



TOWN OF BURLINGTON  
DEPARTMENT OF PUBLIC WORKS

# 2020 CRACK SEALING OF VARIOUS STREETS

20S-411-0058

**This is an unofficial Bid Spec. If this document is used to submit a bid then you must submit your contract information to Lisa Matarazzo at [lmatarazzo@burlington.org](mailto:lmatarazzo@burlington.org) in order to be added to the bidders list.**

Department of Public Works  
25 Center Street  
Burlington MA 01803

*April 2, 2020*

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## INVITATION FOR BID

### SUPPLIES AND SERVICES

Sealed bids for 2020 CRACK SEALING OF VARIOUS STREETS will be received by Department of Public Works, Town Hall Annex, 25 Center Street, Burlington, Massachusetts, 01803 until 9:30 AM on April 2, 2020 and will be publicly opened and read aloud at such time.

- Specifications and bid forms are available on the DPW website site at: <http://www.burlington.org> , under the Projects & Programs tab.
- Specifications and bid forms may be obtained at the Department of Public Works, Town Hall Annex, 25 Center Street, Burlington, Massachusetts, 01803 after March 19, 2020 between 8:30 AM and 4:00 PM for a fifty (\$50.00) dollar reproduction costs.
- A bid bond of five (5) percent is required.
- Successful bidders will provide 100% Payment and Performance bonds.
- This project is bid according to MGL 30B.
- Town's Designated Representative and point of contact for questions is : Meghan Cavalier, [mcavalier@burlington.org](mailto:mcavalier@burlington.org) , 781-270-1642
- Prevailing wage shall be paid per MGL 149 SECT. 26-27H

## **PROJECT DESCRIPTION**

The work under this contract shall include all equipment, labor, material, supplies, etc. necessary to furnish the work described in this contract.

The work covered by this Contract consists of furnishing all plant, labor, equipment and materials necessary to perform all operations in connection with the cleaning and sealing of construction and random cracks in bituminous concrete pavements, and vegetation removal and sterilization of cracks where necessary.

Work shall include cleaning and sealing all visible cracks to include:

- Furnishing all plant, labor, equipment and materials necessary
- Vegetation removal and sterilization within the cracks to be sealed.
- Cleaning foreign material from the cracks to be sealed
- Sealing of construction and random cracks in bituminous concrete pavements

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## INSTRUCTIONS TO BIDDERS

### Receipt and Opening of Bids

The Town of Burlington, Massachusetts, herein called the Owner, acting by and through its Department of Public Works, will receive sealed bids as specified in the invitation for Bids at which time bids will be publicly opened and read.

Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered. The bidder agrees that this bid shall be good and may not be withdrawn for a period of thirty (30) days, Saturdays, Sundays, and legal holidays excluded, after opening the bids.

### Location and Work to be Done

The Location of the Work to be done is described in the project description.

The Contractor shall furnish all labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, and all other things necessary to do all work required for the completion of each item of the Work and as herein specified.

The Work to be done and paid for under any item shall not be limited to the exact extent mentioned or described but shall include all incidental work necessary or customarily done for the completion of that item.

### Preparation of Bid

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures.

Each bid must be submitted in a sealed envelope bearing on the outside **the name of the bidder, his address, and endorsed with the name of the project as specified in Receipt and Opening of Bids.**

If forwarded by mail, **the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in Receipt and Opening of Bids.**

The following sections need to be filled out and completed as part of the bid package;

- Form of General Bid
- Acknowledgement of Addenda, if any
- Bid Form
- Total Bid Price
- Contractor Reference
- Contractor Certification

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**Bid Opening Procedure**

The following list of requirements shall apply to each filed bid. Bids not meeting all the requirements for timeliness and security will be rejected without opening; bids not meeting signature and addenda requirements will be rejected prior to checking of bid amounts.

Bids shall be filed at the place and before the time specified in Receipt and Opening of Bids.

Properly executed bid security shall be placed in a sealed envelope and shall be attached to the outside of the envelope containing the bid.

Bid signatures will be checked.

The total dollar amount of each bid will be read, and the three apparent lowest bids will be selected for further consideration. These three apparent low bids will be read aloud for the benefit of the other bidders and the bid opening procedure will be closed. All those present at the bid opening may arrange a time to examine all bids after the bid opening and after the reading of the three apparent low bids.

**Ability and Experience of Bidder**

No award will be made to any bidder who cannot satisfy the Owner that he has sufficient ability and experience in this class of work and sufficient capital and plant to enable him to complete the work successfully within the time named. The Owner's decision or judgment on these matters will be final, conclusive, and binding.

**Bidder shall have a minimum of five (5) years' experience and have completed satisfactorily five (5) jobs within that time of similar size and scope.**

**All Subcontractors shall have a minimum of five (5) years' experience and have completed satisfactorily five (5) jobs within that time of similar size and scope.**

The Contractor must submit with his bid proposal a list of five (5) jobs which he has successfully completed, giving the name and the address of these projects so they can be investigated prior to the award of the contract.

The Owner may make such investigations as he deems necessary, and the bidder shall furnish to the Owner, under oath if so required, all such information and data for this purpose as the Owner may request.

**Condition of Work**

Each bidder must familiarize himself fully with the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so

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will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his Contract. Insofar as possible the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

### **Addenda and Interpretations**

No interpretation of the bid documents will be made orally. Every request for such interpretation should be in writing addressed to the **Town's Designated Representative** listed in INSTRUCTION TO BIDDERS and to be given consideration must be received at least seven (7) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the Contract Documents. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under this bid as submitted. All addenda so issued shall become part of the Contract Documents.

