ASPHALT RUBBER CHIP SEAL WITH A TYPE II SLURRY SEAL, PHASE II

CITY OF COLUSA
425 WEBSTER STREET
COLUSA, CA 95932

ATTN: JESSE CAIN
CITY MANAGER

AMERICAN PAVEMENT SYSTEMS, INC.
CORPORATE OFFICE:
1012 11TH STREET, SUITE 1000
MODESTO, CA 95354

RESPONSIBLE DIVISION OVERSEEING PROJECT:
CHIP SEAL OPERATIONS OFFICE
1012 11TH STREET SUITE 1000
MODESTO, CA 95354

SUBMITTED BY:
DAVID PIMLEY
VICE PRESIDENT
EMAIL: DPIMLEY@AMERICANPAVEMENTSYSTEMS.COM
OFFICE PHONE: (209) 522-2277
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CALIFORNIA CONTRACTORS LICENSE #943792, A
DIR #1000000207

Company Background & Capability Statement

American Pavement Systems, Inc. (APS)
Established: January 2013
Service Area: California, Nevada, Oregon, Washington
Specialization: Asphalt Rubber Chip Seals & Asphalt Rubber Cape Seals

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Company Overview

American Pavement Systems, Inc. (APS) is a premier Pavement Preservation Contractor, operating since 2013 with a primary focus on Asphalt Rubber Chip Seals and Asphalt Rubber Cape Seals. With millions of square yards successfully placed, APS brings unmatched expertise and dedication to quality across every project. Our management and field personnel boast over 30 years of experience specifically in asphalt rubber applications, allowing us to execute complex projects with precision, efficiency, and foresight.

Project Leadership & Staffing

If awarded the contract based on the City's Bid Schedule, APS will assign a highly qualified and experienced management team to ensure the project's success:

- **David Pimley** – *Vice President, Chip Seal Division*
- **Mike Marchini** – *Vice President, Slurry Seal & Micro-Surfacing Division*
- **Ryan Bangle** – *Operations Manager, Slurry Seal & Micro-Surfacing*
- **Rigo Ochoa** – *Project Manager, Chip Seal Division*
- **Daniel Cruz** – *General Superintendent, Chip Seal Operations*
- **Gilbert Duarte** – *General Superintendent, Slurry Seal & Micro-Surfacing*

Together, these key personnel bring more than 70 years of combined hands-on industry experience. This depth of knowledge empowers APS to proactively solve problems, adapt to dynamic field conditions, and ensure quality execution while minimizing disruption.

Scheduling, Execution & Traffic Control

APS crews are fully capable of self-mobilization, enabling quick response to schedule adjustments and onsite needs. We understand the importance of working around the

City's timeline and community needs. If awarded this project, APS will coordinate closely with City staff to:

- Develop a comprehensive project schedule
- Provide a detailed, street-by-street schedule
- Perform resident and business notifications ahead of construction
- Post No Parking signs and manage all temporary traffic measures

All operations will be performed using dedicated Traffic Control Teams who specialize in advance posting, public notifications, and onsite safety.

Materials, Equipment & Environmental Compliance

- **Material Sourcing:** All materials will be locally sourced within a 1–2 hour range of the project site to enhance logistical efficiency.
- **Equipment:** APS owns and operates one of the newest, most advanced fleets of chip seal and slurry seal equipment in the industry.
- **Environmental Compliance:** Our entire fleet is 100% CARB Compliant, exceeding current environmental and air quality regulations.

APS maintains multiple full-scale crews working daily, giving us the flexibility and production capacity to meet project demands and timelines, barring weather or external phasing constraints.

Project Execution Plan

- **Asphalt Rubber Chip Seal:** ~4 working days
- **Type II Slurry Seal:** ~8 working days (following chip seal)
- **Final Sweeping & Re-Striping:** ~1 week (following curing)

Additional Inclusions:

- Removal of existing thermoplastic striping and markers
- Installation of temporary lane delineation (tabs)
- Post-sweeping of slurry to remove loose aggregate
- Final re-striping of roadways

Optional: Pricing for upgrading to Microsurfacing Emulsion in lieu of Slurry Seal Emulsion is included in bid proposal.

Preparatory Work (By Others)

- Trees must be trimmed to **14' height clearance from curb to curb** to allow safe passage of equipment.

Project References

Agency	Contact Name	Phone	Email
City of Lathrop	Ken Reed	(209) 712-3136	kreed@ci.lathrop.ca.us
El Dorado County	Brian Mullens	(530) 642-4925	brian.mullens@edcgov.us
Marin County	Rachel Calvert	(415) 246-5017	rcalvert@marincounty.org

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Supporting Documentation

- **Quotation:** Attached per Bid Schedule, including optional Microsurfacing upgrade
- **Experience List:** Attached with projects completed since 2013

Respectfully presented for your consideration,

David Pimley, Vice President
American Pavement Systems, Inc.

City of Colusa ASPHALT RUBBER CHIP SEAL with a TYPE II SLURRY SEAL, Phase II

04/2025

Bid Item No.	Description of Bid Item	Unit of Measure	Estimated Qty	Unit Price	Extended Total Amount
1	Mobilization, complete in place for lump s	LS	1	$60,000.00	$60,000.00
2	Traffic Control, complete in place	LS	1	$75,000.00	$75,000.00
3	Water Polution Control	LS	1	$5,000.00	$5,000.00
4	Asphalt Rubber Chip Seal	SY	161,800	$4.25	$687,650.00
5	Slurry Seal	SY	161,800	$2.71	$438,478.00
6	Thermoplastic Traffic Striping	LS	1	$117,250.00	$117,250.00
**	Microsurfacing	SY	161,800	$.07	$11,326.00
	(Additional Cost to upgrade to Microsurfacing)				
	(This item will be added to Item #5)				

SF	Square Foot
LF	Linear Foot
LS	Lump Sum
EA	Each
SY	Square Yard
*	Optional Bid

*please specify qualifying material for use, based on scope.

