



CONTRACT DATA SHEET

Monroe County Division of Purchasing
200 County Office Building, Rochester NY 14614

TITLE: HIGHWAY EQUIPMENT AND SERVICES – GROUP I & III

CONTRACT #: 0101-24 / 0210-24

CONTRACT DATES: 03/01/2024 – 02/28/2026

BUYER: Sean Wilcox
PHONE: 585/753-1136
EMAIL: swilcox@monroecounty.gov

VENDOR(S): Various – See Attached List

Sean Wilcox
Buyer

XC: BP FILE
VENDOR

HIGHWAY EQUIPMENT & SERVICES
GROUP I & III VENDORS

Contract	Vendor Name	Awarded some or all of Items:
7700000200	CAMPOBELLO CONSTRUCTION CO INC	24
7700000201	CARDINAL LAWN & LANDSCAPE INC	22,28,30
7700000202	D CLARK DISTRIBUTORS LLC	15
7700000212	DONEGAL CONSTRUCTION CORP	21
7700000203	HIGHWAY REHAB CORPORATION	7
7700000204	HYNES CONCRETE CONTRACTOR INC	23,25,27
7700000213	IROQUOIS ROCK PRODUCTS INC	10,11,12,13,14
7700000209	JULIEANN SHOVE INC/CHAMPION ASPHALT	8
7700000205	KEELER CONSTRUCTION CO INC	10,11,12,13,14,15
7700000214	MACEDON EXCAVATING & PAVING	10,11,12,13,14,21
7700000206	MIDLAND ASPHALT MATERIALS INC	1,3,5,6,9,18,20
7700000207	MILLENNIUM ROADS LLC	19
7700000208	RAL LANDSCAPE INC	29
7700000215	ROADTEK LLC	10,11,12,13,14
7700000216	ROCHESTER ASPHALT MATERIALS	10,11,12,13,14
7700000217	SPALLINA MATERIALS INC	21
7700000210	SUIT-KOTE CORPORATION	1,2,4,16,17,18,20
7700000---	SWEETING ENTERPRISES	10,11,12,13,14
7700000211	VILLAGER CONSTRUCTION INC	10,11,12,13,14,21,33

TERMS AND CONDITIONS

BID ITEM:

HIGHWAY EQUIPMENT AND SERVICES – GROUP I

FOR:

Department of Transportation

**PURCHASING
CONTACT:**

The Buyer, identified below, is the sole point of contact regarding this Bid from the date of issuance until the bids are opened and the results made public.

Sean Wilcox
Monroe County Division of Purchasing
39 West Main Street Room 200
Rochester, NY 14614
Email: swilcox@monroecounty.gov

All requests for bid clarification must be submitted in writing to the Buyer referenced above and received no later than close of business (5:00 PM Eastern Standard Time) on **Wednesday, January 10, 2024.**

All questions will be answered and documented in writing as an Addendum to the Bid. These will be sent out to all Bidders who received the original Bid no later than **Friday, January 12, 2024.**

DUPLICATE COPIES:

PLEASE SUBMIT YOUR BID IN DUPLICATE; THE ORIGINAL AND ONE (1) COPY.

BID INFORMATION:

At the time of bid, the bidder shall supply detailed specifications covering the item(s) contained herein and shall clearly indicate any areas in which item or items offered do not fully comply with the specifications contained herein.

**SUBMITTAL OF
FORMAL
PROPOSAL:**

Bid proposal must be legible and submitted in the original form, bearing an original signature. **EMAILS AND FACSIMILES ARE NOT ACCEPTABLE.**

All bidders must submit proof that they have obtained the required **Workers' Compensation and Disability Benefits Insurance** coverage or **PROOF** that they are exempt. (Visit www.wcb.ny.gov for forms.)

**SPECIFICATION
ALTERATIONS:**

Specifications will be construed to be complete and be considered the entire description of the goods or services upon which Monroe County is now seeking bids. **Only formal written addenda can materially alter this set of specifications.** No verbal statement made by a Monroe County employee or anyone else is binding nor shall such statement be considered an official part of this public bid proposal.

QUANTITIES:

The quantities listed are the estimated annual requirements and should not be construed to represent either maximum or minimum quantities to be ordered during the contract term.

DELIVERY:

Delivery to be **F.O.B. destination as specified by Purchase Order**. Delivery costs must be built into the unit prices bid. Deliveries must be made within **two (2) weeks, or as stated in specifications**, after receipt of purchase order number. The County reserves the right to terminate the contract in the event the specified delivery time is not met.

NYS WAGE RATES:

Pursuant to the provision of Section 220-A of the New York State Labor Law, as amended, the Contractor (and related Subcontractors) will be obligated to pay all workers in the covered classes only the applicable prevailing wage rates and supplements. The minimum hourly wage rate to be paid the various classes of labor performing work under this contract shall be in accordance with schedules which have been established or may hereafter be established or increased, by the New York State Department of Labor during the contract term. **Refer to NYS Wage Schedule PRC# 2023014435 developed for this project.**

QUALIFIED BIDDER:

Each bidder must be prepared to present satisfactory proof of his capacity and ability to perform this contract. Such proof may include, but is not limited to, an inspection of the bidder's facilities and equipment, financial statements, references and performance of similar contracts. **The Purchasing Manager reserves the right to reject any bid where the bidder cannot satisfy the County as to their ability to perform.** Monroe County reserves the right to reject any and all bids if the Monroe County Purchasing Manager deems said action to be in the best interests of Monroe County.

**METHOD OF
AWARD:**

Monroe County intends to award one or more contract(s) to the lowest responsive and responsible bidder(s). The County reserves the right to award the bid as a **whole or by group or item, depending on whichever method results in the lowest overall cost to the County. Separate awards will be considered when in the County's best interests to do so, such as when the price offered is great enough to offset the additional costs inherent to multiple contracts.** Bidders are not required to bid on every item included in the bid. **The County reserves the right to reject any and all bids** if the Purchasing Manager deems said action to be in the best interest of the County

CONTRACT TERM:

Contract will start with the date of the contract award and run through **February 28, 2025**, with the option to renew the contract up to **two (2)** additional twelve (12) month periods with the mutual consent of both parties.

PRICE CHANGES:

Price changes may be proposed by either party no later than forty-five (45) days prior to contract extension, based upon manufacturer price changes which must be supported with documentation. Should price changes not be acceptable to both parties, the contract will not be extended. Prices may change only at the time of extension.

MINIMUM ORDER:

No minimum order is specified for this contract, unless stated otherwise in the specifications. Agencies must be able to order as needed. **Political subdivisions and others authorized by law may participate in this contract.**

**PURCHASE ORDER
ISSUANCE:**

Delivery of services may be directed by the receipt of a Purchase Order only. **Items that are not part of this bid will not be paid for by Monroe County.** As to all purchase orders issued by Monroe County, exceptions may only be authorized, in writing, by the Purchasing Manager or her authorized agent prior to delivery.

**BILLING
PROCEDURE:**

All invoices for items sold any authorized agency as a result of this contract must be billed in the following manner: Purchase Order #, Quantity, Description of Item Purchased, BP#, Item #, Extension and Total. **ALL INVOICES MUST BE MARKED WITH THE PURCHASE ORDER NUMBER. INVOICES WITHOUT THIS INFORMATION WILL NOT BE PROCESSED FOR PAYMENT.**

**UNCONTEMPLATED
PURCHASES:**

Monroe County reserves the right to request separate bids for such quantities of items on this contract that may be best procured via separate public bid offering and to otherwise act in furthering its own best interests.

**SECURITIES AND
INSURANCE:**

Any Certificate of Insurance, Bonds, or other forms of security required by this bid are to be submitted to the Purchasing Manager no later than ten (10) normal business days following the date of notification of award. Documents must be received by the close of business, 5:00 PM, on that day.

