

MASON COUNTY ROAD COMMISSION

Board of Commissioners

Bill Schwass, Chairman
Doug Robidoux, Vice-Chairman
Mike Ingison, Member
Mary Samuels, Manager/Director
Eric R. Nelson, P.E., County Highway Engineer

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Scottville MI 49454-0247
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NOTICE TO BIDDERS

The Board of County Road Commissioners of Mason County will receive bids at their office at 510 E. State St., Scottville MI 49454, until 11:00 a.m. on Wednesday, March 27, 2019 for the following:

•• 2019 CHIP SEAL PROGRAM

Specifications and bid forms may be obtained at the Road Commission offices during regular business hours or by visiting our website at www.masoncountyroads.com.

All bids must be submitted on Road Commission furnished bid forms. Said forms may be e-mailed to enelson@masoncountyroads.com, faxed to 231-757-2662 or in sealed envelopes, plainly marked as to item bid and shall bear the name of the bidder. Faxed and e-mailed bids must be received before 11:00AM. It is recommended to use a delivered & read receipt when using e-mail.

The Mason County Road Commission hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprise will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of sex, race, color or national origin in consideration for an award.

The Board reserves the right to accept or reject any or all bids, to waive any irregularities in the bids and to make award in any manner they deem to be in the best interest of Mason County.

BOARD OF COUNTY ROAD COMMISSIONERS

BILL SCHWASS, CHAIRMAN
DOUG ROBIDOUX, VICE-CHAIRMAN
MIKE INGISON, MEMBER

PROPOSAL
2019 CHIP SEAL PROGRAM

TO: Board of Mason County Road Commission
510 East State Street
PO Box 247
Scottville, Michigan 49454-0247

Gentlemen:

The undersigned Michigan Department of Transportation (MDOT) approved seal coating contractor in the State of Michigan submits the following unit prices bituminous seal coating, furnished and placed. All prices shall be firm for the year 2019; MDOT 2012 Standard Specifications shall apply, as modified by the attached special provisions.

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>AMOUNT</u>
1.	Seal, Single Chip, Special	<u>175,794</u>	Syd	\$ _____	\$ _____
2.	Seal, Fog	<u>175,794</u>	Syd	\$ _____	\$ _____
				TOTAL	\$ _____

Completion Date: All work shall be completed on or before August 30, 2019. The Mason County Road Commission reserves the right to add or delete bid quantities. Adjustment in unit prices shall be in accordance with MDOT Specifications 103.02

Submitted by: _____

Address: _____

Email: _____

Business Phone: _____

Signature: _____ Date _____

Bids shall be faxed, e-mailed or in a sealed envelope, plainly marked as to contents. The right is reserved by the Mason County Road Commission, to reject any and all bids, and to accept the bid that is in the best interest of the County.

The Mason County Road Commission reserves the right to renew the contract for additional years, each upon mutual agreement of both parties. Pricing, terms and conditions of the contract will remain the same for any renewal period with possible adjustments for documented material price increases.

Closing Date 11:00 am, WEDNESDAY MARCH 27, 2019

INSTRUCTIONS TO BIDDERS

1. CONTRACT DOCUMENTS

It is the intent of these contract documents to be as clear, complete, and consistent as possible.

2. BIDDER INVESTIGATION

The Bidder will be responsible for inspecting the various roads scheduled for seal coating and to determine all conditions under which he will be obligated to work. A copy of the projects and their location is provided to assist the Bidder in his investigation.

3. PROPOSAL PREPARATION

The name and legal status of the bidder, corporation, partnership or an individual shall be stated in the proposal. A corporation bidder shall name the state in which its Articles of Incorporation are held and must give the Title of the Officer having authority, under the by-laws, to sign contracts.

A partnership bidder shall give the full names and addresses of all partners. Anyone signing a proposal as an agent of another, or others, must submit with this proposal legal evidence of his authority to do so. The place of residence of each bidder, or the office address in case of a firm or company, with county and state, must be given after a signature.

The proposal shall be carefully prepared in strict accordance with these instructions; otherwise the bid may be rejected. The proposal for the work is on a unit price basis. All unit prices shall be completed in ink and the proposal legally signed in ink.

The unit prices stated in the proposal shall be plainly written. Illegibility of any work or figure in the proposal may be sufficient cause for rejection of the proposal.

Each proposal must be enclosed in a sealed envelope, addressed to the Mason County Road Commission, and labeled Revised **“2019 Chip Seal Program.”**

The bids will be compared based on comparison of the totals for the extensions of the stated unit prices. In case of an error in the preparation of the bid form, the unit prices shall be used. No partial bids will be considered.

4. BID SURETY

A Certified or Cashier's check or bid bond payable to the Mason County Road Commission in an amount equal to five percent (5%) of the amount of the proposal will be required for each bid.

5. PERFORMANCE BONDS AND INSURANCE

The successful bidder shall furnish performance and payment bonds in amounts equal to the contract bid price in such form and with such sureties licensed to conduct business in the State of Michigan.