### **Laws and Regulations**

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulation of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

### **Bid Security**

Each bid must be accompanied by a BID BOND, CASH, or CERTIFIED CHECK, payable to the Town, in the amount stated in INVITATION TO BID. Such checks will be returned to all except the three (3) lowest responsible and eligible bidders within five (5) days, Saturday, Sundays, and legal holidays excluded, after the opening of bids, and the remaining checks will be returned promptly after the Owner and the accepted bidder have executed the Contract, or if no notice of intent to award has been presented to the selected contractor within thirty (30) days, Saturdays, Sundays and holidays excluded, after the date of the opening of bids, upon demand of the bidder at any time thereafter.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be retained from time to time by the Owner from current periodical estimates.

### **Right to Reject Bid**

The Owner reserves the right to waive any informality or reject any and all bids and alternate bids, should the Owner deem it to be in the public interest to do so.

The Owner also reserves the right to reject the bid of any bidder that the Owner considers to be unqualified based on the criteria set forth in Article 5 herein.

**Time for Completion**

The bidder must agree to commence work and to fully complete the project within the time limit stated in SPECIAL CONDITIONS.

**Comparison of Bids**

In the event that there is a discrepancy in FORM OF GENERAL BID between the lump sum or unit prices written in words and figures, the prices written in words will govern.

**Rule for Award of Contract**

The Contract will be awarded to “the lowest responsible and responsive bidder” for the Total Price Bid pursuant to General Laws Chapter 30B as amended. Such a bidder shall possess the skill ability and integrity necessary for the faithful performance of the work, shall be able to furnish labor that can work in harmony with all other elements of labor employed, or to be employed, in the work, and shall otherwise comply with all applicable provisions of law. Bidder shall execute formal agreement within ten (10) days of the Notice of Award.

**Statutes Regulating Competitive Bidding**

Any bid that does not comply with the provisions of Massachusetts General Laws Chapter 30B as amended need not be accepted and the Owner may reject every such bid.

**Wage Rates**

Prevailing Wage Rates as determined by the Commissioner of Department of Labor and Industries under the provision of the Massachusetts General Laws, Chapter 149, Section 26 to 27H, as amended, apply to this project. It is the responsibility of the contractor, before bid opening to request if necessary, any additional information on Prevailing Wage Rates for those trades people who may be employed for the proposed work under this contract.

State schedules of Prevailing Wage Rates are included in the contract documents.

**Specifications**

All specifications and bid items are based on Massachusetts Highway Departments “Standard Specifications for Highway & Bridges” edition as revised in the 1995 Publication.

**Bid Items Not Guaranteed**

The successful bidder is not guaranteed all items or the total bid price under this contract. Bidders must understand that like items will be bid under other contracts specifically packaged as one complete project. The successful bidder has no right to similar items bid under other projects. The Town Engineer will specify where and when this contract will be applied to undertake a particular improvement.

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**FORM OF GENERAL BID**

Bid of \_\_\_\_\_ (hereinafter called  
“Bidder”)\*

(\_\_\_\_) a corporation, organized and existing under the laws of the state of \_\_\_\_\_.

(\_\_\_\_) a partnership

(\_\_\_\_) a joint venture

(\_\_\_\_) an individual doing business as \_\_\_\_\_

To the Town of Burlington, Massachusetts (hereinafter called “Owner”).

To Whom It May Concern:

The bidder, in compliance with your invitation for bids, having examined the Contract Documents and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby propose to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents within the time set forth in the agreement, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, or which this proposal is a part.

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\*Insert corporation, partnership or individual as applicable.

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**ADDENDA**

Bidder acknowledges receipt of the following addenda:

No. \_\_\_\_\_ Dated: \_\_\_\_\_

No. \_\_\_\_\_ Dated: \_\_\_\_\_

No. \_\_\_\_\_ Dated: \_\_\_\_\_

No. \_\_\_\_\_ Dated: \_\_\_\_\_

No. \_\_\_\_\_ Dated: \_\_\_\_\_

**BID FORM**

| Street             | From                        | To                       | SY    | Cost |
|--------------------|-----------------------------|--------------------------|-------|------|
| A Street           | Middlesex Turnpike          | Terrace Hall Ave         | 4533  | \$   |
| Allison Drive      | Wilmington Road             | Dead End                 | 2233  | \$   |
| Arnold Terrace     | Putman Road                 | Dead End                 | 3000  | \$   |
| B Street           | A Street                    | Dead End                 | 2897  | \$   |
| Bates Street       | Sewall Street               | Williams Circle          | 1267  | \$   |
| Baxter Circle      | Upland Road                 | Dead End                 | 3158  | \$   |
| Beaverbrook Road   | Wilmington Road             | Fox Hill Road            | 10200 | \$   |
| Bennett Lane       | Thomas Street               | Susan Ave                | 900   | \$   |
| Birchcrest Street  | Cambridge Street            | Center Street            | 4400  | \$   |
| Buckman Drive      | Francis Wyman Road          | Dead End                 | 1520  | \$   |
| Burlington Street  | Burlington/Woburn Town Line | Mountain Road            | 667   | \$   |
| Cedar Street       | Francis Wyman Road          | Skelton Road             | 6200  | \$   |
| Cedarwood Lane     | Cambridge Street            | Dead End                 | 1829  | \$   |
| Central Ave        | Peach Orchard Road          | Dead End                 | 1573  | \$   |
| Chestnut Road      | Pathwoods Ave               | Dead End                 | 1800  | \$   |
| Clifford Road      | County Road                 | Dead End                 | 925   | \$   |
| County Road        | Cambridge Street (North)    | Cambridge Street (South) | 5038  | \$   |
| Crystal Circle     | Evergreen Ave (North)       | Evergreen Ave (South)    | 6467  | \$   |
| Dartmouth Road     | Mellin Street               | Dead End                 | 933   | \$   |
| Demone Drive       | Brown Ave                   | Dead End                 | 1933  | \$   |
| Derryfield Ave     | Sunnyside Ave               | Dead End                 | 900   | \$   |
| Donald Road        | Hart Street                 | Vincent Road             | 9827  | \$   |
| Foster Road        | Concoran Road               | Francis Wyman Road       | 3800  | \$   |
| Four Acre Drive    | Cambridge Street            | Dead End                 | 1333  | \$   |
| Fourth Ave         | Middlesex Turnpike          | North Ave                | 1971  | \$   |
| Fowler Terrace     | Terrace Hall Ave            | Dead End                 | 2190  | \$   |
| Fox Hill Road      | Skilton Lane                | Westwood Street          | 14300 | \$   |
| Frances Road       | Winn Street                 | Newbridge Street         | 2116  | \$   |
| Francis Wyman Road | Cambridge Street            | Bedford Street           | 26578 | \$   |
| Freeport Drive     | Mill Street                 | Harris Drive             | 10217 | \$   |
| Gidley Street      | Princeton Road              | Macon Road               | 1083  | \$   |
| Glen Ave           | Winn Street                 | Derryfield Ave           | 4639  | \$   |