SUBCONTRACT:

The successful Bidder shall not subcontract any work without first obtaining the written consent of the Monroe County Purchasing Manager. Notwithstanding the foregoing, subcontractor(s) set forth in a Bidder's MBE/WBE Utilization Plan submitted pursuant to the Minority and Women Owned Business Enterprise Requirements and approved by the County's Director of Diversity, Equity, and Inclusion shall be deemed to be approved subcontractor(s).

RELATED ITEMS:

The County reserves the right to add miscellaneous related items to this contract during the contract term upon agreement by both parties as to the price. Approval must be given in writing by the Purchasing Manager or her Designee.

**REPORT OF
PURCHASE:**

The Contractor must, upon request, provide the County Purchasing Manager with detailed information showing how much of each item was delivered to any and all agencies under this contract. This includes deliveries to not only the County but any other municipality or agency which orders from this contract.

**WARRANTY/
GUARANTEE:**

All warranties by manufacturer shall apply. Bidder shall, as part of its proposal, furnish its warranty/guarantee for all goods/services to be furnished hereunder. As a minimum, Bidder shall warrant all goods for a period of one (1) year from date of acceptance. Bidder shall be obligated to repair or replace all defects in material or workmanship, which are discovered or exist during said period. All labor, parts and transportation shall be at Bidder's expense.

**COMPLIANCE WITH
THE LAW:**

The Contractor agrees to procure all necessary licenses and permits. The Contractor shall comply with all laws, rules and regulations pertaining to the payment of wages and all other matters applicable to the work performed under this contract.

OTHER AGENCIES:

The Contractor(s) **must** honor the prices, terms and conditions of this contract with political subdivisions or districts located in whole or in part within Monroe County. In addition, the contractor may, but is not required to, extend the prices, terms and conditions of this contract to any other political subdivision or district. Usage of this contract by any of these other political subdivisions or districts will have to be coordinated between that subdivision or district and the contractor. Orders placed against this contract between any subdivision or district will be contracts solely between the Contractor(s) and those entities. Monroe County will not be responsible for, nor will it have any liability or other obligation for, such contract between the Contractor(s) and any third party.

INDEMNIFICATION:

The Contractor agrees to defend, indemnify and save harmless the County, its officers, agents, servants and employees from and against any and all liability, damages, costs or expenses, causes of action, suits, judgments, losses and claims of every name not described, including attorneys' fees and disbursements, brought against the County which may arise, be sustained or occasioned directly or indirectly by any person, firm or corporation arising out of or resulting from the performance of the services by the Contractor, arising from any act, omission or negligence of the Contractor, its agents and employees or arising from any breach or default by the Contractor under this Agreement. Nothing herein is intended to relieve the County from its own negligence or misfeasance or to assume any such liability for the County by the Contractor.

**EQUAL PAY
CERTIFICATION:**

Prior to the execution of this Agreement, the Contractor shall submit to the County an Equal Pay Certification ("Certification") affirming the Contractor's compliance with the Federal Equal Pay Act, 29 USC § 206 and New York State Labor Law §194, as amended from time to time ("Equal Pay Laws"). As set forth in the Certification, the Contractor's violation of one or more of the Equal Pay Laws or its filing of a false or misleading Certification during the term of this Agreement may constitute grounds for the County in its sole discretion to immediately terminate the Agreement and for determining the Contractor to be not qualified to participate in future Monroe County contracts.

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a. Requirements (forms included in appendix a)

The Bidder shall take affirmative steps to afford opportunities for MBE and WBE firms on the project and the Bidder shall make its best efforts to meet the MBE/WBE participation goals established for this project. The specific affirmative steps to be taken by Bidder are described in subparagraphs b and d below.

The Bidder shall designate, in writing, an executive of its company who will have overall responsibility for implementing the Bidder's MBE/WBE Utilization Plan. The successful Bidder shall be responsible for maintaining records showing subcontractor awards to MBE and WBE firms and all specific efforts to award subcontracts to such firms even if not successful. A copy of the monthly report form is included in these Requirements. This report form is to be completed by the successful Bidder and submitted to the County with each monthly progress payment application.

Bidders that are either MBEs or WBEs will be allowed to include their own participation towards meeting MBE/WBE participation goals established for this project. In the event a Bidder is a MBE, such Bidder shall remain subject to the goal of subcontracting at least three percent (3%) of the total cost of services to a WBE. In the event a Bidder is a WBE, such Bidder shall remain subject to the goal of subcontracting at least twelve percent (12%) of the total cost of services to a MBE. In the event a Bidder is both a MBE and WBE, the Bidder shall choose one of the two designations and shall remain subject to the subcontracting best efforts requirement for the designation not chosen.

M/WBE firms must be certified by the New York State office of Minority and Women's Business Development or the Monroe County M/WBE Certification Program (locally funded contracts only). The County reserves the right to require specific certification program(s) for its projects.

The successful Bidder shall also be required to submit payment records, which demonstrate payment by the Bidder to all subcontractors, including the MBE and WBE firms utilized on the project. Such submissions shall include affidavits certifying payments to subcontractors for work previously paid for by the County.

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b. Bidder's Detailed M/WBE Utilization Plan

An M/WBE utilization plan shall be submitted with each Bid. The utilization plan must include a detailed MBE/WBE Utilization Plan form and a

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signed Letter of Intent from each of the MBE/WBE firms identified in the Plan.

The Plan must identify the MBE and WBE firms to be utilized by the Bidder. If specific spend information is not available, complete details must be provided on the actual work M/WBEs will complete on the project, together with an explanation as to why spending data is not available shall be provided. If a firm is unable to show attainment of program goals when submitting the utilization plan, Bidder must submit a Request for M/WBE Utilization Waiver with the initial bid. An approved Utilization Plan or granted utilization waiver will be required prior to contract issue. If the Utilization Plan is reviewed and determined to be insufficient and/or a utilization waiver is not granted, the bid may be disqualified as non-responsive.

The County's Director of Diversity, Equity, and Inclusion (DEI) shall be responsible for approving Bidder's MBE/WBE Utilization Plan; any utilization waiver applications; and/or reviewing each subcontractor's MBE or WBE certifications.

The successful Bidder will be obligated, throughout the term of the Contract, to furnish to the County's M/WBE Program Manager copies of all subcontracts with M/WBE firms for Project work. Failure to provide the County with a copy of such subcontracts prior to commencement of the subcontracted work shall constitute a breach of Bidder's obligations and the County shall have the right, at its discretion, to order the work suspended until Bidder has complied with this provision. Any costs associated with or resulting from a suspension of work due to Bidder's failure to comply with this provision shall be Bidder's sole responsibility.

Any amendments to the Utilization Plan submitted by Bidder must be approved by the County's M/WBE Program Manager, including, without limitation, changes in the work to be subcontracted to MBE/WBE firms; changes in the use of MBE/WBE firms; and/or substitutions of MBE/WBE firms. Updated utilization plans shall be submitted for change orders over \$20,000.

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c. Disqualification of Proposals

Without limiting other grounds for the disqualification of bids on the basis of nonresponsiveness and/or nonresponsibility, the County may disqualify a bid as being nonresponsive and/or nonresponsible for failure to provide a timely MBE/WBE Utilization Plan, obtain a waiver, and/or remedy noted deficiencies in the Bidder's MBE/WBE Utilization Plan.

