City of Weldon Spring, Missouri

Request for Bids

2025 Surface Sealing

Contract Provisions

1. Request for Bids

   The City of Weldon Spring, Missouri is seeking a bid to preserve asphalt shared use paths with crack sealing, patching, and asphalt seal coating.

   All proposals must be submitted by **1:00 PM, April 17, 2025**, to the City Administrator, 5401 Independence Road, Weldon Spring, MO 63304, in a sealed envelope marked "2025 Trail Sealing Bid" in the lower left-hand corner. The sealed bids will be publicly opened promptly following the deadline.

2. Contact Person

   Don Stolberg, City Administrator
   5401 Independence Rd.
   Weldon Spring, MO 63304
   (636)441-220 ext. 102
   dstolberg@weldonspring.org

3. Improvement Locations in the City of Weldon Spring, MO

   Shared Use Paths

   - **Independence Road Trail (City Park trail west to Wolfrum Road)**
     - **Exhibit 1**
   - **Weldon Spring Parkway Trail (Independence Road to O'Fallon Road)**
     - **Exhibit 2**
   - **Summit at Whitmoor Trails (2 Segments)**
     - **Exhibit 3**

4. Schedule

   Work should commence as soon as possible following the Award of Bid to the successful Bidder. **All work shall be completed by October 1, 2025.**

5. Pre-Bid Meeting

   An optional Prebid meeting will occur on **Tuesday, April 1, 2025, at 10:00 AM**. All potential bidders are encouraged to attend.

6. Preconstruction Meeting

Prior to any work commencing after the Award of Bid, the Contractor shall contact the City Engineer at 636-441-2110, ext. 110 to schedule a Preconstruction Meeting. The Preconstruction Meeting will occur at City Hall at which contact information, specifications, schedule, and any questions will be presented and answered. This meeting is expected to take one half hour in length.

7. Traffic Control and Workspace

   The contractor shall clearly mark off all work areas with signage, traffic cones, barricades and construction tape as needed to prohibit motorists and pedestrians from each area until the surface is fully cured and dried. The contractor must remove all traffic control after the sealer has been cured prior to final acceptance. Any work vehicles or equipment operating or parking on the streets shall be clearly visible with construction cones and flashing lights. No construction equipment shall be stored in residential neighborhoods or parked on public streets overnight. Locations to store any equipment overnight at the City Hall can be arranged with City Staff. There will be no direct payment for any traffic control devices or complying with this special provision.

8. Preparation of Surface
   Spray all vegetation in cracks and at pavement edges with applicable chemical to kill weeds, and grasses prior to job start date. All existing asphalt shared use paths / lots shall be power blown and swept clean by mechanical brooms of any organic material or loose material in the cracks or on the edge of the shared use paths and parking lots prior to sealing. Clean all cracks with compressed air, wire wheel routing, and hand work to ensure all loose debris is removed. Trim the grass around the pavement edges. No sealer shall be placed on wet surfaces. The surfaces should be inspected by City Staff after cleaning prior to the application of crack or surface sealers. No material shall be applied to the shared use paths without first receiving approval from the City Staff.

9. Application of Sealers

   Application of sealers shall occur when the ground temperatures are a minimum of 50 degrees during the entire process. Weather forecasts shall be monitored to ensure that sealers are not placed when precipitation is eminent and may cause damage to the new surfaces.

   No heavy equipment or metal tracked loaders shall be allowed on any portion of the shared use paths during the work. Only light tired or rubber tracked vehicles or trailers will be allowed on the shared use paths or adjacent ground. Any damage to the shared use paths or adjacent ground by the Contractor's equipment shall be repaired by the Contractor at no cost to the City.

10. Crack Sealer

    Seal all cracks 3/16" or larger with **Deery PLF 80210**, **Hot Crafco Parking Lot 202 Sealant Type 1 Crack Sealant**, or **Sealmaster Crackmaster Supreme Hot Pour Crack Sealant**. The contractor shall apply one of the approved hot crack sealing materials <u>in all cracks 3/16" wide or more</u> and at <u>all locations the asphalt shared use paths or parking lots connect to concrete driveways, curbs or sidewalks</u>. Any wider cracks shall be filled first and tamped with **EZ Street Premium Cold Mix** as

produced by Fred Weber, Inc., **SealMaster Patchmaster** High Performance Pothole Patch, **Aquaphalt 6.0** or commercial hot mix asphalt if available. The crack sealer shall be applied according to the Manufacturer's recommendations. See attached specification sheet(s). Crack Sealer shall be within 1/8" with the top surface of the surrounding asphalt after curing. **Any crack not filled within 1/8" to the top of surface must be re- crack sealed, and re-surface sealed prior to final acceptance**.

Crafco Parking Lot 202 Sealant Type 1 is a hot-applied asphalt-based product used to seal and fill cracks and joints in asphalt or Portland cement concrete pavements in cold to hot climates. Parking Lot Sealant Type 1 is supplied in solid form which when melted and properly applied forms a high stiffness, adhesive and flexible compound that resists cracking in the winter and is highly resistant to flow or pick-up at summer temperatures. Parking Lot Sealant Type 1 is used in highways, street, airfield and parking lot pavements and is applied to pavement cracks using either pressure feed melter applicators or pour pots. At application temperature it is a free flowing, self-leveling product. Parking Lot Sealant Type 1 is specifically formulated to be a stiff, flow resistant, yet flexible product which is suited for use in areas subject to pedestrian and slow-moving vehicular traffic in moderate to warm climates where high resistance to pick-up or tracking is required. VOC = 0 g/l. (See attached specifications)

11. Asphalt Surface Sealer

    All asphalt surfaces shall be sealed with **MAC 52 Premium Pavement Sealer**, **Master Seal E-Z Stir Asphalt Based Pavement Sealer**, or **Crafco Action Pave RT Classic** according to the manufacturer's specifications. **Two** coats of sealer are required according to most manufacturers' specifications to achieve the proper coating. The contractor shall specify in the bid if the proposal is for one coat or two coats of sealer. Bids for one coat of sealer will be deemed nonresponsive. **Product Specifications must be submitted with the bid. The bidder must also specify the application method (squeegee, spray, etc.) of each coat.** Spray equipment must be capable of spraying sealers with sand as specified. **The preference is for both coats to be squeegee applied. Full coverage of the surface is required on both coats.** (See attached specifications)

12. Alternate Approved Materials

    The contractor may propose alternate Crack Sealers and/or Asphalt Sealers as equal or better up to seven calendar days before the Bid Opening. The contractor must supply all information and explanation why the proposed alternate information is equal or better by comparing specification sheets. The City will approve or reject any alternate materials in writing or email to the contractor a minimum of one week prior to the bid opening. Only approved materials can be utilized on the project. Any alternate proposed shall also detail if one or two coats of material are being proposed. If no alternate materials have been approved by the City, the contractor must use the sealers specified in these provisions.

13. Estimated Surface Quantities

    An estimated summary of quantities has been included. The contractor is responsible for verifying all quantities and determining the amount of material needed according to actual field conditions and the manufacturer's recommended application rates. While estimated quantities are listed

for estimating purposes, final measurement will not be made unless an appreciable error exceeding 15% of the plan quantity is discovered. The Contractor shall perform a field inspection prior to bidding and notify the City of any appreciable errors prior to bidding. No additional payment or deductions will be made for variances in measurements or quantities.

Trails	**Length (ft) Approximate**	**Width (ft) Variable**	**Area (SY)**
Independence Road Trail Exhibit 1	2,186'	10'	2,429 SY
Weldon Spring Parkway Trail Exhibit 2	1,154'	10'	1,283 SY
Summit at Whitmoor Trails Exhibit 3	1,735	7'	1,351 SY
TOTAL			**5,063 SY**

14. Material Certifications and Sampling

    The contractor shall supply a dated paid receipt and material certification from the supplier for both the crack sealer and surface sealer approved and used on the project. This shall be included with the payment request after completion of the work.

15. The contractor shall also furnish a sample of the sealer on site in accordance with AASHTO R-66, Sampling Asphalt Materials, except that samples may be taken from a single valve near the bottom of the tank. The contractor will take at least one 1/4-gallon sample in an appropriate sealed wide mouth plastic container with lid for each batch asphalt sealer used on any given day. These QC samples shall be provided to the City and retained for possible future testing and labeled as such.

16. Spillage / Tracking – The contractor shall take every reasonable measure to assure the trail sealer and crack sealer does not spill or track onto other pavements or private driveways. Cross driveways shall be covered with plastic and taped down. Any tracking or spillage will be the contractor's responsibility to clean up and resolve.