The successful bidder shall purchase and maintain such Public insurance that will protect him from claims under Workmen Compensation laws and Public Liability Insurance. The Contractor shall provide for and in behalf of the County, the Mason Board of County Road Commissioners, The Mason County Road Commission, and its employees Owners Protective Public Liability Insurance. A copy of all insurance coverage shall be submitted for approval prior to the award of a contract.

6. CHAPTER II PROCEEDINGS

The Commission reserves the right to waive consideration of any bid submitted by a bidder who either has or has pending the filing of Chapter II proceedings.

7. TESTING

All materials shall be obtained from MDOT approved sources. Testing for compliance with 2012 MDOT Standards and Specifications shall be the responsibility of the Contractor, who shall provide copies of all material certifications and tests done. MCRC reserves the right to perform verification testing of any materials.

8. BID QUANTITIES

The MCRC reserves the right to add or delete quantities, as it deems necessary. Adjustments in unit prices shall be in accordance with MDOT specification 103.02.

9. SPECIFICATIONS

The 2012 Standard Specifications for Construction adopted by the Michigan Department of Transportation are hereby incorporated into these contract documents and shall apply unless otherwise noted. A copy of the "Standard Specifications" is available at the office of the Mason County Road Commission.

10. Liquidated damages will be assessed per Table 108-1 section 108.11 of the MDOT 2012 Standard Specifications for Construction for any uncompleted work until the work is 100% complete.

Specific References made in the contract documents will be shown as MDOT 0.0.00.

11. INSURANCE COVERAGE

The Contractor shall have a minimum insurance policy as described below:

General Liability	
Each Occurrence	\$1,000,000
Aggregate	\$2,000,000
Automotive Liability (minimum)	
Body Injury	\$ 500,000 per Person
	\$1,000,000 per Occurrence
Property Damage	\$1,000,000 per Occurrence
Workers Compensation	

The Contractor shall procure and maintain during the life of this contract, Worker's Compensation Insurance, including Employer Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

Additional Insured -- Commercial General Liability and Motor Vehicle Liability Insurance, as described above, shall include an endorsement stating the following shall be **Additional Insured**. The Mason County Road Commission, its Board and all employees.

The Contractor agrees to hold the MCRC harmless and indemnify the MCRC from all claims or liability arising out of or in connection with the plowing and removal of snow pursuant to the contract provisions, including, but not limited to, the cost of defense, court costs, and any Judgment or settlement arising out of such claims.

The Contractor shall not commence work under this contract until they have obtained the insurance and bond required. All coverage shall be with insurance companies licensed and admitted doing business in the State of Michigan. All coverage shall be with insurance companies acceptable to the Mason County Road Commission.

12. PAVEMENT PERFORMANCE WARRANTY

The Contractor shall warranty his work and materials for a period of ONE year from the acceptance date for Warranted Work. Refer to the attached Special Provision on Pavement Performance Warranty for Seal, Single Chip, Special.

MASON COUNTY ROAD COMMISSION
SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC

MCRC/ERN

1 OF 2

02-26-19

DESCRIPTION

Traffic will be maintained in accordance with the 2012 Edition of the MDOT Standard Specifications for Construction, including any supplemental specifications, and as herein specified. All traffic control devices and their usage shall comply with the 2011 edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), as revised.

CONSTRUCTION INFLUENCE AREA (CIA)

The CIA limits shall include the area within the right-of-way of each route in advance of each designated route as required for the advanced construction signing and traffic control devices, and for a distance of 500' along each leg of the intersections.

CONSTRUCTION METHODS

All work shall be conducted during daylight hours only. Through traffic shall be maintained by use of Flag Control, and portable Lighted Arrow Boards where needed. Temporary Signs, Lighted Arrow Boards and Flag Control shall be placed and moved as necessary in the progression of the work.

TRAFFIC CONTROL DEVICES

Signing for lane closures including all signs, barricades, warning lights, and other traffic control devices shall be in accordance with the *2011 Michigan Manual of Uniform Traffic Control Devices*. The lighted arrow panels, signs, including posts or movable frames, channeling devices and warning lights, shall be as shown on the plans. Installation and upkeep of the temporary signing shall be included in this item of work. Contractor to install Raised Pavt Marker, Temp, Type 1, Yellow, Bidirectional prior to placement of Seal, Single Chip, in accordance with the MDOT Standard Specifications for Construction or as directed by the engineer. Raised Markers, as described in the previous sentence, shall be placed at 50 foot intervals and doubled up - side by side - in No Passing Zones. During non-working periods, any work site with uncompleted work shall have advance signs W20-1 "Road Work Ahead" placed as directed by the engineer.

MASON COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC

MCRC/ERN

2 OF 2

02-26-19

The use of lane closures with flag control shall be in accordance with the attached typical M0150a for single lane closure of a two-lane two-way roadway. The Speed Limit within the construction area shall be 45 miles per hour.

The Contractor shall coordinate and notify the engineer to have the Mason County Road Commission install the sign W8-7 "Loose Gravel" prior to work commencing on each road segment.

Fog Seal shall be placed 24-48 hours after completion of Single Seal Coating; or as approved by the engineer. The Contractor prior to starting the work of Fog Seal shall provide a plan and procedure on traffic control for this item of work.