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d. Best Effort

Where it appears that a Bidder, after making its best efforts, cannot comply with M/WBE participation requirements, a Bidder may submit a written application with its bid requesting a partial or total waiver of such requirements, setting forth the reasons for the Bidder's inability to meet any or all of the participation requirements and an explanation of the efforts undertaken by the Bidder to obtain the required participation of certified businesses. The County's Director of DEI will evaluate utilization waiver applications to determine if the Bidder's efforts are sufficient to grant the waiver. Efforts to obtain M/WBE participation that are merely pro forma are

not best efforts, nor are efforts that, even if they are sincerely motivated, given all relevant circumstances, could not reasonably be expected to produce a level of M/WBE participation sufficient to meet the goal. In order to evaluate a Bidder's best efforts, the County's Director of DEI will consider the quality, quantity, and intensity of the different kinds of efforts that the Bidder has made. Below is a list of the types of actions which the County's Director of DEI will consider as part of the Bidder's best efforts to obtain M/WBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exhaustive or exclusive. Other factors or types of efforts may be relevant in appropriate cases:

1. The Bidder shall conduct market research to identify small business contractors and suppliers and solicit, through all reasonable and available means, the interest of all certified M/WBEs that have the capability to perform the work of the contract. This may include attendance at pre-bid and business matchmaking meetings and events; advertising and/or written notices; posting of notices of sources sought and/or requests for proposals, written notices or emails to all certified M/WBEs listed in the appropriate directory of certified firms that specialize in the areas of work desired and which are located in the area or surrounding area.
2. The Bidder shall solicit this interest as early in the bidding process as practicable, to allow the M/WBEs to respond to the solicitation and submit a timely offer. The Bidder shall determine with certainty if the M/WBEs are interested by taking appropriate steps, including following up the initial solicitation with at least one additional solicitation via a different media. **The Bidder shall solicit quotes from qualified firms listed in the NYS M/WBE or Monroe County directory, regardless if they have their own database of M/WBE firms.** The Bidder shall keep records of efforts to solicit and negotiate with M/WBEs as evidence of best efforts. These records must include the firms contacted, method of contact, evidence of actions, and contact information of individuals that were sent outreach efforts. M/WBE firms should be given a minimum of 10 business days to submit quotes.
3. Selecting portions of the work to be performed by M/WBEs in order to increase the likelihood that the M/WBE goal will be achieved. This includes, where appropriate, either breaking down operations or combining like or related operations into logistically and

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economically feasible units to facilitate M/WBE participation, **even when the Bidder might prefer to perform these work items with its own forces.** This may include, where possible, establishing flexible time frames for performance and delivery schedules in a manner that encourages and facilitates M/WBE participation

4. Providing interested M/WBEs with adequate information on where and how to obtain the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation with their timely offer.
5. Negotiating in good faith with interested M/WBEs. It is the Bidder's responsibility to make a portion of the work available to M/WBE subcontractors and material suppliers and to select those portions of the work or material needs consistent with the available M/WBE subcontractors and material suppliers, to facilitate M/WBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of M/WBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for M/WBEs to perform the work.
6. Additional Costs. The fact that there may be some additional costs involved in finding and using M/WBEs is not in itself sufficient reason for a Bidder's failure to meet the contract M/WBE goal, as long as such costs are reasonable. The ability or desire of a Bidder to perform the work of a contract with its own organization does not relieve the Bidder of the responsibility to make best efforts.
7. Replacement Firms. A Bidder's inability to find a replacement M/WBE at the original price is not sufficient to support a finding that best efforts have been made to replace the original M/WBE. The fact that the Bidder has the ability and/or desire to perform the contract work with its own forces does not relieve the Bidder of the obligation to make best efforts to find a replacement M/WBE, and it is not a sound basis for rejecting a prospective replacement M/WBE's reasonable quote.

8. Making efforts to assist interested M/WBEs in obtaining bonding, lines of credit or insurance as required by the Department or the Bidder.
9. Making efforts to assist interested M/WBEs in obtaining necessary equipment, supplies, materials, or related assistance.
10. The County's M/WBE Program Manager will provide assistance to potential bidders in connecting with M/WBEs.

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e. Payment Deductions

The Bidder's failure to perform in accordance with an approved M/WBE Utilization Plan shall constitute a default by the Bidder of the obligations under the Contract. In the event of such a default by Bidder, the County shall be entitled to deduct payment to Bidder in the percentage amount of the Contract which equals Bidder's shortfall from the M/WBE participation goals for this project. Such deductions by the County may begin with the Bidder's initial payment application, and will carry-over to subsequent payment applications until the total amount of the deductions equals the amount of the MBE/WBE participation goal shortfall. In the event the Bidder thereafter performs in accordance with an approved M/WBE Utilization Plan, the County will reimburse any payment deductions made pursuant to this provision. In the event the Bidder continues to fail to perform in accordance with an approved M/WBE Utilization Plan, the County will retain any payment deductions made pursuant to this provision and may seek any other rights and remedies available to County under law or in equity.

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f. Additional Requirements

1. M/WBE Supplier

M/WBE supplier participation shall be based on 50% of their contract amount. This participation shall be based on 100% of contract amount if said MBE/WBE installs the material they are supplying.

A supplier is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. It is a firm that engages in, as its principal business, and in its own name, the purchase and sale of the products in question. One who deals in bulk items such as steel, cement, gravel,

stone and petroleum products need not keep such products in stock, if it owns or operates distribution equipment.

2. M/WBE Trucking

No material costs will be credited towards a project's M/WBE goals. M/WBE trucking participation credit will be granted for the utilization of M/WBE owned or leased equipment only.

3. M/WBE Labor Only Subcontracts

The M/WBE subcontractor shall submit documentation of the relationship between its work force and the Bidder's work force. The Bidder and the M/WBE subcontractors shall submit copies of the certified payrolls to the County (or designee).

4. M/WBE Subcontract to Non-M/WBE

In order to allow management flexibility for M/WBE firms, the M/WBE firms are permitted to subcontract up to 49% of any single M/WBE subcontract to non-M/WBEs and still have the whole M/WBE subcontract count towards fulfillment of the M/WBE utilization requirement. If the M/WBE firm contracts out more than 49% of any single M/WBE subcontract to non-M/WBE firms, the Subcontract between the M/WBE and the prime Bidder shall no longer be considered a bona fide M/WBE subcontract.

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g. Conditions of Participation

M/WBE participation will be counted toward meeting the M/WBE contract goals, subject to all of the following conditions:

1. Commercially Useful Function

The Bidder is responsible for ensuring that M/WBEs working on the contract perform a commercially useful function. A M/WBE is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of work on a contract and carries out his/her responsibilities by actually performing, managing, and supervising the work involved in accordance with normal industry practice (except where such practices are inconsistent with the M/WBE regulations). Arrangements that erode the ownership, control, or independence of the M/WBE or in any other way does not meet the commercially useful function requirement, the Bidder shall receive no credit toward the goal.

2. Work Force

The M/WBE firm must employ a work force (including administrative and clerical) separate and apart from that employed by the Bidder, other subcontractors on the project, or their affiliates. This does not preclude the employment by the M/WBE of an individual that has been previously employed by another firm involved in the Contract, provided that the individual was independently recruited by the M/WBE in accordance with customary industry practice. The routine transfer of work crews from another employer to the M/WBE shall not be allowed.

3. Supervision

All work performed by the M/WBE must be controlled and supervised by the M/WBE without duplication of supervisory personnel from the Bidder or other subcontractors. This does not preclude routine communication between the supervisory personnel of the M/WBE and other supervisors necessary to coordinate the work of the contract.

4. Equipment

M/WBE subcontractors may supplement their equipment by renting or leasing additional equipment in accordance with customary industry practice. However, no more than

50% of the equipment required to perform the work of the subcontractor may be obtained from the Bidder, other subcontractors on the project, or their affiliates. If the M/WBE obtains equipment from any of those sources, the County of Monroe shall receive from the M/WBE documentation demonstrating that similar equipment and terms could not be obtained at a lower cost from other customary sources of equipment. The required documentation shall include, but not be limited to, copies of the rental or leasing agreements, and the names, addresses, and terms quoted by other sources of equipment.

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h. Certification Process

The State of New York and Monroe County maintains a list of firms which have previously been certified as MBE's or WBE's as those terms are defined below.