17. Scheduling - City Events – The City of Weldon Spring will be holding an annual Independence Day Celebration in July. No work will be allowed from July 3-July 6, 2025. All shared use paths shall be open to the public. There will be no additional pay or time extension to comply with this restriction.

18. Addenda

    Any addenda issued by the City prior to the scheduled time of opening the bids shall be acknowledged in the proposal that the Addenda was received and shall be made part of any contract.

19. Withdrawal of Proposals

    Any person or firm may withdraw the proposal by written request at any time prior to the scheduled time for the opening of the proposals.

20. Economy of the Preparation

    Proposals should be prepared simply and economically, providing a straightforward, concise description of the Vendor's capabilities to satisfy the requirement of this Request. The Vendor shall be responsible for costs incurred in the proposal preparation and delivery.

21. Content of Proposal

    The proposal shall include the following data:

    a. Return all pages of the RFB Document with signature on the "Acceptance of Terms & Conditions" page and include the completed ITEMIZED BID 2025 Trail Sealing.
    b. Insert the bid price into the Contract Agreement and have authorized personnel sign the Contract.
    c. Provide copy of Insurance Requirements.
    d. Short business bio and summary.
    e. Estimated schedule to complete from start to finish.
    f. List of most recent client references ideally other municipalities or public agencies where similar work was completed.

22. Evaluation Process

    Proposals that are judged by the City to be unresponsive or materially incomplete will be immediately rejected. Finalists will be selected from the remaining proposals.

    The City may request interviews from the finalists. The City shall not be responsible for any costs incurred by the Vendor during the interview process.

    The City will perform whatever research it deems necessary into the Bidder's history, financial viability, and references. The Bidder shall cooperate with the City by providing appropriate information.

    The primary evaluation criteria shall be the overall cost/benefit comparison and the Bidder's ability to satisfy the City's expectations. The City shall consider many factors, including the following (which are not in any specific sequence).

        a. The needs of the City are being met.

b. Timeliness in which Bidder can complete the repairs.
c. Bidder's qualifications
d. Cost of:
    1. Base contract bid shall be on a lump sum basis and not based upon city quantity estimates. The application rate must be per the manufacturer's specification. See spec. sheets.

2. Requirements

The City has established certain requirements as specified in the Request. None of the requirements are designed to give any Bidder an advantage or disadvantage in the proposal process. Bidders are encouraged to submit proposals even if the proposal does not meet the requirements as precisely stated. However, the proposal must state specifically which requirements are not met, and why this deviation should not be considered material.

3. City's Obligation

Upon selection of the Contractor and award of the project to the successful bidder it shall be the City's responsibility to provide reasonable access to the trail sites. Prior to the award of the contract access shall be provided for the bid preparation. Reasonable parking of vehicles and temporary storage of needed equipment shall be provided during construction. Pre and post work inspection by designated city staff.

Terms and Conditions

- All proposals shall be good for not less than thirty (30) days from the date of the bid submittal.

- The City of Weldon Spring reserves the right to reject any and all proposals and to negotiate any particulars in the proposals received. Collusion between applicants is sufficient cause to disqualify all those involved.

- Vendors should have no contact with other City personnel except as specifically authorized by the City Administrator.

- All proposals and submittals will be considered final. No additions, deletions, corrections or adjustments will be accepted after the time of the bid opening.

- City, County and State of Missouri Sales Tax and Federal Taxes are not applicable to sales made to the City of Weldon Spring and must be excluded.

- The electronic version of this RFP is available upon request. The document was entered into WORD for Microsoft Windows. The City Administrator shall not guarantee the completeness and accuracy of any information provided on the electronic version. Therefore, respondents are cautioned that the hard copy of this RFP on file at

City Hall governs in the event of a discrepancy between the information on the electronic version and that which is on the hard copy.

- An authorized officer of the company submitting the bid must sign all submissions.
- Vendors must submit one (1) copy of their bid, and it is to be an original and so marked.
- All prices and notations must be in ink or typewritten on the attached form. Mistakes must be crossed out, corrections typed adjacent and must be initialed in ink by person signing the RFP.
- The City of Weldon Spring will not award the project to an individual or business having any outstanding amount due from a prior contract or business relationship with the City or who owes any amount(s) for delinquent taxes, fees or licenses.
- Proposals received after the designated time set for the receipt of the proposals will be considered as a "No Bid" and a "Void" and will not be considered.
- The successful applicant is specifically denied the right to use in any form or medium the name of the City of Weldon Spring for public advertising unless express written permission is granted.
- All applicants must possess the necessary and appropriate business and/or professional licenses in their field.
- Time of delivery, installation and system implementation is part of the consideration and must be stated in definite terms if different than listed above, as this may be a factor in making the award. If time varies on different items, the bidder shall so state. It is anticipated that the contract awarded to the successful Vendor will include penalties for deadlines that may be missed as a result of acts or omissions of the supplier.
- The Vendor agrees to hold the City of Weldon Spring, their officers, agents and employees harmless from liability of any nature or kind on account of use of any copyrighted or un-copyrighted composition, secret process, patented or un-patented invention, article or appliance furnished or used under this proposal call.

INSURANCE and BOND REQUIREMENTS

General:
The Vendor shall respond to these specifications as an independent contractor and not as an employee of the City of Weldon Spring. An original Certificate of Insurance from the company of record must be furnished to the City and provide that the City of Weldon Spring is an "Additional Insured" during the Term of the Agreement.

Contractor's Liability Insurance
The Contractor shall purchase and maintain in full force and effect the following insurance coverage with an insurance carrier acceptable to the Owner. The policy shall be endorsed to cover the contractual liability of the Contractor under the General Conditions. The Contractor and his Subcontractors shall procure and maintain during the life of this Agreement. The Insurance company shall be licensed to do business in the State of Missouri and shall be acceptable to the Owner.
Insurance of the types and minimum amounts as follows:
a) Workers' Compensation in full compliance with statutory requirements of Federal and State of Missouri law and Employers' Liability coverage in the amount of $2,000,000.
b) Comprehensive General Liability and Bodily Injury Including Death: $2,000,000 each person $2,000,000 each occurrence Property Damage: $2,000,000 each occurrence $2,000,000 aggregate
c)Comprehensive Automobile Liability, Bodily Injury Including Death: $2,000,000 each person. $2,000,000 each occurrence Property Damage: $2,000,000 each accident
d)Owner's Protective Bodily Injury Including Death: $2,000,000 each occurrence Property Damage: $2,000,000 each occurrence $2,000,000 aggregate The Owner's Protective Policy shall name the Owner as the insured. Certificates evidencing such insurance shall be furnished by the Owner prior to Contractor commencing the Work on this Project. The certificates must state,

"The City of Weldon Spring, their Officers and Employees, are included as an additional insured as required by a written contract under the General Liability Policy with respect to work performed by the named insured on the above listed project."

Payment Bond – The Contractor shall provide a Payment Bond **prior to Notice to Proceed**. A Payment Bond is required and is conditioned "for the payment of any and all materials, incorporate, consumed, or used in connection with the construction of such work, and all insurance premiums, both for compensation, and for all other kinds of insurance, said work, and for all labor performed in such work whether by subcontractor or otherwise." The Surety shall be a company licensed to do business in the State of Missouri and shall be acceptable to the Owner.

Worker's Compensation Insurance:
The Vendor shall procure and shall maintain during the Term of the Agreement, Worker's Compensation Insurance for all of its employees to be engaged and perform work under the Agreement, and in case such work is sublet, the Concessionaire shall require the subcontractor similarly to provide Worker's Compensation Insurance for all such employees to be engaged by the Vendor for such work unless such employees are covered by the protection afforded by the Vendor's Worker's Compensation Insurance. In the event any class of employees engaged in hazardous work under the Agreement is not protected under the Worker's Compensation statute, the Vendor shall provide and shall cause such subcontractor to provide adequate Employer's Liability insurance for the protection of its employees not otherwise protected.

Indemnity:
The Vendor shall, at all times, fully indemnify, hold harmless, and defend the City and its officers, members, agents, and employees from and against any and all claims and demands, actions, causes of action, and cost and fees of any character whatsoever made by anyone whomsoever on account

of or in any way growing out of the performance of this contract by the Vendor and its employees, or because of any act or omission, neglect or misconduct of the Vendor, its employees and agents or its subcontractors including, but not limited to, any claims that may be made by the employees themselves for injuries to their person or property or otherwise. Such indemnity shall not be limited by reason of the enumeration of any insurance coverage herein provided.