| Street             | From                        | To                             | SY    | Cost |
|--------------------|-----------------------------|--------------------------------|-------|------|
| Gloria Circle      | Francis Wyman Road (North)  | Francis Wyman Road (South)     | 5200  | \$   |
| Grandview Ave      | Peach Orchard Road          | Dead End                       | 1867  | \$   |
| Greenwood Road     | Bedford Street (North)      | Bedford Street (South)         | 7000  | \$   |
| Hampden Ave        | Winn Street                 | Lowell Street                  | 4767  | \$   |
| Harriett Ave       | Winn Street                 | Lowell Street                  | 5704  | \$   |
| Harris Drive       | Chandler Road               | Freeport Drive                 | 3484  | \$   |
| Hart Street        | Skilton Lane                | Donald Road                    | 4189  | \$   |
| Heritage Way       | Burlington Street           | Dead End                       | 6975  | \$   |
| Howard Road        | Forbes Ave                  | Dead End                       | 627   | \$   |
| Johns Road         | Douglas Ave                 | Ivy Lane                       | 548   | \$   |
| Kenmere Ave        | Newbridge Ave               | Harriett Ave                   | 1517  | \$   |
| Laurie Lane        | Holly Street                | Dolores Drive                  | 1982  | \$   |
| Leroy Drive        | Cambridge Street            | Paula Street                   | 5717  | \$   |
| Lexington Street   | Burlington Mall Road        | Bedford Street                 | 26191 | \$   |
| Liberty Ave        | Bedford Street              | College Road                   | 2800  | \$   |
| Locust Street      | Winn Street                 | Mill Street                    | 12533 | \$   |
| Lowell Street      | Dead End                    | Woburn/Burlington Town Line    | 3329  | \$   |
| Mallard Way        | Spring Valley Road          | Mill Street                    | 5250  | \$   |
| Manhattan Drive    | Morrison Road (East)        | Morrison Road (West)           | 5750  | \$   |
| Marrett Road       | Frothingham Road            | Lexington Street               | 4511  | \$   |
| Meadowcraft Road   | Park Drive                  | Dead End                       | 1358  | \$   |
| Meadowvale Road    | Bedford Street              | Webber Road                    | 6300  | \$   |
| Mellin Street      | Francis Wyman Road          | University Ave                 | 1427  | \$   |
| Middlesex Turnpike | Fourth Ave                  | Wheeler Road                   | 63150 | \$   |
| Mountain Road      | Mountain View Way           | Dead End                       | 1913  | \$   |
| Mountain View Way  | Mountain Road               | Heritage Way                   | 2693  | \$   |
| Oak Knoll Road     | Joanne Road                 | Fernglade Road                 | 1600  | \$   |
| Patriot Road       | Skilton Lane                | Dead End (South)               | 2600  | \$   |
| Pearl Street       | Burlington/Woburn Town Line | Winter Street                  | 933   | \$   |
| Princeton Road     | Dead End                    | Carey Ave                      | 3033  | \$   |
| Prouty Road        | Wilmington Road             | Billerica/Burlington Town Line | 5833  | \$   |
| Rahway Road        | Sumpter Ave                 | Dead End                       | 3046  | \$   |

| Street               | From                     | To                          | SY    | Cost |
|----------------------|--------------------------|-----------------------------|-------|------|
| Robin Street         | Wellesley Ave            | Waite Ave                   | 420   | \$   |
| Rocky Hill Road      | Upland Road              | Fox Hill Road               | 4480  | \$   |
| Rolling Lane         | Stone Wall Drive         | Keans Road                  | 2051  | \$   |
| Scott Ave            | Murray Ave               | Taylor Ave                  | 700   | \$   |
| Sears Street         | Center Street            | Winn Street                 | 4117  | \$   |
| Sewall Street        | Cedar Street             | University Ave              | 2889  | \$   |
| South Ave            | Second Ave               | Middlesex Turnpike          | 5349  | \$   |
| South Bedford Street | Burlington Mall Road     | Wayside Road                | 10280 | \$   |
| Susan Ave            | Bennett Lane             | Dead End                    | 3400  | \$   |
| Terrace Hall Ave     | Middlesex Turnpike       | Washington Ave (West)       | 7250  | \$   |
| Travers Lane         | Center Street            | Dead End                    | 1820  | \$   |
| Upland Road          | Fox Hill Road            | Beaverbrook Road            | 9967  | \$   |
| Whitney Street       | Martin Street            | Dead End                    | 624   | \$   |
| Wildmere Ave         | Winn Street              | Dead End                    | 3600  | \$   |
| Williams Circle      | Bates Street             | Amherst Road                | 1173  | \$   |
| Winn Street          | I-95 off ramp Northbound | Woburn/Burlington Town Line | 11333 | \$   |
| Winn Valley Drive    | Mountain View Way        | Heritage Way                | 1437  | \$   |
| Winona Road          | County Road              | Olean Road                  | 1829  | \$   |
| Winter Street        | Pearl Street             | Woburn/Burlington Town Line | 453   | \$   |