1. Definitions

The following terms are defined as follows:

- (a) Minority Business Enterprise (MBE) - an independent business completely or substantially owned, controlled and operated by one or more members of specified minority groups or socially and economically disadvantaged individuals.
- (b) Women's Business Enterprise (WBE) - an independent business completely or substantially owned, controlled and operated by one or more women.
- (c) Independent - demonstrably free from any control, domination or undue influence by individuals or businesses who are not intended to be primary beneficiaries of the MBE/WBE program.
- (d) Business - an entity capable of performing a commercially useful function, including

management and supervision of the work.

- (e) Owned, controlled and operated - minority or women owners must: (a) have at least 51% of the beneficial ownership interest of the business; (b) share in the risks and profits commensurate with their percentage of ownership; (c) possess the power to direct or cause the direction of the management and policies of the business; (d) be actively involved in the day-to-day management and operation of the firm.
- (f) Specified minority groups - Black Americans, Hispanic Americans, Native Americans and Asian Pacific Americans.
- (g) Socially and economically disadvantaged - member of a group or an individual found to be socially and economically disadvantaged by the U.S. Small Business Administration under Section 8(a) of the Small Business Act, as amended (15 USC Section 637 (a)).

INSURANCE REQUIREMENTS
INDEMNIFICATION

The Contractor shall procure and maintain at his own expense until final completion of the work covered by the Contract, insurance for liability for damages imposed by law of the kinds and in the amounts hereinafter provided, issued by insurance companies authorized to do business in the State of New York, covering all operations under the Contract whether performed by the Contractor or by his subcontractors. Monroe County must be named as Additional Insured on the General Liability and Motor Vehicle policies. The ACORD form shall name Monroe County as additional insured and certificate holder. **The General Liability and Motor Vehicle policies shall also include separate endorsement(s) naming Monroe County as an Additional Insured.**

Within ten (10) days after notice of award, the Contractor shall furnish to the County a certificate or certificates of insurance in a form satisfactory to the Monroe County Attorney (a sample form is attached to these specifications) showing that he has complied with all insurance requirements set forth herein, which certificate or certificates shall provide that the policies shall not be changed or canceled until thirty (30) days written notice has been given to the County. Except for Workers' Compensation Insurance, no insurance required herein shall contain any exclusion of municipal operations performed in connection with the Contract resulting from this bid solicitation. The kinds and amounts of insurance are as follows:

- A. **WORKERS' COMPENSATION AND DISABILITY INSURANCE:** A policy covering the operations of the Contractor in accordance with the provisions of Chapter 41 of the Laws of 1914, as amended, known as the Workers' Compensation Law, covering all operations under Contract, whether performed by him or by his subcontractors. The Contract shall be void and of no effect unless the person or corporation making or executing same shall secure compensation coverage for the benefits of, and keep insured during the life of said Contract, such employees in compliance with the provisions of the Worker's Compensation Law known as the Disability Benefits Law (Chapter 600 of the Laws of 1949) and amendments hereto.

Below are Monroe County accepted Workers' Comp forms and Disability Benefits:

Worker's Comp Forms (obtain from (www.wcb.ny.gov))

- 1) C-105.2 (or U-26.3)
- 2) SI-12 (or GSI 105.2)
- 3) CE-200

Disability Benefits Insurance (obtain from (www.wcb.ny.gov))

- 1) DB-120.1
- 2) DB-155
- 3) CE-200

- B. **LIABILITY AND PROPERTY DAMAGE INSURANCE:**

- (1) CONTRACTOR'S GENERAL LIABILITY INSURANCE issued to the Contractor and covering the liability for damages imposed by law upon the Contractor with respect to

all work performed by him under the within Contract. All of the following coverages shall be included:

Comprehensive Form
Premises-Operations
Products/Completed Operations
Contractual Insurance covering the Hold Harmless Provision
Broad Form Property Damage
Independent Contractors
Personal injury

(2) Unless otherwise specifically required by special specifications, each policy shall have limits of not less than the following:

BODILY INJURY LIABILITY	PROPERTY DAMAGE LIABILITY	AGGREGATE
Each Occurrence	Each Occurrence	
\$1,000,000	\$1,000,000	\$3,000,000

C. **MOTOR VEHICLE INSURANCE** issued to the Contractor and covering public liability and property damage on the Contractor's vehicles in the amount of:

BODILY INJURY LIABILITY	PROPERTY DAMAGE LIABILITY
Each Occurrence	Each Accident
\$1,000,000	\$1,000,000

A sample insurance certificate is included with these specifications. All categories and amounts of insurance required for this bid project have been checked off on the sample. These are the minimum requirements that the Contractor must supply. Failure to supply a satisfactory certificate within ten (10) days after receipt of Notice of Award may result in the cancellation of the award.

Rev. 5/23/2012



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:		
	PHONE (A/C, No, Ext):	FAX (A/C, No):	
	E-MAIL ADDRESS:		
	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A :		
	INSURER B :		
INSURED	INSURER C :		
	INSURER D :		
	INSURER E :		
	INSURER F :		

COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	GENERAL LIABILITY						EACH OCCURRENCE	\$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY	<input type="checkbox"/> Y	<input type="checkbox"/>				DAMAGE TO RENTED PREMISES (Ea occurrence)	\$
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person)	\$
							PERSONAL & ADV INJURY	\$
							GENERAL AGGREGATE	\$ 3,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	\$
	<input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC							\$
	AUTOMOBILE LIABILITY	<input type="checkbox"/> Y	<input type="checkbox"/>				COMBINED SINGLE LIMIT (Ea accident)	\$
	<input checked="" type="checkbox"/> ANY AUTO						BODILY INJURY (Per person)	\$
	<input type="checkbox"/> ALL OWNED AUTOS						BODILY INJURY (Per accident)	\$ 1,000,000
	<input type="checkbox"/> HIRED AUTOS						PROPERTY DAMAGE (Per accident)	\$ 1,000,000
	<input type="checkbox"/> SCHEDULED AUTOS							\$
	<input type="checkbox"/> NON-OWNED AUTOS							
	UMBRELLA LIAB						EACH OCCURRENCE	\$
	<input type="checkbox"/> EXCESS LIAB						AGGREGATE	\$
	<input type="checkbox"/> OCCUR							\$
	<input type="checkbox"/> CLAIMS-MADE							
	DED							
	RETENTION \$							
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						WC STATUTORY LIMITS	OTHER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICE/MEMBER EXCLUDED? (Mandatory in NH)	<input type="checkbox"/> Y / <input type="checkbox"/> N	<input type="checkbox"/> N / <input type="checkbox"/> A				E.L. EACH ACCIDENT	\$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	\$
							E.L. DISEASE - POLICY LIMIT	\$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

REFER TO BID PROJECT #0101-24 HIGHWAY EQUIPMENT AND SERVICES GROUP I

MONROE COUNTY MUST BE NAMED AS ADDITIONAL INSURED AND AS SUCH REQUIRES THE ENDORSEMENT FOR GENERAL LIABILITY AND AUTOMOBILE LIABILITY.

CERTIFICATE HOLDER**CANCELLATION**

MONROE COUNTY ATTN: SEAN WILCOX, BUYER 39 WEST MAIN STREET, ROOM 200 ROCHESTER NY 14614	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
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IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s) representative or producer and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

-POLICY NUMBER:

COMMERCIAL AUTO
CA 20 48 02 99

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIER COVERAGE FORM
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Endorsement Effective:	Countersigned By:
Named Insured:	(Authorized Representative)

SCHEDULE

Name of Person(s) or Organization(s):

As required by contract or agreement

If required by contract, this coverage shall be primary and any insurance maintained by the additional insured will apply on an excess basis; however, in no event will this additional insured coverage extend beyond the terms and conditions of the written contract.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to the endorsement.)