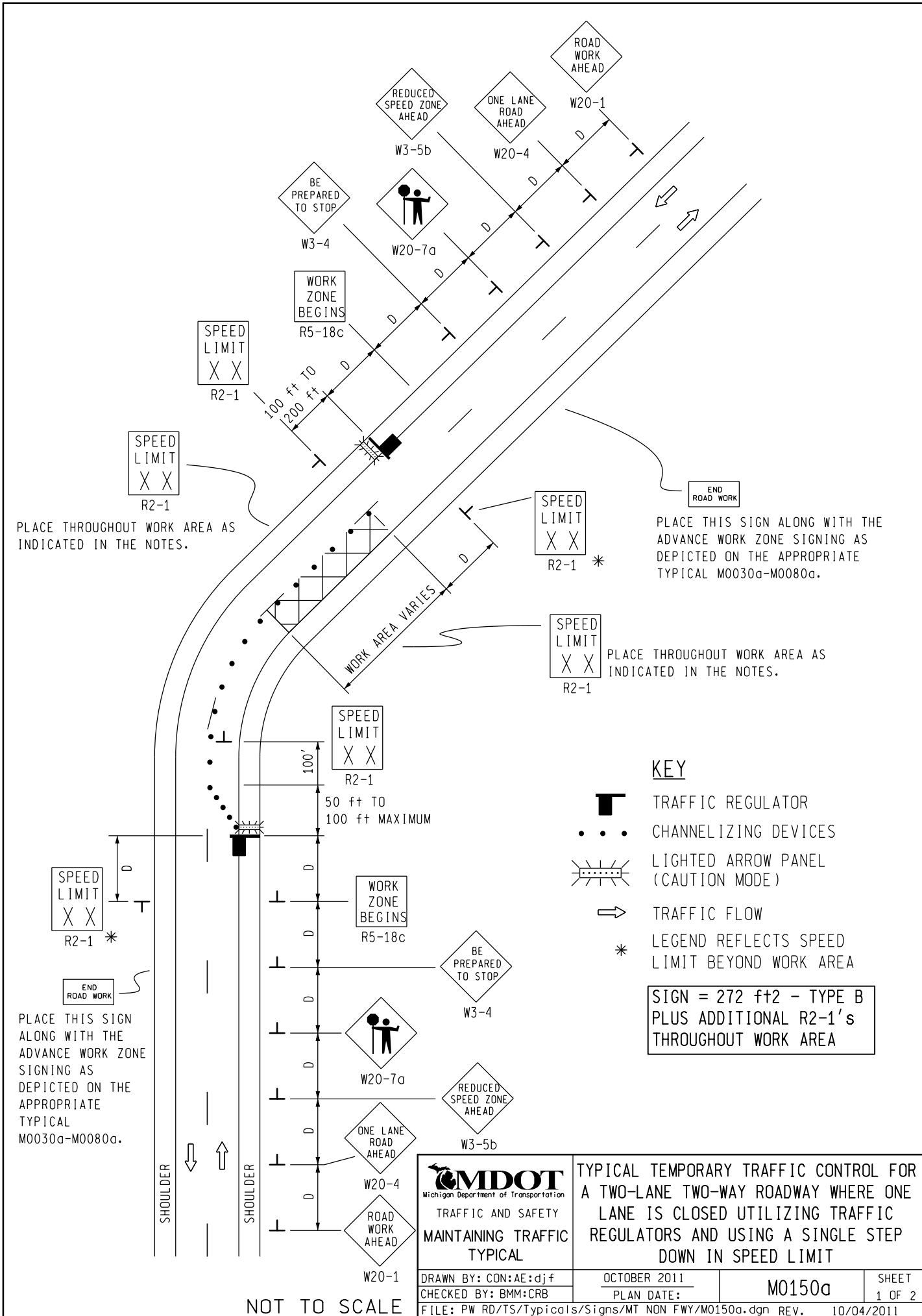
The Memorial Day Holiday will occur during this project, the contractor is to suspend and be off the roadway by 3:00pm Friday, May 24th, and may resume work at 7:00am on Tuesday May 28th; or as directed by the Engineer.

The 4th of July Holiday will occur during this project, the contractor is to suspend and be off the roadway by 3:00pm Wednesday, July 3rd, and may resume work at 7:00am on Monday July 8th; or as directed by the Engineer.

The Labor Day Holiday will occur after the completion date of this project. If the contractor is not 100% completed by August 30th the contractor is to suspend and be off the roadway by 3:00pm Friday, August 30th, and may resume work at 7:00am on Tuesday September 3rd; or as directed by the Engineer.

MEASUREMENT AND PAYMENT

Signs shall remain in place for the duration of the project including any extension of time. The completed work as measured for Maintaining Traffic will not be paid separately but is to be included with other items of work in this project.








PLACE THROUGHOUT WORK AREA AS INDICATED IN THE NOTES.

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.

PLACE THROUGHOUT WORK AREA AS INDICATED IN THE NOTES.

