



COUNTY OF EL DORADO

CHIEF ADMINISTRATIVE OFFICE

AGREEMENT FOR MAINTENANCE SERVICES #9708

THIS AGREEMENT made and entered into by and between the **COUNTY OF EL DORADO**, a political subdivision of the State of California, acting through the governing body or board thereof (hereinafter referred to as "County"), and **AMERICAN PAVEMENT SYSTEMS, INC.**, a corporation duly qualified to conduct business in the State of California, whose principal place of business is 1012 11th Street, Suite 1000, Modesto, California 95354, and whose local office is 25455 Highway 99, Acampo, California 95220 (hereinafter referred to as "Contractor").

RECITALS

On June 13, 2025, Contractor was formally approved to a qualified list for as-needed road surface treatment services in various areas throughout the County as the result of competitive Request for Qualifications (RFQ) #2025-0119;

That for and in consideration of the mutual promises, covenants, agreements and conditions herein contained, the parties hereto agree with each other as follows:

1. Contract Documents

The complete Agreement (hereinafter "Agreement") between the parties consists of and is set forth in the Contract Documents. The Contract Documents consist of: (a) this Agreement and any amendments thereto in accordance with the provisions herein; (b) Exhibits to this Agreement; (c) Work Orders issued under this Agreement; (d) an executed Subcontractors Listing Form, if applicable; (e) executed Certificate of Insurance forms; (f) an executed California Form 590; (g) an executed Department of the Treasury Internal Revenue Service Form W-9 or County Payee Data Record Form, whichever is applicable; and (h) all executed Change Orders. All obligations of the parties are contained in the Contract Documents, and by acceptance of this Agreement the parties hereto agree to be bound by the provisions of all of said documents. All of said documents are intended to cooperate so that any work called for in one and not mentioned in the other or vice versa, is to be executed the same as if mentioned in all of them.

In the event of any conflict between or among the terms and conditions of this Agreement and documents referred to and incorporated herein, such conflict shall be resolved by giving precedence in the order of priority identified above, beginning with (a) and ending with (h).

2. The Work

Contractor is engaged in the business of doing the services and tasks required by this Agreement. Contractor agrees to furnish, at Contractor's own cost and expense, all tools, equipment, apparatus, facilities, labor, services, materials, and all utility and transportation services to perform and complete in a good and workmanlike manner, furnished and installed, and complete and ready for use:

Contractor shall provide various types of road surface treatments, on an as-needed basis, as shown in Exhibit A, marked "Surface Treatment Specifications," incorporated herein and made reference a part hereof, and all other work as called for, and in the manner designated in, and in strict conformance with the Contract Documents adopted by County as prepared by the Contract Administrator or Project Manager, which includes, but is not limited to, the terms Engineer and Architect. Contractor shall perform the Work in accordance with all of the terms and conditions of the Contract Documents and in a safe, professional, skillful, and workmanlike manner. Contractor is responsible for ensuring that its employees, as well as any subcontractor if applicable, perform the services and tasks required under this Agreement accordingly.

The work is for maintenance work only and any resurfacing of streets under this Agreement shall be less than one inch (1") or routine, recurring, and usual work for the preservation or protection of County roads. A Request for Proposal will be issued for a specific Contractor and all other contractors with whom County has as-needed agreements for the scope of work covered by the specific project. Through that competitive proposal procedure limited to existing as-needed agreements, County will select the most qualified contractor and negotiate, develop, and execute a Work Order.

Once the contractor is selected, a pre-construction conference between County's Contract Administrator and Contractor will be scheduled by County's Contract Administrator prior to the issuance of the separate written Work Orders for each work assignment. The conferences will be coordinated by County's Contract Administrator and will be held at a location determined by the County. The purpose of the pre-construction conferences is to discuss important aspects of the work and all essential matters pertaining to the prosecution and the satisfactory completion of the work, including, at a minimum, traffic control measures and the method and timing of notice to the residents of the work to be performed in the work site areas.

Following each pre-construction conference, County's Contract Administrator will issue a separate written Work Order to Contractor identifying the site where the work is to be performed, the method and timing of notification of the work to residents on County roads and any side streets and in accordance with Exhibit B marked, "Notification," incorporated herein and made reference a part hereof, a specific date by which the work shall be completed, liquidated damages to be charged to Contractor if the work is not completed within the prescribed timeframe, a not-to-exceed cost based on the number of square yards at that specific work site, and any required deliverables including test reports or other documents to be supplied by Contractor in connection with the work assignment. Contractor shall not commence work until County has reviewed and approved the payment and performance bonds, as outlined in ARTICLE 8, Performance Bond, and ARTICLE 9, Payment Bond, and has issued Contractor the written Work Order.

Notification of the Work to residents shall be provided by Contractor not less than seventy-two (72) hours in advance and shall consist of door hangers at each of the individual residences and notices posted on barricades.

And all other work as called for, and in the manner designated in, and in strict conformance with the Contract Documents adopted by County as prepared by the Contract Administrator or Project Manager, which includes, but is not limited to, the terms Engineer and Architect. Contractor shall perform the Work in accordance with all of the terms and conditions of the Contract Documents and in a safe, professional, skillful, and workmanlike manner. Contractor is responsible for ensuring that its employees, as well as any subcontractor if applicable, perform the services and tasks required under this Agreement accordingly.

3. Location of Work

The projects will be located in various areas throughout El Dorado County. Said work is to be performed on the various roads within County as designated by issued Work Orders.

4. Contract Price

For services provided herein, including the test reports required in Article 2, The Work, herein and including any other deliverables or reports that may be required by the individual Work Orders issued pursuant to this Agreement, County agrees to pay Contractor upon the satisfactory completion and acceptance of each work assignment in arrears. Payment shall be made within forty-five (45) days following County receipt and approval of itemized invoices detailing the services rendered.

The total amount of this Agreement shall not exceed \$12,000,000, inclusive of all Work Orders and amended Work Orders, costs, taxes, and expenses. It is understood and agreed that there is no guarantee, either expressed or implied that this dollar amount will be authorized under this Agreement through Work Orders.

Itemized invoices shall follow the format specified by County and shall reference this Agreement number and the County-supplied Work Order number on their faces. Copies of documentation attached to invoices shall reflect Contractor's charges for the specific services billed on those invoices. Contractor shall bill County for only one (1) Work Order per invoice. Invoices shall be mailed to County at the following address:

County of El Dorado
Department of Transportation
2441 Headington Road
Placerville, California 95667

Attn: Ashley Johnson

or to such other location as County directs.

In the event that Contractor fails to deliver the documents or other deliverables required by the individual Work Orders issued pursuant to this Agreement, County at its sole option may delay the payment for the period of time of the delay, cease all payments until such time as the deliverables are received, or proceed as set forth herein below in Article 29, Termination by County for Cause, herein.

5. Safety

Contractor shall maintain safe conditions at the jobsite for the duration of the Work for the public, County staff, and all persons performing the Work. Contractor shall comply fully with all laws, orders, citations, rules, regulations, standards, and statutes with respect to occupational health and safety, the handling and storage of hazardous materials, accident prevention, safety equipment and practices. Contractor shall be solely responsible for providing a safe place to work for its employees and for employees of its subcontractors and suppliers or material and equipment, for adequacy of and required use of all safety equipment, and for full compliance with aforesaid laws, orders, citations, rules, regulations, standards, and statutes.

Other safety measures shall include, but not be limited to the following:

- A. Providing safe accessibility to all building entrances, keeping all sidewalks, active doors, corridors or other walkways, driveways, or any emergency vehicle access clear for the duration of the project.
- B. Keeping flammable rags, if applicable, in a sealed container and removing them from the site at the end of each work day.

6. Time of Completion

This Agreement shall be effective upon execution and shall cover the period of November 1, 2025 through October 20, 2028.

Time is of the essence. The Work under the Agreement shall be completed **within the timeframe designated within each issued Work Order**, unless an extension of time or suspension of Work is authorized in writing in accordance with a Work Order Change Order.

It is agreed by the parties to this Agreement that in case all the Work called for under the Agreement in all parts and requirements is not finished or completed within the number of calendar days as set forth above, damage will be sustained by County, and that it is and will be impracticable and extremely difficult to ascertain and determine the actual damage which County will sustain in the event of and by reason of the delay; and it is therefore agreed that Contractor will pay to County a sum as liquidated damages and not as a penalty, for each and every calendar days delay in finishing the work in excess of the number of working days prescribed in the Work Order; the sum shall be calculated as fifteen percent (15%) of the total of each issued Work Order amount divided by the number of calendar days identified for the completion of the Work Order; and Contractor agrees to pay the liquidated

damages herein provided for, and further agrees that County may deduct the amount thereof from any moneys due or that may become due Contractor under the Agreement. The calculated liquidated damages amount will be included in each Work Order, however, omission of the calculated liquidated damages amount from a Work Order does not constitute waiver by County of liquidated damages and such liquidated damages shall be applied as provided herein..

7. Payment

No payment will be made for any work performed prior to approval and full execution of the Work Order and no payment will be made for amounts in excess of the not-to-exceed amount of the Work Order.

The period of performance for Work Orders shall be in accordance with dates specified in each Work Order. The total amount payable by County for an individual Work Order shall not exceed the amount agreed to in the Work Order unless County's Contract Administrator and Contractor amend the Work Order. No payment will be made for any work performed before or after the period of performance in the Work Order, unless County's Contract Administrator and Contractor amend the Work Order. No Work Order will be written which exceeds the cumulative total of the not-to-exceed dollar amount of this Agreement.

Payment by County as herein provided shall not be construed as an absolute acceptance of defects in the work or improper materials.

Retention of five percent (5%) of the total Work Order amount will be held at the option of County. The retained funds will be released within thirty-five (35) days after the Notice of Acceptance is recorded.

County shall promptly pay Contractor in accordance with Public Contract Code section 20104.50.

8. Performance Bond

As a part of the execution of this Agreement, for any Work Order issued in the amount of \$25,000 or greater, Contractor shall furnish a bond of a surety company authorized to do business in the State of California, and acceptable to County, conditioned upon the faithful performance of all covenants and stipulations under this Agreement. The amount of this bond shall be one hundred percent (100%) of the total Work Order cost, and shall be executed upon the form provided by County.

9. Payment Bond

As a part of the execution of this Agreement, for any Work Order issued in the amount of \$25,000 or greater, Contractor shall furnish a bond of a surety company authorized to do business in the State of California, and acceptable to County, conditioned upon the payment in full of all claims for labor and materials in accordance with the provisions of the law of the State of California. The amount of this bond shall be one hundred percent (100%) of the total Work Order cost, and shall be executed upon the form provided by County.

10. Notification of Surety Company

The surety company shall familiarize itself with all of the conditions and provisions of this Agreement, and shall waive the right of special notification of any change or modifications of this Agreement or extension of time, or of decreased or increased work, or of the cancellation of this Agreement, or of any other act or acts by County or its authorized agents, under the terms of this Agreement; and failure to so notify the aforesaid surety company of changes shall in no way relieve the surety company of its obligation under this Agreement.

11. Payment of Prevailing Wages

Contractor shall pay and require payment of wages according to a scale of prevailing wage rates determined by California law, which scale is on file at County's Department of Transportation's principal office and shall

comply with all applicable wage requirements, as set forth in Labor Code sections 1770, et seq., 1773.2, 1775, 1776, 1810, and 1813. In accordance with the provisions of Labor Code section 1810, eight (8) hours of labor shall constitute a legal day's work upon all work done hereunder, and Contractor and any subcontractor employed under this Agreement shall also conform to and be bound by the provisions of Labor Code sections 1810 through 1815.

12. Apprentices

Attention is directed to Labor Code sections 1777.5, 1777.6, and 1777.7 and 8 California Code of Regulations section 200, et seq. To ensure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, each Contractor or subcontractor should, where some question exists, contact the Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, CA 94102, or one of its branch offices prior to commencement of work on the public works contract. Responsibility for compliance with this section lies with Contractor.

It is County policy to encourage the employment and training of apprentices on public works contracts as may be permitted under local apprenticeship standards.

