Roscommon County Road Commission

James Porath, Commissioner Justin Wyckoff, Commissioner Clint Stauffer, Commission Brian Vaughn, Commissioner John Earley, Commissioner 820 E. West Branch Road Prudenville, MI 48651

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NOTICE TO BIDDERS

The Roscommon County Road Commission will receive sealed bids until 2:00 p.m. on February 10, 2022. Bids will be opened for tabulation and review at the Roscommon County Road Commission's regularly scheduled board meeting on February 10, 2022 beginning at 7:00 p.m. Our office is located at 820 E. West Branch Road, Prudenville, MI 48651.

2022 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. 1007 or emailing DahlstromB@roscommoncrc.com.

Submit bids in sealed envelope that is clearly marked with the words "2022 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 John Earley, Vice Chair Justin Wykoff, Member Clint Stauffer, Member Brian Vaughn, Member

Bid Requirements

The Roscommon County Road Commission (RCRC) will receive sealed bids until 2:00 p.m. on <u>February 10, 2022</u>. Bids will be opened for tabulation and review at the Roscommon County Road Commission's regularly scheduled board meeting on <u>February 10, 2022</u> beginning at 7:00 p.m. Our office is located at 820 E. West Branch Road, Prudenville, MI 48651.

2022 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 the requirements of the Michigan Department of Transportation 2020 Standard Specifications for Construction, RCRC Special Provision for Seal, Single Chip and RCRC Special Provision for Seal, Fog.

Start Date: May 16, 2022 (or as approved by the Roscommon County Road Commission)

Completion Date: August 5, 2022 (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 "2022 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.

2022 Chip Seal Bids Roscommon County Road Commission

	Roscommon C	June 1			Item # 2	Item # 2	
				Item #1	Leveling	Top	
				34CS or 29A	CS-T Chip	CS-T Chip	Item # 3
Road Name/ Township	Limits/Location	Length	Road Width	THE P PEARS NAME OF THE PARTY OF	Seal	Seal	Fog Seal
nead Hamey Textilising	Limits/ Location	(Feet)	(Feet)	Syd	Syd	Syd	Syd
DENTON TOWNSHIP		(1. 551)	(1 554)		-,-		
Apricot Ave	Start of pavement to M-18	1,115	21		(0)00,000	2,570	2,570
Aspen St	M-18 to Clinton St	291	10			352	352
Black Elm Dr	M-18 to Denton Dr	598	16			1,161	1,161
Cedar Ave	Grapevine Ave to M-55	267	21			739	739
Clearwater Ave	Peach Tree Ave to M-55	1,270	21			3,016	3,016
Clinton St	Pine St to end of pavement	488	12			666	666
Cove St, Grand Ave	M-55 to M-18	1,759	21			4,362	4,362
Cypress Dr	M-18 to Woodsdale Dr	1,386	20.5			2,972	2,972
Denton Dr	Tamarac Dr to Black Elm Dr	895	16			1,602	1,602
Detroit St	M-55 to end of pavement	345	20			724	724
Dexter Rd	Main St to M-55	881	22			2,388	2,388
Frank St	Grand Ave to M-18	1,400	20			3,219	3,219
Grove St	M-55 to Frank St	1,191	20			2,720	2,720
Guernsey Ave	M-55 to end of pavement	895	19			1,222	1,222
Indian Oaks Trl	Main St to Indian Oaks Trl	2,558	20			5,847	5,847
Kelly St	M-55 to Frank St	1,099	21			2,641	2,641
Level Park Dr	Start of pavement to M-18	2,352	21	5,811			5,811
Michigan Ave	M-55 to end of pavement	420	18			847	847
Midland Rd	Main St to M-55	674	22			2,154	2,154
Oak St	M-18 to end of cul-de-sac	1,209	21			2,884	2,884
Oakdale Dr	Main St to M-55	1,248	21			2,978	2,978
Pine Oaks Dr	M-18 to Woodsdale Dr	1,384	18			2,802	2,802
Pine St	M-18 to end of cul-de-sac	1,568	21			1,568	1,568
Sullivan Ave	Peach Tree Ave to M-55	1,275	22			3,168	3,168
Sumac Dr	M-18 to Woodsdale Dr	1,387	16/18			2,683	2,683
Sweet Plum Ave	Sullivan Ave to M-18	771	21			1,781	1,781
Tamarack Dr	M-18 to Woodsdale Dr	1,386	18			2,828	2,828
Walnut Dr	M-18 to end of cul-de-sac	1,255	21			3,035	3,035
Woodsdale Dr	Nestel Rd to Cypress Dr	1,044	21			2,468	2,468
		ě					
GERRISH TOWNSHIP							
Arbutus Ln, Columbine Ln,	CR 100 to CR 100	6,182	14/21			12,944	12,944
Chaney Point Dr, Cottage St							
Baja Ct	Siesta Trl to end of cul-de-sac	395	20			1,178	1,178
Caliente Dr	Flag Point Dr to Siesta Trl	853	21			2,226	2,226
Carpenter Blvd	Columbine Ln to Hillsdale Dr	1,555	21			3,711	3,711
Flag Point Dr, Pine Bluffs Rd	CR 103 to Hitchcock Ave	7,719	18.5/21			16,978	16,978
Hillsdale Dr	Chaney Point Dr to CR 100	1,653	17			3,289	3,289
Reserve Rd	CR 104 to end of pavement	395	21			2,920	2,920
Siesta Trl	Caliente Dr to Caliente Dr	2,413	20			5,380	5,380