KEY

-  TRAFFIC REGULATOR
-  CHANNELIZING DEVICES
-  LIGHTED ARROW PANEL (CAUTION MODE)
-  TRAFFIC FLOW
-  * LEGEND REFLECTS SPEED LIMIT BEYOND WORK AREA

SIGN = 272 ft x 2 - TYPE B PLUS ADDITIONAL R2-1's THROUGHOUT WORK AREA

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.

MDOT
Michigan Department of Transportation
TRAFFIC AND SAFETY
MAINTAINING TRAFFIC
TYPICAL

DRAWN BY: CON:AE:djf
CHECKED BY: BMM:CRB
FILE: PW RD/TS/Typicals/Signs/MT NON FWY/M0150a.dgn

TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING TRAFFIC REGULATORS AND USING A SINGLE STEP DOWN IN SPEED LIMIT

OCTOBER 2011
PLAN DATE:

M0150a

SHEET 1 OF 2

REV. 10/04/2011

NOT TO SCALE


NOTES

- 1H. D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES AND LENGTH OF LONGITUDINAL BUFFERS
SEE **M0020a** FOR "D" VALUES.
2. ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.
3. DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- 3A. THE "WORK ZONE BEGINS" (R5-18c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.
- 4A. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES IN THE TAPER AREA(S) SHOULD BE 15 FEET AND SHOULD BE EQUAL IN FEET TO TWICE THE POSTED SPEED IN MILES PER HOUR IN THE PARALLEL AREA(S).
5. FOR OVERNIGHT CLOSURES, TYPE III BARRICADES SHALL BE LIGHTED.
6. WHEN CALLED FOR IN THE FHWA ACCEPTANCE LETTER FOR THE SIGN SYSTEM SELECTED, THE TYPE A WARNING FLASHER, SHOWN ON THE WARNING SIGNS, SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.
7. ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET NCHRP 350 CRASHWORTHLY REQUIREMENTS STIPULATED IN THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
9. ALL TRAFFIC REGULATORS SHALL BE PROPERLY TRAINED AND SUPERVISED.
- 9A. IN ANY OPERATION INVOLVING MORE THAN ONE TRAFFIC REGULATOR, ONE PERSON SHOULD BE DESIGNATED AS HEAD TRAFFIC REGULATOR.
10. ALL TRAFFIC REGULATORS' CONDUCT, THEIR EQUIPMENT, AND TRAFFIC REGULATING PROCEDURES SHALL CONFORM TO THE CURRENT EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CURRENT EDITION OF THE MDOT HANDBOOK ENTITLED "TRAFFIC REGULATORS INSTRUCTION MANUAL."
11. WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS, APPROPRIATE LIGHTING SHALL BE PROVIDED TO SUFFICIENTLY ILLUMINATE THE TRAFFIC REGULATOR'S STATIONS.
- 12E. THE MAXIMUM DISTANCE BETWEEN THE TRAFFIC REGULATORS SHALL BE NO MORE THAN 2 MILES IN LENGTH UNLESS RESTRICTED FURTHER IN THE SPECIAL PROVISIONS FOR MAINTAINING TRAFFIC. ALL SEQUENCES OF MORE THAN 2 MILES IN LENGTH WILL REQUIRE WRITTEN PERMISSION FROM THE ENGINEER BEFORE PROCEEDING.
13. WHEN INTERSECTING ROADS OR SIGNIFICANT TRAFFIC GENERATORS (SHOPPING CENTERS, MOBILE HOME PARKS, ETC.) OCCUR WITHIN THE ONE-LANE TWO-WAY OPERATION, INTERMEDIATE TRAFFIC REGULATORS AND APPROPRIATE SIGNING SHALL BE PLACED AT THESE LOCATIONS.
14. ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE W3-4 SIGNS.
15. THE HAND HELD (PADDLE) SIGNS REQUIRED BY THE MMUTCD TO CONTROL TRAFFIC WILL BE PAID FOR AS PART OF FLAG CONTROL.
- 16A. ADDITIONAL SPEED LIMIT SIGNS REFLECTING THE REDUCED SPEED SHALL BE PLACED AFTER EACH MAJOR CROSSROAD THAT INTERSECTS THE WORK AREA WHERE THE REDUCED SPEED IS IN EFFECT, AND AT INTERVALS ALONG THE ROADWAY SUCH THAT NO SPEED LIMIT SIGNS REFLECTING THE REDUCED SPEED ARE MORE THAN TWO MILES APART.
- 16B. WHEN REDUCED SPEED LIMITS ARE UTILIZED IN THE WORK AREA, ADDITIONAL SPEED LIMIT SIGNS RETURNING TRAFFIC TO ITS NORMAL SPEED SHALL BE PLACED BEYOND THE LIMITS OF THE REDUCED SPEED AS INDICATED.
- 16E. WHEN EXISTING SPEED LIMITS ARE REDUCED MORE THAN 10 MPH, THE SPEED LIMIT SHALL BE STEPPED DOWN IN NO MORE THAN 10 MPH INCREMENTS.
- 28E. THE TRAFFIC REGULATORS SHOULD BE POSITIONED AT OR NEAR THE SIDE OF THE ROAD SO THAT THEY ARE SEEN CLEARLY AT A MINIMUM DISTANCE OF 500 FEET. THIS MAY REQUIRE EXTENDING THE BEGINNING OF THE LANE CLOSURE TO OVERCOME VIEWING PROBLEMS CAUSED BY HILLS AND CURVES.

