a bona fide occupational qualification. The Affirmative Action Policy will be signed by the Contractor or one of the Company's Authorized Officers.

### CONTRACT BONDS

The Successful Bidder will furnish satisfactory performance and lien bonds, each in the amount of not less than one hundred (100) percent of the total contract price. Such bonds will be on forms provided and will meet the regulations of the Allegan County Road Commission and the requirements specified in the laws of Michigan.

Bonds will not be required for contracts of less than \$5,000.00.

### M.D.O.T. – PREQUALIFICATION

Contractors bidding on this work must be pre-qualified by the Michigan Department of Transportation to do similar work on State or Federal-aid Secondary projects.

LIQUIDATED DAMAGES

Failure to complete the project on or before the completion date specified will be assessed according to the following schedule:

Original Contract Amount	Liquid Damages Per Calendar Day
\$ 0 to 49,999	75
50,000 to 99,999	150
100,000 to 499,999	450
500,000 to 999,999	900
1,000,000 to 1,999,999	1,300
2,000,000 to 4,999,999	1,550
5,000,000 to 9,999,999	2,650
10,000,000 and above	3,000

The liquidated damages may be delayed if the contractor meets the requirements set forth in Section 108.11 of the 2012 Standard Specifications for Construction. Approval of the project engineer is required.