Each person or organization shown in the Schedule is an "insured" for Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured Provision contained in Section II of the Coverage Form.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – SCHEDULED PERSON OR
ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization:

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

A. Section II – Who Is An Insured is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.

B. With respect to the insurance afforded to these additional insureds, the following exclusion is added:

2. Exclusions

This insurance does not apply to "bodily injury" or "property damage" occurring after:

- (1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or
- (2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

COMPLIANCE WITH FEDERAL SINGLE AUDIT ACT

In the event the Contractor is a recipient through this contract, directly or indirectly of any funds of or from the United States Government, Contractor agrees to comply fully with the terms and requirements of Federal Single Audit Act [Title 31 United States Code, Chapter 75], as amended from time to time. The Contractor shall comply with all requirements stated in Federal Office of Management and Budget Circulars A-102, A-110 and A-133 and such other circulars, interpretations, opinions, rules or regulations that may be issued in connection with the Federal Single Audit Act.

If on a cumulative basis the Contractor expends Seven Hundred Fifty Thousand and no/100 Dollars (\$750,000.00) or more in federal funds in any fiscal year, it shall cause to have a single audit conducted, the Data Collection Form (defined in Federal Office of Management and Budget Circular A-133) shall be submitted to the County; however, if there are findings or questioned costs related to the program that is federally funded by the County, the Contractor shall submit the complete reporting package (defined in Federal Office of Management and Budget Circular A-133) to the County.

If on a cumulative basis the Contractor expends less than Seven Hundred Fifty Thousand and no/100 Dollars (\$750,000.00) in federal funds in any fiscal year, it shall retain all documents relating to the federal programs for three (3) years after the close of the Contractor's fiscal year in which any payment was received from such federal programs.

All required documents must be submitted within nine (9) months of the close of the Contractor's fiscal year end to:

Monroe County Internal Audit Unit
304 County Office Building
39 West Main Street
Rochester, New York 14614

The Contractor shall, upon request of the County, provide the County such documentation, records, information and data and response to such inquiries as the County may deem necessary or appropriate and shall fully cooperate with internal and/or independent auditors designated by the County and permit such auditors to have access to, examine and copy all records, documents, reports and financial statements as the County deems necessary to assure or monitor payments to the Contractor under this contract.

The County's right of inspection and audit pursuant to this contract shall survive the payment of monies due to Contractor and shall remain in full force and effect for a period of three (3) years after the close of the Contractor's fiscal year in which any funds or payment was received from the County under this contract.

**PROPER ATTIRE MUST BE WORN BY ALL WORKERS PERFORMING UNDER
THIS CONTRACT CONSISTING OF:**

- **LONG PANTS**
- **SHIRTS WITH SHORT OR LONG SLEEVES INCLUDING TEE SHIRTS (NO TANK TOPS OR MUSCLE SHIRTS)**
- **REFLECTIVE VEST**
- **HARD HAT**
- **STEEL TOE SHOES OR BOOTS**

Monroe County Department of Transportation

2024 Group 1: Highway Equipment & Services

Technical Specifications

The item numbers and descriptions on the following page will provide the reference between the technical specifications and the Bid Proposal Sheets.

2024 Group 1: Highway Materials

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Item 5 – Fiber Reinforced Surface Treatment

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Item 30 – Trees and Shrubs (Furnish, Deliver, and/or Plant)

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Item 35 – Rubber Tire Skid Steer Loader Rental & Operator

ASPHALT PRICE ADJUSTMENT APPENDIX

DESCRIPTION

Asphalt price adjustments will be allowed based on the **December 2023** New York State Department of Transportation (NYSDOT) Average Posted Price for Asphalt (Performance Grade Binder); this will be considered the Base Index Price. Monthly Average Posted Prices for Asphalt (Performance Graded Binder) are determined by NYSDOT based on prices of pre-approved primary sources of Performance Graded Binder in accordance with NYSDOT Standard Specifications. Instructions for calculating the Asphalt Price Adjustment (Item 698.04) are contained in the NYSDOT Standard Specifications; the formula is included below.

The December 2023 Average Posted Price for Asphalt (Performance Graded Binder) is \$615.00 per US Ton; this will be considered the Index Price.

Note: The same grade of asphalt used in establishing the Base Index Price shall be used in establishing the New Monthly Average Price.

1. In the event that one or more of the NYSDOT preapproved sources discontinue posting a monthly Average Posted Price for Asphalt, the Base Index Price **shall not be recalculated**.
2. Price Adjustments will be in accordance with the formula below and will be effective for deliveries made on and after the first of the month.
3. The **unit price per Ton of Bituminous Asphalt** material for any item referencing this Appendix will be subject to adjustment based on the following formula:

Asphalt Price Adjustment (per Ton)	=	New Monthly Average (per Ton)	-	Base Index Price (per Ton)	x	Total % Asphalt + Fuel Allowance
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4. The **unit price per Square Yard (SY) of Paver Placed Surface Treatment (NOVA CHIP)** material for any item referencing this Appendix will be subject to adjustment based on the following formula:

NOVA CHIP Adjustment (per SY)	=	New Monthly Average (per Ton)	-	Base Index Price (per Ton)	X	.07 (7% Total Petroleum)	x	0.03
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5. The **unit price per Square Yard (SY) of Fiber Reinforced Surface Treatment** material for any item referencing this Appendix will be subject to adjustment based on the following formula:

Fiber Reinforced Surface Treatment Adjustment (per SY)	=	New Monthly Average (per Ton)	-	Base Index Price (per Ton)	x	Total % Asphalt + Fuel Allowance	x	0.40
		235						

ASPHALT PRICE ADJUSTMENT APPENDIX

6. The **unit price per Gallon (GAL) of Liquid Bituminous Asphalt Emulsion** material for any item referencing this Appendix will be subject to adjustment based on the following formula:

Price Adjustment (per Gallon)	=	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">New Monthly Average (per Ton)</div> <div style="text-align: center;">-</div> <div style="text-align: center;">Base Index Price (per Ton)</div> </div> <div style="border-top: 1px solid black; text-align: center; margin-top: 5px;">235</div>	x	Total % Asphalt + Fuel Allowance
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NEW MONTHLY AVERAGE PRICE

The new Average Posted Price for Asphalt (Performance Graded Binder) as determined by NYSDOT each month after the bid letting in accordance with NYSDOT Standard Specifications.

BASE INDEX PRICE

The **December 2023** Average Posted Price for Asphalt (Performance Graded Binder) as determined by NYSDOT; **\$615.00 per Ton**.

TOTAL % ASPHALT PLUS FUEL BY MATERIAL TYPE

The percentage of total allowable Asphalt and Fuel for each item is as follows:

ITEM	% ASPHALT	% FUEL ALLOWANCE *	TOTAL % ASPHALT + FUEL ALLOWANCE
Hot Mix Asphalt (HMA) and Warm Mix Asphalt (WMA)			
Type MC1 Binder Course (County #1 Binder)	5.75%	1.00%	6.75%
Flexible Overlay (Smooth Seal)	7.00%	1.00%	8.00%
Flexible Top (County Top)	6.20%	1.00%	7.20%
True & Leveling F9 (< 0.3 M ESAL's)	**	1.00%	***
Shim Course F9 (< 0.3 M ESAL's)	8.25%	1.00%	9.25%
6.3 F2 Top Course (< 0.3 M ESAL's)	6.70%	1.00%	7.70%
9.5 F2 Top Course (< 0.3 M ESAL's)	6.20%	1.00%	7.20%
12.5 F2 Top Course (< 0.3 M ESAL's)	5.50%	1.00%	6.50%
19 F9 Binder Course (< 0.3 M ESAL's)	4.90%	1.00%	5.90%
25 F9 Binder Course (< 0.3 M ESAL's)	4.50%	1.00%	5.50%
37.5 F9 Base Course (< 0.3 M ESAL's)	4.00%	1.00%	5.00%
Paver Placed Surface Treatment (NOVA CHIP)	6.40%	0	6.40%
Asphalt Emulsions			
CMS-2	65.00%	12.20%	77.20%
CRS-2	65.00%	3.20%	68.20%
CRS-2p	65.00%	3.20%	68.20%
CSS-1	57.00%	0.20%	57.20%
CSS-1h	57.00%	0.20%	57.20%
RS-2	63.00%	3.20%	66.20%
RS-2p	63.00%	3.20%	66.20%
HFRA	65.00%	5.00%	70.00%