The Vendor shall likewise be liable for the cost, fees and expenses incurred in the City's or the Vendor's defense of any such claims, actions, or suits.
The Vendor shall be responsible for any damages incurred as a result of its errors, omissions or negligent acts and for any losses or costs to repair or remedy construction as a result of its errors, omissions or negligent acts.

Survival of Indemnification:
The indemnification described above shall not be limited by reason of the enumeration of any insurance coverage herein provided, and it shall survive the termination of the Contract for claims arising from events occurring while the Contract is in force.

Warranty
The Contractor with this contract hereby warrants all the work done under this contract for a period of one (1) year following the completion of the project. Upon completion, the Contractor shall submit to the City a written one (1) year warranty on total project with the request for final payment. Failure of the Contractor to submit a written warranty does not release the Contractor of this warranty in any way.

Acceptance of Terms and Conditions:

_____
Name of Authorized Official for Vendor (Print)

_____ _____
Signature of Authorized Official for Vendor Date

BID SHEET

ITEMIZED BID
2025 Trail Sealing

Crack Sealer to be Used: _____ Estimated # Gallons_____

Surface Sealer to be Used: _____Estimated # Gallons_____

Number of Asphalt Sealer Coats to be applied: _____ (2 coats minimum required)

Application Method 1st Coat_____2nd Coat_____
(Specify application method for each coat – squeegee/brush/spray – full coverage required on both coats)

Bid Item	Description	Estimated Quantity	Unit	Bid Price	Extension
001	Mobilization, Traffic Control, Cleanup, Misc. Work	1	each		
002	Independence Road Trail Crack Sealing	1	LS		
003	Independence Road Trail Surface Sealing	2,429	SY		
004	Weldon Spring Parkway Trail Crack Sealing	1	LS		
005	Weldon Spring Parkway Trail Surface Sealing	1,283	LS		
006	Summit at Whitmoor Trail A and B Crack Sealing	1	LS		
007	Summit at Whitmoor Trail A and B Surface Sealing	1,351	SY		
	TOTAL BID				**$**

CONTRACTOR:_____

DATE: _____

CONTRACT AGREEMENT

This agreement, made the _____ day of _____2025, and between

_____Parties of the First Part, hereinafter called the "Contractor", and the CITY OF WELDON SPRING, MISSOURI, Party of the Second Part, and hereinafter called the "Owner".

WITNESSETH: That the Owner and the Contractor for the consideration hereinafter named agree as follows:

ARTICLE 1. Scope of Work:

The Contractor shall furnish all of the labor, materials, machinery, and equipment and perform all of the work outlined in the specifications and plans entitled **2025 Trail Sealing**, prepared by the City of Weldon Spring, 5401 Independence Road, Weldon Spring, Missouri.

The Work to be done under this Contract consists of constructing and completing all work described in the proposal, attached.

ARTICLE 2. Time of Completion:

The work to be performed under this Contract shall commence immediately upon authorization by the City, weather permitting, per the timetable noted in the scope of work and shall be completed no later than **October 1, 2025**. It is the intent of this contract that the re-sealing and re-striping of the asphalt parking lot may commence as soon as weather permits, and ground temperatures reach a sustained level of 55 degrees Fahrenheit.

It is mutually understood and agreed that time is the essence of this Agreement. Extensions of time granted by the Owner, for completion of the Contract Agreement on account of fire, strikes, or acts of Providence shall not be construed as extra time. The amount of such expense and services shall be determined by the Engineer, shall be reported in writing to the Owner, and shall be withheld from any money due the Contractor and paid to the proper parties.

ARTICLE 3. The Contract Sum:

The Owner shall pay the Contractor for the performance of the Contract Agreement a sum not-to-exceed ($_____) for the performance of the Contract, subject to additions and deductions provided herein, in current funds at the prices named in the proposal attached hereto and made a part of these documents and this Contract Agreement.

ARTICLE 4. Acceptance and Final Payment:

Upon satisfactory completion of the work as determined by final inspection, and when the final estimate has been prepared and certified by the City, the Contractor will submit to the City a final certificate stating that the work has been completed, under the terms and conditions thereof, and the amount, based on the final estimate, remaining due the Contractor. The City will then determine if the work is fully completed and will, not later than thirty (30) days thereafter pay the Contractor the entire sum so found due thereunder after deduction of amounts to be kept and retained under provisions of this Contract; provided however, and it is understood and agreed, that as a precedent to receiving final payment, the Contractor shall submit to the City a sworn

affidavit that all bills for labor, service, materials, and subcontractors have been paid and that there are no suits pending in connection with the work done or labor and materials furnished under the Contract. The Contractor with this contract hereby warrants all of the work done under this contract for a period of one (1) year following the completion of the project. Upon completion, the Contractor shall submit to the City a written one (1) year warranty on total project. Failure of the Contractor to submit a written warranty does not release the Contractor of this warranty in any way.

If, after the work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor and the City so certifies, the Owner shall upon certificate of the Engineer, and without terminating the Contract, make payment of the balance due for that portion of the work fully completed and accepted. Such payment shall be made under the terms and conditions covering final payment, and it shall not constitute a waiver of claims by the City.

ARTICLE 5. The Contract Documents:

The information for and instruction to bidders, the proposal, the bond, the general conditions of the contract, the specifications, and the drawings, together with the agreement, form the contract and they are as fully a part of this contract as if thereto attached or repeated.

IN WITNESS WHEREOF, the parties have hereto executed this Agreement the date of the year first above written.

CITY OF WELDON SPRING, MISSOURI

_____

By: Donald D. Licklider, Mayor Date
Attest:

_____

City Clerk Date SEAL
(CONTRACTOR Authorized Signatures)

_____

_____

By: Date

Attest:

_____

DEERY® BRAND PLF 210

PAVEMENT PRESERVATION PRODUCTS

HOT APPLIED SEALANT, Part No. 80210PLF

PRODUCT DATA SHEET
FEBRUARY 2012

DESCRIPTION DEERY PLF 210 is a Premium Grade, hot applied, single component, elastically modified composition of asphalt cement, virgin synthetic polymer, premium rubber, and other modifiers, which results in a fast set up sealant. VOC=0 g/l.

USE DEERY PLF 210 is a moderate viscosity pavement preservation sealant ideally suited for parking lots, and other slow moving vehicle and pedestrian areas, plus highway, street and aviation applications for sealing longitudinal and transverse joints and random cracks in Asphalt or Concrete pavements where a firm yet pliable material is desirable. Properly installed, DEERY PLF 210 is an effective barrier against damage from debris and moisture infiltration into cracks and joints within regions experiencing moderate high and moderate low pavement temperatures.

HEATING and APPLICATION Sealant shall be heated in a hot-oil jacketed melter capable of constant mechanical agitation and equipped with a calibrated thermometer to monitor sealant temperature. Material shall be heated to and maintained at Recommended Application Temperature during use. Material can be cooled and then reheated, but only if prolonged heating is avoided. Prolonged heating at or above Recommended Application Temperature may severely damage product. If overheating damage occurs, immediately drain machine completely and refill with new material. DEERY PLF 210 is pre-reacted and can be applied immediately after heating to Recommended Application Temperature. With pavement temperature at 40°F (4°C) or higher, place hot sealant into properly prepared, clean, dry crack or prepared reservoir by means of a hand-held pour pot, wheeled push bander or wand applicator. Squeegee any excess sealant tight to pavement surface. Pavement may be warmed to 40°F (4°C) or higher with a Hot Air Lance. For more details on heating and application, refer to the **Installation Instructions- Hot Applied Sealant** sheet which is included with each pallet of product. Specific Gravity of DEERY PLF 210 sealant is 1.25.