Bidder is welcome to adjust the Est. quaty to reflect cost to scope.

Total Base Bid	$1,383,378.00
Total Optional Bid	$11,326.00
Total Project Cost	$1,394,704.00

Subcontractor

Bid Item No.	Name of Subcontractor	Licence Number	Type & % of Work	Location/Place of Buisness
1	Chrisp Company	#374600 DIR# 1000000306	R&R striping 9.2%	Woodland, CA
2				
3				
4				

David Pimley
Vice President

Signature of Bidder and Name Printed

American Pavement Systems, Inc.

Company Name Printed

CITY OF COLUSA

REQUEST FOR PROPOSAL

ASPHALT RUBBER CHIP SEAL WITH A TYPE II SLURRY SEAL, PHASE II

Release Date:	04/25/2025
Submittal Date:	05/15/2025
Contact Person:	Jesse Cain, City Manager

CITY OF COLUSA 425 WEBSTER STREET COLUSA, CA 95932
www.cityofcolusa.com (530) 458-4941

Table of Contents

I. INTRODUCTION

a. Description of The City of Colusa

Located in the Sacramento Valley, approximately 65 miles north of Sacramento and 45 miles south of Chico, the City of Colusa is primarily an agricultural community. Colusa is along the Sacramento River and sits on Highway 20/45, 24 miles west of Yuba City and nine miles east of Williams. Incorporated as a general law city in 1868, the City is the Colusa County seat. The City of Colusa serves a population of approximately 6,411. The City covers about 3.42 square miles, with the planning area covering 10 square miles. The City maintains 35.37 centerline miles of roads.

The City is a full-service city that operates under the council/manager form of government, providing the following: Police; Fire; Streets and Drainage; Water; Parks; Buildings and Grounds; Recreation and Swimming Pool; Sewer; and General Administrative Services. Engineering and legal services are provided to the City on a contract basis.

The City Council meets the first and third Tuesday of every month at 6:00 p.m. at City Hall, 425 Webster Street, Colusa, CA 95932.

b. Purpose of RFP

The City of Colusa is seeking proposals for the repaving project to enhance our community's infrastructure and ensure safe and efficient transportation for residents and visitors alike. Our primary goal is to revitalize the roadways, addressing any existing deterioration and improving overall quality and durability. By investing in repaving, we aim to enhance the aesthetic appeal of our city while also prioritizing the safety and convenience of pedestrians, cyclists, and motorists. This project aligns with our commitment to fostering sustainable growth and maintaining the high standards of living that define Colusa. We invite qualified contractors to submit proposals that reflect innovative approaches, cost-effectiveness, and a dedication to excellence in construction and project management. Period of Performance is July 1, 2025 – October 31, 2025.

II. Nature of Services Required

A) SCOPE OF SERVICES REQUIRED

The selected contractor will be responsible for:

- **Surface Preparation**: Cleaning and preparing existing pavement surfaces on specified streets to ensure proper adhesion of the rubberized chip seal.
- **Application of Rubberized Chip Seal**: Applying a rubberized asphalt binder containing a minimum of 300 pounds of tire-derived crumb rubber per ton of binder, followed by the application of aggregate chips.
- **Traffic Control**: Implementing appropriate traffic control measures to ensure public and worker safety during the project.
- **Quality Assurance**: Conducting tests to verify material properties and adherence to project specifications.
- **Cleanup and Restoration**: Removing debris and restoring the project area to its original condition upon completion.

1. **General**

1.1. **Scope**

This work consists of constructing a chip seal using an asphalt-rubber binder.

1.2. **Definitions**

Crumb Rubber Modifier (CRM): Combination of ground or granulated scrap tire and high natural crumb rubber.

Scrap tire crumb rubber: Any combination of:

1. Automobile tires
2. Truck tires
3. Tire buffing

High natural crumb rubber: Material containing between 40 to 48 percent natural rubber.

Asphalt Modifier: A resinous, high flash point, and aromatic hydrocarbon.

Descending viscosity reading: Subsequent viscosity reading at least 5 percent lower than the previous viscosity reading.

1.3. **Submittals**

The Contractor shall comply with all Federal, State, and Local environmental laws, rules, regulations, and ordinances including, but not limited to, air quality requirements.

At least 5 days before use, Contractor shall submit the permit issued by the local air district for asphalt-rubber binder production equipment and application equipment. If an air quality permit is not required by the local air district for producing asphalt-rubber binder, submit verification from the local air district that an air quality permit is not required.

At least 10 days before starting any asphalt-rubber chip seal activities, Contractor shall submit the name of an authorized laboratory to perform QC testing. The authorized laboratory must comply with the Caltrans Independent Assurance Program (IAP) or possess current AASHTO Material Reference Laboratory (AMRL) accreditation for all ASTM and AASHTO tests required in Section 2.

Submit a certified volume or weight slip for each delivery of asphalt-rubber binder ingredients.

At least 14 days before use, Contractor shall submit:

1. Four each one-quart cans of mixed asphalt-rubber binder
2. Samples of each asphalt-rubber binder ingredient
3. SDS for each hazardous material
4. Asphalt-rubber binder formulation, including:
    4.1. Source and grade of asphalt binder
    4.2. Source and type of asphalt modifier
    4.3. Each source and type of scrap tire crumb rubber and high natural crumb rubber
    4.4. Percentage of asphalt modifier by weight of asphalt binder
    4.5. Percentage of combined asphalt binder and asphalt modifier by weight of asphalt-rubber binder
    4.6. Percentage of scrap tire crumb rubber and high natural crumb rubber by total weight of asphalt-rubber binder
    4.7. Percentage of scrap tire crumb rubber and high natural crumb rubber by total weight of crumb rubber modifier
    4.9. Minimum reaction time and temperature
5. Test results
    5.1. Certificate of Compliance showing the asphalt binder is the required PG grade
    5.2. Test results showing the asphalt modifier meets the requirements in Table 1
    5.3. Test results showing each source of CRM meets the requirements in Tables 2, 3, and 4
    5.4. Test results showing the asphalt-rubber binder meets the requirements in Tables 5 and 6
    5.5. Test results showing the screenings meets the requirements in Tables 7 and 8

1.4. Quality Control Program

Contractor shall develop, implement, and maintain a QC program.