SIGN SIZES

DIAMOND WARNING	- 48" x 48"
RECTANGULAR REGULATORY	- 48" x 60"
R5-18c REGULATORY	- 48" x 48"

NOT TO SCALE

 TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING TRAFFIC REGULATORS AND USING A SINGLE STEP DOWN IN SPEED LIMIT
DRAWN BY: CON:AE:djf	OCTOBER 2011
CHECKED BY: BMM:CRB	PLAN DATE:
	M0150a
FILE: PW RD/TS/Typicals/Signs/MT NON FWY/M0150a.dgn	SHEET 2 OF 2 REV. 10/04/2011

MASON COUNTY ROAD COMISSION

SPECIAL PROVISION FOR SEAL, SINGLE CHIP, MODIFIED

1 of 5

Description:

The work consists of furnishing all materials, equipment and labor necessary for the surface preparation and application of a single chip seal. This work shall conform to the requirements of Section 505, 902, and 904 of the Michigan Department of Transportation 2012 Standard Specification for Construction except as stated within.

Equipment:

All equipment must meet the requirements under Section 505 of the Michigan Department of Transportation 2012 Standard Specifications for Construction, except as modified herein:

Pressure Distributor:

The pressure distributor shall have a computerized application rate and speed control device interconnected with the liquid asphalt pump such that the specified application rate will be supplied at any speed. This control shall have a radar ground sensing device that controls the application rate regardless of ground speed or spray bar width. The pressure distributor shall be capable of maintaining the asphalt at the specified temperature. The spray bar nozzles shall produce a uniform triple lap application fan spray, and the shutoff shall be instantaneous with no dripping. Each pressure distributor shall be capable of maintaining the specified rate of application within +/- 0.015 gallons per square yard for each load.

Compacting Equipment:

Use a minimum of two (2) self-propelled, pneumatic-tired rollers, weighing not less than 8 tons each.

Broom/Sweeper:

The use of a rotary-powered broom is required to remove the loose material from the surface to be treated and for removing loose aggregate after the work has been completed.

Pre-paving Meeting:

A pre-paving meeting will be held at a location designated by the Engineer before beginning work to discuss the following:

- Work schedule.
- Traffic control plan.
- Equipment calibration and adjustments.
- Condition of materials and equipment, including transport units.
- Mix design(s) including job-mix-formula (JMF); coarse aggregate gradation; application rate of asphalt emulsion and coarse aggregate (by stationing and course).
- Contractor's quality control plan (method of yield check, etc.).

General Placement Operations:

1. The Contractor shall establish 1000-foot intervals along the entire length of the project, prior to placing materials. The stations shall be clearly identified and maintained until project completion.
2. Keep all vehicles and equipment involved in the chip sealing operation as close to each other as practical. Keep the asphalt emulsion distributor within 100 feet of the chip spreader. Do not place cover aggregate on asphalt after it has cured.
3. Perform rolling within two (2) minutes of placing the coarse aggregate and before the asphalt has begun to cure. Make a minimum of two complete passes over the coarse aggregate. A complete pass is one trip, forward and backward, over the same path. Overlap each pass by one-half the width of the roller. Use a minimum of two rollers and proceed in a longitudinal direction at a speed not greater than 5 mph.

Quality Control:

The following measures shall be taken by the Contractor to maintain quality control and uniformity. If the condition is identified that causes an unsatisfactory chip seal, all production work shall stop and corrective action must immediately be taken. The Contractor shall perform the corrective action at no additional cost to the contract. All truck demurrage will be the responsibility of the contractor.

1. **Asphalt Emulsion.** The Contractor shall apply asphalt emulsion at a temperature between 170°F and 190°F.
2. **Visible Dust.** During normal traffic operations any dust that is a nuisance or slightly impairs visibility is unsatisfactory. The roadway must be wet broomed until the condition is eliminated.
3. **Loose Stone.** During normal traffic operations any stone picked off the surface by vehicles is unsatisfactory. The roadway must be wet broomed until the condition is eliminated.
4. **Bleeding or Tracking.** During normal traffic operations any bleeding or moderate tracking is unsatisfactory. The roadway must be sanded and swept clean. If the surface conditions call for further action, a heated coarse aggregate, meeting the requirement of this special provision, shall be applied, rolled and broomed.
5. **Rough Joints.** Traverse and longitudinal construction joints from a chip seal application that creates a bump or poor riding joint is unsatisfactory. The bump shall be removed by grinding the surface and lightly applying a fog seal over the ground area.
6. **Surface Patterns.** Any asymmetric appearance seen in the chip seal surface characterized by longitudinal groves or ridges in the surface is unsatisfactory. The spray bar and nozzles must be readjusted to eliminate the surface pattern problem.