PROPERTIES of DEERY PLF 210
When sampled and heated to maximum heating temperature in accordance with ASTM D5167

TEST	METHOD	SPECIFICATION
Cone Penetration @ 77°F (25°C)	ASTM D5329	20-50 dmm
Flow @ 140°F (60°C)	ASTM D5329	3.0 mm maximum
Resilience @ 77°F (25°C)	ASTM D5329	40% minimum
Asphalt Compatibility	ASTM D5329	Pass
Softening Point	ASTM D36	210°F (99°C) minimum
Low Temperature Flexibility	ASTM D3111 modified	Pass @ -10°F (-23°C)
Recommended Application Temperature	ASTM D5167	380-400°F (193-204°C)*
Maximum Heating Temperature	ASTM D6690	400°F (204°C)

*Temperature of product measured at pavement surface. Use highest Recommended Application Temperature in cool weather.
*Prolonged heating at or above Recommended Application Temperature may severely damage product

PACKAGING Packaging consists of individual boxes of product which are palletized into shipping units. Boxes are made from corrugated kraft board with a minimum rating of 44 ECT. Boxes contain a non-adherent film liner that permits easy removal of product from the box and quickly melts into the product during heating. Boxes use tape closure and do not contain any staples. Boxes are made from renewable resources and are fully recyclable. Pallets contain up to 75 boxes stacked in layers. Weight of product in boxes does not exceed 40 lbs. (18 kg). Pallet weights do not exceed 2880 lbs. (1310 kg). Pallets of product are weighed and sold by net product weight, not including weight of the boxes, pallet and outer wrapping. Boxes are labeled with the manufacturer, product name, product part no., product lot no., heating temperatures, safety information and use instructions. Palletized units are protected from the weather using a minimum 3 mil thick plastic bag, a weather and moisture resistant cap sheet and a minimum of 2 layers of 6 month u.v. protected stretch wrap. Pallets are labeled with the product part number, lot number and net weight. Installation instructions are provided with each pallet of product.

PERFORMANCE Temperature fluctuations, site conditions, surface preparation, traffic, installation technique, material selection, shape factor and surface treatment compatibility influence the effectiveness and useful life of Pavement Preservation treatments. Consider and monitor each element for optimum results. Purchaser and end user should determine applicability for use in their specific conditions.

WARRANTY Manufacturer warrants that these products meet applicable ASTM, AASHTO, Federal or State specifications at time of shipment. Techniques used for the preparation of the cracks and joints prior to sealing or filling are beyond our control as are the use and application of the products; therefore, manufacturer shall not be responsible for improperly applied or misused products. Remedies against manufacturer, as agreed to by manufacturer, are limited to replacing nonconforming product or refund (full or partial) of purchase price from manufacturer. All claims for breach of this warranty must be made within three (3) months of the date of use or twelve (12) months from the date of delivery by manufacturer, whichever is earlier. There shall be no other warranties expressed or implied. **For optimum performance, follow manufacturer recommendations for product installation.**

CRAFCO™ INC
AN ERGON® COMPANY

6165 W. Detroit Street • Chandler AZ 85226
1-800-528-8242 • (602) 276-0406 • Fax (480) 961-0513
www.crafco.com

FOR ADDITIONAL INFORMATION
Call:1-800-227-4059 toll free
Email:info@deeryamerican.com
Web: www.deeryamerican.com

CRAFCO® INC
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www.crafco.com

PRODUCT DATA SHEET

PARKING LOT SEALANT TYPE 1

PART NO. 34202

DECEMBER 2022

READ BEFORE USING THIS PRODUCT

GENERAL

Crafco Parking Lot Sealant Type 1 is a hot-applied asphalt-based product used to seal and fill cracks and joints in asphalt or Portland cement concrete pavements in cold to hot climates. Parking Lot Sealant Type 1 is supplied in solid form which when melted and properly applied forms a high stiffness, adhesive and flexible compound that resists cracking in the winter and is highly resistant to flow or pick-up at summer temperatures. Parking Lot Sealant Type 1 is used in highways, streets, airfields, and parking lot pavements and is applied to pavement cracks using either pressure feed melter applicators or pour pots. At application temperature it is a free flowing, self-leveling product. Parking Lot Sealant Type 1 is specifically formulated to be a stiff, flow resistant, yet flexible product which is suited for use in areas subject to pedestrian and slow-moving vehicular traffic in moderate to warm climates where high resistance to pick-up or tracking is required. VOC = 0 g/l.

SPECIFICATION CONFORMANCE

Crafco recommended specifications for Parking Lot Sealant Type 1 when heated to the safe heating temperature in accordance with ASTM D5167 are:

Test	Recommended Specification
Cone Penetration (ASTM D5329)	60 max.
Flow, 140 °F (60 °C), 5h (ASTM D5329)	3.0 mm max.
Resilience (ASTM D5329)	40% min.
Softening Point (ASTM D36)	205 °F (96 °C) min.
Ductility, 77 °F (25 °C) (ASTM D113)	50 cm min.
Flexibility, 1/8" (3.2 mm) specimen, 180° bend, 5 sec, 1/2" (12 mm) mandrel (ASTM D 3111 modified)	Pass at -20 °F (-29 °C)
Tensile Adhesion, 1" (25.4mm) thickness (ASTM D5329)	500% min.
Asphalt Compatibility (ASTM D5329)	Pass
Minimum Application Temperature	380 °F (193 °C)
Maximum Heating Temperature	400 °F (204 °C)

INSTALLATION

The unit weight of Crafco Parking Lot Sealant Type 1 is 10.8 lbs. per gallon (1.29 kg/L) at 60 °F (15.5 °C). Prior to use, the user must read and follow Installation Instructions for Hot-Applied RoadSaver, PolyFlex, Parking Lot and Asphalt Rubber Products to verify proper product selection, heating methods, pavement preparation procedures, application geometry, usage precautions and safety procedures. These instructions are provided with each pallet of product.

PACKAGING

Product is supplied in either cardboard boxes, or in meltable boxless packaging. Both package types are labeled in accordance with OSHA, GHS, and specification requirements; are sold by net weight; are interlock stacked on 48 x 40 in. (122 x 102 cm) 4-way pallets; can be stored outside; and are covered with a weather resistant pallet cover and 2 layers of UV protected stretch wrap.

- **BOX** packaging consists of cardboard boxes containing 30 lbs. (13.6 kg) of product with 75 boxes per pallet, weighing approximately 2250 lb. (1020 kg). Boxes contain a quick melting release film for easy removal and are taped closed, without any staples.
- **Meltable** packaging consists of approximately 30 lb. (13.6 kg) completely meltable packages that are interlocked stacked on pallets. To use, the pallet wrap is removed, and individual blocks are placed in the Melter. There are no individual cardboard boxes to open, empty, handle, or dispose of. Meltable packaging quickly melts into the product without affecting specification conformance. Meltable packaged sealant products are sold by the pallet only and individual packages are not intended for sale. For more details on meltable packaging go to https://crafco.com/materials-documentation/

WARRANTY

CRAFCO, Inc. warrants that CRAFCO products meet applicable ASTM, AASHTO, Federal or State specifications at time of shipment. Techniques used for the preparation of the cracks and joints prior to sealing or filling are beyond our control as are the use and application of the products; therefore, Crafco shall not be responsible for improperly applied or misused products. Remedies against Crafco, Inc., as agreed to by Crafco, are limited to replacing nonconforming product or refund (full or partial) of purchase price from Crafco, Inc. All claims for breach of this warranty must be made within three (3) months of the date of use or twelve (12) months from the date of delivery by Crafco, Inc. whichever is earlier. There shall be no other warranties expressed or implied. **For optimum performance, follow Crafco recommendations for product installation.**

SealMaster®
Pavement Products & Equipment

Technical Data Sheet

CRACKMASTER SUPREME

Hot Pour Crack Sealant

SMT-190

REVISED 03/20/23

PRODUCT DESCRIPTION

CrackMaster Supreme is a single component, hot applied crack and joint sealant. CrackMaster Supreme is specially formulated for both direct fire and oil-jacketed melters. It is heat stabilized to withstand temperatures up to 450°F without experiencing polymer degredation. When melted and properly applied it forms a resilient crack sealant for both asphaltic and cementatious pavements. CrackMaster Supreme meets manufacturer's specifications.

USES

CrackMaster Supreme is designed to seal expansion joints, longitudinal and transverse cracks, joints between concrete and asphalt shoulders, and random cracks in both asphalt and concrete pavements. CrackMaster Supreme is relatively hard and has a high softening point, which makes it well suited for parking lots and driveways.

COMPOSITION

As supplied, CrackMaster Supreme is supplied in solid blocks comprised of heat stabilized polymers and asphalt.

COLOR

Black.

LIMITATIONS

Do not overheat material. Cracks must be free from moisture, dust, loose aggregate and other contaminates prior to application. Not recommended for cracks in excess of 1" wide.

TECHNICAL DATA

CrackMaster Supreme meets SealMaster Product Specification when tested in accordance with ASTM D5329. (see chart below).