Contractor shall prepare and maintain QC records, including:

1. Names and qualifications of:
    1.1. Samplers
    1.2. Testers
    1.3 Inspectors
2. Testing laboratories
3. Testing equipment calibrations and certifications
4. Construction inspection reports
5. Sampling and testing records organized by date and type of material
6. Test results with comparison of quality characteristic requirements
7. Test results in relation to action and any suspension limits
8. Records of corrective actions and suspensions

Contractor shall notify the Agency within 24 hours of any noncompliance identified by the QC program.

1.5. Quality Control Manager

Contractor shall assign a QC manager before the start of the affected work. The QC manager must receive, review, and approve all correspondence, submittals, and reports relating to the QC of materials before they are submitted to the Agency. The QC manager must be the sole individual responsible for:

1. Signing the QC plan
2. Implementing the QC plan
3. Maintaining the QC records

The QC manager must be the Contractor's employee or must be an employee of a subcontractor that is providing only QC services. The QC manager must not be employed or compensated by a subcontractor or by any other persons or entities hired by subcontractors who will provide services or material for the project.

2. Materials

2.1. Asphalt Binder

Asphalt binder must be PG 64-16.

2.2. Asphalt Modifier

Asphalt modifier must be a resinous, high flash point, aromatic hydrocarbon. Asphalt modifier must comply with the requirements shown in Table 1.

Table 1: Asphalt Modifier for Asphalt-Rubber Binder

Quality Characteristic	Test Method	Requirement
Viscosity at 100 °C (m2/s x 10-6)	ASTM D445	X ± 3 [a]
Flash point (CL.O.C., °C, min)	ASTM D92	207
Asphaltenes by mass (%, max)	ASTM D2007	0.1
Aromatics by mass (%, min)	ASTM D2007	55

[a] *X* denotes the asphalt modifier viscosity from 19 to 36 as proposed by the Contractor. The proposed value "*X*" shall be submitted in writing to the Agency. A change in *X* requires a new asphalt-rubber binder submittal.

2.3. Crumb Rubber Modifier

Crumb rubber modifier (CRM) shall consist of a combination of scrap tire CRM and high natural CRM. The scrap tire CRM shall consist of ground or granulated rubber derived from any combination of automobile tires, truck tires or tire buffings. The high natural CRM shall consist of ground or granulated rubber derived from materials that utilize high natural rubber sources.

Scrap tire crumb rubber and high natural crumb rubber must be delivered to the asphalt-rubber binder production site in separate bags and shall be sampled and tested separately.

Steel and fiber must be separated. If steel and fiber are cryogenically separated, it must occur before grinding and granulating. Cryogenically-produced CRM particles must be large enough to

be ground or granulated. Cryogenically produced CRM particles that pass through the grinder or granulator without being ground or granulated, respectively, shall not be used.

The CRM must comply with the requirements shown in the Tables 2, 3 and 4.

Table 2: Crumb Rubber Modifier Physical Requirements

Quality characteristic	Test method	Requirement
Wire in CRM (%, max)	California Test 385	0.01
Fabric in CRM (%, max)	California Test 385	0.05
CRM specific gravity	California Test 208	1.1-1.2

Table 3: Crumb Rubber Modifier Chemical Requirements

Quality Characteristic	Test Method	Scrap Tire	High Natural
Acetone extract (%)	ASTM D297	6.0–16.0	4.0–16.0
Rubber hydrocarbon (%, min)	ASTM D297	42.0–65.0	50.0
Natural rubber content (%)	ASTM D297	22.0–39.0	40.0–48.0
Carbon black content (%)	ASTM D297	28.0–38.0	---
Ash content (%, max)	ASTM D297	8.0	---

Table 4: Crumb Rubber Gradation Requirements

Percent passing by weight		
Sieve Size	Scrap Tire	High Natural
No. 8	100	100
No. 10	98–100	100
No. 16	45–75	95–100
No. 30	2–20	35–85
No. 50	0–6	10–30
No. 100	0–2	0–4
No. 200	0	0–1

2.4. **Asphalt-Rubber Binder**

Asphalt-Rubber Binder must be a combination of:

1. Asphalt binder
2. Asphalt modifier
3. Crumb rubber modifier

Asphalt-rubber binder blending equipment must be authorized under the Caltrans Material Plant Quality Program. The blending equipment must allow the determination of weight percentages of each asphalt-rubber binder ingredient.

Asphalt-rubber binder must be 79 ± 1 percent by weight asphalt binder and asphalt modifier. The minimum percentage of CRM must be 20.0 percent and lower values may not be rounded up. CRM must be 76 ± 2 percent by weight scrap tire crumb rubber and 24 ± 2 percent by weight high natural crumb rubber.

Asphalt modifier and asphalt binder must be blended at the production site. Asphalt modifier must be from 2.5 to 6.0 percent by weight of the asphalt binder in the asphalt-rubber binder. The asphalt-rubber binder supplier determines the exact percentage.

The blend of asphalt binder and asphalt modifier must be combined with the CRM at the asphalt-rubber binder production site. The asphalt binder and asphalt modifier blend must be from 375 to 440 degrees F when the CRM is added. Combined ingredients must be allowed to react at least 45 minutes at temperatures from 375 to 425 degrees F except the temperature shall not be higher than 10 degrees F below the actual flashpoint of the asphalt-rubber binder.

After reacting for at least 45 minutes, the asphalt-rubber binder must comply with the requirements shown in Table 5.