LAKE TOWNSHIP Deadstream Rd Howe Ave			Road Width	Chip Seal	CS-T Chip Seal	CS-T Chip Seal	Item # 3 Fog Seal Syd
Deadstream Rd		(Feet)	(Feet)	Syd	Syd	Syd	- Syu
		1,000	20			2,444	2,444
Howe Ave	Old Mead Rd to School Rd	1,090 350	22			860	860
Lastau Ct	Lester St to Truman St	1,075	22			2,680	2,680
Lester St Long Point Dr	Howe Ave to Northway Rd CR 300 to CR 300	15,100	21		-	35,522	35,522
Mary Rd	Northway Rd to Old 27	1,279	20			2,952	2,952
Northway Rd	M-55 to end	1,284	32/21			3,257	3,257
Old Mead Rd	Deadstream Rd to River Rd	555	20			1,290	1,290
Point View Ave	West Shore Dr to Houghton Lake	332	18			718	718
School Rd	Deadstream Rd to end	1,260	20			2,936	2,936
Truman St	Howe Ave to Northway Rd	1,083	22			2,702	2,702
Victory Rd	Northway Rd to Old 27	1,275	20			2,935	2,935
Victory Nu	Northway ha to old 27	- 1,273					
MARKEY TOWNSHIP							
Agate Dr	Englewood Dr to Winchester Dr	1,314	20.5			3,100	3,100
Avalon Dr	Englewood Dr to Winchester Dr	1,193	21			2,800	2,800
Avon Ave	Vista Dr to end of pavement	226	22			595	595
Beacon Ln, Wellington Dr,						40.050	42.250
Brandywine Dr, Staton Way	Reserve Rd to Englewood Dr	4,945	22			12,250	12,250
Bryant Dr	Start of pavement to CR 104	1,142	21			2,680	2,680
Burgundy Way	Brandywine Dr to Flint Rd	380	25/14			1,435	1,435
Englewood Dr, Avon Ave Vista Dr	Avalon Dr to Winchester Dr	6,348	21/22			15,422	15,422
Gardner Rd	Start of pavement to Lakewood Dr	2,624	22			6,615	6,615
lvy Dr	Englewood Dr to Winchester Dr	1,330	21			3,189	3,189
Lakewood Dr	Start of pavement to Flint Rd	3,999	22			9,940	9,940
Leafy Ln	Start of cul-de-sac to CR 104	606	22			1,644	1,644
Palmetto Ln	School Rd to Avalon Dr	380	21			1,053	1,053
Winchester Dr	Avalon Dr to Wellinton Dr	1,948	21			4,656	4,656
RICHFIELD TOWNSHIP							
Cedar Creek Rd, Beaver Dr	Central Dr to Johnston Blvd	3,009	20.5/22			7,460	7,460
Central Dr	F-97 to end of HMA	8,745	25/22	21,690			21,690
Eagle Dr	Artesia Beach Rd to end	2,578	23/18			6,430	6,430
Ford Dr, Washington St	F-97 to F-97	4,941	21			11,750	11,750
Fourth St	Ford Dr to Washington St	696	21			1,782	1,782
Glenn Ave	Johnston Blvd to Johnston Blvd	2,091	20.5/22			4,936	4,936
Ivalee Ct	Glen Ave to end	256	20			854	854
Johnson Blvd	Washington St to end	529	20			1,334	1,334
Johnston Blvd, Otter Dr	Johnson Blvd to end of HMA	6,074	21			14,210	14,210
Leeward Ln	Artesia Beach Rd to end	3,975	14.5/22			10,374	10,374
Madison St	Old 76 to Ford Dr	3,067	20/20.5			7,232	7,232
Tippedy Dr	Lake St to end	3,200	20.5			7,918	7,918
ROSCOMMON TOWNSHIP	en 200 i en 200	F 300	22	42.400			12.100
Hidden Hills Dr	CR 306 to CR 306	5,323	22	13,166			13,166

				Item #1 34CS or 29A	Item # 2 Leveling CS-T Chip	Item # 2 Top CS-T Chip	Item # 3
Road Name/ Township	Limits/Location	Length	Road Width	Chip Seal	Seal	Seal	Fog Seal
PRIMARY PROJECTS							
CR 201	Old 27 to CR 200	6,495	22	16,080			16,080
TOTAL QTY				56,747	-	311,978	368,725