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**TOTAL BID PRICE**

Total Price Bid: \$ \_\_\_\_\_

Bid Price in Words: \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

**This is an unofficial Bid Spec. If this document is used to submit a bid then you must submit your contact information to Lisa Matarazzo at [lmatarazzo@burlington.org](mailto:lmatarazzo@burlington.org) in order to be added to the bidders list.**

## CONTRACTOR REFERENCES

The undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all the requirements of the plans and specifications.

1. Have been in business under present name for \_\_\_years.
2. The names and addresses of all persons interested in the bid (if made by a partnership or corporation) as Principals are as follows:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Attach supplementary list if necessary)

3. The bidder is requested to state below what work of a similar character to that included in the proposed contract he has done, and give references that will enable the Owner to judge his experience, skill and business standing (add supplementary page if necessary).

| # | Completion Date | Project Name | Contract Amount | Reference Name | Telephone No. |
|---|-----------------|--------------|-----------------|----------------|---------------|
| 1 |                 |              |                 |                |               |
| 2 |                 |              |                 |                |               |
| 3 |                 |              |                 |                |               |
| 4 |                 |              |                 |                |               |
| 5 |                 |              |                 |                |               |

4. Bank reference \_\_\_\_\_

(Name)

\_\_\_\_\_

(Bank)

\_\_\_\_\_

(Address)

(Telephone No.)

---

## **CONTRACTOR CERTIFICATION**

### **NON-COLLUSION**

I certify under penalties of perjury that this bid or proposal has been made and submitted under good faith and without collusion or fraud with any other person. As used in this certification, the word “person” shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

### **TAX COMPLIANCE**

Pursuant to Massachusetts General Law Chapter 62C, Section 49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

### **LABOR HARMONY / OSHA 10-HOUR**

I will furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work, and all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health administration that is at least 10 hours in duration.

Signature: \_\_\_\_\_  
(Person Signing Bid)

\_\_\_\_\_  
(Name of Business)



**AGREEMENT**

THIS AGREEMENT, by and between the party of the first part, the Town of Burlington, hereinafter called "OWNER", acting herein through its Town Administrator, and the party of the second part hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the project described by these bid documents hereinafter called the project, for the sum of the contract price and all extra work in connection therewith, under the terms as stated in the Contract Documents; and at his (its and their) own proper cost and expense to furnish all the materials, supplies, machinery equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in FORM OF GENERAL BID, GENERAL CONDITIONS, Contract Documents as prepared by the Owner.

IN WITNESS WHEREOF, the parties to these presents have executed this contract.

\$ \_\_\_\_\_  
Contract Price

AGREED:  
Town of Burlington

\_\_\_\_\_  
Owner Date

Contractor

\_\_\_\_\_  
Contractor Date

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

In accordance with M.G.L. C. 44, Section 31C, this is to certify than an appropriation in the amount of this contract is available therefore and that the Town Administrator has been authorized to execute the contract and approve all requisitions and change orders.

\_\_\_\_\_  
Account # Town Accountant Date

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## SPECIAL CONDITIONS

1. All work under this contract must comply with the most recent edition of the Town of Burlington Department of Public Works; Street Opening/Utility Connection Rules & Regulations
2. Prior to the commencement of any work the Contractor will obtain a Street Opening permit from the DPW/Engineering Division
3. At the end of each week the Contractor shall submit itemized summary/quantities of items per street completed during the week. These quantities will be reviewed with the Engineer before the end of the day on Friday.
4. All certified payroll slips must be submitted as part of the pay requisition package for each individual pay requisition request, for each contractor and sub-contractor that has performed work under this contract, up to date of the current pay requisition before the pay requisition will be processed and paid.
5. The Contractor shall have a designated Project Manager, or a designated Foreman, in the field at all times while work is taking place. The Project Manager or designated Foreman shall have the authority to agree on quantities and items with the Engineer and have all decision making ability on behalf of the Contractor. This person shall also be responsible for the location/re-location of all traffic signs and traffic barrels as specified in the Traffic Management Plan or as directed by the Engineer.
6. Traffic Management under this contract must be considered at all times meaning the following points apply:
  - a. Two (2) way traffic must be maintained at all times
  - b. Complete compliance with the Traffic Management Plan standards set forth in the Town of Burlington Department of Public Works Street Opening/Utility Connections Rules & Regulations
  - c. Detours not included as part of the Traffic Management Plan will be allowed only upon written authorization from the Owner and the Contractor is responsible for supplying all necessary sign(s) and traffic barrels to which to attach the signs, for the detour.
  - d. Contractor is also responsible for carrying twenty five (25) separate traffic barrels to barricade the end of any side roads to prevent traffic from damaging the new road surface.
7. Normal Hours of work: Work hours shall be between the hours of 7:00 AM and 5:00 PM Monday through Friday, unless otherwise specified. The successful Contractor shall not work on Saturdays, Sundays, Holidays or other hours, without express authority from the Director of Public Works.

8. Unless otherwise specified, the cost of the Police Detail Officer(s) will be paid for by the Town of Burlington. If Detail is to be canceled it must be done 2 hours prior to the scheduled time, any detail not canceled in the correct or timely manner will be charged to the Contractor.
  