Table 5: Asphalt-Rubber Binder

Quality Characteristic	Test Method	Requirement
Cone penetration at 25 °C (0.10 mm)	ASTM D217	25–60
Resilience at 25 °C (% rebound)	ASTM D5329	18-40
Softening point (°C)	ASTM D36/D36M	55-88
Viscosity at 375 °F (Pa•s x 10^{-3})[a]	ASTM D7741/D7741M	1,500–2,500

[a] Prepare sample for viscosity test in accordance with California Test 388.

Maintain asphalt-rubber binder at a temperature from 375 to 415 degrees F.

Stop heating unused asphalt-rubber binder 4 hours after the 45-minute reaction period. If the asphalt-rubber binder drops below 375 degrees F, reheat before use. Reheating asphalt-rubber binder that cools below 375 degrees F is a reheat cycle. Do not exceed 2 reheat cycles. If reheating, asphalt-rubber binder must be from 375 to 415 degrees F before use.

During reheating, you may add scrap tire crumb rubber. Scrap tire crumb rubber must not exceed 10 percent by weight of the asphalt-rubber binder. Allow added scrap tire crumb rubber to react for at least 45 minutes. Reheated asphalt-rubber binder must comply with the specifications for asphalt-rubber binder.

Design the asphalt-rubber binder from testing you perform for each quality characteristic and for the reaction temperatures expected during production. The profile must include the same component sources for the asphalt-rubber binder used. The 24-hour (1,440-minute) interaction period determines the design profile. At a minimum, mix asphalt-rubber binder components, take samples, and perform and record the tests shown in Table 6.

Table 6: Asphalt-Rubber Binder Reaction Design Profile

Quality characteristic	Test Method	Minutes of reaction [a]							Limit[c]
		45	60	90	120	240	360	1,440	
Cone penetration at 25 °C (0.10 mm)	ASTM D217	X [b]	---	---	---	X	---	X	25-60
Resilience at 25 °C (% rebound)	ASTM D5329	X	---	---	---	X	---	X	18-50
Softening point (°C)	ASTM D36/D36M	X	---	---	---	X	---	X	55-88

Viscosity ($Pa \cdot s \times 10^{-3}$)[a]	ASTM D7741/D7741M	X	X	X	X	X	X	X	1,500-2,500

[a] Six hours (360 minutes) after CRM addition, reduce the oven temperature to 275 degrees F for 16 hours. After the 16-hour (960 minutes) cool down after CRM addition, reheat the binder to the reaction temperature expected during production for sampling and testing at 24 hours (1,440 minutes).
[b] *X* denotes required testing.
[c] The values presented in this table are for binder design only and are not to be used for material acceptance.

2.5. **Screenings**

Screenings for asphalt-rubber chip seal must comply with the gradation requirements shown in Table 7.

Table 7: Asphalt-Rubber Chip Seal Screenings Gradation

Percentage passing by weight		
Sieve Size	Coarse	Medium
3/8 inch	0-15	70-85

Do not recombine fine materials collected in dust control systems except from primary dust collection devices such as cyclone collectors or knock-out boxes with any other aggregate used in the production of screenings.

The screenings must also comply with the requirements shown in Table 8.

Table 8: Asphalt-Rubber Chip Seal Screenings Requirements[a]

Quality Characteristic	Test Method	Requirement
Cleanness Value (min)	California Test 227	80
Durability (min)	California Test 229	52
Los Angeles Rattler Loss (100 Revolutions, %, max)	ASTM C 131	10
Los Angeles Rattler Loss (500 Revolutions, %, max)		40
Film Stripping (%, max)	California Test 302	25

[a] Test the screenings prior to pre-coating.

3. **Quality Control**

3.1. **General**

The Contractor must submit all QC testing results to the Agency within 7 calendar days of receiving test results.

The Contractor must notify the Agency immediately if a QC test result falls outside of the material property requirements shown in Section 2. The Agency may stop production and construction activities by the Contractor if two test results in a row for any of the materials fall outside of the specified requirements in Section 2. The Contractor may not begin construction activities until the Contractor performs corrective action and demonstrates to the Agency that the material is within the specified requirements.

3.2. **Asphalt Modifier**

Test asphalt modifier under the test methods and frequencies shown in Table 9.

Table 9: Asphalt Modifier Testing Frequencies

Quality characteristic	Test method	Frequency[a]
Viscosity	ASTM D445	1 per project
Flash point	ASTM D92	
Asphaltenes	ASTM D2007	1 per project
Aromatics	ASTM D2007	

[a] Certificate of Compliance from CRM supplier/producer showing the material meets these requirements may be used in lieu of QC testing.

3.3. **Crumb Rubber Modifier**

If multiple sources of scrap tire CRM are used, the tests shall be performed on each source separately. Test CRM under the test methods and frequencies shown in Table 10.

Table 10: Crumb Rubber Modifier Testing Frequencies

Quality characteristic	Test method	Frequency[a]
CRM gradation	California Test 385	1 per shipment
Wire in CRM	California Test 385	
Fabric in CRM	California Test 385	
CRM specific gravity	California Test 208	

[a] Certificate of Compliance from CRM supplier/producer showing the material meets these requirements may be used in lieu of QC testing.

3.4. **Asphalt-Rubber Binder**

Test asphalt-rubber binder under the test methods and frequencies shown in Table 11.

Table 11: Asphalt-Rubber Binder Testing Frequencies

Quality characteristic	Test method	Sampling location	Frequency
Viscosity at 375 °F [a]	ASTM D7741/D7741M	Reaction Vessel or Distribution Truck	1 per distribution truck
Descending viscosity [a]	ASTM D7741/D7741M		
Cone penetration [b]	ASTM D217	Distribution Truck	1 per day of asphalt-rubber binder production
Resilience [b]	ASTM D5329		
Softening point [b]	ASTM D36/36M		

[a] Tested in the field by an IAP certified technician. Start taking viscosity readings at least 45 minutes after adding crumb rubber modifier and continue taking viscosity readings every 30 minutes until 2 consecutive descending viscosity readings have been obtained and the final viscosity, as measured at the distribution truck on the job site immediately prior to application, is within the specification requirements.