Asphalt Emulsion:

Asphalt Emulsion to be used shall be CRS-2M and shall meet the requirements stated in Table 904-6 of the MDOT 2012 Standard Specification for Construction. Target application range of 0.39 to 0.44 gallons/square yard applied at a temperature between 170°F and 190°F.

The optimum application rate (after correction for temperature expansion and distillate loss) shall be determined by the Contractor and field conditions due to the gradation of the course aggregate used or due to existing surface condition of the pavement. The Contractor shall document the JMF rate(s) by stationing and shall continuously monitor the application rate and report any noticeable changes to the Engineer. All truck demurrage will be the responsibility of the Contractor.

Coarse Aggregate:

Cover material to be used will be CS-2-Slag. The CS-2-Slag shall be tested material or provided by a prequalified aggregate supplier. All aggregates must meet the gradation and physical requirements stated in Table 2. If the target rate is not the optimum application rate due to the gradation of the coarse aggregate or due to existing surface conditions of the pavement, the Contractor shall notify the Engineer immediately and prior to any further application. Upon approval of changes by the Engineer, the Contractor shall then document the new JMF rate(s) by stationing and resume the application at the new rate. The Contractor shall continue to monitor the new application rate and report any noticeable changes to the Engineer. All truck demurrage will be the responsibility of the contractor.

Table 2 – Gradation and Physical Requirements for Chip Seal Aggregate

Sieve Analysis (MTM 109), Total Percent Passing (a)	
Sieve Size	Percent Passing
¾"	100
½"	100
3/8"	90-100
No. 4	0-10
No. 8	0-5
No. 200 (Loss by Wash)	2.0 Maximum

Physical Requirements for Coarse Aggregates (a)		
Test	Description	Specification
MTM 102	L.A. Abrasion Resistance	45% maximum (b)
MTM 117	Percent of Crushed Particles	95% minimum
MTM 111	Aggregate Wear Index (AWI)	260 minimum
(c)	Moisture Content at time of placement	4% maximum

(a) All aggregate shall be washed.
 (b) Iron Blast-Furnace Slag Aggregate.
 (c) As described in MDOT Procedures for Aggregate Inspection.

Maintaining Traffic:

The Contractor shall provide all equipment, labor, and materials to properly control traffic throughout the length of the project. All traffic control features shall be in accordance with the 2011 edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), to protect the traveling public, the Contractor's workforce and the work.

Traffic control costs including raised pavement markers shall be included in unit prices for Chip and Fog.

Measurement and Payment:

Completed work, as measured, will be paid for at the contract unit price for the following contract items:

<u>Pay Item</u>	<u>Pay Unit</u>
Seal, Single Chip, Modified	Square Yard

Payment for Seal, Single Chip, Modified includes all equipment, labor and materials for placement of liquid asphalt and coarse aggregate, brooming, establishment of yield intervals, documentation and delayed acceptance inspection.

No adjustments in the unit price will be made for approved rate of liquid asphalt and/or coarse aggregate that are within the ranges identified in Liquid Asphalt and Coarse Aggregate Application.

The contract unit price shall be payment in full for all labor and equipment needed to accomplish the work.

**SPECIAL PROVISION
FOR
FOG SEAL**

1 of 3

Description:

The work consists of furnishing all materials, equipment and labor necessary for the surface preparation and application of a fog seal. This work shall conform to the requirements of the Michigan Department of Transportation 2012 Standard Specification for Construction except as stated within.

Equipment:

All equipment must meet the requirements under Section 505 of the Michigan Department of Transportation 2012 Standard Specifications for Construction, except as modified herein:

Pressure Distributor:

The pressure distributor shall have a computerized application rate and speed control device interconnected with the asphalt emulsion pump such that the specified application rate will be supplied at any speed. This control shall have a radar ground sensing device that controls the application rate regardless of ground speed or spray bar width. The pressure distributor shall be capable of maintaining the asphalt at the specified temperature. The spray bar nozzles shall produce a uniform fan spray, and the shutoff shall be instantaneous with no dripping. Each pressure distributor shall be capable of maintaining the specified rate of application within +/- 0.015 gallons per square yard for each load.

General Placement Operations:

1. Fog seal completed chip seal areas, after brooming and before placement of permanent pavement markings. Allow chip seal to cure a minimum 24 hours before fog sealing. Remove the protective covers from the temporary pavement marker tab after the placement of the fog seal. Removal of the protective covers shall be done within a lane closure. Allow a minimum of 3 days before placing permanent pavement markings.
2. Fog seal shall not be applied when the air temperature is below 60° F. The fog seal shall be applied to a clean, dry pavement surface. Do not apply fog seal when precipitation is imminent. If precipitation occurs, prior to the emulsion breaking, the effected areas shall be reapplied at the Contractors expense.
3. The fog seal shall be applied so that there is a minimum of a 1 foot overlap at the centerline of the roadway.
4. Traffic shall not be allowed on the fog seal until the emulsion has fully cured.

5. The fog seal Emulsified Asphalt shall be applied at the temperature recommended by the Supplier.

Fog Seal Application Rate

The fog seal shall be a Cationic Emulsified Asphalt, CSS-1h (at 50% dilution) as specified in Table 904-4 of the Michigan Department of Transportation 2012 Standard Specifications for Construction.