9. This Contract includes estimated quantities that may or may not be purchased during Fiscal Year. Additionally, quantities are used for comparison of bids and establishing the Bid Deposit.
  
10. This Contract may be terminated, with fifteen (15) days' notice, for unsatisfactory performance and/or availability of funds. The contractor will hold the Town harmless from all damages as a result of funding restraints.

Attention is directed to the following parts of the contract:

| <b>Description</b>                | <b>Location in Contract</b>              |
|-----------------------------------|--|
| Preparation of Bid                | Instructions Bidders; Part 3             |
| Experience of Bidders             | Instructions to Bidders; Part 5          |
| Bid Security                      | Instructions to Bidders; Part 9          |
| Execution, Correlation and Intent | General Conditions; Article 1            |
| Contract Administration           | General Conditions; Article 2            |
| Superintendent                    | General Conditions; Article 4, Section 8 |
| Project/Progress Schedule         | General Conditions; Article 4, Section 9 |
| Liquidated Damages                | General Conditions; Article 6            |
| Project Plans                     | Appendix B                               |
| Prevailing Wage Rates             | Appendix C                               |

Summary Table of Important Contract Dates

| <b>Item</b>                        | <b>Date</b> |
|------------------------------------|-------------|
| Bid Opening                        | 4/2/2020    |
| Commencement of Work No Later Than | 6/1/2020    |
| Completion of Work No Later Than   | 8/31/2020   |
| Liquidated Damages Starting        | 9/1/2020    |

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## **GENERAL CONDITIONS**

### **ARTICLE 1**

#### **CONTRACT DOCUMENTS**

##### **1.1 DEFINITIONS**

###### **1.1.1 THE CONTRACT DOCUMENTS**

The Contract Documents consist of the Owner-Contractor Agreement, the Conditions of the Contract (General, and other Conditions), the Drawings, the Specifications, all Addenda issued prior to and all Change Orders issued after execution of the Contract, and all applicable laws, ordinances and regulations. The Contract Documents include Bidding Documents such as the Advertisement or Invitation to Bid, the Instructions to Bidders, sample forms, the Contractor's Bid or portions of Addenda relating to any of these, or any other documents, specifically enumerated in the Owner-Contractor Agreement.

###### **1.1.2 THE CONTRACT**

The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Change Order.

###### **1.1.3 THE WORK**

The Work comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated in such construction.

###### **1.1.4 THE PROJECT**

The project is the total construction of which the Work performed under the Contract Documents may be the whole or a part.

###### **1.1.5 OR EQUAL**

The use of the words "Or Equal" following the name of any manufacturer, vendor or proprietary product shall be understood to mean that articles or materials may be substituted which, in the opinion of the Owner, are equal in quality, durability, appearance, strength, design and performance to the articles or materials named or described and will perform adequately in providing a first-class facility.

When submitting shop drawing information on articles or materials which are being proposed as substitutes for specified items, the Contractor shall clearly identify them as such. If the articles or materials are accepted as equal to those on which dimensions on the drawings are based, any dimensional variance from those shown and/or specified shall be shown on the shop drawings prepared by the Contractor, illustrating the manner in which conformity to dimensions and design is to be obtained. All such drawings shall be subject to the approval of the Owner and the installation of the article shall not proceed without first obtaining said approval.

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## **1.2 EXECUTION, CORRELATION AND INTENT**

### **1.2.1**

By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

### **1.2.2**

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable there from as being necessary to produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

### **1.2.3**

The Notice to Proceed will come in the form of a written letter to the Contractor. Once the written Notice to Proceed has been received by the Contractor, that date will be the legal start date for work under the Contract.

In the event of a failure to issue a Notice to Proceed written document specifying the commencement date, the pre-construction meeting date will serve as the Notice to Proceed date.

## **1.3 OWNERSHIP AND USE OF DOCUMENTS**

### **1.3.1**

All Drawings, Specifications and copies thereof furnished by the Owner are and shall remain the Owner's property. They are to be used only with respect to this Project and are not to be used on any other project without prior written consent of the Owner. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Owner at the completion of the Work. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of any reserved rights.

## **ARTICLE 2**

### **ADMINISTRATION**

#### **2.1 ADMINISTRATION OF THE CONTRACT**

##### **2.1.1**

The designated representative of the Owner or its Engineer will visit the site at intervals appropriate to the stage of construction to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. However, the Owner's Representative or Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

##### **2.1.2**

The Owner shall at all times have access to the Work whenever it is in preparation and progress. The Contractor shall provide facilities for such access so the Owner may perform its functions under the Contract Documents.

##### **2.1.3**

The Owner shall make payments for completed work, as approved by the Owner, in accordance with M.G.L. Ch. 30, Sec. 39G. A five percent retainage will be deducted from periodic payments to the Contractor.

##### **2.1.4**

The Owner will render information necessary for the proper execution or progress of the Work within twenty (20) days of any request by the contractor or in accordance with any time limit agreed upon.

##### **2.1.5**

The Owner will have authority to reject Work which does not conform to the Contract Documents. Whenever, in his opinion, he considers it necessary or advisable for the implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the Work whether or not such Work is then fabricated, installed or completed. Any such rejection of work shall not relieve the Contractor of the responsibility for maintaining protection of the Work and the Owner's property.

##### **2.1.6**

The Owner or its Engineer will review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay. The Owner's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

**2.1.7**

The Owner will conduct inspections to determine the date of Substantial Completion and Final Completion, will review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment.

**ARTICLE 3**

**OWNER**

**3.1 DEFINITION**

**3.1.1**

The Owner is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Town of Burlington or its designated representative.

**3.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER**

**3.2.1**

The Owner shall, at the time of execution of the Agreement and any subsequent Change Orders, certify for the Contractor that financial arrangements have been made to fulfill the Owner's obligations under the Contract.