13. Certified Payroll

As required under the provisions of Labor Code section 1776, Contractor and any subcontractors shall keep accurate payroll records as follows:

1. The payroll records shall show the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by Contractor or subcontractors in connection with this Project.
2. A certified copy of all payroll records enumerated above shall be available for inspection at all reasonable hours at the principal office of Contractor as follows:
 - a. Make available or furnish to the employee or his or her authorized representative on request.
 - b. Make available for inspection or furnished upon request to a representative of County, the State Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the State Department of Industrial Relations.
 - c. Make available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either County, the State Division of Labor Standards Enforcement, or the State Division of Apprenticeship Standards. The requesting party shall, prior to being provided the records, reimburse the costs of preparation by Contractor, subcontractor, and the entity through which the request was made. The public shall not be given access to the records at the principal office of Contractor.
 - d. All contractors and subcontractors must furnish electronic certified payroll records directly to the Department of Industrial Relations.

14. Registration of Contractors

No contractor or subcontractor may bid on any public works project, be listed in a bid proposal for any public works project, or engage in the performance of any contract for public work unless registered with the Department of Industrial Relations pursuant to Labor Code sections 1725.5 and 1771.1.

Contractor shall post job site notices as prescribed by 8 California Code of Regulations section 16451.

15. Records Examination and Audit Requirements

Contractor and its subcontractors, if any are authorized hereunder, shall maintain all books, documents, papers, accounting records, and other evidence pertaining to the performance of this Agreement, including but not limited to, the costs of administering the various aspects of this Agreement. In accordance with Government Code section 8546.7, all of the above-referenced parties shall make such materials available at their respective offices at all reasonable times during this Agreement period and for four (4) years from the date that final payment by County and all other pending matters are closed. Representatives of County, the State Auditor, and any duly authorized representative of other government agencies shall have access to any books, documents, papers, and records that are pertinent to this Agreement for audit, examination, excerpts, and transactions and copies thereof shall be furnished upon request.

16. Payment of all Federal, State, or Local Taxes

Any federal, state, or local tax payable on the articles furnished by Contractor under this Agreement shall be included in the Contract Price and paid by Contractor.

17. Compliance with all Applicable Laws

Contractor shall conform to and abide by all Federal, State, and local building, labor and safety laws, ordinances, rules, and regulations. All Work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshal, safety orders of the Division of Industrial Safety, California Electrical Code, California Building Code, California Plumbing Code, and any and all other applicable laws and regulations. Nothing in the Contract Documents, including but not limited to the plans and specifications, is to be construed to permit work not conforming to these codes, laws, and regulations.

18. Nondiscrimination

- A. County may require Contractor's services on projects involving funding from various state and/or federal agencies, and as a consequence, Contractor shall comply with all applicable nondiscrimination statutes and regulations during the performance of this Agreement including but not limited to the following: Contractor and its employees and representatives shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, mental disability, medical condition, genetic information, military or veteran status, marital status, age, gender, gender identity, gender expression, sexual orientation, or sex; Contractor shall, unless exempt, comply with the applicable provisions of the Fair Employment and Housing Act (Government Code section 12900, et seq.) and applicable regulations promulgated thereunder (2 California Code of Regulations section 11000, et seq.); the applicable regulations of the Fair Employment and Housing Commission implementing Government Code section 12990, set forth in Subchapter 5 Chapter 5 of Division 4.1 of Title 2 of the California Code of Regulations incorporated into this Agreement by reference and made a part hereof as if set forth in full; and Title VI of the Civil Rights Act of 1964, as amended. Contractor and its employees and representatives shall give written notice of their obligations under this clause as required by law.
- B. Where applicable, Contractor shall include these nondiscrimination and compliance provisions in any of its agreements that affect or are related to the services performed herein.

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- C. Contractor's signature shall provide any certifications necessary under the federal laws, the laws of the State of California, including but not limited to Government Code section 12990 and 2 California Code of Regulations section 11102.

19. Reporting Accidents

Contractor shall prepare and submit (within 24 hours of such incidents) reports of accidents at the site and anywhere else the work is in progress in which bodily injury is sustained or property loss in excess of Five Hundred Dollars (\$500.00) occurs.

20. Workers' Compensation

Contractor shall comply with Labor Code section 3700, et seq., requiring it to obtain Workers' Compensation Insurance, and sign a certificate of knowledge thereof.

CERTIFICATE OF KNOWLEDGE - LABOR CODE SECTION 3700

I am aware of the provisions of Labor Code section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Agreement.

Signed: _____ Dated: _____

21. Emissions Reduction

Contractor shall comply with emission reduction regulations mandated by the California Air Resources Board, and sign a certification of knowledge thereof:

CERTIFICATE OF KNOWLEDGE – EMISSIONS REDUCTION REGULATIONS

I am aware of the emissions reduction regulations being mandated by the California Air Resources Board. I will comply with such regulations before commencing the performance of the Work and maintain compliance throughout the duration of this Contract.

Signed: _____ Dated: _____

22. Deviation from Plans and Specifications

No deviation shall be made from the plans and/or the specifications, if any, without the prior written approval of County.

23. Unity of Plans and Specifications

The plans and specifications, if any, are one document, and any work shown or mentioned, in one and not in the other, or vice versa, shall be furnished or performed as though mentioned or shown in both.

24. Relocation of Utilities

As required by Government Code section 4215, County will assume responsibility for the removal, relocation, and protection of main or trunk-line utility facilities existing on the construction site, if such facilities are not shown in the plans and specifications, and County shall compensate Contractor for the costs of locating and repairing damage to such facilities not due to the failure of Contractor to exercise reasonable care.

Nothing herein shall be deemed to require County to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the site of the construction project can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the construction.

If Contractor, while performing the Work under this Agreement, discovers utility facilities not identified in the Contract Documents, including the plans or specifications, Contractor shall immediately notify the Contract Administrator or Project Manager. County shall not be liable for Contractor's performance of unauthorized work.

25. Notice of Discovery of Hazardous Waste or Unusual Conditions

- A. Contractor shall promptly, and before the following conditions are disturbed, notify County in writing, in the event Contractor encounters, after excavating to a depth of greater than four (4) feet, any of the following:
1. Material that Contractor believes may be hazardous waste, as defined in section 25117 of the Health and Safety Code, which is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; or
 2. Subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents; or
 3. Unknown physical conditions at the site of any unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the Work provided for in this Agreement.
- B. County shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, or cause a decrease or increase in Contractor's cost of, or time required for performance of any part of the Work, an adjustment, excluding loss of anticipated profits, will be made and this Agreement will be modified by a Change Order. County will notify Contractor of County's determination as to whether or not an adjustment of this Agreement is warranted.
- C. In the event a dispute arises between County and Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in Contractor's cost of, or time required for, performance of any part of the Work, Contractor shall not be excused from any scheduled completion date provided for by this Agreement, but shall proceed with all Work to be performed under this Agreement. Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between Contractor and County.

26. Subcontracting

The provisions of Public Contract Code sections 4100-4114, inclusive, regarding subcontracting shall apply to this Agreement, and Contractor represents that it will comply with all provisions therein.

27. Additional Work

County reserves the right to make such alterations, deviations, additions to, or deletions from the plans and specifications, including the right to increase or decrease the quantity of any item or portion of work or to delete any items or portion of work, as may be deemed by the Contract Administrator or Project Manager to be necessary or advisable, and to require such additional work to be required for the proper completion of the whole Work contemplated.

Any such changes will be set forth in a written Contract Change Order (Change Order) which will specify the additional work, adjustment of performance time, if any, and basis for additional compensation, if any. Any Change Order shall not become effective until approved by the Director of Transportation, or where required, by the Board of Supervisors.

28. Termination by County for Convenience

County reserves the right to terminate this Agreement at any time, in whole or in part, for convenience upon thirty (30) calendar days written Notice of Termination. County shall issue Contractor a written notice specifying that this Agreement is to be terminated.

Upon receipt of said written notice, Contractor shall stop all work under this Agreement except: (1) work specifically directed to be completed prior to termination, (2) work the Inspector deems necessary to secure the Project for termination, (3) removal of equipment and plant from the site of the Work, (4) action that is necessary to protect materials from damage, (5) disposal of materials not yet used in the Work as directed by County, and (6) clean up of the site.

If this Agreement is terminated for County's convenience as provided herein, all finished or unfinished work and materials previously paid for shall, at the option of County, become its property. Contractor shall be paid an amount which reflects costs incurred for satisfactory work provided to the date of notification of termination. In addition, Contractor shall be paid the reasonable cost, as solely judged by County, and without profit, for all work performed to secure the Project for termination.

29. Termination by County for Cause

County may, without prejudice to any other right or remedy and after giving Contractor and its Surety a minimum of ten (10) days from delivery of a written termination notice, terminate the services of Contractor if any of the following events occur:

1. Contractor is adjudged as bankrupt or insolvent.
2. Contractor makes a general assignment for the benefit of its creditors or if a trustee or receiver is appointed for Contractor or for any of its property.
3. Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws.
4. Contractor on more than one occasion fails to supply sufficient skilled workmen or suitable material or equipment.
5. Contractor on more than one occasion fails to make prompt payments to subcontractors for labor, materials, or equipment.
6. Contractor disregards the authority of County's representative, or the Engineer, if one is appointed.
7. Contractor violates Article 39.

8. Contractor otherwise violates any material provision of the Contract Documents.

County shall state in that written notice the reason(s) for the default. After that ten (10) day period has elapsed, County may terminate the services of Contractor immediately and take equipment and machinery thereon owned by Contractor and finish the Work by whatever method County may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the Work is finished.

Without prejudice to other rights or remedies County may have, County may serve Contractor and the Surety on its faithful performance bond with an Inspector's written notice demanding satisfactory compliance with this Agreement if Contractor does any of the following:

1. Contractor fails to begin delivery of materials and equipment, to commence Work within the time specified, or to maintain the rate of delivery of material.
2. Fails to execute the Work in the manner and at such locations as specified.
3. Fails to maintain a work program which will ensure County's interest.
4. Contractor is not carrying out the intent of this Agreement.

If Contractor or its Surety does not comply with such notice within five (5) days after receiving it, or after starting to comply, fails to continue, County may exclude it from the premises and take possession of all material and equipment, and complete the Work by County's own forces, by letting the unfinished Work to another Contractor, or by a combination of such methods.

Where Contractor's services have been so terminated by County, said termination shall not affect any right of County against Contractor then existing or which may thereafter accrue. Any retention or payment of monies by County due Contractor will not release Contractor from compliance with the Contract Documents.

If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Work, including compensation for additional professional services, such excess shall be paid to Contractor. If the sums under this Agreement are insufficient for completion, Contractor or Surety shall pay to County within five (5) days after the completion, all costs in excess of the Contract Price. In any event, the cost of completing the Work shall be charged against Contractor and its Surety and may be deducted from any money due or becoming due from County.

The provisions of this Article shall be in addition to all other rights and remedies available to County under law.

If after notice of termination, it is determined for any reason that Contractor was not in default, the rights and obligations of the parties shall be the same as if the notice of termination had not been issued. This Agreement shall be equitably adjusted to compensate for such termination.

30. Successors and Assigns

This Agreement shall bind and inure to the heirs, devisees, assignees, and successors in interest of Contractor and to the successors in interest of County in the same manner as if such parties had been expressly named herein.

31. Assignment of Contract

Neither this Agreement, nor any part thereof, nor any monies due or to become due hereunder, may be assigned by Contractor without the written approval of County, nor without the consent of the Surety unless the Surety has waived its right to notice of assignment in writing. County may assign this Agreement to a lender, or any third party that assumes the obligations of County hereunder.

32. Amendments

This Agreement may be amended by mutual consent of the parties hereto. Said amendment shall become effective only when in writing and fully executed by duly authorized officers of the parties hereto.

33. Separate Contracts

County reserves the right to let other contracts in connection with the Work. Contractor shall afford all other such contractors reasonable opportunity for storage of their materials, shall provide that the execution of its work properly connects and coordinates with theirs, and shall cooperate with them to the end of facilitating the Work.

34. Indemnity

To the fullest extent permitted by law, Contractor shall defend at its own expense, indemnify, and hold the County harmless, its officers, employees, agents, and volunteers, against and from any and all liability, claims, suits, losses, damages, or expenses of every name, kind and description, including attorney's fees and costs incurred, brought for, or on account of, injuries to or death of any person, including but not limited to workers, County employees, and the public, or damage to property, or any economic or consequential losses, which are claimed to or in any way arise out of or are connected with the acts or omissions of Contractor or its officers, agents, or employees in rendering the services, operations, or performance hereunder, except for liability, claims, suits, losses, damages or expenses arising from the active negligence, sole negligence, or willful acts of the County, its officers and employees, or as expressly prescribed by statute. This duty of Contractor to indemnify and save County harmless includes the duties to defend set forth in Civil Code section 2778.