The CSS-1h shall be spread at a target rate between 0.10 and 0.15 gallons per square yard.

Construct a 100-foot test strip at the target rate of 0.135 gallons per square yard and review the application. If this target rate is not the optimum application rate due to the gradation of the course aggregate or due to existing surface condition of the pavement, the Contractor shall notify the Engineer immediately and prior to any further application. Upon approval of adjustments to the application rate by the Engineer, the Contractor shall then document the new JMF rates(s) by stationing and resume the application at the new rate. The Contractor shall continue to monitor the new application rate and report any noticeable changes to the Engineer. All truck demurrage will be the responsibility of the Contractor.

Submittals:

Upon completion the Contractor shall provide an inspector's daily report for each day work was performed containing the following information:

- Control Section / project number / Road Name
- Date / air temperature / pavement temperature / humidity
- Asphalt Emulsion temperature
- Beginning and ending stations
- Yield checks on asphalt emulsion
- Length / Width / Total Square Yards
- Contractor's Signature

Provide the following additional materials documentation:

- Asphalt Emulsion: per current acceptance procedures.
- Bill of loading or delivery tickets for asphalt emulsion

The above submittals shall be placed in order by date in a folder with the certification statement in the back.

Protection of Motor Vehicles

The Contractor is responsible for claims of damage to vehicles until the roadways and shoulders have been swept free of loose aggregate, the Fog Seal has been applied and the permanent pavement markings have been applied.

Maintaining Traffic:

The Contractor shall provide all equipment, labor, and materials to properly control traffic throughout the length of the project. All traffic control features shall be in accordance with the 2011 edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), to protect the traveling public, the Contractor's workforce and the work.

Traffic control shall be provided as detailed in special provision for maintaining traffic and paid for per that special provision.

Delayed Acceptance:

A minimum of 30 days after placement of the fog seal, the Engineer will inspect the project with the Contractor for surface flushing, surface patterns, or loss of stone. If these deficiencies are found, corrective work is required before project acceptance.

Complete all corrective work within seven working days of the review, or by an agreed upon date. All costs associated with completing this corrective work, to the satisfaction of the Engineer, will be borne by the Contractor.

Measurement and Payment:

Completed work, as measured, will be paid for at the contract unit price for the following contract items:

<u>Pay Item</u>	<u>Pay Unit</u>
Fog Seal	Square Yard

Payment for the Fog Seal includes all equipment, labor, testing and materials for placement of a Cationic Emulsified Asphalt, CSS-1h (at 50% dilution), brooming, establishment of yield intervals, documentation and delayed acceptance inspection.

No adjustments in the unit price will be made for an approved rate of Cationic Emulsified Asphalt, CSS-1h (at 50% dilution) that is within the ranges identified in Fog Seal application rate.

The contract unit price shall be payment in full for all labor and equipment needed to accomplish the work.

MASON COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
**PAVEMENT PERFORMANCE WARRANTY
FOR THE CHIP SEAL PROGRAM**

a. Description. The pavement performance warranty shall consist of satisfying the warranty requirements of the work contained in this bid. This special provision establishes the common terms and definitions applied to the pavement requiring warranted work. The pavement performance warranty assures and protects the MCRC from specific defects found in the pavement.

b. Definitions.

1. Acceptance Date of Warranted Work – the date when the warranted work is complete, has been determined by the MCRC to be in compliance with the contract specifications and is continuously open to traffic. This is the date of initial acceptance and constitutes the start date for the warranty period. There may be more than one acceptance date of warranted work for a project.
2. Driving Lane(s) – The delineated pavement surface used by traffic. Each of the following is considered a separate driving lane.
 - Each individual mainline lane
 - The sum of all ramp lanes and the associated acceleration/deceleration lanes
 - The sum of all auxiliary lanes, such as passing lanes and turn lanes

Approaches and driveways are not considered driving lanes for the purpose of this provision.

3. Warranted Work – Work that is guaranteed to meet the warranty requirements throughout the warranty period.
4. Warranty Work – Corrective action taken by the Contractor to bring the warranted work into contract compliance.

c. Initial Acceptance. The MCRC and the Contractor shall jointly review all completed warranted work, or a portion thereof, as determined by the MCRC. If the work does not meet contract requirements, the Contractor shall make all necessary corrections, at their expense, prior to initial acceptance. Initial acceptance will occur as soon as the MCRC determines that all contract requirements have been met for the warranted work. The date on which initial acceptance occurs is termed the Acceptance Date of Warranted Work.

Initial acceptance will be documented and executed jointly by the MCRC and the Contractor on a form furnished by the MCRC. Neither the initial acceptance nor any prior inspection, acceptance, or approval by the MCRC diminishes the Contractor's responsibility under this warranty.