**3.2.2**

The Owner shall furnish all documents describing the work.

**3.2.3**

Except as provided in Subparagraph 4.7.1. Owner shall secure and pay for necessary approvals, easements, assessments and charges required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

**3.2.4**

Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

**3.2.5**

The Owner will furnish the Contractor with three (3) copies of all Drawings and Specifications and revisions issued during the progress of the Work; all additional copies will be furnished upon request at the cost of reproduction.

**3.2.6**

The Owner, through its designated agent or Engineer, shall forward all instructions directly to the Contractor.

**3.3 OWNER'S RIGHT TO STOP THE WORK**

**3.3.1**

If the Contractor fails to correct defective Work as required by the Owner or fails to carry out the Work in accordance with the Contract Documents or if the Owner shall for any other reason so require, the Owner, by a written order signed personally or by an agent specifically so empowered by the Owner in writing, may order the Contractor to stop the

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Work, or any portion thereof, until the cause for such order has been eliminated or until further written notice from the Owner; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. The Contractor shall resume the Work after such stoppage promptly upon written notice to do so from the Owner. If such stoppage is required through no fault of the Contractor, the Contract Time (and the dates for achieving Substantial Completion and Final Completion) shall be extended by a period equal to the period of the stoppage, and the Contractor shall be compensated for its reasonable and justifiable cost incurred as a result of such stoppage.

### **3.4 OWNER'S RIGHT TO CARRY OUT THE WORK**

#### **3.4.1**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within seven days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedy he may have, perform such work or cause such work to be performed and/or make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for additional services made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover the amount, the Contractor shall pay the difference to the Owner.

### **3.5 OWNER'S RIGHT TO TERMINATE CONTRACT**

#### **3.5.1**

The Town reserves the right to terminate this Contract at their discretion with thirty (30) days written notice to the contractor. In the event of Contract termination, all finished or unfinished work, or un-used material, already paid for under Contract prices, shall become the property of the Town of Burlington.

**ARTICLE 4**

**CONTRACTOR**

**4.1 DEFINITION**

**4.1.1**

The Contractor is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

**4.2 REVIEW OF CONTRACT DOCUMENTS**

**4.2.1**

The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Owner any error, inconsistency or omission he may discover. The Contractor shall not be liable to the Owner for any damage resulting from errors, inconsistencies or omissions in the Contract Documents which he discovers but shall be liable for damage to the extent he reasonably should have but failed to discover such errors, inconsistencies or omissions. The Contractor shall perform no portion of the Work at any time without Contract Documents or, where required, approved Shop Drawings, Product Data or Samples for such portion of the Work.

**4.3 SUPERVISION AND CONSTRUCTION PROCEDURES**

**4.3.1**

The Contractor shall supervise and direct the Work, using his best skill and attention which shall not be less than such state of skill and attention generally rendered by the contracting profession for projects similar to the Project in scope, difficulty and location. The Contractor shall maintain adequate supervisory personnel at the Site during the performance of the Work. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

**4.3.2**

The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor. This obligation shall also extend to the presence on the Site of suppliers of materials or equipment, their employees, contractors, and agents engaged in the work.

**4.3.3**

The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the Owner in its administration of the Contract.

#### **4.4 LABOR AND MATERIALS**

##### **4.4.1**

Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and service necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

##### **4.4.2**

The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him including all persons on the Site controlled directly or indirectly by the Contractor.

#### **4.5 WARRANTY**

##### **4.5.1**

The Contractor warrants to the Owner that all materials and equipment furnished under this Contract will be new and of recent manufacture unless otherwise permitted in writing by the Owner and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective and, promptly after written notification of non-conformance, shall be repaired or replaced by the Contractor with Work conforming to such requirements. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

#### **4.6 TAXES**

##### **4.6.1**

The Contractor shall pay all applicable sales, consumer, use and other similar taxes for the Work or portion thereof provided by the Contractor which are legally enacted at the time bids are received, whether or not yet effective.

#### **4.7 PERMITS, FEES AND NOTICES**

##### **4.7.1**

Unless otherwise expressly provided in the SPECIAL CONDITIONS, the Contractor shall secure and pay for all permits and fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required at the time the bids are received, and the same shall at all times be the property of the Owner and shall be delivered to the Owner upon completion of the Project.

**4.7.2**

The Contractor shall give all notices and comply with all federal, state and local laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work. The Contractor shall provide the Owner with reproductions of all permits, licenses and receipts for any fees paid. The Owner represents that it has disclosed to the Contractor all orders and requirements known to the Owner of any public authority particular to this Contract.

**4.7.3**

If the Contractor observes that any of the Contract Documents are at variance with applicable laws, statutes, codes and regulations in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be accomplished by appropriate Modification.

**4.7.4**

If the Contractor performs any Work which he knows or should know is contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility therefore and shall bear all costs attributable thereto.

**4.8 SUPERINTENDENT**

**4.8.1**

The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site at all times during the progress of the Work. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be so confirmed on written request in each case.

**4.9 PROGRESS SCHEDULE**

**4.9.1**

The Contractor, immediately after being awarded the Contract, shall prepare and submit for the Owner's information an estimated progress schedule for the Work. The progress schedule shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. No work shall start without the Project schedule. The Contractor shall submit the project schedule five days prior to start the work.

**4.10 DOCUMENTS AND SAMPLES AT THE SITE**

**4.10.1**

The Contractor shall maintain at the site for the Owner one record copy of all Drawings, Specifications, Addenda, Change Orders and other Modifications, and "As-Built"

Drawings and Specifications in good order and marked currently to record all changes made during construction, and approved Shop Drawings, Product Data and Samples. These shall be available to the Owner upon completion of the Work.