ASPHALT PRICE ADJUSTMENT APPENDIX

HFMS-2	65.00%	10.20%	75.20%
HFMS-2gh	75.00%	3.00%	78.00%
HFMS-2h	65.00%	3.20%	68.20%
HFRS-2	63.00%	3.20%	66.20%
HFRS-2p	63.00%	3.20%	66.20%
HFMS-2h Tack coat	40.00%	0.20%	40.20%
RS-1h (Rapid breaking tack)	55.00%	0.20%	55.20%
CSS-1h Tack Coat	57.00%	0.20%	57.20%
PG 64-22 (AC-20 w/ fiber crack fill)	95.00%	0	95.00%
18-64	100.00%	0	100.00%
Polymer Crack fill (ASTM D6690)	56.00%	0	56.00%
MC 30	100.00%	2.00%	102.00%
DEC 50	25.00%	25.00%	50.00%

*Fuel Allowance represents an allowance for energy (fuel, electricity, natural gas) used in the production of Asphalt. It is a cost associated with the material and not intended to represent any trucking or hauling of the material.

** The % Asphalt shall be computed separately using the conversion factors for the individual Asphalt mixture used.

** The total % Asphalt + Fuel Allowance will vary depending on the % Asphalt used.

EXAMPLE BITUMINOUS ASPHALT PRICE ADJUSTMENT CALCULATION

Item being adjusted: 9.5 F2 Top Course (< 0.3 M ESAL's)

Base Index Price = \$615.00 per Ton

New Average Price = \$750.00 per Ton

Total % Asphalt plus Fuel = 6.20% + 1.00% = 7.2%

$(\$750.00 - \$615.00) \times 0.072 = +\9.72 per Ton

EXAMPLE ASPHALT EMULSION PRICE ADJUSTMENT CALCULATION

Item being adjusted: Hand spray using HFRS-2p (Polymer Modified High Float Rapid Setting Asphalt Emulsion)

Base Index Price = \$615.00 per Ton

New Average Price = \$750.00 per Ton

Total % Asphalt plus Fuel = 63.00% + 3.20% = 66.20%

$(\$750.00 - \$615.00) \times 0.6620 = +\0.38 per Gallon

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Note: All materials with identical numbers preceding the decimal and identical first and second number after the decimal receive the price adjustment shown for the base material.

Positive Price Adjustment number shall be added to original bid price per Ton.

ASPHALT PRICE ADJUSTMENT APPENDIX

Negative Price Adjustment number shall be subtracted from original bid price per Ton.

Price adjustments allowed by this contract shall be calculated and applied to the original unit bid prices. **There will not be price adjustments unless the calculated adjustment results in more than \$0.10 per Ton from the original unit bid price for Hot Mix Asphalt (HMA) and Warm Mix Asphalt (WMA), and \$0.01 for Asphalt Emulsions and Paver Placed Surface Treatment (NOVA CHIP).** In instances where the calculated adjustment is less than these values, prices will revert back to the original bid unit prices.

All price adjustments shall be computed to two (2) decimal places.

Should these provisions result in a price structure which becomes unworkable, detrimental, or injurious to the County, in unit prices which are not truly reflective of market conditions, or which are deemed by the Monroe County Director of Transportation to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Monroe County Director of Transportation reserves the sole right upon ten (10) days written notice mailed to the Vendor(s)/Contractor(s) to terminate any contract resulting from this bid opening.

Monthly price adjustment shall be published by Monroe County and issued to all contract holders, whose responsibility it will be to attach the appropriate Monroe County notification (based on when the work was performed) to the payment invoice submitted to Agency.

Work performed after expiration of the contract, where no extension has been granted, resulting from purchase orders placed prior to expiration of the contract, will receive monthly price adjustments based on the monthly average price in effect during the last month of the contract.

Monthly price adjustments for any contracts that are extended will be based on the new average for the month in which the work is completed applying the same Base Index Price established for that contract.

ITEM 1 LIQUID BITUMINOUS (SURFACE TREAT & FOG SEAL)

DESCRIPTION

The work will involve the furnishing, delivering, and applying bituminous materials through an approved distributor for application in surface treating pavements at any point in Monroe County. The liquid bituminous materials will be provided and paid for by the gallon. The liquid bituminous for Surface Treating will be provided with or without an aggregate spreader as indicated in the item options.

MATERIALS

All materials shall meet the requirements of the current version of the New York State Department of Transportation Standard Specifications Section 702 Bituminous Materials and Section 703 Aggregates. Bituminous cold mix shall meet the requirements of Section 405 Cold Mix Bituminous Pavement (Open Graded).

The bituminous material shall be obtained from a primary source/supplier that has been approved by the NYSDOT Materials Bureau. The liquid bituminous material for Surface Treatment shall be selected by the Vendor/Contractor from the following list:

702-3101	RS-2	Rapid Setting Asphalt Emulsion
702-3102	HFRS-2	High Float Rapid Setting Asphalt Emulsion
702-3301	HFMS-2	High Float Medium Setting Asphalt Emulsion
702-4101	CRS –2	Cationic Rapid Setting Asphalt Emulsion
702-4501	CSS –1h	Cationic Slow Setting Asphalt Emulsion
702-3701	RS-2p	Polymer Modified Rapid Setting Asphalt Emulsion
702-3801	HFRS-2p	Polymer Modified High Float Rapid Setting Asphalt Emulsion
702-4702	CRS-2p	Polymer Modified Cationic Rapid Setting Asphalt Emulsion

If polymer modifiers are chosen for use the bitumen content shall be determined by the laboratory performing the mix designs. The minimum polymer modifier content shall be 3% polymer solids, based on bitumen weight. The polymer material shall be milled or blended into the asphalt of blended into the emulsifier solution prior to the emulsification process.

Aggregates for each process will be purchased and delivered by the Agency. All aggregates shall conform to the requirements of Section 703-02 Coarse Aggregate. The Agency will select the size designation of aggregate stone to be used. Sampling and testing of the aggregate shall be the responsibility of the Vendor / Contractor.

EQUIPMENT

All equipment shall be maintained in satisfactory working condition at all times.

Liquid Bituminous Material Distributor - The liquid bituminous distributor shall be a bituminous distributor that has been calibrated within the previous 12 months for transverse and longitudinal application rate by ASTM-D2995. The distributor shall be equipped, maintained, and operated so that the bituminous material can be applied at controlled temperature and rates from 0.12 to 1.68

ITEM 1 LIQUID BITUMINOUS (SURFACE TREAT & FOG SEAL)

gallons per sq. yard. The distributor shall uniformly apply the material to the specified rate with a maximum allowed variation of 0.016 gallons liters per square yard.

Aggregate Spreader - The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of 6 inches wider than the width of the lane to be treated. The spreader shall be calibrated, within the previous 12 months, for transverse and longitudinal application using several sheets of canvass each being 1 foot by 3 feet and a portable scale, similar to ASTM-D2995 for bituminous distributors.

Pneumatic Rubber Tire Roller (Option) - The Vendor/Contractor shall supply a Pneumatic Rubber Tire Roller(s) and experienced pneumatic rubber tire roller operator to properly roll the aggregate as to not crush the aggregate.

Preparation of the Surface

All areas to be treated will be prepared by the Agency. Any portion of the existing pavement surface to be treated deemed to be deficient by the Vendor/Contractor and agreed to by the Agency shall receive an additional treatment by either application of fog seal or an additional single surface treatment.