The insurance obligations of Contractor are separate, independent obligations under the Contract Documents, and the provisions of this defense and indemnity are not intended to modify nor should they be construed as modifying or in any way limiting the insurance obligations set forth in the Contract Documents.

Nothing herein shall be construed to seek indemnity in excess of that permitted by Civil Code section 2782, et seq. In the event any portion of this Article is found invalid, the Parties agree that this Article shall survive and be interpreted consistent with the provisions of Civil Code section 2782, et seq.

35. Insurance

GENERAL INSURANCE REQUIREMENTS: Contractor shall provide proof of a policy of insurance satisfactory to County's Risk Management Division and documentation evidencing that Contractor maintains insurance that meets the following requirements:

1. Full Workers' Compensation and Employers' Liability Insurance covering all employees of Contractor as required by law in the State of California.
2. Commercial General Liability Insurance (providing scope of coverage equivalent to ISO policy form CG 00 01) of not less than One Million Dollars (\$1,000,000) combined single limit per occurrence for bodily injury and property damage, including but not limited to endorsements for the following coverage: premises, personal injury, operations, products and completed operations, blanket contractual, and independent contractors' liability and a \$2,000,000 aggregate limit. County, including, without limitation, its officers, officials, employees, and volunteers shall be named as an additional insured on ISO form CG 2010 1185, or its equivalent.
3. Automobile Liability Insurance of not less than One Million Dollars (\$1,000,000) is required in the event motor vehicles are used by Contractor in performance of this Agreement.

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4. In the event Contractor is a licensed professional and is performing professional services under this Agreement, Professional Liability Insurance is required with a limit of liability of not less than One Million Dollars (\$1,000,000).
 5. Explosion, Collapse and Underground coverage is required when the scope of work includes XCU exposures.

PROOF OF INSURANCE REQUIREMENTS:

1. Contractor shall furnish proof of coverage satisfactory to County's Risk Management Division as evidence that the insurance required herein is being maintained. The insurance will be issued by an insurance company acceptable to County's Risk Management Division, or be provided through partial or total self-insurance likewise acceptable to the Risk Management Division.
2. The County of El Dorado, its officers, officials, employees, and volunteers shall be included as additional insured, but only insofar as the operations under this Agreement are concerned. This provision shall apply to all general and excess liability insurance policies. Proof that County is named additional insured shall be made by providing the Risk Management Division with a certified copy, or other acceptable evidence, of an endorsement to Contractor's insurance policy naming County as additional insured.
3. In the event Contractor cannot provide an occurrence policy, Contractor shall provide insurance covering claims made as a result of performance of this Agreement for not less than three (3) years following completion of performance of this Agreement.
4. Any deductibles or self-insured retentions must be declared to and approved by County. At the option of County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects County, its officers, officials, employees and volunteers; or Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.
5. Contractor shall require each of its subcontractors to procure and maintain Commercial General Liability Insurance, Automobile Liability Insurance and Workers' Compensation Insurance of the types and in the amounts specified above, or shall insure the activities of its subcontractors in its own policy in like amounts. Contractor shall also require each of its subcontractors to name Contractor and the County of El Dorado as additional insureds on each subcontractor's general and excess liability insurance policies. Upon request by County Contractor shall furnish proof of coverage satisfactory to County as evidence that the subcontractor insurance required herein is being maintained.

INSURANCE NOTIFICATION REQUIREMENTS:

1. Contractor agrees that no cancellation or material change in any policy shall become effective except upon thirty (30) days prior written notice to Department of Transportation, 2441 Headington Road, Placerville, California 95667.
2. Contractor agrees that the insurance required herein shall be in effect at all times during the term of this Agreement, inclusive of the guarantee/warranty period specified herein below. In the event said insurance coverage expires at any time or times during the term of this Agreement, Contractor shall immediately provide a new certificate of insurance as evidence of the required insurance coverage. In the event Contractor fails to keep in effect at all times insurance coverage as herein provided, County may, in addition to any other remedies it may have, terminate this Agreement upon the occurrence of such event. New certificates of insurance are subject to the approval of County's Risk Management Division.

ADDITIONAL STANDARDS: Certificates shall meet such additional standards as may be determined by County's Department of Transportation either independently or in consultation with County's Risk Management Division, as essential for protection of County.

COMMENCEMENT OF PERFORMANCE: Contractor shall not commence performance of this Agreement unless and until compliance with each and every requirement of the insurance provisions is achieved.

MATERIAL BREACH: Failure of Contractor to maintain the insurance required herein, or to comply with any of the requirements of the insurance provisions, shall constitute a material breach of the entire Agreement.

REPORTING PROVISIONS: Any failure to comply with the reporting provisions of the policies shall not affect the coverage provided to County, its officers, officials, employees, or volunteers.

PRIMARY COVERAGE: Contractor's insurance coverage shall be primary insurance as respects County, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by County, its officers, officials, employees or volunteers shall be in excess of Contractor's insurance and shall not contribute with it.

PREMIUM PAYMENTS: The insurance companies shall have no recourse against County, its officers, officials, employees, and volunteers or any of them for payment of any premiums or assessments under any policy issued by any insurance company.

CONTRACTOR'S OBLIGATIONS: Contractor's indemnity and other obligations shall not be limited by the insurance required herein and shall survive the expiration of this Agreement.

36. Independent Contractor

It is understood that the services provided under this Agreement shall be prepared in and with cooperation from County and its staff. It is further understood that this Agreement does not create an exclusive relationship between County and Contractor, and Contractor may perform similar work or services for others. However, Contractor shall not enter into any agreement with any other party, or provide any information in any manner to any other party, that would conflict with Contractor's responsibilities or hinder Contractor's performance of services hereunder, unless County's Contract Administrator, in writing, authorizes that agreement or sharing of information.

The parties intend that an independent contractor relationship will be created by this contract. Contractor is, and shall be at all times, deemed independent and shall be wholly responsible for the manner in which it performs services required by the terms of this Agreement. Contractor exclusively assumes responsibility for acts of its employees, agents, affiliates, and subcontractors, if any are authorized herein, as they relate to the services or work to be performed under this Agreement during the course and scope of their employment by Contractor. Those persons will be entirely and exclusively under the direction, supervision, and control of Contractor.

County may designate the tasks to be performed and the results to be accomplished under this Agreement, provide information concerning the work or services, approve or disapprove the final work product and/or services provided, and set deadlines for the completion of the work or services, but County will not control or direct the manner, means, methods, or sequence in which Contractor performs the work or services for accomplishing the results. Contractor understands and agrees that Contractor lacks the authority to bind County or incur any obligations on behalf of County.

Contractor, including any subcontractor or employees of Contractor, shall not receive, nor be eligible for, any benefits County provides for its employees, including, but not limited to, vacation pay, paid holidays, life insurance, health insurance, social security, disability insurance, pension, or 457 plans. Contractor shall not receive, nor be eligible for, workers' compensation, including medical and indemnity payments. County is not responsible for withholding, and shall not withhold, Federal Income Contribution Act amounts or taxes of any kind from any payments which it owes Contractor. Contractor shall not be subject to the work schedules or vacation periods that apply to County employees.

Contractor shall be solely responsible for paying its employees, and for withholding Federal Income Contribution Act amounts and other taxes, workers' compensation, unemployment compensation, medical insurance, life insurance, or any other benefit that Contractor provides for its employees.

Contractor acknowledges that it has no authority to bind the County or incur any obligations on behalf of the County with regard to any matter, and shall not make any agreements or representations on the County's behalf.

37. Force Majeure

Neither party will be liable for any delay, failure to perform, nor omission under this Agreement that is due to any cause that it is beyond its control, not due to its own negligence, and cannot be overcome by the exercise of due diligence. In that event, the affected party will:

1. Promptly give written notice to the other of the fact that it is unable to so perform and the cause(s) that is beyond its control.
2. Once the cause(s) has ceased, provide written notice to the other party and immediately resume its performance under this Agreement.

For purposes of this Article, "cause that is beyond its control" includes labor disturbances, riots, fires, earthquakes, floods, storms, lightning, epidemics, war, disorders, hostilities, expropriation or confiscation of properties, failure of and delays by carriers, interference by civil or military authorities, whether legal or de facto, and whether purporting to act under some constitution, decree, or law, or otherwise, or acts of God.

38. Waiver

No failure on the part of the parties to exercise any rights under this Agreement, and no course of dealing with respect to any right hereunder, shall operate as a waiver of that right, nor shall any single or partial exercise of any right preclude the exercise of any other right. The remedies herein provided are cumulative and are not exclusive of any other remedies provided by law.

39. Conflict of Interest

The parties to this Agreement have read and are aware of the provisions of Government Code section 1090, et seq. and the Political Reform Act of 1974 (section 87100, et seq.), relating to conflict of interest of public officers and employees. Individuals who are working for Contractor and performing work for County and who are considered to be consultant within the meaning of 2 California Code of Regulations section 18700.3, as it now reads or may thereafter be amended, are required to file a statement of economic interest in accordance with County's Conflict of Interest Code. County's Contract Administrator shall at the time this Agreement is executed make an initial determination whether or not the individuals who will provide services or perform work pursuant to this Agreement are consultants within the meaning of the Political Reform Act and County's Conflict of Interest Code. Statements of economic interests are public records subject to disclosure under the California Public Records Act.

Contractor covenants that during the term of this Agreement neither it, nor any officer or employee of the Contractor, has or shall acquire any interest, directly or indirectly, in any of the following:

1. Any other contract connected with, or directly affected by, the services to be performed by this Agreement.
2. Any other entities connected with, or directly affected by, the services to be performed by this Agreement.

-
3. Any officer or employee of County that are involved in this Agreement.

If Contractor becomes aware of a conflict of interest related to this Agreement, Contractor shall promptly notify County of the existence of that conflict, and County may, in its sole discretion, immediately terminate this Agreement by giving written notice of termination specified in Article 29.

40. Licenses

Contractor warrants and represents that it holds a valid California license pursuant to the Contractors' State License Law (Business and Professions Code Sections 7000, et seq.), that its license is in good standing and that it possesses a Class A General Engineering Contractors License as required by the categories and type of the Work. Copies of Contractor's State Contractors' license must be provided with this Agreement.

41. Business License

County's Business License Ordinance provides that it is unlawful for any person to furnish supplies or services, or transact any kind of business in the unincorporated territory of County of El Dorado without possessing a County business license unless exempt under County Ordinance Code section 5.08.070. Contractor warrants and represents that it shall comply with all of the requirements of County's Business License Ordinance, where applicable, prior to beginning work under this Agreement and at all times during the term of this Agreement.

42. Cleaning Up

Contractor shall not allow the site of the Work to become littered with trash, rubbish, or waste material, but shall maintain the site of Work in a neat and orderly condition throughout the performance of the Work. At the end of each work day, Contractor shall clean up all debris and waste materials generated by the Work and shall properly dispose of all trash, rubbish and waste materials off site at no additional cost to County.

43. Access to the Work

County, and any state or local authorities having jurisdiction over the Project, shall at all times have access to the Work.

44. Acceptance of Work

A recorded Notice of Acceptance signed by the Director of Transportation will be issued by County for each issued Work Order to accept the work, when the work under the Work Order has been completed satisfactorily, as determined by County or its duly authorized representative. Acceptance of the work shall not constitute an acceptance of latent defects nor relieve Contractor of responsibility for any act or omission which is a violation of this Agreement. County will release retention withheld, if any, thirty-five (35) days after the Notice of Acceptance is recorded.

45. Resolution of Claims

Contractor's attention is invited to Public Contract Code section 20104, et seq., for resolution of construction claims, and specifically section 20104.2. Claims pertaining to this Agreement shall be governed by the provisions of those sections.

Contractor's attention is directed to Public Contract Code section 9204, which describes procedures for the resolution of claims on public works projects. Among other things, section 9204 requires the claimant to furnish reasonable documentation to support a claim, requires the public entity to respond to the claim within forty-five (45) days of receipt of the claim, and allows for the claimant to demand an informal meet and confer conference for settlement of the issues in dispute. For any portion of a claim that remains in dispute, section 9204 requires submission of the claim to nonbinding mediation. Additionally, section 9204 requires the public entity to make

any payment due on an undisputed portion of the claim within sixty (60) days of the public entity's written response and to pay interest at the rate of seven (7) percent per annum on any amounts not paid in a timely manner. The claims procedures described herein and in any other Contract Documents are in addition to the procedures required by section 9204 and, in the event of a conflict between those various procedures, the more stringent procedures will control.