The MCRC may accept any portion of the work and begin the warranty period, excluding any area needing corrective work, to accommodate seasonal limitations or staged construction.

d. Rights and Responsibilities of the MCRC. The MCRC:

1. Reserves the right to approve the time, traffic control and methods for performing any warranty work by permit through the County utilities and permit process.
2. Reserves the right to approve the schedule proposed by the Contractor to perform warranty work.
3. Reserves the right to approve all materials and specifications used in warranty work.
4. Reserves the right to determine if warranty work performed by the Contractor meets the contract specifications.
5. Reserves the right to perform, or have performed, routine maintenance during the warranty period, which routine maintenance will not diminish the Contractor's responsibility under the warranty.
6. Reserves the right, if the Contractor is unable, to make immediate emergency repairs to the pavement to prevent an unsafe road condition caused by defective warranted work as determined by the MCRC. The MCRC will attempt to notify the Contractor that action is required to address an unsafe condition. However, should the Contractor be unable to comply with this requirement, to the MCRC satisfaction and within the time frame required by the MCRC, the MCRC will perform, or have performed any emergency repairs deemed necessary. Any such emergency repairs undertaken will not relieve the Contractor from meeting the warranty requirements of this Special Provision. Any costs associated with such emergency repairs will be paid by the Contractor.
7. Is responsible for monitoring the pavement throughout the warranty period and will provide the Contractor any written reports of the surface condition and/or maintenance activities related to pavement performance when requested.
8. Is responsible for notifying the Contractor, in writing, of any corrective action required to meet the warranty requirements.

e. Rights and Responsibilities of the Contractor. The Contractor:

1. Shall warrant to the MCRC that the warranted work will be free of defects as measured by the performance parameters and specified threshold values for each.
2. Is responsible for performing all warranty work including, but not limited to, maintaining traffic and restoring all associated pavement features, at the Contractor's expense.
3. Is responsible for performing all temporary or emergency repairs, resulting from being in non-compliance with the warranty requirements, using MCRC approved materials and methods.
4. Shall notify the MCRC and submit a written course of action for performing the needed warranty work ten calendar days prior to commencement of warranty work, except in the case of emergency repairs as detailed in this special provision. The submitted must propose a schedule for performing the warranty work and the materials and methods to be used.
5. Shall follow a MCRC approved maintaining traffic plan when performing warranty work. All warranty work shall be performed under permit issued by the County Utilities and Permits Engineer. The permit fee and an individual permit performance bond shall not be required. The permit insurance requirements, however, shall apply.
6. Shall complete all warranty work when required by this special provision and prior to conclusion of the warranty period, or as otherwise agreed to by the MCRC.
7. Shall be liable during the warranty period in the same manner as Contractors currently are liable for their construction related activities with the MCRC pursuant to the standard specifications, including, but not limited to subsections 104.07.C, 107.10 and 107.11. This liability shall arise and continue only during the period when the Contractor is performing warranty work. This liability is in addition to the Contractor performing and/or paying for any required warranty work, and shall include liability for injuries and/or damages and any expenses resulting there from which are not attributable to normal wear and tear of traffic and weather, but are due to non-compliant materials, faulty workmanship, and to the operations of the Contractor as set forth more fully in subsections 104.07.C, 107.10 and 107.11 of the Standard Specifications for Construction.

- f. **Warranty Requirements.** Warranty work will be required when the following two criteria are both met as a result of a failure to meet the performance parameters.

Criteria 1 – The threshold limit for a performance parameter is exceeded, and

Criteria 2 – The maximum allowable number of defective segments is exceeded for one or more performance parameters for a driving lane, unless otherwise noted in the appendices.

Specific threshold limits and segment limits shall be agreed to by both the Contractor and MCRC as part of the Initial Acceptance.

During the warranty period, the Contractor will not be held responsible for pavement distresses that are caused by factors beyond his control and unrelated to design decisions made by the Contractor, pavement construction or materials. These include, but are not limited to, chemical and fuel spills, vehicle fires, snow plowing, and any testing by the MCRC, such as coring. Other factors considered to be beyond the control of the Contractor which may contribute to pavement distress will be considered by the Engineer on a case by case basis upon receipt of a written request from the Contractor.

- g. **Emergency Repairs.** If the MCRC determines that emergency repairs are necessary for public safety, the MCRC or its agent may take repair action. Emergency repairs will be authorized by the Engineer.

Prior to emergency repairs, the MCRC will document the basis for the emergency action. In addition, the MCRC will preserve evidence of the defective condition.

- h. **Length of Warranty Period.** One (1) year from acceptance date of warranted work.
- i. **Non-extension of Contract.** This Special Provision shall not be construed as extending or otherwise affecting the claim process and statute of limitation applicable to this Contract.

- j. Measurement and Payment.** All costs, including engineering and maintaining traffic costs, associated with meeting the requirements of this Special Provision are considered to be included in the contract unit prices for the warranted work regardless of when such costs are incurred throughout the warranty period. These costs include, but are not limited to, all materials, labor and equipment necessary to complete required warranty work.

Completed work, as measured, will be included with the ‘item of work’ listed below.

<u>Pay Item</u>	<u>Pay Unit</u>
Seal, Single Chip, Special	Square Yard
Seal, Fog	Square Yard

The Contract unit price shall be payment in full for all labor, materials and equipment to perform the work warranted by this specification.