[b] Tested at independent AMRL-accredited lab.

Retain the sample from each batch. A batch shall consist of all asphalt-rubber material that is blended together from the raw materials (asphalt binder, asphalt modifier, CRM). Each time asphalt binder, asphalt modifier, and CRM are blended together will be considered a batch.

Log the test results, including time of testing and temperature of the asphalt-rubber binder. Submit the log of asphalt-rubber binder viscosity test results for each day of asphalt-rubber binder application to the Agency within 24 hours. The Agency shall be notified of production schedule of all asphalt-rubber binder produced for the work. The Agency reserves the right to observe QC testing of the asphalt-rubber binder.

3.5. **Screenings**

Each stockpile of uncoated screenings must be sampled and tested. Make available all stockpiles to the Agency for Quality Assurance testing and notify the Agency a minimum of one (1) full working day prior to pre-coating. Maintain discrete stockpiles at the asphalt plant.

Test the quality characteristics of screenings under the test methods and frequencies shown in Table 12.

Table 12: Screenings QC Testing[a]

Quality Characteristics	Test Method	Frequency
Gradation	ASTM C 136	1 per day per stockpile[b]
Cleanness value	California Test 227	
Durability	California Test 229	

[a] Test screenings prior to precoating.

[b] The Contractor is only required to test the stockpiles from which the screenings for that day's work are being taken from.

4. Construction

4.1. Equipment

4.1.1. Producing Asphalt-Rubber Binder

All equipment used to blend, store, and transport crumb rubber, asphalt modifier, and asphalt-rubber binder shall comply with the requirements in Section 2-12 of Caltrans Material Plant Quality Program (*MPQP*) unless otherwise authorized in writing by the Agency.

The Agency reserves the right to require approval of equipment prior to use.

4.1.2. Placing/Finishing Asphalt-Rubber Chip Seal

Self-propelled distributor truck for applying asphalt-rubber binder must have the following features:

1. Heating unit
2. Internal mixing unit
3. Pumps that spray asphalt-rubber binder within 0.05 gal/sq yd of the specified rate
4. Fully circulating spray bar that applies asphalt-rubber binder uniformly
5. Tachometer
6. Pressure gauges
7. Volume measuring devices
8. Thermometer
9. Observation platform on the rear of the truck for an observer on the platform to see the nozzles and unplug them if needed.

Self-propelled power brooms that clean the existing pavement and remove loose screenings without dislodging screenings set in the asphalt-rubber binder.

Pneumatic tired rollers must be self-propelled and reversible. Pneumatic tires must be of equal size, diameter, type and ply. The roller must carry at least 1,500 lb of load on each wheel, and each tire must have an air pressure of 100 ± 5 psi.

Steel wheel rollers must be self-propelled and reversible. The roller must be operated in static mode at all times and may not exceed 10 tons in weight.

Screenings haul trucks must have tailgates that discharge screenings and devices to allow locking onto the rear screenings spreader hitch. The dump beds must not push down on the spreader when fully raised. Dump beds must not spill screenings on the roadway when transferred to the spreader hopper. All haul trucks must have tarpaulins to cover precoated screenings.

Self-propelled screenings spreader must have a screenings hopper in the rear, belt conveyors that carry the screenings to the front, and a spreading hopper capable of providing a uniform screening spread rate over the entire width of the traffic lane in one application.

4.2. **Surface Preparation**

The Contractor shall remove any existing traffic stripes, markings, crosswalks, stop bars, legends, and raised pavement markers in areas to receive asphalt-rubber chip seal as required by the Plans or project Specifications. Removal shall be done by sand blasting or grinding and disposing of by the Contractor. Grinding or sand blasting operations shall be conducted to keep all removed pavement material from entering the storm drain system.

Existing pavement striping, markings, or markers which are outside the work area and not to be removed, shall be protected by the Contractor. Any striping, markings, or markers to remain damaged or rendered useless by the Contractor's operations shall be restored by the Contractor to the Agency's satisfaction and at the Contractor's expense.

Before applying asphalt-rubber binder, cover manholes, valve and monument covers, grates, or other exposed facilities located within the area of application with plastic or oil-resistant construction paper secured by tape or adhesive to the facility being covered. Reference the covered facilities with enough control points to locate the facilities after the application of the asphalt-rubber chip seal. Remove coverings promptly to return the facilities to service prior to the end of the same shift the seal coat is placed.

The Contractor shall remove all vegetation material growing in the street or on the interface of the asphalt surface with the lip of concrete gutter prior to placing asphalt-rubber binder.

Immediately before applying the asphalt-rubber binder, the surface shall be clean and completely dry. Cleaning shall be performed by sweeping, flushing, or other means necessary to remove all loose particles of paving, all dirt, and all out extraneous material. The Contractor shall clean all streets from face of curb to face of curb in the project area as necessary to ensure the pavement surface is sufficiently cleaned to provide for a bond between the existing pavement surface and seal coat. Any cleaning of the pavement surface immediately before placing asphalt-rubber chip seal shall be performed without water. The application of asphalt-rubber binder on any street shall not proceed until the Agency has approved the street cleaning.

In the event that a scheduled street should become wet due to fog, rain, or any other reason, the placement of asphalt-rubber chip seal shall be suspended until the surface has completely dried as determined by the Agency.