46. Environmental and Toxic Warranty

Contractor warrants that its operations concerning the Project are not and will not be in violation of any applicable federal, state, or local environmental statute, law, or regulation dealing with hazardous materials substances or toxic substances.

47. Guarantee

Final Guarantee: Contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year. Contractor warrants and guarantees for a period of one (1) year from the date of Acceptance of the Work that the Work is free from all defects due to faulty materials or workmanship and Contractor shall promptly make such corrections as may be necessary, including repairs of any damage to other parts of the Work resulting from such defects at no cost to County. County will give notice of observed defects with reasonable promptness. In the event that Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, County may do so and charge Contractor the cost thereby incurred.

Extended Guarantees: If a guaranty exceeding one (1) year is provided by the supplier or manufacturer of any equipment or materials used in this Project, then the guarantee for such equipment or materials shall be extended for such term. Contractor expressly agrees to act as co-guarantor of such equipment and materials, and Contractor shall supply County with all warranty and guaranty documents relative to equipment and materials incorporated in the job and guaranteed by its suppliers or manufacturers.

Warranty: Contractor warrants to County that materials and equipment furnished under this Agreement will be of good quality and new, unless otherwise required or permitted by this Agreement, that the Work will be free from defects or flaws and is of the highest quality of workmanship and that the Work will conform with the requirements of this Agreement. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective.

If within one (1) year from the date of the Acceptance of the Work or such longer period of time as may be prescribed by law or regulations or by the terms of any applicable special guarantee required by the Contract Documents, any work is found to be defective, Contractor shall promptly, without cost to County and in accordance with County's written instruction, correct such defective work. If work is rejected by County, defective material or work will be removed from site and replaced with non-defective materials or work. If Contractor is unable to promptly and properly correct any defective work, County may at its option have the work corrected by such other means as County deems appropriate and hold Contractor liable for all direct, indirect and consequential costs caused by such defective work. Said warranty shall apply to all work found to be "defective" which is attributable to the quality or quantity of the materials used, the quality of the workmanship or for performance of this Agreement.

48. Notice

Any notice or other correspondence required to be given under this Agreement by either party to the other may be affected by personal delivery in writing or by mail, postage prepaid. Notices personally delivered during normal business hours shall be deemed received on the actual date of delivery; mailed notices shall be deemed received one (1) day after affixed postmark. Notices and correspondence to County shall be in duplicate and shall be delivered to it as follows:

To County:

County of El Dorado
Department of Transportation
2441 Headington Road
Placerville, California 95667

Attn.: Brian Mullens
Deputy Director

With a copy to:

County of El Dorado
Chief Administrative Office
Procurement and Contracts Division
330 Fair Lane
Placerville, California 95667

Attn.: Michele Weimer
Procurement and Contracts Manager

Notices and correspondence to Contractor shall be delivered when personally delivered to, or if mailed, addressed to Contractor at:

American Pavement Systems, Inc.
1012 11th Street, Suite 1000,
Modesto, California 95354

Attn.: Gregory Reed
President

Either party may change its address for notices or for its principal place of business by giving written notice pursuant to this Article.

49. Drug-Free Workplace

Contractor shall comply with Government Code section 8355.

50. California Residency (Form 590)

All independent Contractors providing services to County must file a State of California Form 590, certifying their California residency or, in the case of a corporation, certifying that they have a permanent place of business in California. Contractor will be required to submit a Form 590 prior to execution of an Agreement or County shall withhold seven (7) percent of each payment made to Contractor during the term of this Agreement. This requirement applies to any Agreement/Contract exceeding \$1,500.00.

51. County Payee Data Record Form

All independent contractors or corporations providing services to County who do not have a Department of the Treasury Internal Revenue Service Form W-9 (Form W-9) on file with County must file a County Payee Data Record Form with County.

52. Taxes

Contractor certifies that as of today's date, it is not in default on any unsecured property taxes or other taxes or fees owed by Contractor to County. Contractor agrees that it shall not default on any obligations to County during the term of this Agreement.

53. Venue

The Contract Documents and all provisions thereto shall be governed by the laws of the State of California. Any litigation arising herein shall be brought in the County of El Dorado.

54. Contract Administrator

The County Officer or employee with responsibility for administering this Agreement is Brian Mullens, Deputy Director, Department of Transportation, or successor.

55. Authorized Signatures

The parties to this Agreement warrant and represent that the undersigned individuals executing this Agreement on their respective behalves are fully authorized to do so by law or other appropriate instrument and to bind upon said parties the obligations set forth herein.

56. Electronic Signatures

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement, are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic Signature means any electronic visual symbol or signature attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record, including facsimile or email electronic signatures, pursuant to the California Uniform Electronic Transactions Act (Civil Code sections 1633.1 to 1633.17) as amended from time to time.

57. Partial Invalidity

If any provision, sentence, or word of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions, sentences, and words will continue in full force and effect without being impaired or invalidated in any way.

58. No Third Party Beneficiaries

Nothing in this Agreement is intended, nor will be deemed, to confer rights or remedies upon any person or legal entity not a party to this Agreement.

59. Counterparts

This Agreement may be executed in one or more counterparts, each of which shall be an original and all of which together shall constitute one and the same instrument.

60. Entire Agreement

This document and the documents referred to herein or exhibits hereto are the entire Agreement between the parties and they incorporate or supersede all prior written or oral agreements or understandings.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates indicated below, the latest of which shall be deemed to be the effective date of this Agreement.

-- COUNTY OF EL DORADO --

By: _____

Dated: _____

Board of Supervisors
"County"

Attest:
Kim Dawson
Clerk of the Board of Supervisors

By: _____
Deputy Clerk

Dated: _____

-- AMERICAN PAVEMENT SYSTEMS, INC. --

By: _____
Gregory Reed
President
"Contractor"

Dated: _____

By: _____
Pamela Call
Chief Financial Officer

Dated: _____

American Pavement Systems, Inc.

Exhibit A

Surface Treatment Specifications

RUBBER MODIFIED ASPHALT CHIP SEAL SPECIFICATIONS

1. General

1.1. Scope

This work consists of constructing a chip seal with rubber modified asphalt binder.

1.2. Definitions

Scrap tire crumb rubber:

Any combination of:

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

1.3. Submittals

Contractor shall comply with all federal, state, and local environmental laws, rules, regulations, and ordinances including, at a minimum, air quality requirements.

At least five (5) days before use, Contractor shall submit to County, the permit issued by the local air district for rubber modified binder application equipment. If an air quality permit is not required by the local air district for applying rubber modified binder, Contractor shall submit verification, from the local air district, that an air quality permit is not required.

At least ten (10) days before starting any rubber modified asphalt chip seal activities, Contractor shall submit to County, the name of an authorized laboratory to perform Quality Control (QC) testing. The authorized laboratory shall comply with the Caltrans Independent Assurance Program or possess current American Association of State Highway and Transportation Officials (AASHTO) Material Reference Laboratory (AMRL) accreditation for all American Society for Testing and Materials (ASTM) and AASHTO tests required in Section 2.

Contractor shall submit a certified volume or weight slip for each delivery of rubber modified asphalt binder.

At least fourteen (14) days before use, Contractor shall submit:

1. Four (4) each one-quart cans of rubber modified rubber modified asphalt binder
2. Safety Data Sheets (SDS) for each hazardous material
3. Rubber modified asphalt binder formulation, including:
 - 3.1. Each source and type of crumb rubber modifier
 - 3.2. Percentage of crumb rubber modifier by total weight of rubber modified asphalt binder
4. Test results
 - 4.1. Certificate of Compliance showing the rubber modified asphalt binder is the required Performance Grade (PG)
 - 4.2. Certificate of Compliance showing each source of crumb rubber modifier is derived from automobile and/or truck tires

4.3. Test results showing the screenings meets the requirements in Tables 1 and 2 (refer to Page 3 below)

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

Within twenty-four (24) hours, Contractor shall notify County's Contract Administrator of any noncompliance issues identified by the QC program.

Within ten (10) days of beginning the modified binder seal coat operation, Contractor's independent testing laboratory shall conduct the Vialit Test Method for aggregate in Chip Seals French Chip for the retention requirement and submit a signed copy of a test results report to County's Contract Administrator. The report shall not be considered for acceptability testing. The Vialit Test Method can be reviewed at: <http://www.dot.ca.gov/hq/esc/ctms/index.html>

1.5. Quality Control Manager

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

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

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

2. Materials

2.1. Rubber Modified Asphalt Binder

Unless County and Contractor determine a different rubber modified asphalt binder would work better for the road condition, or would better advance the objectives of Streets and Highway Code Section 2030, the Rubber modified asphalt binder shall be PG 64-16 M with a minimum of eighteen percent (18%) scrap tire rubber that meets the requirements in Section 92 of the current Caltrans Standard Specifications. The solubility requirement is waived if the Dynamic Shear Rheometer test on original binder result ($G^*/\sin(\delta)$) at 64° C is less than or equal to 2.00 kPa.

2.2. Screenings

Screenings for rubber modified asphalt chip seal shall comply with the screenings gradation requirements shown in Table 1.

Table 1: Rubber Modified Asphalt Chip Seal Screenings Gradation

Percentage passing by weight	
Sieve Size	Medium
3/4 inch	100
1/2 inch	95-100
3/8 inch	70-85
No. 4	0-15
No. 8	0-5
No. 16	---
No. 200	0-1

The screenings shall also comply with the requirements shown below in Table 2.

Table 2: Rubber Modified Asphalt Chip Seal Screenings Requirements

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

3. Quality Control

3.1. Rubber Modified Asphalt Binder

Contractor shall submit to County, a Certificate of Compliance for each truckload of rubber modified asphalt binder delivered to the jobsite.

3.2. Screenings

Contractor shall sample and test each stockpile of uncoated screenings. Contractor shall make all stockpiles available to County for quality assurance testing and notify County's Contract Administrator a minimum of one (1) full working day prior to pre-coating. Contractor shall maintain discrete stockpiles at the asphalt plant.

Contractor shall test the quality characteristics of screenings under the test methods and frequencies shown in Table 3.

Table 3: Screenings QC Testing

Quality Characteristics	Test Method	Frequency
Gradation	ASTM C 136	One (1) per day per stockpile ^a
Cleanness value	California Test 227	
Durability	California Test 229	

^a Contractor is 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.Placing/Finishing Rubber Modified Asphalt Chip Seal

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

1. Heating unit
2. Internal mixing unit
3. Pumps that spray rubber modified asphalt binder within 0.05 gal/sq yd of the specified rate
4. Fully circulating spray bar that applies rubber modified asphalt 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.

Contractor shall use self-propelled power brooms that clean the existing pavement and remove loose screenings without dislodging screenings set in the rubber modified asphalt binder.

Pneumatic tire rollers shall be self-propelled and reversible. Pneumatic tires shall be of equal size, diameter, type, and ply. The roller shall carry at least one thousand five hundred (1,500) pounds of load on each wheel, and each tire shall have an air pressure of 100 ± 5 pounds per square inch (psi). Steel wheel rollers shall be self-propelled and reversible. The roller shall be operated in stated mode at all times and shall not exceed ten (10) tons in weight.

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

The self-propelled screenings spreader shall 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 (1) application.

4.2. Surface Preparation

Contractor shall furnish, place, maintain, and remove temporary pavement delineation in accordance with provisions in Section 12 of the current Caltrans Standard Specifications and Special Provisions. Nothing in the Special Provisions shall be construed as to reduce the minimum standards specified in the "Manual of Uniform Traffic Control Devices," and the California Supplement or as relieving Contractor from its responsibility, as provided in Section 7-1.04, "Public Safety," of the Caltrans Standard Specifications.

Contractor shall remove any existing traffic stripes, markings, crosswalks, stop bars, legends, and raised pavement markers in areas to receive rubber modified asphalt chip seal as required by the plans or project specifications. Removal shall be done by grinding and disposing of by Contractor. Grinding 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 Contractor. Any striping, markings, or markers damaged or rendered useless by Contractor's operations shall be restored by Contractor to County's satisfaction and at Contractor's expense.

