

NOTICE TO BIDDERS

The Roscommon County Road Commission will receive sealed bids until 2:00 p.m. on January 22, 2020. (Bids will be opened at 2:00 p.m. for tabulation and review. Bid results and staff recommendations will be presented to the RCRC Board at their regular meeting January 23, 2020 beginning at 7:00 p.m.). The Roscommon County Road Commission office is located at 820 E. West Branch Road, Prudenville, MI 48651, for the submittal of and bid opening for the item:

2020 Chip Seal & Fog Seal

Specifications may be obtained by contacting the Roscommon County Road Commission at the above address, on our website, www.roscommoncrc.com or by calling (989)-366-0333 ext. 17 or emailing Belangern@roscommoncrc.com.

Submit bids in sealed envelope that is clearly marked with the words **“2020 Chip Seal & Fog Seal”**.

The Roscommon County Road Commission reserves the right to reject any or all bids, to waive irregularities in any bid, to waive details in the specifications, and to accept the bid deemed to be in the best interest of Roscommon County. Quantities may include work on MDOT Trunklines. **Bids may be extended for an additional year with mutual agreement.**

The Roscommon County Road Commission has adopted a “Local Contractors Preference Policy”. Please go to Adopted Policies, at www.roscommoncrc.com for details and application forms.

ROSCOMMON COUNTY BOARD
OF ROAD COMMISSIONERS

Jim Porath, Chair
Fred Chidester, Vice-Chair
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Bid Requirements

The Roscommon County Road Commission (RCRC) will receive sealed bids until 2:00 p.m. on January 22, 2020. (Bids will be opened at 2:00 p.m. for tabulation and review. Bid results and staff recommendations will be presented to the RCRC Board at their regular meeting January 23, 2020 beginning at 7:00 p.m.). Our office is located at 820 E. West Branch Road, Prudenville, MI 48651, for the submittal of and bid opening for the item:

2020 Chip Seal & Fog Seal

The contractor will be responsible for all materials, equipment and labor necessary for the surface preparation and application for Chip Seal and Fog Seal. The contractor must meet Section 505 of the Michigan Department of Transportation 2012 Standard Specifications for Construction, RCRC Special Provision for Seal, Single Chip and RCRC Special Provision for Seal, Fog.

Start Date: May 4, 2020 (or as approved by the Roscommon County Road Commission)

Completion Date: August 7, 2020 (or as approved by the Roscommon County Road Commission)

Contractor will provide flag control, temporary prismatic signs, minor traffic devices, and temporary raised pavement markers and is considered incidental to the unit prices submitted and must conform to the MMUTCD manual.

Contractor is required to have a Preconstruction Meeting with Roscommon County Road Commission before any work begins.

Contractor must contact RCRC within 72 hours in advance of a start date and provide a progress schedule for the work. No work shall be done Friday, Saturday or Sunday without approval from the Roscommon County Road Commission.

The Roscommon County Road Commission reserves the right to add or delete quantities and projects to the bid list at the unit prices quoted.

The Roscommon County Road Commission reserves the right to perform acceptance testing on any materials being incorporated into the work for quality assurance purposes and reserves the right to reject any material found to be non-conforming.

Contractor will provide Certificate of Insurance prior to commencing production.

Certificate shall include:

- Board of County Road Commissioners and Roscommon County Road Commission and all employees named as additionally insured on all coverage.
- General Liability = (or greater than) \$1,000,000 each occurrence.
- Automotive Liability = (or greater than) \$1,000,000 each occurrence.
- Workers Compensation = statutory limits.

All incidental spills of hazardous materials shall be the Contractor's responsibility. Notification to the proper authorities and clean up shall conform to the Michigan Department of Environmental Control Response Act "Polluter's Pay Act" as amended. Any costs incurred through such notice, litigation, etc., shall be the responsibility of the Contractor.

Submit bids in an envelope that is clearly marked "2020 Chip Seal & Fog Seal". The RCRC reserves the right to reject any and all bids, to waive irregularities in the bids, to waive details in the specifications and to accept the bid deemed to be in the best interest of the Roscommon County Road Commission.