Chemical & Physical Analysis	
Recommended Pour Temperature	350-400°F
Maximum Heating Temperature	450°F
Cone Penetration at 25°C	50 max.
Flow at 60°C, mm	0
Softening Point	200°F Min
Flexibility 0°F	(1" Mandrel) - PASS
Specific Gravity	1.17
Asphalt Compatibility	PASSES

ENVIRONMENTAL CONSIDERATIONS

CrackMaster Supreme is considered a non-hazardous material.

INSTALLATION

Proper surface preparation will facilitate adequate adhesion and consequently the maximum service life of the sealant. The crack must be free from moisture, dust, and loose aggregate. Routing or wire brushing are preferred methods followed by a compressed air heat lance immediately prior to sealing. The substrate and air temperature must be above 40°F.

METHODS

CrackMaster Supreme shall be melted in direct fired or oil jacketed melters. Carefully insert blocks of material (with plastic bag) into the melting equipment while the agitator is turned off. Load material slowly to avoid splashing. After the initial load of material has reached the recommended pouring temperature (350-400°F), fresh material may be added as sealant is used. Melt only enough material that will be used the same day. Avoid overheating material. Excessive heat could cause material to gel in the equipment or fail in crack and joints. A significant viscosity increase accompanied by stringiness signals the approach of gelation. If this occurs, immediately remove the material from the melter and dispose of it.

IMPORTANT

Protective apparel is recommended with application of CrackMaster Supreme. The extremely hot material will cause severe burns on contact with skin. OSHA Safety Regulations require workers to wear the following types of safety attire (see current OSHA/Safety Regulations for additional information): Hard hat with face shield; long sleeved shirt buttoned at the wrist; heat resistant gloves; long, cuffless pants; and safety toed work boots. Make certain all area around melte ris clear of all debris and flammable materials. Avoid breathing vapors. Use with adequate ventilation.

MIXING PROCEDURES

Use material as supplied. Do not blend with other materials.

APPLICATION

Apply heated CrackMaster Supreme using either a pump and wand system or a pour pot. For best results the sealant depth to width ratio should not exceed 2 to 1 (i.e. 2-inches deep to 1-inch wide). The cooled sealant height should not exceed 1/8" above surrounding pavement. Using a sealing shoe or squeegee, band the material 2 to 3 inches wide over the crack.

MAC
McConnell & Associates
Pavement Maintenance Products

MAC 52®

MAC 52
Premium Pavement Sealer
Application Specification

I. OBJECTIVES:

A. To extend the serviceable life of off-street asphalt pavements that do not receive a full and continuous pattern of compaction from rolling traffic. To further increase the life of these pavements by protecting them from damage caused by (1) gasoline and oil, which soften and dissolve the asphaltic binder, (2) sun and oxidation, which dries out and embrittles the asphalt therefor leading to raveling of the surface aggregates, (3) and most importantly water absorption, which reduces the pavements internal cohesive and compressive strength, thus creating susceptibility to progressive freeze-thaw damage.

B. To create an attractive traction enhanced surface, slate-black in color, that does not release hazardous loose stones with age and reduces the need for expensive premature overlays.

C. To acquire the aforementioned benefits at minimum expenditure when used over parking lots, low to medium traffic roadways, gasoline stations, walkways, airfield runways and aprons.

D. To achieve objectives A, B, and C by employing the most advantageous application system based on the intended usage of the pavement involved.

RECOMMENDED APPLICATION SPECIFICATIONS

SYSTEM	SYSTEM DESCRIPTION	RECOMMENDED AREAS FOR SYSTEM
MAC – S1	1 Sand Slurry Coat and 1 Coat Without Sand	Home drives, Low Traffic Parking Lots, Gasoline and Oil Spillage Areas
MAC – S2	2 Sand Slurry Coats	High Traffic Parking Lots, Aged Pavements, Private Streets
MAC – S3	2 Sand Slurry Coats and 1 Coat Without Sand	Parking Lot Roadways, Airfields

II. MATERIALS:

MAC-52 PAVEMENT SEALER is a heavy-bodied and high-solids refined coal tar pitch emulsion. Basic ingredients include a stable, straight run distillate softening point refined coal tar pitch combined with inert mineral fillers dispersed in water. MAC-52 meets and exceeds requirements of ASTM D 3320-00 – Emulsified Coal-Tar Pitch (Mineral Colloid Type).

Physical composition and performance data are detailed in McConnell & Associates Specification Index MAC-PS. The chemical and physical make up is as follows:

	MAC – 52 Specifications	R-P-355E Requirements
Water, %	48%+/- 2%	53% Max.
Nonvolatile, %	49%+/- 2%	47% Min.
Ash of Nonvolatile %	36%+/- 2%	30% - 40%
Solubility of Nonvolatile in CS2, %	20% Min.	20% Min.
Specific Gravity 25 Deg. C/25 Deg. C	1.20 Min.	1.20 Min.

SAND – shall be clean, hard and durable, free from clay, salt and organic matter, and well grading within the following limits (U.S. Sieve / Total % Retained): No. 30 / 0.10; No. 40 / 4.80; No. 50 / 34.20; No. 70 / 36.90; No. 100 / 17.60; No. 140 / 5.90; No. 200 / 0.20; No. 270 / 0.10

WATER – shall be fresh, clean, and within a temperature range of 50 degrees to 75 degrees F.

MAC-52 SAND SLURRY – shall be a blend equal to two to six pounds of sand per gallon of MAC-52 agitated to even consistency. When high ambient or pavement temperatures are prevalent and workability is hampered, water may be added, but at no time shall the amount exceed 10% of the total MAC-52 slurry.

III. PREPARATION OF PAVEMENT:

The asphaltic surface, prior to application, shall be clean, sound, and surface cured.

To be clean, the surface shall be free from sand, clay, dust, oil, grease and other foreign matter. Insure this by hand brooming, power brooming, or the employment of high velocity air blowers. Oil and grease spots which have accumulated on the pavement surface shall be scraped or heated using a propane torch if necessary, then sealed off with MAC OIL SPOT PRIMER (refer to McConnell & Associates Specification Index MAC-OSP) prior to the application of Protective Surface Treatment.

To be sound the pavement shall have sufficient drainage capabilities and be supportive of the traffic loads for which it was designed.

To be surface-cured the pavement shall be free of surface oils presenting a water-break-free surface when exposed to water. Minimum cure time is 30 days. Home driveways, where 95% compaction (PROCTER) is not achieved, cure time is a minimum of 60 days.

McConnell & Associates
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MAC 52®

MAC 52
Premium Pavement Sealer
Application Specification

IV. APPLICATION OF MATERIALS:

Specification No. **MAC-S1** is a two-coat system consisting of one application of MAC-52 Sand Slurry and one application of MAC 52 without sand.

Specification No. **MAC-S2** is a two coat system consisting of two applications of MAC-52 Sand Slurry.

Specification No. **MAC-S3** is a three coat system consisting of two applications of MAC-52 Sand Slurry and one application of MAC-52 without sand.

The aforementioned application systems are to provide a uniform heavy-duty protective coating that is free of voids, holidays, and pinholes.

The **first coat of MAC-52 Sand Slurry** (detailed in Section II) shall be applied uniformly over the entire pavement surface (refer to Section III). If it is necessary to pre-dampen the prepared surface on hot days to reduce the surface temperature, only dampen the pavement. The surface shall be free of all standing water.

When the first application has dried sufficiently to take traffic without scuffing, the **second and/or third coat of MAC-52**, depending upon specification employed, shall then be applied uniformly over the entire area (cross-wise if practical).

QUANTITIES OF MATERIALS necessary to complete the project can vary as much as 20% depending on the porosity and surface texture of the pavement. The general range is as follows with minimums noted:

First MAC-52 Sand Slurry Coat

MAC-52	0.12 to 0.15 gallon/square yard
Sand (dry wt.)	2 to 6 pounds/gallon of MAC-52

Second MAC-52 Sand Slurry Coat

MAC-52	0.08 to 0.12 gallon/square yard
Sand (dry wt.	2 to 6 pounds/gallon of MAC-52

MAC-52 without Sand

MAC-52	.08 to .10 gallon/square yard

Application may be made with a heavy-duty soft rubber squeegee with brushes employed to rake areas of heavy deposits. Mechanical equipment (squeegee or spray) specially designed for this purpose may also be used.

It is recommended that the completed application be allowed to cure for a minimum of 24 hours and then tested for trafficability before opening for regular use.

V. NOTES:

Pavement Striping – For non-bleeding marking, white or yellow latex traffic paint is recommended (TTP-1952b). Refer to paint manufactures specifications for application.