Before applying rubber modified asphalt binder, Contractor shall 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. Contractor shall reference the covered facilities with enough control points to locate the facilities after the application of the rubber modified asphalt chip seal. Contractor shall remove coverings promptly to return the facilities to service prior to the end of the same shift the seal coat is placed.

Immediately before applying the rubber modified asphalt binder, Contractor shall clean and completely dry the pavement surface. Contractor shall perform sweeping, flushing, or other means necessary to remove all loose particles of paving, all dirt, and all extraneous material. 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 rubber modified asphalt chip seal shall be performed without water. The application of rubber modified asphalt binder on any street shall not proceed until County 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 rubber modified asphalt chip seal shall be suspended until the surface has completely dried, as determined by County.

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 rubber modified asphalt binder.

The removal of all existing pavement markings and traffic stripes shall occur no sooner than two (2) calendar days prior to the day that the rubber modified chip seal is to be placed. Contractor shall place, at a minimum, two (2) changeable message signs (CMS) boards a week prior to construction for public notification.

If Contractor uses sweeping equipment to clean the streets, Contractor shall perform a minimum of two (2) complete passes over all pavement surfaces. In the event County determines that two (2) passes are not adequate, 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 vacuum sweeper, or approved equal, in a sufficiently maintained condition to accomplish the sweeping goals of the project. Pavement surfaces missed by or inaccessible to broom sweepers shall be swept clean by other methods that are approved by County. Contractor shall provide flushing, compressed air, or other cleaning methods necessary to remove all dirt, vegetation, and loose material from the pavement.

Prior to the application of the rubber modified asphalt chip seal, Contractor shall completely remove all grease and oil spots deposited by parked cars in the area of work. Grease build up greater than 1/32 of an inch shall be removed by scrapping or other mechanical methods. The application of rubber modified asphalt binder on any street shall not proceed until County has approved the removal of all grease and oil spots.

4.3. Precoating Screenings

Precoating of screenings is required. Precoating of screenings shall be performed at a central mixing plant.

Contractor shall 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 rubber modified asphalt chip seal, screenings shall be preheated from two hundred sixty (260) to three hundred twenty-five (325) degrees Fahrenheit (F). Contractor shall coat with any of the asphalts specified in the table titled, "Performance Graded Asphalt Binder," in Section 92 of the current Caltrans Standard Specifications. The asphalt shall be one (1.0) percent by weight of dry screenings.

Do not stockpile preheated and/or precoated screenings.

4.4. Rubber Modified Asphalt Binder Application

The rubber modified asphalt binder may only be applied if:

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

Contractor shall apply the rubber modified asphalt binder when the temperature of the preheated rubber modified asphalt binder is between three hundred thirty (330) and three hundred seventy-five (375) degrees F, or in accordance with the spray temperature curve provided by binder supplier. Contractor shall prevent vehicles from driving on rubber modified asphalt binder before spreading screenings.

Contractor shall not apply rubber modified asphalt 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 rubber modified asphalt binder, County may decide to suspend construction activities by Contractor at no cost to County. Contractor may not resume construction activities until receiving approval from County.

In the course of construction where the rubber modified asphalt 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 rubber modified asphalt binder. This is to prevent an overlapping double thickness joint from being created once work resumes. Transverse joints of this type shall be constructed by spraying the rubber modified asphalt binder on the uncovered rubber modified asphalt binder from the area before the work stopped and proceed along the roadway. All reasonable precautions shall be taken to avoid skips and

overlaps at joints. Any defects shall be corrected at Contractor's expense by use of a shovel and/or broom prior to continuing operations. Contractor shall plan its operations to minimize transverse joints.

The longitudinal joint between adjacent applications of screenings shall coincide with the line between designated traffic lanes. Contractor shall overlap longitudinal joints. The overlap shall be from two (2) to four (4) inches. At longitudinal joints with screenings, Contractor shall broom back and blend the edge to eliminate the 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 Contractor's expense.

Joints between areas of rubber modified binder without screenings shall be made by Contractor overlapping the rubber modified binder distributions. Contractor shall disperse the excess material by spreading it with a squeegee or rake over a larger area of freshly applied rubber modified binder.

If the rubber modified asphalt chip seal will be applied in a cul-de-sac, Contractor shall submit plans for the construction methods in these areas. Contractor shall submit plans that include, but at a minimum, diagrams showing how the distributor truck and screenings spreader shall move through the work area. Contractor shall submit plans at least five (5) days before any rubber modified asphalt chip seal may be placed in cul-de-sac areas in order to minimize overlapping of the binder. When placing rubber modified asphalt chip seals in the cul-de-sac, Contractor shall cover rubber modified asphalt in screenings within five (5) minutes of application and initial rolling of the screenings shall begin within three (3) minutes after spreading.

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

Contractor shall apply the rubber modified asphalt binder at the following rates:

For Medium Screenings, from 0.55-0.65 gallons per square yard.

The exact rate shall be determined by the inspector. Contractor shall apply binder to within ten (10) percent of the determined application rate.

All areas of the existing pavement surface that have patching shall be tack coated with conventional emulsion or paving-grade asphalt binder prior to the full application of the rubber modified asphalt chip seal. These areas will be identified by County and Contractor shall tack coat the areas with rubber modified asphalt binder one (1) hour before full application of the rubber modified asphalt chip seal begins.

4.5. Screenings Application

During transit, Contractor shall cover precoated screenings for rubber modified binder chip seal with tarpaulins, which are fully secured, at all times.

Contractor shall prevent vehicles from driving on rubber modified asphalt binder before spreading screenings.

At the time of application, precoated screenings for rubber modified binder chip seal shall be preheated from two hundred twenty-five (225) to three hundred twenty-five (325) degrees F.

Contractor shall spread screenings at a uniform rate over the full lane width in one (1) application. Contractor shall operate the spreader at speeds slow enough to prevent screenings from rolling over after dropping. If the spreader is not moving, screenings shall not drop. If the spreader stops and screenings drop, Contractor shall remove the excess screenings before resuming activities.

The screenings spreader shall be at an appropriate distance behind the rubber modified asphalt binder distribution truck such that screenings are applied to the rubber modified asphalt binder within one (1) minute. The screenings spreader shall be within a maximum of two hundred (200) feet from the distribution truck at all times.

Spread screenings at the following rates:

For Medium Screenings, from twenty-eight (28) to thirty-two (32) per square yard.

The exact rate shall be determined by the inspector. Contractor shall spread screenings to within ten (10) percent of the determined application rate. The application of the finished rubber modified binder chip seal shall be uniform in appearance and free of defects.

4.6. Rolling and Sweeping

Contractor shall perform initial rolling within ninety (90) seconds of spreading screenings. Contractor shall not spread screenings more than a maximum of two hundred (200) feet ahead of the initial rolling.

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

Initial rolling of the rubber modified binder chip seal shall consist of a minimum of one (1) coverage with pneumatic tire rollers. After the initial rolling, a minimum of three (3) coverages with pneumatic tire rollers, shall be made by Contractor on the rubber modified binder chip seal.

After completion of rolling with pneumatic tire rollers, only one (1) coverage shall be performed by Contractor with a steel-wheeled roller, not to exceed ten (10) tons in weight. Contractor's use of steel-wheeled roller shall be immediately discontinued if it fractures the aggregate screenings.

Sweeping shall be a multi-step operation following final rolling of the screenings. Contractor shall perform initial sweepings and remove loose screenings without dislodging the screenings set in the rubber modified binder, prior to acceptance.

Three (3) additional sweepings shall be performed. One (1) calendar day after placement of the rubber modified binder chip seal, Contractor shall perform the first sweeping. The second sweeping shall be performed two (2) calendar days after placement of the rubber modified binder chip seal, and the final sweeping shall occur from five (5) to seven (7) calendar days after placement of the rubber modified binder chip seal. The second and third sweeping will be performed by County.

Contractor shall remove all loose chips from the street surface by sweeping the chips off of the roadway. Contractor shall remove excess screenings before uncontrolled traffic is permitted on the completed rubber modified seal coat. If a broom sweeper is not 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, Contractor shall be responsible for removing these chips through the use of a vacuum sweeper or other acceptable means as approved by County.

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

Contractor's failure to provide adequate sweeping shall result in County performing said work at Contractor's sole expense, which shall be deducted from any monies due to Contractor. Sweeping by County forces shall not relieve Contractor of any liability arising from its failure to comply with these specifications.

5. County Acceptance

County reserves the right to refuse to permit the use of material solely on the basis of a Certificate of Compliance. Contractor shall allow County or its designee access to observe any QC testing being performed. Contractor shall inform County or its designee of the time and location that the QC testing shall be performed.

County will use Contractor's QC test results to determine if the materials used for the rubber modified chip seal meet the quality characteristic requirements that are specified herein. Contractor shall deliver samples of materials used to County or permit County or its designee access to obtain samples from any stockpiles or facilities used to store or produce materials used in the rubber modified chip seal, upon request at any time during construction. County 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. Contractor may examine the records and test reports that County performs.

County will accept the completed in-place rubber modified 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 rubber modified asphalt chip seal is square yard, and such price shall include full compensation for specified surface preparation, removals, sweeping, and sanding if necessary, and for performing all of the work and providing the materials involved in constructing the rubber modified asphalt chip seal completely in place.

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

Price adjustments shall be made in accordance with Caltrans standard language in Section 9-1.07 of the Standard Specifications.

SLURRY SEAL SPECIFICATIONS

1. Application

Application of a Type II / Latex Modified Slurry Seal independent of the other surface applications described herein. All materials and application methods shall be in conformance with current Caltrans Standard Specifications, including any amendments thereto. Traffic Control measures shall be adequate for the application of surfacing materials until surfacing materials have sufficiently cured to allow traffic access to resurfaced areas.

2. Surface Preparation

Contractor shall furnish, place, maintain, and remove temporary pavement delineation in accordance with provisions in Section 12 of the current Caltrans Standard Specifications and Special Provisions. Nothing in the Special Provisions shall be construed as to reduce the minimum standards specified in the "Manual of Uniform Traffic Control Devices" and the California Supplement or as relieving Contractor from its responsibility, as provided in Section 7-1.04, "Public Safety," of the Caltrans Standard Specifications.

Contractor shall remove any existing traffic stripes, markings, crosswalks, stop bars, legends, and raised pavement markers in areas to receive rubber modified asphalt chip seal as required by the plans or project specifications. Removal shall be done by grinding and disposing of by Contractor. Grinding 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 Contractor. Any striping, markings, or markers damaged or rendered useless by Contractor's operations shall be restored by Contractor to County's satisfaction and at Contractor's expense.

Before applying Type II / Latex Modified Slurry Seal, Contractor shall 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. Contractor shall reference the covered facilities with enough control points to locate the facilities after the application of the Type II / Latex Modified Slurry Seal and shall remove coverings promptly to return the facilities to service prior to the end of the same shift the seal coat is placed.

Immediately before applying the Type II / Latex Modified Slurry Seal, Contractor shall clean and completely dry the surface. Cleaning shall be performed by a vacuum sweeper, flushing, or other means necessary to remove all loose particles of paving, all dirt, and all extraneous material. 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 Type II / Latex Modified Slurry Seal shall be performed without water. The application Type II / Latex Modified Slurry Seal on any street shall not proceed until County 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 Type II / Latex Modified Slurry Seal shall be suspended until the surface has completely dried, as determined by County.

3. Testing

Contractor shall furnish test reports for aggregate and emulsion used in conjunction with the work to County's Contract Administrator at the time the work is completed.

4. Spoils

Spoils shall be disposed of off-site at no additional cost to County.

5. Sweeping

One (1) additional sweeping shall be performed one (1) calendar day after the application of the Type II/Latex Modified Slurry Seal.

Contractor's failure to provide adequate sweeping shall result in County performing said work at Contractor's sole expense, which shall be deducted from any monies due to Contractor. Sweeping by County forces shall not relieve Contractor of any liability arising from its failure to comply with these specifications.

MICRO SEAL SPECIFICATIONS

1. Application

Application of a Type II or Type III emulsified asphalt slurry seal is independent of the above surface applications. All materials and application methods shall be in conformance with current Caltrans Standard Specifications, including any amendments thereto. Traffic Control measures shall be adequate for the application of surfacing materials until surfacing materials have sufficiently cured to allow traffic access to resurfaced areas.