2020 Chip Seal Bids
Roscommon County Road Commission

Road Name/ Township	Limits/Location	Length (Feet)	Road Width (Feet)	Item #1 34CS or 29A Chip Seal Syd	Item # 2 Leveling CS-T Chip Seal Syd	Item # 2 Top CS-T Chip Seal Syd	Item # 3 Fog Seal Syd
AUSABLE TOWNSHIP							
Hyde Dr/Richardson Circle	F-97 to F-97	3,129	22-24			8,012	8,012
DENTON TOWNSHIP							
Antelope Dr	Whitetail Dr to Deer Run Blvd	1,164	21			2,974	2,974
Antler Tr	Reindeer Dr to Reindeer Dr	1,802	21			4,410	4,410
Arrowood Dr	Emery Rd to Whitetail Dr	1,843	21			4,452	4,452
Boatman Rd	Roberts Rd to CR 401	1,998	21			4,791	4,791
Deer Run Blvd/Meadow Ln	M-18 to Deer Run Blvd	13,240	16/21			35,878	35,878
Gazelle Dr	Whitetail Dr to Northland Dr	1,006	21			2,512	2,512
Homestead Rd	Huntington Rd to M-55	905	21			2,536	2,536
Huntington Rd	Roberts Rd to CR 401	1,916	21			4,531	4,531
James Rd	Huntington Rd to M-55	903	21			2,331	2,331
Nestel Rd	CR 401 to Owens Dr	5,166	21/30			14,717	14,717
Northland Dr	Emery Rd to Antelope Dr	2,581	21			6,226	6,226
Reindeer Dr	M-18 to Deer Run Blvd	2,110	21			5,040	5,040
Roberts Rd	Huntington Rd to M-55	974	21			2,433	2,433
Split Hoof Tr	Deer Run Blvd to Nestel Rd	1,013	22			2,765	2,765
Springwood Dr	M-55 to CR 107	10,232	22			25,533	25,533
Swift Deer Tr	Reindeer Dr to Reindeer Dr	1,560	21			3,822	3,822
Thunderbird Dr	Arrowood Dr to Whitetail Dr	2,007	21			4,826	4,826
Whitetail Dr	Emery Rd to End of Cul-de-sac	4,803	21			11,484	11,484
GERRISH TOWNSHIP							
Sunset	E Higgins Lk Dr east 3411 ft	3,411	30			11,190	11,190
HIGGINS TOWNSHIP							
Joyce Kilmer	M-18 to AuSable River Trail	5,750	21			13,635	13,635

Road Name/ Township	Limits/Location	Length (Feet)	Road Width (Feet)	Item #1 34CS or 29A Chip Seal Syd	Item # 2 Leveling CS-T Chip Seal Syd	Item # 2 Top CS-T Chip Seal Syd	Item # 3 Fog Seal Syd
LAKE TOWNSHIP							
Howe	Lester to Truman	363	22-23			920	920
Lester	Howe To Northway	1,062	21.5			2,655	2,655
Truman	Howe To Northway	1,083	22			2,803	2,803
Northway	M55 to end	1,286	21-26			3,455	3,455
Mary	Northway to Old 27	1,279	20-23			3,070	3,070
Victory	Northway to Old 27	1,273	20.5			3,006	3,006
Sundown	Longpoint to Longpoint	475	16-20			1,400	1,400
Woodworth	Longpoint to CR300	839	21			2,080	2,080
LYON TOWNSHIP							
W Ausable Rd (EST)	Old 27 to Amvet	1,135	22			2,835	2,835
MARKEY TOWNSHIP							
Everett	Doyle Tr North to end of pavement	2,663	22			6,560	6,560
Gardner	Lansing to Lakewood	2,663	22			7,040	7,040
Lansing	CR100 to Redwood	2,648	22			6,585	6,585
Redwood	Lansing to end	1,889	22			4,822	4,822
School	Redwood to Cut	2,654	21			7,130	7,130
School	Resrve to Flint	2,569	22			6,352	6,352
Teed	CR100 to end	2,653	21			6,230	6,230
NESTER TOWNSHIP							
Penny Lane	Start of Pavement to End	2,441	22			6,900	6,900
Sargent Road	F-97 to End of Pavement	3,159	22			7,750	7,750
ROSCOMMON TOWNSHIP							
Charles Ct	Danes Dr to End	1,160	21-23			3,162	3,162
Corral St	W Nestel to End	688	21			2,130	2,130
Danes Dr	Towerhill Rd to End	1,308	21-29			4,154	4,154
Goldenrod	Towerhill (S) to Towerhill (N)	8,692	22			21,990	21,990
Home Acres and Robinson	Federal to Loxley	2,774	22			7,040	7,040
Kennedy Rd	Standard St to Welch Rd	1,777	20			4,060	4,060
Standard St	Welch Rd to M-55	1,674	21			4,512	4,512
W Nestel	Towerhill to Townline	5,261	24			15,075	15,075
Welch Rd	Cloverleaf Rd to Old 27	2,568	20			5,902	5,902
White Birch	Goldenrod (S) to Goldenrod (N)	3,636	22			9,392	9,392
TOTAL QTY				-	-	333,108	333,108