METHOD OF MEASUREMENT

The liquid bituminous material shall be the number of gallons @ 60°F of specified material applied and in place.

BASIS OF BID

The unit price bid per Gallon for surface treating shall include all costs of furnishing, delivering, heating and applying the bituminous material through an approved bituminous distributor: the bid will include options with or without the cost of an approved self-propelled aggregate spreader.

Surface Treat A: The bid price per Gallon **WILL NOT** include the cost of an aggregate spreader.

Surface Treat B: The bid price per Gallon (Gal) **shall** include the cost of an aggregate spreader

Pneumatic Rubber Tire Roller (Option) The unit price per Square Yard (SY) shall include all costs of furnishing, delivering, and operating the self-propelled pneumatic roller.

BASIS OF AWARD

The County will award by each individual item as shown in the proposal.

ITEM 1 LIQUID BITUMINOUS (SURFACE TREAT & FOG SEAL)

ASPHALT PRICE ADJUSTMENTS

Asphalt price adjustments will be made according to the provisions provided in the asphalt adjustment Appendix. Each oil used in the treatment is eligible for adjustments according to the provisions contained in the Appendix.

BASIS OF PAYMENT

Payment will be made under the following items by Gallon (Gal) or Square Yard (SY). Surface treat emulsions will be either Surface Treat A or Surface Treat B.

ITEM	DESCRIPTION	UNIT
RS-2 Emulsion	Surface Treat using RS-2 Rapid Setting Asphalt Emulsion	Gallon (GAL)
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)
HFRS-2 Emulsion	Surface Treat using HFRS-2 High Float Rapid Setting Asphalt Emulsion	Gallon (GAL)
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)
CRS –2 Emulsion	Surface Treat using CRS –2 Cationic Rapid Setting Asphalt Emulsion	Gallon (GAL)
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)
RS-2p Emulsion	Surface Treat using RS-2p Polymer Modified Rapid Setting Asphalt Emulsion	Gallon (GAL)
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)
HFRS-2p Emulsion	Surface Treat using HFRS-2p Polymer Modified High Float Rapid Setting Asphalt	Gallon (GAL)
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)
CRS-2p Emulsion	Surface Treat using CRS-2p Polymer Modified Cationic Rapid Setting Asphalt Emulsion	Gallon (GAL)
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)
HFMS-2 Emulsion	Surface Treat/Fog Seal using HFMS-2 High Float Medium Setting Asphalt Emulsion	Gallon (GAL)
CSS-1h Emulsion	Surface Treat/Fog Seal using CSS-1h Cationic Slow Setting Asphalt Emulsion	Gallon (GAL)

ITEM 2

DENSE GRADE COLD MIX PAVING

GENERAL

This specification describes the minimum material and quality requirements for Dense Graded Cold Mix Bituminous Pavement courses. All work required to furnish, mix, and place a Dense Graded Cold Mix Bituminous Pavement shall meet the requirements of Section 405 Cold Mix Bituminous Pavement (Open Graded) of the current version of the New York State Department of Transportation Standard (NYSDOT) Specifications, and as specified herein.

DESCRIPTION

- a) The work shall consist of constructing one or more courses of dense graded cold mix bituminous pavement on a prepared base in accordance with these specifications and in substantial conformance with the lines, grades, thicknesses, and typical cross-sections shown on the plans or established by the Agency.
- b) Prior to the start of the pavement process, the Vendor/Contractor shall review the preparation of base and acknowledge the roadway surface to be covered is free from holes, depressions, bumps, waves, and corrugations. Any unsuitable surface areas must first be repaired by replacement of the unstable materials or by patching with a material to produce a tight surface having the same elevation as the surrounding surface.
- c) After placement of dense graded cold mix pavement, the mixture shall be thoroughly and uniformly compacted with a self-propelled steel-wheeled roller or an approved vibratory roller to obtain a thoroughly compacted pavement. The number of roller passes to achieve the desired compaction shall be reviewed and approved by the Vendor/Contractor and Agency.
- d) The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while placing the Dense Graded Cold Mix Bituminous Pavement. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

MATERIALS

- a) Aggregates shall meet all requirements specified in the current version of NYSDOT Standard Specifications Sections 703-01 Fine Aggregate and 703-02 Coarse Aggregate and be provided from a NYSDOT approved source, purchased by the Agency, and delivered to a pre-determined mixing site a maximum of 6 miles from the paving project location.
- b) All coarse and fine aggregates shall be 100% crushed stone, meeting the gradations below; tested and approved by the Vendor/Contractor.
- c) Bituminous materials shall meet all requirements specified in the current version of NYSDOT Standard Specifications Section 702 Bituminous Materials, and as specified herein.

ITEM 2**DENSE GRADE COLD MIX PAVING**

- d) Asphalt emulsion shall conform to the current version of NYSDOT Standard Specifications Section 702 Bituminous Materials as follows: HFMS-2GH or CMS-2 with a minimum of 70% asphalt and as specified herein.
- e) Vendor/Contractor shall validate mix design and determine required residual asphalt based on an analysis of existing pavement gradation and asphalt cores.

Dense Graded Cold Mix Bituminous Pavement Types:

	Type 1	Type 2	Type 3
	Percent Passing	Percent Passing	Percent Passing
Screen Sizes	#1A's & Sand	#1's & Sand	#2's , 1's & Sand
2"			
1.5"			100
1"		100	95 - 100
1/2"	100	90 - 100	50 - 90
1/4"	90 - 100	30 - 70	30 - 74
1/8"	30 - 70	15 - 65	15 - 62
#20	5 - 40	5 - 40	5 - 40
#40	3 - 25	3 - 25	3 - 25
#80	1 - 8	1 - 8	1 - 8
#200	0 - 4	0 - 4	0 - 4
% of Residue	3.5 - 4.4	3.2 - 4.4	3.2 - 4.4
Gal / Ton	12 - 15	11 - 15	11 - 15
Asphaltic Emulsion Type	HFMS-2GH / CMS-2	HFMS-2GH / CMS-2	HFMS-2GH / CMS-2

Notes:

1. Aggregate percentages are based on total weight of aggregate.
2. Bitumen content is based on the total weight of the mix.
3. Aggregate gradation is based on the total weight of the aggregate.
4. Asphalt emulsion is HFMS-2GH or CMS-2.
5. Coarse aggregates (retained on the + 1/8 inch screen) shall consist of approved crushed stone or crushed gravel conforming to the requirements of the current version of NYSDOT Standard Specifications Section 703-02 Coarse Aggregate, except for gradation. Fine aggregates shall consist of material conforming to the requirements of NYSDOT Standard Specifications Section 703-01 Fine Aggregate. In addition, the fine aggregates, including the blended fine aggregate, used in all top courses shall have a Florida Bearing Value of

ITEM 2**DENSE GRADE COLD MIX PAVING**

not less than 45. Test procedures for determining the Florida Bearing Value are available from the NYSDOT Materials Bureau.

Composition of Sand for Cold Mixes (Recommended)*:

Sieve Size	Percent (%) Passing	
	Minimum	Maximum
½"	100%	100%
¼"	95%	100%
1/8"	70%	90%
#20	15%	40%
#40	7%	20%
#80	4%	12%
#200	2%	5%

*Sand shall be processed, crushed, and screened. Bank Run Sand should be avoided.