2. Surface Preparation

Contractor shall furnish, place, maintain, and remove temporary pavement delineation in accordance with provisions in Section 12 of the current Caltrans Standard Specifications and Special Provisions. Nothing in the Special Provisions shall be construed as to reduce the minimum standards specified in the "Manual of Uniform Traffic Control Devices," and the California Supplement or as relieving Contractor from its responsibility, as provided in Section 7-1.04, "Public Safety," of the Caltrans Standard Specifications.

Contractor shall remove any existing traffic stripes, markings, crosswalks, stop bars, legends, and raised pavement markers in areas to receive rubber modified asphalt chip seal as required by the plans or project specifications. Removal shall be done by grinding and disposing of by Contractor. Grinding 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 Contractor. Any striping, markings, or markers damaged or rendered useless by Contractor's operations shall be restored by Contractor to County's satisfaction and at Contractor's expense.

Before applying Type II or Type III emulsified asphalt slurry seal, Contractor shall 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. Contractor shall reference the covered facilities with enough control points to locate the facilities after the application of the Type II or Type III emulsified asphalt slurry seal and shall remove coverings promptly to return the facilities to service prior to the end of the same shift the seal coat is placed.

Immediately before applying the Type II or Type III emulsified asphalt slurry seal, Contractor shall clean and completely dry the surface. Cleaning shall be performed by a vacuum sweeper, flushing, or other means necessary to remove all loose particles of paving, all dirt, and all out extraneous material.

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 Type II or Type III emulsified asphalt slurry seal shall be performed without water. The application of Type II or Type III emulsified asphalt slurry seal on any street shall not proceed until County 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 Type II or Type III emulsified asphalt slurry seal shall be suspended until the surface has completely dried as determined by County.

3. Testing

Contractor shall furnish test reports for aggregate and emulsion used in conjunction with the work to County's Contract Administrator at the time the work is completed.

4. Spoils

Spoils shall be disposed of off-site at no additional cost to County.

5. Sweeping

One (1) additional sweeping shall be performed one (1) calendar day after the application of the Type II or Type III emulsified asphalt slurry seal.

Contractor's failure to provide adequate sweeping shall result in County performing said work at Contractor's sole expense, which shall be deducted from any monies due to Contractor. Sweeping by County forces shall not relieve Contractor of any liability arising from its failure to comply with these specifications.

TRAFFIC STRIPES AND PAVEMENT MARKINGS

1. General

1.1 Scope

This work consists of applying traffic stripes and pavement markings.

1.2 Definitions

Pavement marking: Transverse marking such as (1) a limit line, (2) a stop line, or (3) a word, symbol, shoulder, parking stall, or railroad-grade-crossing marking.

Traffic stripe: Longitudinal centerline or lane line used for separating traffic lanes in the same direction of travel or in the opposing direction of travel or a longitudinal edge line marking the edge of the traveled way or the edge of a lane at a gore area separating traffic at an exit or entrance ramp. A traffic stripe is shown as a traffic line.

1.3 Submittals

For each lot or batch of thermoplastic, paint, and glass beads, submit:

1. Certificate of compliance, including the product name, lot or batch number, and manufacture date
2. Materials Engineering and Testing Services (METs) notification letter stating that the material is authorized for use
3. Safety Data Sheet

For glass beads used in drop-on applications and in thermoplastic formulations, submit a certificate of compliance and test results for each lot of beads specifying the Environmental Protection Agency (EPA) test methods used and tracing the lot to the specific test sample. The testing for lead and arsenic content must be performed by an independent testing laboratory.

Submit retro reflectivity readings for traffic stripes and pavement markings at locations with deficient retro reflectivity determined by the Engineer.

1.4 Quality Assurance

Before starting permanent application of two-component painted traffic stripes or markings, apply a test stripe of the paint on roofing felt or other suitable material in the presence of County's Engineer. The test section must be at least fifty (50) feet in length.

Test each lot of glass beads for arsenic and lead under EPA Test Method 3052 and 6010B or 6010C.

County's Engineer will perform a nighttime, drive-through, visual inspection of the retro reflectivity of the traffic stripes and pavement markings and notify you of any locations with deficient retro reflectivity. Measure the retro reflectivity of the deficient areas using a retro reflectometer under ASTM E1710 and the sampling protocol specified in ASTM D7585.

2. Materials

2.1 General

Traffic stripes and pavement markings must be retroreflective. Within thirty (30) days of applying traffic stripes and pavement markings, the retro reflectivity of the stripes and markings must be a minimum of 250 mcd·m⁻²·lx⁻¹ for white and 125 mcd·m⁻²·lx⁻¹ for yellow when measured under ASTM E1710.

2.2 Thermoplastic

Thermoplastic must comply with State Specification PTH-02SPRAY, PTH-02HYDRO, or PTH-02ALKYD.

For recessed thermoplastic stripes and pavement markings, mark packages of thermoplastic with the words "For Recessed Application."

2.3 Paint

The paint for traffic stripes and pavement markings must comply with the specifications for the paint type and color shown in following table:

Paint Specifications		
Paint type	Color	Specification
Waterborne traffic line	White, yellow, and black	State Specification PTWB-01R2
Acetone-base	White, yellow, and black	State Specification PT-150VOC(A)
Waterborne traffic line for the international symbol of accessibility and other curb markings	Blue, red, and green	Federal Specification TT-P-1952E

The color of painted traffic stripes and pavement markings must comply with ASTM D6628.

2.4 Glass Beads

Glass beads applied to paint must comply with State Specification 8010-004.

Glass beads applied to molten thermoplastic material must be Type 2 beads complying with AASHTO M247. The glass beads must have a coating that promotes adhesion of the beads to thermoplastic.

At least seventy-five (75) percent of the beads by count must be true spheres that are colorless and do not exhibit dark spots, air inclusions, or surface scratches when viewed under 20X magnification.

Each lot of glass beads used in pavement markings must contain less than two hundred (200) parts per million each of arsenic and lead when tested under EPA Test Methods 3052 and 6010B or 6010C.

2.5 Thermoplastic Traffic Stripes and Pavement Markings with Enhanced Wet-Night

Visibility

A thermoplastic traffic stripe or pavement marking with enhanced wet-night visibility consists of a single uniform layer of thermoplastic and two (2) layers of glass beads.

The 1st layer of glass beads must be on the Authorized Material List for high-performance glass beads. The color of the glass beads must match the color of the stripe or marking to which they are being applied.

The 2nd layer of glass beads must comply with AASHTO M 247, Type 2.

The glass beads used in both layers must be surface treated for use with thermoplastic under the bead manufacturer's instructions.

Within fourteen (14) calendar days of applying a thermoplastic traffic stripe or pavement marking with enhanced wet-night visibility, the retro reflectivity must be a minimum of seven hundred (700) mcd·m⁻²·lx⁻¹ for white stripes and markings and five hundred (500) mcd·m⁻²·lx⁻¹ for yellow stripes and markings when measured under ASTM E1710.

2.6 Two-Component Painted Traffic Stripes and Pavement Markings

A two-component painted traffic stripe or pavement marking consists of one (1) coat of paint and two (2) applications of retroreflective glass beads of two (2) gradations.

The large-gradation glass beads must be on the Authorized Material List for two-component traffic striping paints and large-gradation retroreflective glass beads.

The small-gradation glass beads must comply with AASHTO M 247, Type 1.

The glass beads must have an adhesion-promoting and water-repellant coating complying with the paint manufacturer's instructions.

Contractor may use alternative types of glass beads recommended by the paint manufacturer if authorized.

The daytime and nighttime color of the painted traffic stripes and pavement markings must comply with ASTM D6628.

2.7 Payment

The price shall include full compensation for specified surface preparation, paint and thermoplastic removals, sweeping, and for performing all of the work and providing the materials involved in the application of the specified traffic striping and traffic markings.

3. CONSTRUCTION

3.1 General

Establish the alignment for traffic stripes and the layouts for pavement markings with a device or method that will not conflict with other traffic control devices.

Protect existing retroreflective pavement markers during work activities.

Remove existing pavement markers that are coated or damaged by work activities and replace each with an equivalent marker on the Authorized Material List for signing and delineation materials.

1. Have clean, well-defined edges without running or deformation
2. Be uniform
3. Be straight on a tangent alignment and on a true arc on a curved alignment

The width of a completed traffic stripe must not deviate from the width shown by more than one-quarter (1/4) inch on a tangent alignment and one-half (1/2) inch on a curved alignment.

The length of the gaps and individual stripes that form a broken traffic stripe must not deviate by more than two (2) inches from the lengths shown. The gaps and stripes must be uniform throughout the entire length of each section of broken traffic stripe so that a normal striping machine can repeat the pattern and superimpose successive coats on the applied traffic stripe.

A completed pavement marking must have well-defined edges without running or deformation.

A completed thermoplastic traffic stripe or thermoplastic pavement marking must be free from runs, bubbles, craters, drag marks, stretch marks, and debris.

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.

3.2 Surface Preparation

Use mechanical wire brushing to remove dirt, contaminants, and loose material from the pavement surface that is to receive the traffic stripe or pavement marking.

Use abrasive blast cleaning to remove laitance and curing compound from the surface of new concrete pavement that is to receive the traffic stripe or pavement marking.

3.3 Application of Stripes and Markings

3.3.1 General

Apply thermoplastic for a pavement marking with a stencil or a preformed marking.

Apply paint for a pavement marking by hand with a stencil and spray equipment.

Contractor may use permanent tape for a traffic stripe or a pavement marking instead of paint or thermoplastic. The permanent tape must be on the Authorized Material List for signing and delineation materials. Apply the tape under the manufacturer's instructions.

Immediately remove drips, overspray, improper markings, paint, and thermoplastic tracked by traffic with an authorized method.

Apply a traffic stripe or a pavement marking only to a dry surface during a period of favorable weather when the pavement surface is above fifty (50) degrees F.

The glass beads must be embedded in the coat of paint or thermoplastic to a depth of one-half (1/2) their diameters.

Verify the rate of application of the glass beads by stabbing the glass bead tank with a calibrated rod.

Where a new broken traffic stripe joins an existing broken traffic stripe, allow enough overlap distance between the new and existing striping patterns to ensure continuity at the beginning and end of the transition.

3.3.2 Thermoplastic Traffic Stripes and Pavement Markings

3.3.2.1 General

Do not thin the primer. Apply the primer under the manufacturer's instructions:

1. To asphaltic surfaces over six (6) months old and to all concrete surfaces
2. Immediately before and concurrently with the application of the thermoplastic
3. At the manufacturer's instructed rate:

Use preheaters with mixers having a three hundred sixty (360)-degree rotation to preheat the thermoplastic material.

Apply the thermoplastic in a single uniform layer by spray or extrusion methods.

Completely coat and fill voids in the pavement surface with the thermoplastic.

3.3.2.2 Extruded Thermoplastic Traffic Stripes and Pavement Markings

Apply extruded thermoplastic at a temperature from four hundred (400) to four hundred twenty-five (425) degrees F unless a different temperature is recommended by the manufacturer.

Apply extruded thermoplastic for a traffic stripe at a rate of at least 0.20 pounds of thermoplastic per foot of four (4) inch wide solid stripe. The applied thermoplastic traffic stripe must be at least 0.060 inch thick.

An applied thermoplastic pavement marking must be from 0.100 to 0.150 inch thick.

Apply glass beads to the surface of the molten thermoplastic at a rate of at least eight (8) pounds of beads per one hundred (100) square feet.

3.3.2.3 Sprayable Thermoplastic Traffic Stripes and Pavement Markings

Apply sprayable thermoplastic under State Specification PTH-02SPRAY at a temperature from three hundred fifty (350) to four hundred (400) degrees F.

Apply sprayable thermoplastic at a rate of at least 0.13 pounds of thermoplastic per foot of four (4) inch wide solid stripe.

The applied sprayable thermoplastic material must be at least 0.040 inch thick.

3.3.2.4 Recessed Thermoplastic Traffic Stripes and Pavement Markings

Construct recesses for double traffic stripes in a single pass.

Keep the recesses dry and free from debris. Apply primer to the recesses.

After constructing the recesses, apply the thermoplastic traffic stripes and pavement markings before the end of the same work shift.