**ROSCOMMON COUNTY ROAD COMMISSION
2020 CHIP & FOG SEAL APPLICATIONS INCLUDING MATERIALS**

#1 Chip Seal Application (Approx. As-Needed Syd. For Price Options)

Seal, Single Chip with CM-90 and 34CS Natural Aggregate \$_____per Syd.
Seal, Single Chip with CM-90 and 34CS Blast Furnace Slag \$_____per Syd.
Seal, Single Chip with CM-90 and 29A Natural Aggregate \$_____per Syd.
Seal, Single Chip with CM-90 and 29A Blast Furnace Slag \$_____per Syd.
Seal, Single Chip (Alternate)_____ \$_____per Syd.
Seal, Single Chip (Alternate)_____ \$_____per Syd.

#2 Chip Seal Application (Approx. 333,108 Syd.)

Seal, Single Chip with CM-90 and CS-T Natural Aggregate \$_____per Syd.
Seal, Single Chip with CM-90 and CS-T Blast Furnace Slag \$_____per Syd.
Seal, Single Chip (Alternate)_____ \$_____per Syd.

#3 Fog Seal Application (Approx. 333,108 Syd.)

Fog Seal (CSS-1H)_____ \$_____per Syd.
Fog Seal (Alternate)_____ \$_____per Syd.
Fog Seal (Alternate)_____ \$_____per Syd.

#4 Pick-up Sweeping (Approx. As-Needed Syd.)

Pick-up Sweeping_____ \$_____per Syd.

Company Name

Telephone Number

Mailing Address

Fax Number

City, State, Zip

Email Address

Company Contact Person

Date

Authorized Company Representative's Signature

ROSCOMMON COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
Seal, Single Chip

1 of 5

RCRC:TLT

3-06-18

Description:

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

Equipment:

All equipment must meet the requirements under Section 505 of the Michigan Department of Transportation 2012 Standard Specification 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 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.

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.

Pilot Car:

The pilot car will be omitted from this project.

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 five 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 a 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.

1. **Liquid Asphalt.** The Contractor shall apply the liquid at a temperature between 260°F and 300°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 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 operations any bleeding or tracking is unsatisfactory. The roadway must be sanded and swept clean. If the surface conditions call for further action, a heated aggregate meeting the physical properties of Table 2, shall be applied, rolled and broomed.
5. **Rough Joints.** Transverse and longitudinal construction joints formed in 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.

Liquid Asphalt:

The liquid asphalt to be used shall be CM-90 or approved equal. The asphalt must meet the requirements stated in Table 1. The Contractor shall apply the liquid asphalt at a temperature between 260°F and 300°F, followed by a uniform application of coarse aggregate. The CM-90 or approved equal placement rate shall be within a residual target range of 0.27 to 0.29 gallons per square yard for the 34Cs or 29A(after correction for temperature expansion and distillate loss). Construct a 100-foot test strip at the residual target rate of 0.28 gallons per square yard followed by a uniform application of coarse aggregate and review the application. The CM-90 or approved equal placement rate shall have a target rate of .20 gallons per square yard for CS-T. If this target rate is not the optimum application rate due to the gradation of the coarse 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 the adjustments to the application rate 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 1 - Chip Seal Matrix Modified Asphalt (CSMMA) - CM 90 or Approved Equal
Table 904-2**

TESTS	Requirements CM 90 or Approved Equal
Modified Koppers Vacuum Viscosity, 25°C, P, ASTM D 4957	2,000 to 20,000
Flash Point, deg °C	
Tag Flash Point, °C, min, ASTM D 3143-98	65.5
Water in Petroleum, ASTM D 95-05, %, max	1.0
Cut-back Distillation, ASTM D 402-02	
Distillate, % by Vol of Total Distillate to 360°C	
To 225° C	0 - 2
To 260° C	0 - 5
To 315.5° C	10 - 65
Residue from Distillation to 360° C, min	90
Test on Residue from Distillation, ASTM D 402	
Penetration, 25° C, 100 r, 5 sec, ASTM D5-05a	90 to 150
Ductility at 25° C, cm, min, ASTM D5 113	Report
Solubility in Trichloroethylene, %, min, ASTM D 2042-01	99.0
Softening Point, °C, min, ASTM D 36-95	60
Float Test, 60° C, sec, min, ASTM D 139-95	1200

Coarse Aggregate:

Cover material to be used shall be approved 34CS or 29A per Section 902 of the Michigan Department of Transportation 2012 Standard Specification for Construction. The 34CS or 29A placement rate shall be within the range of 20 to 24 pounds per square yard with a target rate of 22 pounds per square yard. 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.