If using sweeping equipment to clean the streets, the Contractor will perform a minimum of two (2) complete passes over all pavement surfaces. In the event the Agency determines that two (2) passes are not adequate, the Contractor shall re-sweep designated areas as necessary to achieve the appropriate level of pavement cleaning. Completion of sweeping shall be evidence by the absence of all loose particles of paving, all dirt, sand, gravel, leaves, and all other extraneous material. Street sweeping equipment shall be a broom sweeper, or approved equal, in a sufficiently maintained condition to accomplish the sweeping goals of the project. Pavement missed by or inaccessible to broom sweepers shall be swept clean by other methods that are approved by the Agency. The Contractor shall provide whatever flushing, compressed air, or other cleaning methods are necessary to remove all dirt, vegetation, and loose material from the pavement.

Prior to the application of the asphalt-rubber chip seal, the Contractor shall completely remove all grease and oil spots deposited by parked cars in the area of work. .The application of asphalt-rubber binder on any street shall not proceed until the Agency has approved the completion of all oil spot removal.

4.3. Precoating Screenings

Precoating of screenings is required.

Precoating of screenings must be performed at a central mixing plant.The plant must be authorized under the Caltrans Material Plant Quality Program (MPQP).

Do not recombine fine materials collected in dust control systems except from primary dust collection devices such as cyclone collectors or knock-out boxes with any other aggregate used in the production of screenings.

For asphalt-rubber chip seal, screenings must be preheated from 260 to 325 degrees F. Coat with any of the asphalts specified in the table titles "Performance Graded Asphalt Binder" in section 92 of the current Caltrans Standard Specifications. The asphalt must be from 0.5 to 1.0 percent by weight of dry screenings. The Agency determines the exact rate.

Do not stockpile preheated and/or precoated screenings.

4.4. Asphalt-Rubber Binder Application

The asphalt-rubber binder may only be applied if:

1. The pavement temperature is above 55 degrees F.
2. The ambient temperature is from 60 to 105 degrees F.
3. The pavement is clean and dry.
4. Wind conditions are such that uniform asphalt-rubber binder coverage can be achieved.
5. Rain is not imminent.

The asphalt-rubber binder shall be applied when the temperature of the asphalt-rubber binder is between 385 and 415 degrees F.

Prevent vehicles from driving on asphalt-rubber binder before spreading screenings.

Do not apply asphalt-rubber binder during high wind conditions. If authorized, Contractor may adjust the distributor bar height and distribution speed and use shielding equipment during high wind conditions. However, if the weather conditions do not allow for uniform placement of the asphalt-rubber binder, the Agency may decide to suspend construction activities by the Contractor at no cost to the Agency. The Contractor may not resume construction activities until after receiving approval from the Agency.

In the course of construction where the asphalt-rubber binder distributor truck creates a joint by stopping at some point along the length of the roadway, the screenings spreader shall stop short of this joint, leaving a small strip of uncovered asphalt-rubber. This is to prevent an overlapping double thickness joint from being created once work resumes. Transverse joints of this type shall be constructed by beginning spraying of the asphalt-rubber binder on the uncovered asphalt-rubber binder from before the work stoppage and proceed along the roadway. All reasonable precautions shall be taken to avoid skips and overlaps at joints. Any defect shall be corrected at the Contractor's expense by use of a shovel and/or broom prior to continuing operations. Plan your operations to minimize transverse joints.

The longitudinal joint between adjacent applications of screenings shall coincide with the line between designated traffic lanes. Longitudinal joints shall be overlapped for complete coverage. The overlap shall be from 2 to 4 inches. At longitudinal joints with screenings, the edge shall be broomed back and blended to eliminate differences in elevation. The joints shall be free from ridges and depressions and shall have a uniform appearance consistent with the adjacent sealed surface. Defects shall be corrected at the Contractor's expense.

Joints between areas of asphalt-rubber binder without screenings shall be made by overlapping asphalt-rubber binder distributions. The excess material shall be properly dispersed by spreading with a squeegee or rake over a larger area of freshly applied asphalt-rubber binder.

If the asphalt-rubber chip seal will be applied in a cul-de-sac, the Contractor shall submit plans for the construction methods in these areas. The Contractor shall submit plans that include, but not limited to, diagrams showing how the distributor truck and screenings spreader will move through the work area at least 5 days before any asphalt-rubber chip seal may be placed in cul-de-sac areas in order to minimize overlapping of the binder. When placing asphalt-rubber chip seals in cul-de-sac, asphalt-rubber shall be covered in screenings within 5 minutes of application and initial rolling of the screenings shall begin within 3 minutes after spreading.

The application of asphalt-rubber binder to areas not accessible with the distributor bar on the distributor truck shall be accomplished by using handheld squeegees or other means approved by the Agency. If using Agency-approved methods, the Contractor will apply the asphalt-rubber binder at a comparable rate and uniformly as the distributor truck in these areas. Care shall be taken to apply screenings while the binder is still hot enough to allow proper embedment.

Apply the asphalt-rubber binder at a rate from 0.55 to 0.65 gallons per square yard. The Agency determines the exact rate. The Contractor must apply binder to within 10 percent of the determined application rate.

4.5. Screenings Application

During transit, cover precoated screenings for asphalt-rubber chip seal with tarpaulins at all times.

Prevent vehicles from driving on asphalt-rubber binder before spreading screenings.

At the time of application, precoated screenings for asphalt-rubber chip seal must be from 225 to 325 degrees F.

Spread screenings at a uniform rate over the full lane width in one application. Operate the spreader at speeds slow enough to prevent screenings from rolling over after dropping. If the spreader is not moving, screenings must not drop. If the spreader stops and screenings drop, remove the excess screenings before resuming activities.

The screenings spreader shall be an appropriate distance behind the asphalt-rubber binder distribution truck such that screenings are applied to the asphalt-rubber binder within one minute. The screenings spreader shall be within 200 feet of the distribution truck at all times.

Spread screenings at a rate from 28-40 lb /sq yd. The Agency determines the exact rate. Spread screening to within 10 percent of the determined application rate. The application of the finished asphalt-rubber chip seal shall be uniform in appearance and free of defects.