Weather MAC-52 shall not be applied outside when weather is foggy or rainy, or when ambient temperature is below 50 degrees F. Lower temperature and/or higher humidity may retard curing based on a one hour set to touch of 78 degrees F. and 50% relative humidity with air circulation present. Favorable conditions must exist 24 hours following application.

Precautions Refined coal tar is a collection of organic compounds, primarily aromatic hydrocarbons. If individuals with sensitive skin are overexposed to MAC-52 for long periods of time, dermatitis or other skin disorders may result. Consult the MAC 52 M.S.D.S. sheets and Index MAC-PS for more information.

SHORT SPECIFICATION FOR ARCHITECTS AND ENGINEERS

MAC-S1 – 1 slurry coat & 1 coat without sand – "Asphalt pavement, after a minimum of a 30 day cure period, shall be provided a MAC-52 Protective Surface Treatment (1 slurry coat and 1 sealcoat) applied in accordance with McConnell and Associates Corp., General Application Specification MAC-S1."

MAC-S2 – 2 slurry coats – "Asphalt pavement, after a minimum of a 30 day cure period, shall be provided with a MAC-52 Protective Surface Treatment (2 slurry coats) applied in accordance with McConnell and Associates Corp. General Application Specification MAC-S2."

MAC-S3 – 2 slurry coats & 1 coat without sand – "Asphalt pavement, after a minimum of a 30 day cure period, shall be provided with a MAC 52 Protective Surface Treatment (2 slurry coats and 1 sealcoat) applied in accordance with McConnell and Associates Corp. General Application Specification MAC-S3."

MAC
McConnell & Associates
Pavement Maintenance Products

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Technical Data Sheet

CRACKMASTER SUPREME

Hot Pour Crack Sealant

SMT-190

REVISED 03/20/23

ESTIMATING MATERIAL REQUIREMENTS

Use the following chart as a guideline for estimating material requirements (based upon pounds of material needed for 100 feet of cracks):

Crack Width	Depth	Lbs/100 Ft
3/8"	3/8"	6.2 lbs.
3/8"	1/2"	8.3 lbs.
1/2"	1/2"	11.1 lbs.
1/2"	1"	22.2 lbs.
3/4"	1/2"	16.6 lbs.
3/4"	3/4"	25.00 lbs.

The above coverage rates are only a guideline. Actual material usage may vary due to width of application and thickness of material above pavement surfaces.

PRECAUTIONS

Cracks must be free from moisture, dust, dirt, and debris. Both substrate and air temperature must be above 40°F. Keep boxes of material dry during storage. Do not store in direct sunlight.

PACKAGING AND AVAILABILITY

CrackMaster Supreme is supplied in both meltable packaging and cardboard cartons. CrackMaster Hot Pour Crack Sealants are supported by a nationwide network of SealMaster facilities along with a national and international network of professional applicators.

WARRANTY AND DISCLAIMER

The statements made on this technical data sheet are believed to be true and accurate and are intended to provide a guide for approved application practices. As workmanship, weather, construction, condition of pavement, tools utilized, and other variables affecting results are all beyond our control, the manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. The manufacturer expressly disclaims any implied warranties of merchantability or fitness for a particular purpose.

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INSTALLATION INSTRUCTION

Action Pave RT Classic, Action Pave RT Pro, Action Pave RT Supreme, Action Pave RT Aviator

PART NO.

January 2019

READ BEFORE USING THIS PRODUCT

GENERAL Crafco Action Pave RT (Refined Tar) Pavement Sealers are tough, durable, flexible emulsion coatings for asphalt concrete pavement surfaces. Action Pave RT Pavement Sealers protect asphalt pavement surfaces from oxidation and are resistant to de-icing chemicals. Action Pave RT Pavement Sealers provide a renewed surface with a uniform, deep black color. Action Pave RT Pavement Sealers can be used to protect and renew all asphalt surfaces, including parking lots; driveways; bridge decks; airfields; taxiways; golf, bike, and walking paths; and commercial and retail parking lots and drives. Action Pave RT Pavement Sealers protect and preserve the pavement with an application of a tough, durable, quality surface that fills narrow cracks and small voids to seal the surface from the damaging aging effects of heat, sun, and water. Action Pave RT Pavement Sealers are mixed on the job with appropriate amounts of sand and water to provide proper application consistency, skid resistance, and wear resistance. Rubber latex additives may be field-mixed with Action Pave RT for quicker set time and improved durability. Mixed Action Pave RT Pavement Sealer is applied to clean and prepared asphalt concrete pavement surfaces by hand-using a squeegee, followed by brushing, or by an appropriate squeegee/spray application machine. Two or three coats, with required drying time between coats, are used to provide the desired level of protection and durability.

SURFACE PREPARATION Clean the surface thoroughly to remove all foreign debris (dirt, gravel, silt, etc.) using air blowers or by flushing with water. Embedded dirt and silt shall be removed with steel bristle hand brooms. Remove dirt and debris from site, being careful to avoid upsetting existing landscaping and accumulating dirt in grass along asphalt areas.
GREASE AND OIL SPOTS Treat all grease and oil spots by scraping off the excess oil and dirt with a wire bristle and then coating with an oil spot primer. Oil spot primer, or recommended alternatives, are available from CRAFCO SUPPLY CENTERS. The oil spot primer is supplied as a concentrate and should be diluted 2 parts water to 1 part primer. The primer shall be applied using a brush or garden sprayer, covering the oil spot and at least 2 inches of the asphalt surrounding the oil spot.
POTHOLES Repair potholes and damaged asphalt areas. Install cold patch or hot applied mastic material to minor potholes. Repair heavily damaged areas using a full-depth asphalt repair. Saw cut and remove damaged asphalt. Repair base if necessary. Install asphalt mix and ensure proper compaction. HP patch is available from CRAFCO SUPPLY CENTERS.
CRACK SEALING Seal all cracks greater than 1/16 inch in width. Manufacturer installation instructions shall be followed for crack preparation, routing (if required), overbanding, and application. Sealant choice is based on climate conditions and type of project. Contact your CRAFCO SUPPLY CENTER or Crafco representative for specific applications.

PAVEMENT SEALER MIX DESIGN The recommended mix design for Action Pave RT Pavement Sealers is to be diluted with clean, potable water by volume and pounds of clean silica sand. The sand shall be clean and free from clay, salt, and organic matter and have the average size between 50 and 70 mesh, a maximum of 2% retained on the 30 mesh and a maximum of 0.3% passing the 200 mesh. The appropriate sand and recommendations are available from CRAFCO SUPPLY CENTERS.

The table below lists the Action Pave RT products and recommended mix designs:

Product	Pavement Sealer (gallons)	Water (gallons)	Sand (Pounds)	Latex (Gallons)
Action Pave RT	100	25 – 30	200 – 500	0 – 5
Action Pave RT Pro	100	25 – 30	200 – 500	0 – 1
Action Pave RT Supreme	100	25 – 30	200 – 500	0 – 1
Action Pave RT Aviator	100	As Specified	As Specified	As Specified

In heavy traffic areas, the sand can be increased to 400-600 pounds and the latex to 5 gallons per 100 gallons of sealer. A third coat may be required in certain circumstances.
Sand Slurry Preparation Add the required amount of water to the sealer and mix thoroughly with mechanical agitation. Keep the agitator running at a moderate rate and add the sand in a steady stream of about 100 pounds per minute. Mix the material for 10 minutes. If the mixer is shut off for more than 10 minutes, such as on transport to the job site, mix 10 minutes before application can begin.

INSTALLATION Action Pave RT shall be applied in two coats in temperatures over 50°F. The first coat will be 0.10 – 0.12 gallons per square yard and the second coat will be 0.06 – 0.08 gal./sq. yd. to achieve a 0.18 – 0.20 gal./sq. yd. coating thickness based on undiluted material. Coat the edges of the area first to trim the area. Pour a continuous ribbon of Action Pave RT along the pavement edge 6 – 12 inches from curbing. Draw Action Pave RT mix away from the pavement edge by pulling a squeegee or brush perpendicular through the ribbon of material at a slight angle. Walk parallel to the pavement edge. Repeat the process in reverse direction, pulling the excess material toward the center of the pavement. Apply sealer over the remaining area using either a squeegee or a self-propelled machine that squeegees and brushes the sealer into the pores of the pavement. Allow the first coat to dry sufficiently to take light traffic scuffing. It will take 2-6 hours, depending on drying conditions. After trimming the second coat, use a machine with a spray wand or spray bar apparatus that deposits the material according to the recommended coverage rates. The spray application will take out any squeegee marks and give a uniform appearance. The completed application shall be allowed to cure at least for 24 hours and then tested for trafficability prior to opening for regular use. Quantities of the material will vary according to porosity and texture of the pavement.