#### **4.11 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

##### **4.11.1**

Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

##### **4.11.2**

Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the Work.

##### **4.11.3**

Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

##### **4.11.4**

The Contractor shall review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the Owner or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents.

##### **4.11.5**

By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that he has determined and verified all material, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

##### **4.11.6**

The Contractor shall not be relieved of responsibility for any deviation from the requirements or the Contract Documents by the Owner's approval of Shop Drawings, Product Data or Samples or the Engineer's approval of the same unless the Contractor has specifically informed the Owner or Engineer in writing of such deviation at the time of submission and the Owner or Engineer has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility from errors or omissions in the Shop Drawings, Product Data or Samples by the Owner's approval thereof.

##### **4.11.7**

The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by the Owner or its Engineer on previous submittals.

**4.11.8**

No portion of the Work requiring submission of a Shop Drawing, Product Data or Sample shall be commenced until the submittal has been approved by the Owner or Engineer. All such portions of the Work shall be in accordance with approved submittals.

**4.12 USE OF SITE**

**4.12.1**

The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.

**4.13 CUTTING AND PATCHING OF WORK**

**4.13.1**

The Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work or to make its several parts fit together properly.

**4.13.2**

The Contractor shall not damage or endanger any portion of the Work or the work of the Owner or any separate contractors by cutting, patching or otherwise altering any work or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any separate contractor except with the written consent of the Owner and of such separate contractor. The Contractor shall not unreasonably withhold from the Owner or any separate contractor his consent to cutting or otherwise altering the Work.

**4.14 CLEANING UP**

**4.14.1**

The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work he shall remove all his waste materials and rubbish from and about the Project in full compliance with all applicable laws and regulations as well as all his tools, construction equipment, machinery and surplus materials and the Project shall be thoroughly cleaned and ready for immediate occupancy by the Owner.

**4.14.2**

If the Contractor fails to clean up at the completion of the Work, the Owner may do so as provided in Paragraph 3.4 and the cost thereof shall be charged to the Contractor.

**4.15 COMMUNICATIONS**

**4.15.1**

The Contractor shall forward all communications to the Owner's designated representative.

**4.16.2**

The Contractor shall at all times have a designated representative in the field that is authorized to act on behalf and make decisions for the Contractor under this contract agreement.

**4.16 ROYALTIES AND PATENTS**

**4.16.1**

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor believes or has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Owner, and thereafter the Owner insists on the use of the design, process or products specified.

**4.17 INDEMNIFICATION**

**4.17.1**

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, the Engineer and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting there from, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified there under. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or of indemnity which would otherwise exist as to any party or person described in this Paragraph 4.17.

**4.17.2**

In any and all claims against the Owner the Engineer or any of their agents or employees by any employee of the Contractor, any Subcontractor anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 4.17 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

**4.17.3**

The obligations of the Contractor under this paragraph 4.17 shall not extend to the liability of the Owner, the Engineer, their agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) written directions or instructions given by the Owner, the Engineer, their agents or employees, provided they are the sole cause of the injury or damage.



**ARTICLE 5**

**INSURANCE**

Contractor shall provide insurance as specified below:

**GENERAL LIABILITY**

Includes:

- Comprehensive form
- Premises/Operations
- Underground Explosion & Collapse Hazard
- Products / Completed Operations
- Independent Contractors
- Broad From Property Damage
- Personal Injury

|                 |             |
|-----------------|-------------|
| Each Occurrence | \$1,000,000 |
| Aggregate       | \$2,000,000 |

**Automobile Liability**

Includes:

- All Owned Vehicles
- Hired Vehicles
- Non-owned Vehicles

|  |             |
|--|-------------|
| Bodily Injury & Property Damage Combined | \$1,000,000 |
|--|-------------|

**Workers Compensation & Employers Liability**

- As Required by State of Massachusetts

|  |           |
|--|-----------|
| Each Accident                            | \$100,000 |
| Bodily Injury by Disease (Policy Limit)  | \$500,000 |
| Bodily Injury by Disease (Each Employee) | \$100,000 |

**Additional Insurance / Requirements**

- The Town of Burlington Shall be named as Additional Insured

**ARTICLE 6**

**LIQUIDATED DAMAGES**

**6.1 LIQUIDATED DAMAGES**

If the Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to Owner the amount of \$1000 per day, not as a penalty but as liquidated damages for such breach of Contract as hereinafter set forth, for each and every calendar day that the Contract shall be in default after the time stipulated in the Contract for completing the work.

## SPECIFICATIONS

### 1. SCOPE OF WORK

The work covered by this section of the specification consists of furnishing all plant, labor, equipment, and materials necessary to perform all operations in connection with the cleaning and sealing of construction and random cracks in bituminous concrete pavements, including vegetation removal and sterilization of cracks where necessary.

### 2. MATERIAL

Crack sealant shall be a modified asphalt-fiber compound designed especially for improving strength and performance of the parent asphalt sealant.