Aggregate:

Cover material to be used shall be approved CS-T per the Roscommon County Road Commission Special Provision, Table 2. The CS-T placement rate shall have a target rate of 16 pounds per square yard . 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.

Table 2: Gradation and Physical Requirements for CS-T Aggregate

Sieve Analysis (MTM 109), Total Percent Passing (a)	
Sieve Size	CS-T
3/4 inch	100
1/2 inch	100
3/8 inch	100
1/4 inch	85-100
No. 4	N/A
No. 8	0-10
No. 200 (Loss by Wash)	2.0 maximum
Physical Requirements for Aggregate (CS-T)	
Test – Description	Specification
<i>MTM 102</i> – L.A. Abrasion Resistance	35% maximum (b) 45% maximum (c)
<i>MTM 117</i> – Percent of Crushed Particles	ADT > 4,000 100% minimum on single face, 90% on 2 faces ADT < 4,000 95% minimum on single face 85% on 2 faces
<i>MTM 110</i> – Deleterious Particles in Aggregate	3.5% maximum (d)
<i>ASTM D 4791</i> – Flat and Elongated Ratio, 3:1(e)	N/A
<i>MTM 111</i> – Aggregate Wear Index (f)	ADT > 4,000 60/40 Weighted Average > 260 (g) ADT < 4,000 220 minimum
Moisture Content at time of placement(h)	4% maximum
a. All aggregate must be washed. b. Natural aggregate. c. Iron Blast-Furnace slag aggregate. d. Includes the sum of shale, silt stone, structurally weak and clay ironstone. e. As determined for material retained on the No.4 sieve. The ratio between any combination of length, width or thickness. f. Does not apply to a shoulder chip seal. g. The top course will be weighted at 60% and base course will be weighted at 40% with the higher AWI aggregate as the top course. h. As described in MDOT Procedures for Aggregate Inspection.	

Delayed Acceptance:

The delayed acceptance will not occur until after 30 days from the time of placement of the fog seal.

Measurement and Payment:

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

Pay Item

Seal, Single Chip

Pay Unit

Square Yard

Payment for the Seal, Single Chip includes all equipment, labor and materials for placement of a single application of liquid asphalt and 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 aggregate that are within the ranges identified in Liquid Asphalt and Aggregate Application.

ROSCOMMON COUNTY ROAD COMMISSION

SPECIAL PROVISION FOR **Seal, Fog**

1 of 3

RCRC:TLT

3-07-18

Description:

The work consists of furnishing all materials, equipment and labor necessary for the surface preparation and application of a seal, fog. This work shall conform to the requirements of Section 505 and 904 of the Michigan Department of Transportation 2012 Standard Specification for Construction and this Special Provision.

Equipment:

All equipment must meet the requirements under Section 505 of the Michigan Department of Transportation 2012 Standard Specification 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 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. Seal, fog completed chip seal areas, after brooming and before placement of permanent pavement markings. Allow the 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 marking.
2. Seal, fog 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 affected areas shall be re-applied at the Contractors expense.
3. The Seal, fog 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 Seal, fog until the emulsion has fully cured.
5. The Seal, fog 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 904-5 of the Michigan Department of Transportation 2012 Standard Specifications for Construction. The CSS-1h shall be spread at a target rate between 0.12 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, 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 follow information:

- ~ Control Section / Project Number / Road Name
- ~ Date / Air Temperature / Pavement Temperatures / Humidity
- ~ Asphalt Emulsion temperature
- ~ Beginning and ending stations
- ~ Yield checks on asphalt emulsion
- ~ Length / Width / Total Square Yards
- ~ Contractor Signature

Provide the following additional materials documentation:

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

The above submittals shall be placed in order by date in a folder with the certification statement on 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 seal, fog has been applied and the permanent pavement markings have been applied.

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 lost stone. If any deficiencies are found, corrective work is required.

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>
Seal, Fog	Square Yard

Payment for the Seal, Fog 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 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.