CAUTIONS If the pavement temperature is above 90°F, use a fog bar to pre-dampen the pavement. Do not apply refined tar sealers over asphalt or gilsonite pavement sealers. Action Pave RT Pavement Sealer is not recommended for steeply sloped surfaces.

STORAGE Action Pave RT Pavement Sealer is supplied in bulk. Protect Action Pave RT Pavement Sealer from freezing.

SAFETY PRECAUTIONS It is essential that operations be conducted safely. All personnel need to be aware of the hazards of using refined tar products. Before use, the crew should read and understand product-use and safety information on the Safety Data Sheet. Safety precautions should include:

1. Personal protective clothing
2. Careful operation of the application equipment
3. Traffic and pedestrian control measures that meet or exceed MUTCD requirements
4. Appropriate cleanup of product spills or excessive applications

ADDITIONAL INFORMATION Additional information regarding these products is available by contacting your distributor or Crafco, Inc. This information includes:

1. Product Data Sheets
2. Safety Data Sheets

SealMaster
Pavement Products & Equipment

Technical Data Sheet

MASTERSEAL E-Z STIR PAVEMENT SEALER

Factory Blended with Water, Aggregate and Polymer Additive

SMT-112

REVISED 08/18/17

PRODUCT DESCRIPTION & BENEFITS

MasterSeal E-Z Stir Pavement Sealer is a clay-stabilized, asphalt emulsion pavement sealer designed to protect and beautify asphalt pavement. MasterSeal E-Z Stir is a ready to apply material that is factory blended with water, aggregate and polymer, providing a highly durable slip-resistant coating. MasterSeal E-Z Stir Pavement Sealer meets ASTM D8099/D8099M-17 Standard Specification for Asphalt Emulsion Pavement Sealer.

USES

MasterSeal E-Z Stir is ideal for protecting and beautifying all types of pavement surfaces including parking lots, shopping malls, airports, driveways, roadways and more.

ESTIMATING MATERIAL REQUIREMENTS

One gallon of MasterSeal E-Z Stir will cover approximately 70 - 82 square feet per gallon per coat (7.75 – 9.1 square yards per gallon per coat).

APPLICATION RATE

Apply MasterSeal E-Z Stir at a rate of 70 – 82 square feet per gallon per coat (7.75 – 9.1 square yards per gallon per coat). Application rates may vary due to pavement porosity and method of application.

PERFORMANCE CHARACTERISTICS

Table 1 - Physical Properties Of Masterseal E-Z Stir

ASTM	Test Description	Result
D5	Penetration of Bituminous Materials-Base Asphalt	12-45 Pen
D6937	Density of Emulsified Asphalt	1,000 -1300 g/l
D113	Ductility of Bituminous Materials-Base Asphalt	5-15 cm
E70	PH of Aqueous Solutions with Glass Electrodes	6-10 PH
D6378	Vapor Pressure (VPX), mm Hg @ 25° C (77° F)	22-26 mm Hg
D36	Softening Point of Emulsion Residue (Ring and Ball Apparatus)	> 200° F
D93	Flash Point of Liquid Emulsion	> 450° F
D562	Viscosity using a Stormer-Type Viscometer	65-110 KU
D4060	Abrasion Resistance- Taber Abraser Dry Method	< 1% Loss
D522	Mandrel Bend Test of Attached Coatings	No Cracking
D870	Water Resistance of Coatings using Water Immersion	No Delamination
D6904	Resistance to Wind-Driven Rain	No Delamination
D4585	Water Resistance of Coatings Using Controlled Condensation	No Delamination
D1735	Water Resistance of Coatings Using Water Fog Apparatus	No Delamination
D2247	Water Resistance of Coatings in 100% Relative Humidity	No Delamination
D4541	Adhesion Strength over Asphalt Pavement	> 200 PSI
D3910-6.4	Wet Track Abrasion Test	< 5 g/ft² Loss
D2939-5	Uniformity of Emulsified Bituminous Coatings	PASS
D2939-7	Weight per Gallon	10-11 lbs./gal
D2939-8	Residue by Evaporation, %	45-65%
D2939-13	Drying Time- 50% humidity, 73.4 ± 3.6°F. Firm in 24 hrs.,	PASS
D2939-26	Resistance to Impact- No Chipping, Cracking or Delamination	PASS
D2939-10	Ash Content of Residue, %	60-68%
D2939-14	Resistance to Heat- No Blistering, sagging or slipping	PASS
D2939-15	Resistance to water- No softening, delamination or re-emulsification	PASS
D2939-16	Flexibilty- No Cracking or Delamination	PASS
D2939-26	Resistance to Impact- No Chipping, Cracking or Delamination	PASS
D2939-22	Wet Film Continuity	PASS
D95	Water Content, %	35-55%
D2939-27	Resistance to Impact After Accelerated Weathering	PASS
D4799	QUV UV Aging-1,000 Hours	No Color Fade
D3359	Measuring Adhesion by Tape- No More than a Trace of Peeling	PASS
Volatile Organic Compounds	Determination of Volatile Organic Compounds (VOC) in various Coatings	< 10 g/l
PAH Content (Percentage)	Polycyclic Aromatic Hydrocarbon Content (Percentage)	Less than one-tenth of 1% (< .10%)

SURFACE PREPARATIONS

Surface must be clean and free from loose material and dirt. Cracks should be filled with SealMaster Cold or Hot-Applied Crack Filling Materials. Oil stains should be cleaned and primed with SealMaster Oil Spot Primer.

APPLICATION EQUIPMENT

MasterSeal E-Z Stir shall be applied by mechanical squeegee/brush equipment or spray equipment capable of spraying coatings with sand. Equipment shall have continuous agitation or mixing capabilities to maintain homogeneous consistency of mixed material throughout the application process. Truck mount or self-propelled squeegee/brush equipment shall have at least 2 squeegee or brush devices (one behind the other) to assure adequate distribution and penetration of MasterSeal E-Z Stir into bituminous pavement. Hand squeegees and brushes shall be acceptable in areas where practicality prohibits the use of mechanized equipment.

MIXING PROCEDURES

Mix MasterSeal E-Z Stir thoroughly before

Technical Data Sheet

MASTERSEAL E-Z STIR PAVEMENT SEALER

Factory Blended with Water, Aggregate and Polymer Additive

SMT-112

REVISED 08/18/17

applying. If needed, a small amount of water may be added to facilitate application.

APPLICATION PROCEDURES
For optimum performance and durability apply a minimum of two coats of MasterSeal E-Z Stir. A third coat may be applied to high traffic areas such as parking lot entrances, exits and drive lanes for added durability. Allow each coat to dry thoroughly before applying successive coats. Allow final coat to dry for 24 hours prior to opening to vehicle traffic.

APPLICATION WEATHER CONDITIONS
MasterSeal E-Z Stir shall not be applied when temperature is expected to drop below 50° F during application and for a period of at least 24 hours after application. Do not apply if rain is imminent or forecast within 12 hours.

LINE STRIPING AND TRAFFIC MARKINGS
Use SealMaster Traffic Paints for line striping and traffic markings.

PACKAGING AND AVAILABILITY
MasterSeal E-Z Stir is available for plant pick up or bulk tanker load quantities. MasterSeal E-Z Stir is supported by a national network of SealMaster manufacturing and distribution facilities along with a national network of qualified applicators.

WARRANTY AND DISCLAIMER
The statements made on this technical data sheet are believed to be true and accurate and are intended to provide a guide for approved application practices. As workmanship, weather, construction, condition of pavement, tools utilized, and other variables affecting results are all beyond our control, the manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. The manufacturer expressly disclaims any implied warranties of merchantability or fitness for a particular purpose.