(a) The asphalt binder shall consist of a blend of neat asphalt binder, chemically modified crumb rubber (CMCR), and a polymer package, all of which meets the following specifications:

- The binder will meet PG 64-28E requirements after modification including:
  - PG grade requirements of AASHTO M320
  - Requirements of AASHTO TP70/MP19
- Viscosity of not more than three (3) PaS at 300 degrees Fahrenheit.
- Modification at a minimum shall consist of 7% CMCR and the maximum particle size for the CMCR shall be eighty (80) mesh (#80 sieve).
- The asphalt supplier shall provide testing for the neat asphalt binder and modified asphalt binder in accordance with AASHTO M320.
- See below for typical modified test results for 64-28E with crumb rubber:
  - DSR ORIGINAL
    - kPa >1.00 @ 64°C. Fail temp = 76+°C
  - DSR RTFO
    - kPa >2,20 @ 64°C. Fail temp = 76+°C
  - MSCR
    - JNR (MSCR unit of measure): 3.2 E<0.5% @ 64°C
    - R3200 (Average % Recovery): >70%
  - BBR
    - Stiffness <300 @ -18°C. M-Value >0.300 @ -18°C

(b) Fiber reinforcing materials shall be short-length polyester fibers having the following properties:

|                                    |                                |
|------------------------------------|--------------------------------|
| Length*                            | 0.25in.+0.02 in.               |
| Elongation at Break; ASTM D2256-90 | 35% ± 3%                       |
| Melting Point; ASTM D3418-82       | >475 degrees F (246 degrees C) |
| Crimps/Inc; ASTM D3937-90          | None                           |
| Cross Section                      | Round                          |
| Denier; ASTM D1577-90              | 4.5 Nominal dpf                |

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|                                 |               |
|---------------------------------|---------------|
| Tensile Strength; ASTM D2256-90 | >70,000 psi   |
| Diameter                        | 0.0008 in. ** |
| Specific Gravity; ASTM D792-91  | 1.32 to 1.40  |

\* At temperatures ranging from ambient to maximum finished product mix temperature

\*\* Subject to Normal Variations

Modified asphalt-fiber compound shall be mixed at a rate of eight (8) fiber weight to weight of asphalt cement. This compound having the same chemical base provides compatibility and exhibits excellent bond strengths. The fiber functions to re-distribute high stress and strain concentrations that are imposed on the sealant by thermal sources, traffic loading, etc.

#### (c) EQUIPMENT

Equipment used in the performance of the work required by this section of the specification shall be subject to engineer approval and maintained in a satisfactory working condition at all times.

- Air Compressor: Air compressors shall be portable and capable of furnishing not less than 100 cubic feet of air per minute at not less than ninety (90) pounds per square inch pressure at the nozzle. The compressor shall be equipped with traps that will maintain the compressed air free of oil and water.
- Manually operated, gas powered air-broom or self-propelled sweeper designed especially for use in cleaning highway and airfield pavements shall be used to remove debris, dirt, and dust from the cracks.
- The Melter: The unit used to melt or maintain crack sealant compound at the recommended application temperature shall be the indirect fired type. It shall be equipped with a remote heat exchanger and hot oil circulation pump capable of maintaining a consistent temperature of the heat transfer oil. The heat transfer oil shall be circulated to all sides and the bottom of the vat containing the crack sealant compound making a continuous loop back to the heat exchanger and having a flash point of not less than 600 degrees Fahrenheit. The melter shall be equipped with a satisfactory means of agitating the crack sealant at all times. This may be accomplished by continuous stirring with mechanically operated paddles and/or by a circulating gear pump attached to the melter. The melter must be equipped with a thermostatic control calibrated between 200 degrees Fahrenheit and 550 degrees Fahrenheit and must be capable of pumping an eight (8) percent fiber content blend.

#### (d) PREPARATION OF CRACKS

(a) Debris and Vegetation Removal: All cracks shall be blown clean and sterilized by use of a propane air torch generating 2,000 degrees Fahrenheit. and 3,000 foot/second

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velocity to eliminate all vegetation, dirt, moisture and seeds. All debris removed from the cracks shall be removed from the pavement surface immediately by means of a power sweeper, hand or air broom.

(b) General: No crack sealant material shall be applied in wet cracks or where frost, snow or ice is present nor when ambient temperature is below twenty five (25) degrees Fahrenheit.

(e) PREPARATION AND PLACEMENT OF SEALANT

(a) The asphalt-fiber compound shall be thoroughly mixed for a minimum of one hour before application can begin. Whenever material is added to the tank, sealing operations shall be suspended for one (1) hour to allow for the minimum required mixing time. Minimum application temperature shall be 320 degrees Fahrenheit.

(b) Sealant shall be delivered to the pavement cracks through a high pressure hose line and applicator shoe. Diameter of the applicator shoe is not to exceed three and one half (3.5) inches. Once the pavement cracks are sealed the width of the sealant on the pavement (overbanding) shall be no greater than three (3) inches. When traffic requires immediate use of the roadway, a boiler slag aggregate shall be broadcast over the cracks to prevent sealant from being picked up

(f) WORKMANSHIP

All workmanship shall be of the highest quality, and any excess of spilled sealant shall be removed from the pavement by approved methods and discarded. Any workmanship determined to be below the high standards of the particular craft involved will not be accepted, and will be corrected and/or replaced as required by the engineer in charge.

(g) PERFORMANCE

(a) It is the intention of the Public Agency not to award a contract for this work under this or any other proposal if the bidder cannot furnish satisfactory evidence that he has the ability and experience to perform this class of work and that he has sufficient capital and equipment to enable him to prosecute the work successfully and to complete it within the time named in the contract; and the Public Agency reserves the right to reject this or any other proposal or to award the contract as is deemed to be in the best interest of said Public Agency.

(b) Properly formulated and mixed asphalt fiber compound overbanding shall not be greater than three (3) inches in width. Penalties will be imposed upon the contractor for overbanding beyond three (3) inches.

## **MEASUREMENT & PAYMENT**

The unit of measure shall be lump sum payment per street completed to the satisfaction of the Engineer.

The unit of measurement will be per completed street, as determined by the Engineer. Payment shall be at the unit price as set forth in the BID FORM and shall include full compensation for furnishing, preparing, placing the material specified and furnishing of all labor, equipment and incidentals for the satisfactory completion of the Owner.

## APPENDIX

Plans, prevailing wage, details, etc. Located at [www.burlington.org](http://www.burlington.org)