3.3.2.5 Thermoplastic Traffic Stripes and Pavement Markings with Enhanced Wet-Night Visibility

Use a ribbon-extrusion or screed-type applicator to apply thermoplastic traffic stripes with enhanced wetnight visibility. Operate the striping machine at a speed of eight (8) miles per hour (mph) or slower during the application of the stripe and glass beads.

Apply the stripe at a rate of at least 0.38 pounds of thermoplastic per foot of four (4) inch wide solid stripe. The applied thermoplastic traffic stripe must be at least 0.090 inch thick.

Apply thermoplastic pavement marking at a rate of at least 1.06 pounds of thermoplastic per square foot of marking. The applied thermoplastic pavement marking must be at least 0.100 inch thick.

Apply thermoplastic traffic stripe and both types of glass beads in a single pass. First apply the thermoplastic, followed immediately by consecutive applications of high-performance glass beads and then AASHTO M 247, Type 2, glass beads. Use a separate applicator gun for each type of glass bead.

You may apply glass beads by hand on pavement markings.

Uniformly distribute glass beads on traffic stripes and pavement markings. Apply high-performance glass beads at a rate of at least six (6) pounds of glass beads per one hundred (100) square feet of stripe or marking. Apply AASHTO M 247, Type 2, glass beads at a rate of at least eight (8) pounds of glass beads per one hundred (100) square feet of stripe or marking. The combined weight of the two (2) types of glass beads must be greater than fourteen (14) pounds of glass beads per one hundred (100) square feet of stripe or marking.

3.3.3 Painted Traffic Stripes and Pavement Markings

3.3.3.1 General

Do not thin paint for traffic stripes and pavement markings. Mix the paint by mechanical means until it is homogeneous. Thoroughly agitate the paint during its application.

Use mechanical means to paint traffic stripes and pavement markings and to apply glass beads for traffic stripes.

The striping machine must be capable of superimposing successive coats of paint on the 1st coat and on existing stripes at a speed of at least five (5) mph.

The striping machine must:

1. Have rubber tires
2. Be maneuverable enough to produce straight lines and normal curves in true arcs
3. Be capable of applying traffic paint and glass beads at the specified rates
4. Be equipped with:
 - 4.1. Pointer or sighting device at least five (5) feet long extending from the front of the machine
 - 4.2. Pointer or sighting device extending from the side of the machine to determine the distance from the centerline for painting shoulder stripes
 - 4.3. Positive acting cutoff device to prevent depositing paint in gaps of broken stripes
 - 4.4. Shields or an adjustable air curtain for line control
 - 4.5. Pressure regulators and gauges that are in full view of the operator for a pneumatically operated machine
 - 4.6. Paint strainer in the paint supply line
 - 4.7. Paint storage tank with a mechanical agitator that operates continuously during painting activities
 - 4.8. Glass bead dispenser located behind the paint applicator nozzle that is controlled simultaneously with the paint applicator nozzle
 - 4.9. Calibrated rods for measuring the volumes of paint and glass beads in the paint and glass bead tanks

Air-atomized spray equipment must:

1. Be equipped with oil and water extractors and pressure regulators
2. Have adequate air volume and compressor recovery capacity
3. Have properly sized orifices and needle assemblies for the spray gun tip

Where the configuration or location of a traffic stripe is such that the use of a striping machine is not practicable, you may apply the traffic paint and glass beads by other methods and equipment if authorized. County Engineer determines if the striping machine is not practicable for a particular use.

For an existing surface, apply traffic stripes and pavement markings in one (1) coat.

For a new surface, except for the black stripe between the two (2) yellow stripes of a double traffic stripe, apply traffic stripes and pavement markings in two (2) coats. The 1st coat of paint must be dry before applying the 2nd coat.

Paint one (1) coat, three (3) inch wide black stripe between the two (2) four (4) inch wide yellow stripes of a double traffic stripe.

If the two (2) for (4) inch wide yellow stripes are applied in two (2) coats, apply the black stripe concurrently with the 2nd coat of the yellow stripes.

Apply each coat of paint for any traffic stripe in one (1) pass of the striping machine, including the glass beads, regardless of the number, width, and pattern of the individual stripes. Do not paint traffic stripes and pavement markings if:

1. Freshly painted surfaces could become damaged by rain, fog, or condensation
2. Atmospheric temperature could drop below forty (40) degrees F for acetone-based paint and fifty (50) degrees F for waterborne paint during the drying period

On 2-lane highways:

1. If the 1st coat of the centerline stripe is applied in the same direction as increasing post miles, use the right-hand spray gun of the three (3) spray guns used to apply the double yellow stripe to apply a single yellow stripe.
2. If the 1st coat of the centerline stripe is applied in the same direction as decreasing post miles, use the left-hand spray gun of the three (3) spray guns used to apply the double yellow stripe to apply a single yellow stripe.
3. Apply the 2nd coat of centerline striping in the opposite direction of the 1st coat.

Apply 1-coat paint at an approximate rate of one hundred seven (107) square feet/gallon.

Apply 2-coat paint at the approximate rate shown in the following table:

Two-Coat Paint Application Rates

Paint Type	Coverage (square feet/gallon)	
	1 st coat	2 nd coat
Waterborne paint	215	215
Acetone-based paint	360	150

Apply glass beads at an approximate rate of five (5) pounds of beads per gallon of paint.

County's Engineer determines the exact application rate of the paint and glass beads.

Verify the application rate of paint by stabbing the paint tank with a calibrated rod. If the striping machine has paint gauges, County's Engineer may measure the volume of paint using the gauges instead of stabbing the paint tank with a calibrated rod.

3.3.3.2 Two-Component Painted Traffic Stripes and Pavement Markings

Do not apply paint for two-component painted traffic stripes and pavement markings until authorized.

Apply the paint only to clean, completely dry surfaces when the pavement surface temperature is above thirty-nine (39) degrees F and the ambient temperature is above thirty-six (36) degrees F.

Comply with the paint manufacturer's instructions for the temperature of the paint during its application.

The striping machine must not travel faster than ten (10) mph when applying the paint and glass beads.

Apply the paint and glass beads in one (1) pass in the following order:

1. Paint
2. Large-gradation glass beads
3. Small-gradation glass beads

Apply the glass beads with two (2) separate applicator guns.

Uniformly distribute the glass beads on traffic stripes and pavement markings.

You may apply the glass beads by hand methods on pavement markings.

Apply the large-gradation glass beads at a minimum rate of 11.7 pounds of beads per gallon of paint.

Apply the small-gradation glass beads at a minimum rate of 8.3 pounds of beads per gallon of paint.

MICRO-MILLING

1. General

1.1. Scope

Micro-milling shall consist of the cold milling of existing asphalt concrete pavement with a self-propelled milling machine equipped with a cutting drum specifically designed and constructed for micro-milling.

1.2. Definitions

Area of Localized Roughness: Moving average of the International Roughness Index values for each wheel path using a twenty-five (25) foot continuous interval and a two hundred fifty (250) millimeter (mm) filter.

Mean Roughness Index: Average of the International Roughness Index values for the left and right wheel paths for the same traffic lane using a fixed interval and a two hundred fifty (250) mm filter.

Wheel Paths: Pair of lines three (3) feet from and parallel to the edges of a traffic lane. Left and right wheel paths are based on the direction of travel.

1.3. Submittals

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 five (5) business days before starting initial profiling or changing the inertial profiler or operator, Contractor shall submit to County an inertial profiler certification and operator certification for the inertial profiler. Within two (2) business days after cross-correlation testing, Contractor shall submit to County a ProVAL profiler certification analysis report for test results to the County's Contract Administrator, or designee.

At least two (2) business days before performing corrective grinding for areas of localized roughness or areas exceeding the specified thresholds for the Mean Roughness Index, Contractor shall submit to County a corrective grinding plan as an informational submittal. The corrective grinding plan must include:

1. Grinder manufacturer make and model.
2. Grinder wheelbase in feet, measured from the front centerline to the back centerline of the single wheel or tandem wheel spread.
3. Grinder head position in feet, measured relative to the centerline of the front single wheel or the front tandem wheel spread.
4. Tandem wheel spreads in feet, for rear and front wheels as applicable.

5. Tabular listing of the planned corrective grinding including:
 - 5.1 Start and stop locations in stationing to the nearest foot
 - 5.2 Width of grind, such as left half lane, right half lane, or full width lane
 - 5.3 Corresponding grinder head depths to the nearest 0.01 inch
 - 5.4 Direction of grind, up to passes per grind location, such as forward, reverse, forward-forward, reverse-reverse, reverse-forward
 - 5.5 Distance from start or stop locations to the nearest semi-permanent reference point
6. Forecasted improvement in terms of the Mean Roughness Index and area of localized roughness values.

Within two (2) days of measuring smoothness with a straightedge, Contractor shall submit to County a list of the areas requiring smoothness correction or a report stating there are no areas requiring smoothness correction. Areas requiring smoothness correction shall be identified by:

1. Location number
2. Road Name
3. Beginning station or post mile to the nearest 0.01 mile
4. For correction areas within a traffic lane:
 - 4.1 Lane Direction (NB, SB, EB, OR WB)
 - 4.2 Wheel path (L for left, R for right or B for both)
5. For correction areas not within a traffic lane:
 - 5.1 Identify the pavement area, such as shoulder, weigh station, or turnout
 - 5.2 Direction and distance from the centerline (L for left or R for right)
6. Estimated size of correction area

2. Profiling

County requires profiling services be completed by a third party, subcontractor. Pre-Grind International Roughness Index (IRI) Data must be submitted no later than one (1) week prior to the start of construction. Post-Grind IRI Data must be submitted to the County prior to the installation of any subsequent pavement preservation treatments.

2.1. Submittals

Within two (2) business days after each day of profiling, Contractor shall submit the profile information to the County's Contract Administrator, or designee.

For each surface with inertial profile smoothness requirements, the profiling information must include:

1. Raw profile data for each lane
2. ProVAL ride quality analysis report for the Mean Roughness Index of each lane in Portable Document Format (PDF). Report the following:
 - 2.1. Listing of Mean Roughness Index values for 0.1-mile segments or portions thereof
 - 2.2. Inputs, including the specified Mean Roughness Index threshold and fixed segment length
 - 2.3. Raw profile data name selections
 - 2.4. Areas exempt from inertial profile smoothness
3. ProVAL ride quality analysis report for the International Roughness Index of the left and right wheel paths of each lane in PDF format. Report the following:
 - 3.1. Listing of areas of localized roughness
 - 3.2. Inputs, including the specified area of the localized roughness threshold and continuous segment length
 - 3.3. Raw profile data name selections
 - 3.4. Areas exempt from inertial profile smoothness

4. Global Positioning System (GPS) data file for each lane. Submit the data file in GPS eXchange file format.
5. Manufacturer's recommended calibration and verification test results for the inertial profiler.
6. Inertial profiler's calibration and verification test results, including results for bounce, block, and the distance measurement instrument.
7. Completed Pavement Smoothness Inertial Profiler Submittal Record.

Contractor shall submit to County's Contract Administrator, or designee, Asphalt Concrete Pavement Smoothness Corrections Information or Concrete Pavement Smoothness Corrections Information with the final profiling information prior to the installation of any subsequent pavement preservation treatments.

Submit the raw profile data in an unfiltered electronic pavement profile file format.

2.2. Inertial Profiler Certifications

At all times, the inertial profiler must display a current certification decal displaying the expiration date. The operator shall be certified for each model of inertial profiler operated. The certification for the inertial profiler and operator shall not be more than twelve (12) months old.

2.3 Inertial Profiler Calibration and Verification Tests

Notify County's Contract Administrator at least two (2) business days before performing calibration and verification testing of the inertial profiler.

Contractor shall conduct the following calibration and verification tests each day before profiling:

1. Block test to verify the accuracy of the height sensor under California Test 387
2. Bounce test to verify the combined accuracy of the height sensor and accelerometer under California Test 387
3. Distance measurement instrument test to verify the accuracy of the distance measuring instrument under California Test 387
4. Manufacturer's recommended tests

Contractor shall conduct a cross-correlation verification test of the inertial profiler in the Engineer's presence before performing the initial profiling. A verification test must be performed at least annually. Conduct five (5) repeat runs of the inertial profiler on an authorized test section. The test section must be a 0.1-mile segment of existing concrete pavement if you are measuring new concrete pavement or existing asphalt concrete pavement if you are measuring new asphalt concrete pavement. Where micro-milled asphalt concrete surfaces are to be measured, the cross-correlation verification test may be performed on the initial 0.1-mile section of milled asphalt concrete surface. Calculate a cross-correlation to determine the repeatability of your device under California Test 387 using a ProVAL profiler certification analysis with a three (3) foot maximum offset. The cross-correlation must be a minimum of 0.92.