ROSCOMMON COUNTY ROAD COMMISSION 2022 CHIP & FOG SEAL APPLICATIONS INCLUDING MATERIALS

#1 Chip Seal Application (Approx. 56,747 Syd)

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 (A Seal, Single Chip with CM-90 and CS-T Natural Aggregate		1,978 Syd) 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 (Ap	prox. 368	3,725 Syd)		
Fog Seal (CSS-1H)	\$	per Syd.		
Fog Seal (Alternate)	\$	per Syd.		
Fog Seal (Alternate)	\$	per Syd.		
#4 Pick-up Sweeping (Appr	ox. As-Ne	eded Syd)		
Pick-up Sweeping	_ \$	per Syd.		
Company Name	Telephone	Number		
Mailing Address	Fax Numb	er		
City, State, Zip	Email Add	Email Address		
Company Contact Person	Date			
Authorized Company Representative's Signature				

ROSCOMMON COUNTY ROAD COMMISSION

SPECIAL PROVISION FOR Seal, Single Chip

RCRC: BDD 1 of 5 12-20-21

a. 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 sections 505, 902 and 904 of the Standard Specifications for Construction and this Special Provision.

b. Equipment.

All equipment must meet the requirements under section 505 of the Standard Specifications for Construction, except as modified herein:

Pressure Distibutor:

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.

c. General Placement Operations.

- 1. The Contractor shall establish 1,000 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 aggregate and before the asphalt has begun to cure. Make a minimum of two complete passes over the aggregate. A complete pass is one trip, forward and backward, over the same path.

4. 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.

d. 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 correction 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.
- 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 Special Provision, 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 grooves or ridges in the surface is unsatisfactory. The spray bar and nozzles must be readjusted to eliminate the surface pattern problem.

e. Liquid Asphalt.

The liquid asphalt to be used shall be CM-90 or approved equal. The asphalt must meet the requirements stated in the Special Provision, 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 34 CS 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 0.20 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

Tests	Requirements CM-90 or Approved Equal
Modified Koppers Vacuum Viscosity, 25°C, P, ASTM D 4957	2,000 to 20,000
Flash Point, °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 113	90-150
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

f. Coarse Aggregate.

Cover material to be used shall be approved 34CS or 29A per section 902 of the Standard Specifications 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.

g. 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	0-15			
No. 200 (Loss by Wash)	2.0 maximum			
Physical	Requirements for Aggregate (CS-T)			
Test – Description	Specification			
MTM 102 – L.A. Abrasion	35% maximum (b)			
Resistance	45% maximum (c)			
MTM 117 - Percent of Crushed	ADT > 4,000 100% minimum on single face, 90% on 2 faces			
Particles	ADT < 4,000 95% minimum on single face, 85% on 2 faces			
MTM 110 – Deleterious Particles in Aggregate	3.5% maximum (d)			
ASTM D 4791 – Flat and Elongated Ratio, 3:1 (e)	N/A			
MTM 111 – 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.

h. Delayed Acceptance.

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

i. 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 (Syd)

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

RCRC: BDD 1 of 3 12-20-21

a. 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 sections 505 and 904 of the Standard Specifications for Construction.

b. Equipment.

All equipment must meet the requirements under section 505 of the Standard Specifications for Construction, except as modified herein:

Pressure Distibutor:

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.

c. General Placement Operations.

- 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 Seal, Fog is placed. Remove the protective covers from the temporary pavement marker tab after Seal, Fog placement. Removal of the protective covers shall be done within a lane closure. Allow a minimum of 3 days before placing permanent pavement marking.
- Seal, Fog shall not be applied when the air temperature is below 60° F. Seal, Fog shall be applied to a clean, dry pavement surface. Do not apply Seal, Fog when precipitation is imminent. If precipitation occurs, prior to the emulsion breaking, the affected areas shall be re-applied at the Contractors expense.
- 3. Seal, Fog shall be applied so 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.

d. Seal, Fog Application Rate.

The fog seal shall be a Cationic Emulsified Asphalt, CSS-1h (at 50% dilution) as specified in Table 904-6 of the Standard Specifications for Construction. The CSS-1h shall be spread at a 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 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.

e. Submittals.

Upon completion, the Contractor shall provide an inspector's daily report for each day's work performed containing the following 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 of the back.

f. 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, Seal, Fog has been applied and the permanent pavement markings have been applied.

g. Delayed Acceptance.

A minimum of 30 days after placement of Seal, Fog, 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.

h. Measurement and Payment.

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

Pay Item Seal, Fog Pay Unit Square Yard (Syd) 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 section d. Seal, Fog Application Rate of this special provision.

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