4.6. Rolling and Sweeping

Perform initial rolling within 90 seconds of spreading screenings. Do not spread screenings more than 200 feet ahead of the initial rolling.

A coverage must consist of the number of passes a roller needs to cover the width. A pass must be one (1) roller movement parallel to the asphalt-rubber chip seal application in either direction. Overlapping passes are part of the coverage being made and are not part of a subsequent coverage. Do not start a coverage until completing the previous coverage.

Initial rolling of the asphalt-rubber chip seal shall consist of a minimum of one (1) coverage with pneumatic-tried roller(s). A minimum of three (3) coverages with pneumatic tired rollers, after the initial rolling, shall be made on the asphalt-rubber chip seal.

After completion of rolling with pneumatic tired rollers, one and only one coverage shall be performed with a steel-wheeled roller, not to exceed 10 tons in weight. Use of steel wheel roller shall be immediately discontinued if it fractures the aggregate screenings.

Sweeping shall be a multi-step operation following final rolling of the screenings. Initial sweepings shall be performed and loose screenings shall be removed without dislodging the screenings set in the asphalt-rubber binder prior to acceptance. .

Three additional sweepings shall be performed. The first sweeping shall be done one calendar day after placement of the asphalt-rubber chip seal, the second two calendar days after placement of the asphalt-rubber chip seal, and the final sweeping shall occur from five to seven calendar days after placement of the asphalt-rubber chip seal.

The Contractor must remove all loose chips from the street surface by sweeping the chips off of the roadway. Removal of excess screenings shall be completed before uncontrolled traffic is permitted on the completed asphalt-rubber seal coat. A broom sweeper may not be able to remove excess chips in areas where chips cannot be swept off the roadway, such as a cul-de-sac and areas with curb and gutter. The Contractor is responsible for removing these chips through the use of a vacuum sweeper or other acceptable means as approved by the Agency.

The use of any sweeper that causes damage to the asphalt-rubber chip seal coat shall be immediately discontinued. Any voids caused by automobile tires, poor adhesion of chips to asphalt-rubber binder, or any other cause shall be the Contractor's responsibility to patch prior to removing traffic control devices at no additional cost to the Agency.

Failure to provide adequate sweeping will result in the Agency preforming said work at the Contractor's sole expense, which shall be deducted from any monies due to the Contractor. Sweeping by Agency forces shall not relieve the Contractor of any liability arising from his/her failure to comply with these Specifications.

The traffic control on roadways scheduled to receive a newly constructed asphalt-rubber chip seal shall be performed as specified in the project Special Provisions and the Agency Standard Specifications.

Whenever the final sweeping or brooming of the asphalt-rubber chip seal is complete, place all permanent traffic stripes, pavement markings, crosswalks, stop bars, and raised pavement markers as shown in the Plans or project Specifications. Placement of all pavement markings and raised pavement markers shall be completed within from 2 to 10 calendar days after completion of final sweeping or brooming of the asphalt-rubber chip seal. Protect newly placed traffic stripes and pavement markings from traffic and other deleterious activities until the paint is thoroughly dry or the thermoplastic is hard enough to bear traffic. If multiple pavement stripes will be placed, the centerline strip shall be placed first before all other traffic stripes.

5. **Agency Acceptance**

The Agency reserves the right to refuse to permit the use of material soley on the basis of a Certificate of Compliance, except for the asphalt modifier and crumb rubber modifier. The Contractor shall allow the Agency or their designee access to observe any QC testing being performed. The Contractor must inform the Agency or their designee of the time and location that all QC testing will be performed.

Contractor must submit CalRecycle Form 739-TRP certifying the use of California tires (http://www.calrecycle.ca.gov/Funding/Forms/Tires/CalRecycle739TRP.pdf).

The Agency will use the results of the Contractor's QC test results to determine if the materials used for the asphalt-rubber chip seal meet the quality characteristic requirements that are specified herein. The Contractor shall deliver samples of materials used to the Agency or permit the Agency or their designee access to obtain samples from any stockpiles or facilities used to store or produce materials used in the asphalt-rubber chip seal upon request at any time during construction. Agency reserves the right to have such materials tested by an independent laboratory for compliance with the requirements in Section 2 for verification and acceptance purposes. The Contractor may examine the records and reports of the tests the Agency performs.

The Agency will accept the completed, in-place asphalt-rubber chip seal if the final product is uniform in appearance, free from all visible defects, bumps, areas of poor chip retention, and has been swept to remove all loose chips.

6. **Payment**

The payment quantity for asphalt-rubber chip seal is square yard, and such price shall include full compensation for specified surface preparation, removals, sweeping, and sanding if necessary, and for

doing all the work and materials involved in constructing the asphalt-rubber chip seal complete in place.

The payment quantity for the precoated screenings is tons measured after the screenings preheated and precoated with asphalt binder. Contractor shall supply:

1. Time, date, mix number, load number, and truck identification are correlated with a load slip.
2. Each load slip shows the truck's empty weight and the truck's total weight including precoated screenings material.
3. Copy of the recorded batch weights is certified by a licensed weighmaster.

The payment quantity for the asphalt-rubber binder is tons. Contractor shall supply:

1. Time, date, mix number, load number, and truck identification are correlated with a load slip.
2. Each load slip shows the truck's empty weight, the truck's total weight including asphalt-rubber binder, and the truck's final weight after spraying asphalt-rubber binder.
3. Copy of the recorded batch weights is certified by a licensed weighmaster.

Note: Bidders may optionally propose additional services such as micro-surfacing or planning of streets prior to chip seal application. These services are not required but may be considered for added value.