2.4 Performing, Analyzing and Collecting Data

Contractor shall operate the inertial profiler under the manufacturer's instructions and AASHTO R 57 at one (1) inch recording intervals using a minimum four (4) inch line laser sensor. Establish semi-permanent reference points for aligning inertial profiler runs and locating potential corrective grinding. Place semi-permanent reference points at a frequency of 0.5 mile or less along the edge of the traffic lane or roadway. Maintain semi-permanent reference points until County acceptance testing is completed.

Collect profiling data under AASHTO R 57 and analyze it using two hundred fifty (250) mm and International Roughness Index filters. While collecting the profile data to determine the International Roughness Index values, record semi-permanent reference points and the beginning and end of the following locations in the raw profile data:

1. Bridge approach slabs
 2. Bridges
 3. Culverts visible on the roadway surface
 4. Railroad crossings
 5. At-grade intersections
 6. Project limits
 7. Change in pavement type
- Profile the left and right wheel paths of each lane.

Determine the Mean Roughness Index for 0.1-mile fixed sections using the ProVAL ride quality analysis with a two hundred fifty (250) mm filter. Calculate the Mean Roughness Index of each lane. A partial section equal or less than 0.05-mile length is to be included with the previous or the subsequent segment forming up to a 0.15- mile length. A partial section greater than 0.05 mile, but less than 0.10 mile, is a separate segment.

Sections must comply with the Mean Roughness Index specifications for a full section. A weighted average calculation shall be used for those partial sections that have been combined with previous or subsequent segments.

Determine the areas of localized roughness using ProVAL with the average International Roughness Index values for each wheel path using a twenty-five (25) foot continuous interval and a two hundred fifty (250) mm filter.

3. Construction

3.1. Equipment

3.1.1. Micro-Milling Machine Specifications

The micro-milling self-propelled machine shall be:

1. Equipped with a cutter head width that matches the width to be planed. If the cutter head width is wider than the cold plane area shown, submit to the County's Contract Administrator, or designee, a request for using a wider cutter head. Do not cold plane unless the County's Contract Administrator, or designee, approves your request.
2. Equipped with automatic grade controls for the longitudinal grade and transverse slope of the cutter head and:
 - 2.1 A ski device to be used, must be at least forty (40) feet long, rigid, and a one piece unit. The entire length must be used in activating the seven sensors on each side of the machine.
 - 2.2 If referencing from existing pavement, the cold planer (machine) must be controlled by a self-contained grade reference system. They system must be used at or near the centerline of the roadway. On the adjacent pass with the cold planer (machine), a joint-matching shoe may be used.
3. Drum shall be a minimum of six and a half inch (6.5') width with a tungsten carbide tooth spacing of three (3) millimeters double strike drum capable of a tooth strike every one hundred eighty (180) degrees. Tooth holder blocks shall be uniform and not cause variations in the cut radius greater than plus or minus 0.02 inches.
4. Equipped with a drum scanner on both sides of the drum.
5. Equipped to effectively control dust generated by the cold planer's operation.
6. Micro-milling machine shall be operated so that no fumes or smoke is produced.

7. A new set of teeth shall be installed in the micro-milling machine prior to beginning the work. The grinding pattern shall always be within specified tolerances or the teeth shall be replaced to meet the required tolerances.
8. Ridge to valley on milled surface shall not exceed 4mm.

3.2. Milling Operations

Contractor shall notify the County's Contract Administrator, or designee, of the start location by station and start time at least two (2) business days before each day of profiling. Before profiling, Contractor shall remove foreign objects from the pavement surface and mark the beginning and ending station on the pavement shoulder. The stationing must be the same when profiling more than one surface.

Milling operations shall progress from the low side of each roadway lane and progress towards the high side. Each successive pass of the milling machine shall meet the line and grade of the previous pass. The speed of the milling machine shall be maintained at a rate which results in a uniform pavement texture. A dedicated ground man must be present alongside the grinder operation at all times. The ground man must have a minimum of one (1) year of experience on similar micro grinding projects and provide at least three (3) relevant project references, if requested.

Micro-milling shall result in a grid-patterned textured pavement surface with longitudinal ridges approximately the same distance apart as the cutting teeth. The ridges shall be consistent in depth, width and profile. The distance between the top of each ridge and the adjacent valleys shall not exceed 1/8 inch.

The resulting profile and cross slope of the milled pavement surface shall be such that a twelve (12) foot long straightedge laid perpendicular or parallel to the centerline will not allow a shim with a width of one (1) inch and a thickness of 3/16 inch to pass under the straightedge at any point except breaks in profile grade or cross slope. Contractor shall test pavement smoothness using an inertial profiler with the exception of using a twelve (12) foot straightedge for the pavement at:

1. Traffic lanes less than one thousand (1,000) feet in length, including ramps, turn lanes, and acceleration and deceleration lanes
2. Horizontal curves with a centerline radius less than the following and within the super-elevation transition of such curves:
3. Areas within twelve and a half (12.5) feet of manholes
4. Shoulders
5. Weigh-in-motion areas
6. Miscellaneous areas such as medians, gore areas, turnouts, and maintenance pullouts

Where inertial profiler testing is required:

1. Determine the pavement smoothness for each traffic lane by obtaining the International Roughness Index for the left and right wheel paths on an individual basis.
2. Determine the Mean Roughness Index and areas of localized roughness using ProVAL

Where open-graded friction course (OGFC) is required, test the pavement smoothness of the final hot mixed asphalt or concrete pavement surface before placing OGFC and after placing OGFC.

Milled pavement surfaces which do not conform to the requirements above shall be corrected by the Contractor. The Contractor shall prepare and submit to the County's Contract Administrator, or designee, for approval a correction plan prior to initiating corrective action.

During milling operations, the cutter teeth shall be regularly checked and replaced as necessary to maintain the required tolerances.

All required pavement markings removed by milling operations shall be restored with temporary paint before the roadway is opened to traffic.

3.3. Spoils

Spoils shall be disposed of off-site at no additional cost to County.

3.4. Sweeping

A self-loading motorized street sweeper equipped with both brooms and a vacuum system, and a functional water spray system shall immediately follow the micro-milling machine. Sweeping shall continue until loose millings have been completely removed and as requested by the County's Contract Administrator, or designee. The Contractor shall maintain the micro-milled surface until the surface treatment is applied.

4. County Acceptance

County accepts pavement surface for smoothness based on compliance with the smoothness specifications for the type of pavement surface specified. The micro milling operation must demonstrate an improvement of at least forty to sixty (40–60%) percent in ride smoothness. If this improvement is not achieved, a five (5%) percent deduction will be applied to the grind item, or a revised grind plan must be submitted and approved to meet the required smoothness threshold. For areas that require pavement smoothness determined using a twelve (12) foot straightedge, the pavement surface must not vary from the lower edge of the straightedge by more than:

1. 0.01 foot when the straightedge is laid parallel with the centerline
2. 0.02 foot when the straightedge is laid perpendicular to the centerline and extends from edge to edge of a traffic lane
3. 0.02 foot when the straightedge is laid within twenty-four (24) feet of pavement conforms

Pavement located within twelve and a half (12.5) feet of the ends of bridges, approach slabs, culverts visible on the roadway surface, railroad crossings, at-grade intersections, and transverse surface joints with existing pavement must comply with Mean Roughness Index and twelve (12) foot straightedge requirements. The requirements for areas of localized roughness do not apply to these areas.

ADJUST DRAINAGE STRUCTURES

1. General

1.1. Scope

Specifications for partially removing and either lowering or raising facilities. Adjust to grade with new materials that are similar in character to the existing materials.

1.2. Frames, Covers, Grates and Manholes

Adjust frames, covers, grates and manholes by lowering before cold planing and raising after paving or surfacing. Before opening the lane to traffic, either (1) complete permanent paving or surfacing or (2) temporarily fill any depressions with HMA. Where paving or surfacing work is shown, do not adjust to final grade until the adjacent pavement or surfacing is complete. For a structure that is to be raised, remove the cover or frame and trim the top of the structure to provide a suitable foundation for the new material. Instead of using new materials similar in

character to those in the existing structure, you may use raising devices to adjust a manhole to grade. Before starting paving work, measure and fabricate raising devices. Raising devices must:

1. Comply with the specifications for section 75 except that galvanizing is not required
2. Have a shape and size that matches the existing frame
3. Be match marked by painting identification numbers on the device and corresponding structure
4. Result in an installation that is equal to or better than the existing one in stability, support, and nonrocking characteristics
5. Be fastened securely to the existing frame without projections above the surface of the road or into the clear opening. Where manholes are to be lowered, remove the facility to three and a half (3.5) feet below finished grade or to an authorized depth. Adjust the manhole using the taper needed to match the finished grade. If a manhole cover is unstable or noisy under traffic, place a coil of asphalt-saturated rope, a plastic washer, or asphaltic compound on the cover seat. Before placement, obtain authorization for use of the material.

1.3. Inlets

Use minor concrete with at least five hundred ninety (590) pounds of cementitious material per cubic yard. Where inlets are adjusted before placing the uppermost layer of pavement or surfacing, limit the work area so that adjusting the inlet and final paving or surfacing is completed within the same work day. The top of the inlet grate or cover must be protected during paving operations by heavy plywood covers, steel plate covers, or other authorized methods. Excess paving material must be removed before rolling. Where inlets are adjusted after placing the uppermost layer of pavement or surfacing, do not adjust the inlet to final grade until the paving or surfacing has been completed immediately adjacent to the inlet.

American Pavement Systems, Inc.
Exhibit B
Notification

FRONT



No Parking 7 AM to 5 PM

MON TUE WED THUR FRI SAT SUN

The _____ of this month, Street Sealing will be done on your street.

We're sorry for any inconvenience this may cause you. Please park and drive on adjacent streets not posted **NO PARKING**. Any vehicles parked within the posted areas during the **NO PARKING** times may be towed at owners' expense.

Your street will be **CLOSED** unless flaggers are present to control traffic. Please avoid driving, bicycle riding or walking on sealed streets until new surface dries. Under normal weather conditions, your street will be re-opened within 3 to 4 hours after sealing is complete. Only **EMERGENCY VEHICLES** will be allowed through at any time.

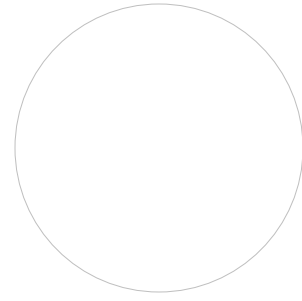
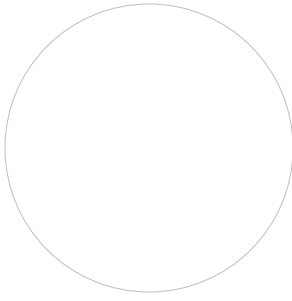
Please do not permit water to run in gutters during this period.

Weather considerations or equipment breakdowns may cause schedule changes. If your street is not completed due to any reason, you will be notified again as to the new date.

Thank you for cooperation and patience

**Exhibit B
Notification**

BACK



Street Sealing

is an asphalt seal coat that is a very economical surface treatment that prolongs the life of the asphalt by stopping erosion from water and oxidation from the sun. Timely preventative maintenance like this helps avoid extremely costly street rebuilding in the future.

Due to the number of streets scheduled, we cannot tell you the exact time your street will be done. We realize the inconvenience caused by limiting access to your street. Please consider that the inconvenience caused at this time is very small compared to what would later be required if this protection were not applied.

Driving or walking on this new material before it has cured will damage the street and will stick to your shoes, be splattered up onto your car, and will track onto concrete driveway, carpets and floors. The material is highly adhesive but can be removed from vehicles with tar removers available at local auto part stores. Read and follow directions from any products purchased.

Emulsion aggregate slurry seal coat will be damaged by sharp turning during the curing phase, specifically power steering turns. This can be avoided by making wide turns. Always be sure the vehicle is moving before turning the steering wheel.

FOR ADDITIONAL INFORMATION

PLEASE CALL:

Company Contact Number

Company Title

CA Contractors Lic. Number