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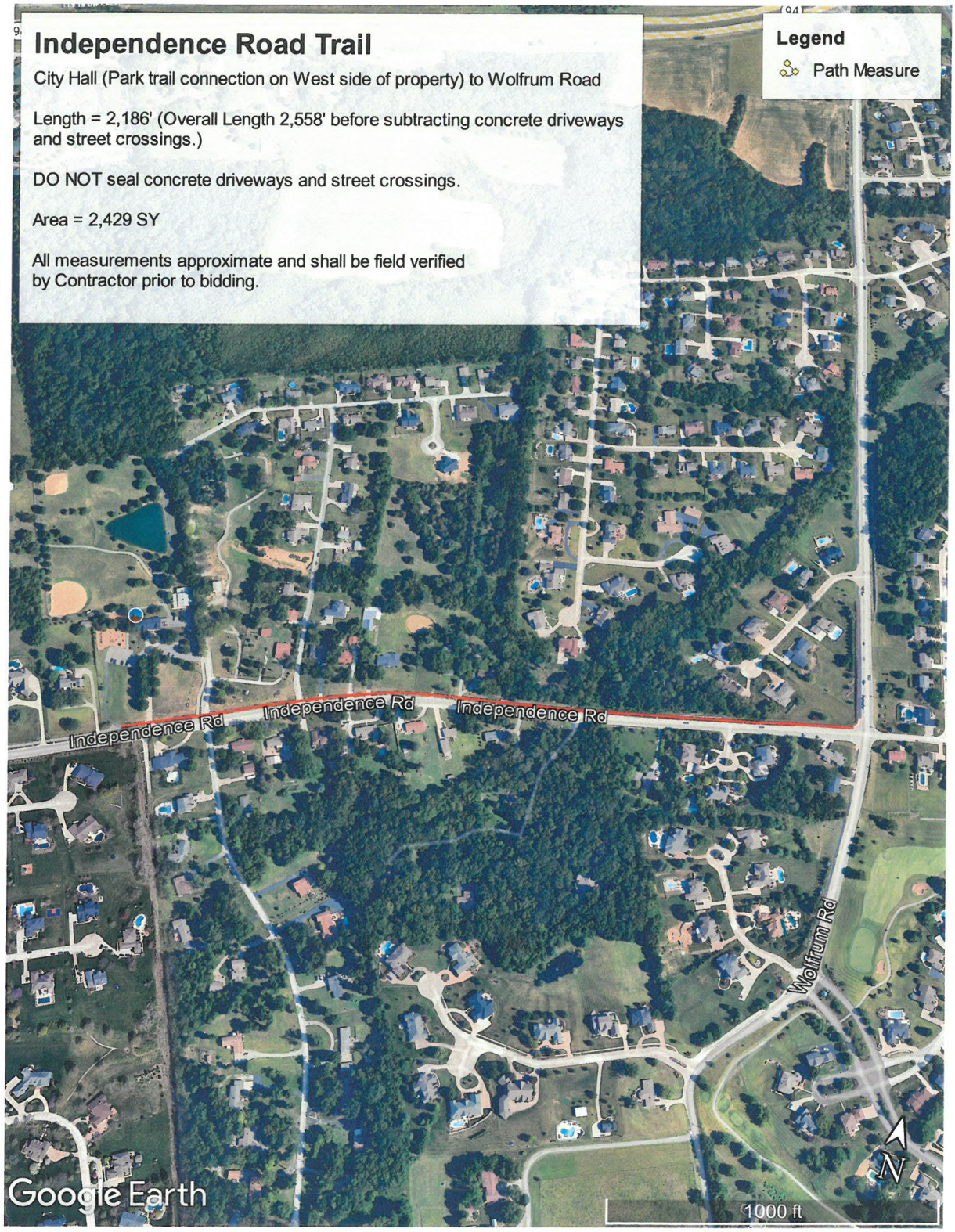
Independence Road Trail
City Hall (Park trail connection on West side of property) to Wolfrum Road
Length = 2,186' (Overall Length 2,558' before subtracting concrete driveways and street crossings.)
DO NOT seal concrete driveways and street crossings.
Area = 2,429 SY
All measurements approximate and shall be field verified by Contractor prior to bidding.
Legend
Path Measure
Independence Rd
Independence Rd
Independence Rd
Wolfrum Rd
Google Earth
1000 ft
N

Exhibit 1


Weldon Spring Parkway Trail
10' Wide Trail between Independence Road and O'Fallon Road.
Total Length = 1,154'
Total Area = 1,283 SY
All measurements approximate and shall be field verified by Contractor prior to bidding.
Legend
Path Measure
Old Hwy 94
94
Weldon Spring Pkwy
Southbrook Forest Ct
Independence Rd
Google Earth
600 ft

Exhibit 2

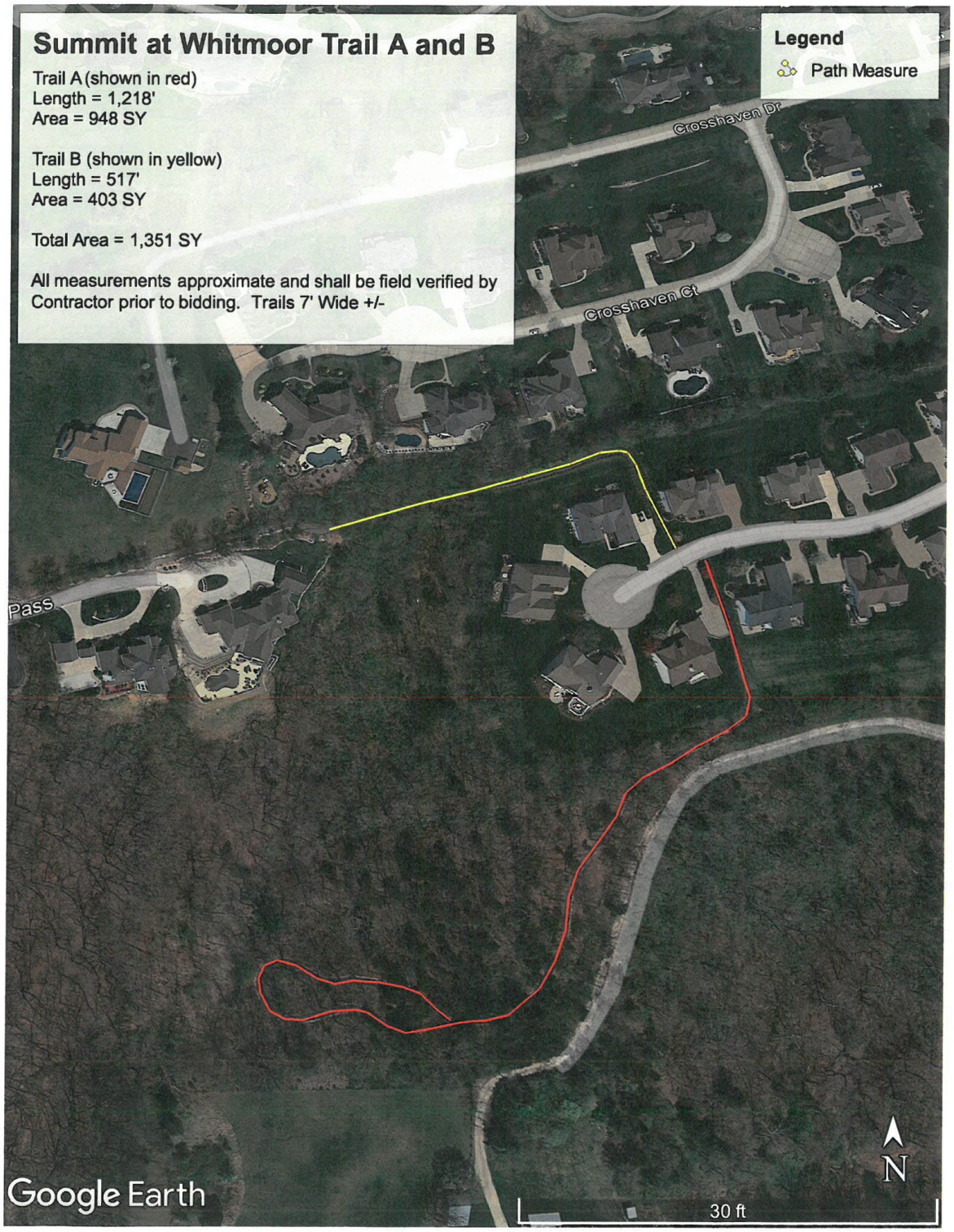
Summit at Whitmoor Trail A and B
Trail A (shown in red)
Length = 1,218'
Area = 948 SY
Trail B (shown in yellow)
Length = 517'
Area = 403 SY
Total Area = 1,351 SY
All measurements approximate and shall be field verified by Contractor prior to bidding. Trails 7' Wide +/-
Legend
Path Measure
Crosshaven Dr
Crosshaven Ct
Pass
Google Earth
30 ft
N

Exhibit 3