III. Implementation Schedule

a) Contractor Selection Schedule

- Request for proposals issued: April 15,2025
- Deadline for RFP Clarifications/Questions: April 25, 2025
- Due date for proposals: May 15, 2025, at 2:30 PM
- Committee review completed: May 20, 2025
- City council contact approval: June 3, 2025
- Commence services: July 1, 2025

IV. Submittal Information

CalRecycle Grant Requirements

This project is funded in part by the California Department of Resources Recycling and Recovery (CalRecycle) through its **Rubberized Pavement Grant Program (FY 2024–25)**. The selected contractor shall comply with all applicable requirements of the grant, including but not limited to the following:

1. **California Waste Tire Source Requirement**
   Crumb rubber used in the rubberized asphalt binder must be derived from **California-generated waste tires**processed in **California facilities**. Documentation verifying the source and amount of crumb rubber must be submitted to the City.

2. **Minimum Rubber Content**
   The rubberized binder must contain **a minimum of 300 pounds (±15%) of tire-derived crumb rubber per ton of binder**, complying with Caltrans Section 94 or Section 203, or an equivalent local specification approved by CalRecycle.

3. **Material and Quantity Documentation**
   Contractor must submit weigh tickets, mix designs, and product certifications verifying:

   a. Total rubberized binder used

   b. Pounds of crumb rubber

   c. Supplier and processor information

4. **Reporting Support**
   Contractor shall assist the City in meeting CalRecycle's post-project documentation requirements, including:

   a. A letter certifying the use of rubberized asphalt meeting program specs

   b. Estimated total number of California waste tires diverted (1 tire = ~20 lbs crumb rubber)

5. **Records Retention**
   All documentation must be retained by the contractor for **three years** post-project and made available for audit upon request.

6. **Nondiscrimination and Affirmative Action**
   Contractor shall comply with all nondiscrimination and equal opportunity regulations required under California state law and the CalRecycle program.

7. **Environmental Compliance**
   Contractor must ensure compliance with all applicable federal, state, and local environmental regulations throughout the duration of the project.

A) Contents of Proposal

1. Proposals must include:

2. **Company Information**: Name, address, contact details, and a brief history of the company.

3. **Experience and Qualifications**: Details of similar projects completed, particularly those involving rubberized chip seal and CalRecycle funding.

4. **Project Approach**: Description of the proposed approach to completing the scope of work, including a timeline.

5. **Cost Proposal**: Detailed cost estimate, including unit prices and total project cost in provided Bid Worksheet (Attachment B)

6. **Optional Add-Alternatives**: Bidders are welcome to include optional bids for:

   a. **Micro-surfacing** as a surface enhancement either prior to or following chip seal application.

      This services are not required but may be evaluated for feasibility and budget alignment.

7. **References**: Contact information for at least three clients for whom similar work has been performed.

8. Contractor and all subcontractor's DIR numbers.

B) DELIVERY OF PROPOSALS

Proposals must be submitted in a sealed envelope plainly marked on its outside with "Asphalt Rubber Chip Seal 2025." Proposals shall be received until 2:30 pm local time on 05/15/2025 at the City of Colusa Office, 425 Webster Street, Colusa, CA 95932.

Mr. Jesse Cain, City Manager
425 Webster Street
Colusa, CA 95932
citymanager@cityofcolusa.com
530.458.4941, extension 105

All proposals received by **2:30 p.m. on Thursday 5/15/2025** will be given equal consideration. Minority, women-owned and disadvantaged business enterprises are encouraged to apply. Respondents must submit one PDF copy of the proposal.

Facsimiles will not be accepted. Proposals received after the stated date and time, or at a different location, will not be accepted for consideration.

C) RFP Clarifications and Questions

Questions regarding this request for proposal shall be addressed to:

Ms. Sadie Ash, Grant Writer & Admin
grantwriter@cityofcolusa.gov

The consultant may ask for clarifications of the RFP by submitting written questions to the City of Colusa contact identified above. Questions regarding this RFP must be submitted no later than April 25, 2025.

V. Evaluation and Selection Process

The City will evaluate all quotes received by the deadline. The City contemplates awarding the project to the lowest responsive bidder.

The City of Colusa exercises its discretion in selecting a contractor or individual that presents the quote that, in sole judgment of the City, best serves the interest of the City. The City reserves the right to waive minor irregularities in any quote, reject any quote that fails to meet the quote requirements in any respect, to reject all quotes for any reason or to cancel in part or in its entirety the Request for Quotes.

VI. Contract

1. Agreement for Services

The successful offer shall be required to enter into an Agreement of Services City of Colusa. The scope of work, terms and conditions, and other express requirements set forth in this RFP shall be incorporated by reference into the actual executed Agreement for Service upon award. Where there is a conflict between the terms of the Agreement and the express, stringent, or terms set forth in the RFP, the provision or requirement set forth in the RFP shall control.

2. Insurance Requirements

Selected firm must provide a certificate of endorsement naming City of Colusa as additional insured complying with insurance requirements listed

1. Commercial General Liability ("CGL"): Commercial General Liability Insurance, occurrence form, using Insurance Services Office ("ISO") "Commercial General Liability" policy form CG 0001 or an approved equivalent. Defense costs must be paid in addition to limits. There shall be no cross-liability exclusion for claims or suits by one insured against another. Limits are subject to review, but in no event shall be less than TWO MILLION DOLLARS ($2,000,000) each occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project or the general aggregate limit shall be twice the required occurrence limit

2. Workers' Compensation: Workers Compensation on a state-approved policy form providing statutory benefits as required by law with

employer's liability insurance, with minimum limits of ONE MILLION DOLLARS ($1,000,000) per occurrence for bodily injury or disease. If Consultant is self-insured, provide a Certificate of Consent to Self-Insure, signed by the Department of Industrial Relations. Workers' Compensation is not required if the Consultant provides written verification that it has no employees.

VII. Attachments

Attachment A - Bid Worksheet

Attachment B -Asphalt Rubber Project_Phase 2

Resource Links, provided here:

a. Map of the City of Colusa - https://cityofcolusa.com/planning-and-building/

b. Pavement Managment Plan 2021 - https://cityofcolusa.com/wp-content/uploads/2020/07/Final-Report_Colusa.pdf