Specifications for Emulsified Asphalt - HFMS-2GH 70% / CMS-2 70%:

The emulsion is a High Float, Medium Setting emulsion. It shall be homogeneous and shall conform to the following requirements:

Emulsion Properties (a)		Min.	Max.	Viscosity
Saybolt Furol @ 25°C (77°F), sec	50	---		
Storage Stability, 24 hour, %		---	1.0	
Sieve Test, %				0.10
Stone Coating (b)		Pass		
Fines Coating (c)		Pass		
Stripping Test (d)		Pass		
Distillation (e)				
Oil Distillate, by volume of emulsion, %			10	
Residue from distillation, %		70		
Tests on Residue from Distillation:				
Penetration, 25C (77°F) 100g, 5 sec		60	140	
Float Test @ 60°C (140°F), sec		1200	---	
Solubility in Trichloroethylene, %		97.5	---	

Notes:

ITEM 2

DENSE GRADE COLD MIX PAVING

- a) All tests shall be run in accordance with ASTM D-244, except as noted.
- b) ASTM D244, except that the mixture of stone and asphalt emulsion shall be mixed vigorously for 5 minutes, then allowed to stand for 3 hours, after which the mixture shall be capable of being mixed an additional 5 minutes. The mixture shall be then rinsed twice with approximately its own volume of tap water without showing appreciable loss in bituminous film. After the second mixing, the aggregate shall retain 90% of its original coating.
- c) ASTM D244, except the aggregate shall be silica sand. After weighing 500 grams of the sand into the pan, the sand shall be completely immersed in tap water. Rebalance the pan, sand, and water and add 40 grams of emulsion into the sand and water. Mix the sand under water vigorously for 3 minutes. Pour off the excess water. The sand shall be at least 90% coated.
- d) 100 grams of produced mixture shall be heated to 250°F in a laboratory oven for 2 hours. Stir and cool to 200°F. Place the mix in 400 ml of boiling distilled water in a 600 ml glass beaker. Stir with a glass rod at a rate of one revolution per second for 3 minutes. The aggregate shall be at least 90% coated with a bituminous film.
- e) All tests shall be run in accordance with ASTM D-244 except as noted.

The emulsion shall remain homogenous and useable for a minimum of 30 days. The supplier will not be held responsible for emulsion testing of samples that have frozen before testing.

Material that does not fully comply with these specifications will be rejected. The Vendor/Contractor shall be responsible for the cost and disposal of all rejected material.

EQUIPMENT

All equipment and the condition of the equipment for this work shall be subject to approval of the Agency at all times.

- a) **Pug Mill** - Mixing shall be done with a rotating twin paddle shaft Pug Mill providing suitable pressure-kneading action in mixing. Mixing by blading, shoveling and/or scooping will not be permitted. The mixer shall be a central continuous or batch type Pug Mill designed to accurately proportion either by volume or by weight, so that when the aggregate and bituminous materials are incorporated in the mix, a thorough and uniform coating will result. The mixer shall be equipped to mechanically or electrically interlock the bituminous feed with the aggregate feed such that uniformity of the mixture is assured at all times. The Pug Mill mixer shall be provided with weighing, volumetric or other gauging equipment which shall be capable of providing accurate control at all times of the amount of aggregate entering the mixer per time interval. The mixer shall be equipped with a positive displacement metering system capable of totalizing the quantity of bituminous material applied to the mixing chamber. The aggregate feed system must contain a minimum of two (2) compartments or bins; each compartment or bin shall have adjustable feed gates so that the aggregates can be proportioned at the specified rate. The capacities of the cold feed bins shall be sufficient to maintain a continuous flow of material. Each bin

ITEM 2

DENSE GRADE COLD MIX PAVING

shall have a mechanical device for uniform feeding of the aggregate. The mixer unit shall be approved by the Agency prior to commencing any work.

- b) **Paver** - The Paver shall be a Barber-Greene BG-260B or approved equal, equipped with automatic transverse slope and longitudinal grade screed controls. The Paver shall be equipped with a screed that is fully extendible from 10 feet to 19 feet 6 inches. Heat and vibration shall be provided for the full-extended width. The extenders shall have independent slope control and on the go capabilities to change width and slope.
- c) **Roller** - The Roller shall be an Ingersoll-Rand Model DD-110 or approved equal twin drum vibratory with static weight of 22,000 lbs. or more. Drum width shall be a minimum of 78 inches and capable of providing the necessary compaction of the dense graded cold mix.

TRUCKING (Option)

- a) As ordered by the Agency, the Vendor/Contractor shall provide trucking from the Pug Mill plant to the project location. Trucks shall be equipped with tarps to prevent loss of any materials while in transit.
- b) Vendor/Contractor shall provide sufficient trucking, so that the paver shall be in continuous motion from start to finish, or only stopping at logical termination points.
- c) Vendor/Contractor shall cycle trucking to minimize or eliminate transverse seams in pavement mat.
- d) Failure to provide sufficient trucking to keep paver in continuous motion could be cause for termination of Contract. Such trucking shall be an added cost per ton unit price.

METHOD OF MEASUREMENT

- a) Unit price bid per US TON shall include all materials, equipment, and labor required to provide a finished dense graded Cold Mix Bituminous Pavement, at locations identified by the Agency.
- b) Unit bid price shall include all costs necessary for dense graded cold mix design, testing for composition of aggregates, and bituminous materials for the type of pavement course required by the Agency.
- c) Payment shall be the number of Tons of material actually produced at the Pug Mill for delivery. It shall be calculated by dividing the total gallons mixed per day by the average gallons per ton mixed.

EXAMPLE: Gallons of HFMS-2GH 70% or CMS-2 70% delivered (22,050), divided by the gallons per ton added (11.5) equals 1917.39 tons produced.

ITEM 2**DENSE GRADE COLD MIX PAVING**

- d) MPOT for mobile operations shall be provided by the Vendor/Contractor and included in the per ton unit price.

BASIS OF BID

The unit price bid per Ton for the Dense Graded Cold Mix for each type of Asphaltic Emulsion along with the Optional Trucking for each bid.

BASIS OF AWARD

The County will award by each individual item as shown in the proposal.

ASPHALT PRICE ADJUSTMENTS

Asphalt price adjustments will be made according to the provisions provided in the asphalt adjustment Appendix. Each oil used in the treatment is eligible for adjustments according to the provisions contained in the Appendix.

PAYMENT

Payment will be made under the following items:

ITEM	DESCRIPTION	UNIT
HFMS-2GH	Paver Placed Dense Cold Mix Asphalt (HFMS-2GH)	Ton
Option Trucking	OPTION: Trucking for HFMS-2GH (additional cost per Ton)	Ton
CMS-2	Paver Placed Dense Cold Mix Asphalt (CMS-2)	Ton
Option Trucking	OPTION: Trucking for CMS-2 (additional cost per Ton)	Ton

ITEM 3

LIQUID BITUMINOUS (COLD MIX/MOTOPAVE)

DESCRIPTION

The work will involve the furnishing, delivering, and applying bituminous materials through an approved distributor for application in for constructing a cold mix bituminous pavement on a prepared base in accordance with these specifications at any point in Monroe County. The liquid bituminous for Cold Mix/Motopave paving will include an approved cold mix paver.

MATERIALS

All materials shall meet the requirements of the current version of the New York State Department of Transportation (NYSDOT) Standard Specifications Section 702 Bituminous Materials and Section 703 Aggregates. Bituminous cold mix shall meet the requirements of Section 405 Cold Mix Bituminous Pavement (Open Graded).

The bituminous material shall be obtained from a primary source/supplier that has been approved by the NYSDOT Materials Bureau. The liquid bituminous material for Cold Mix/Motopave shall be selected by the Vendor/Contractor from the following list:

702-3301	HFMS-2	High Float Medium Setting Asphalt Emulsion
702-3401	HFMS-2h &2gh	High Float Medium Setting Asphalt Emulsion
702-4201	CMS-2	Cationic Medium Setting Asphalt Emulsion
702-4301	CMS-2h	Cationic Medium Setting Asphalt Emulsion
702-4401	CSS-1	Cationic Slow Setting Asphalt Emulsion
702-4401	CSS-1h	Cationic Slow Setting Asphalt Emulsion
702-4601	CQS-1h	Cationic Quick Setting Asphalt Emulsion

If polymer modifiers are chosen for use, the bitumen content shall be determined by the laboratory performing the mix designs. The minimum polymer modifier content shall be 3% polymer solids, based on bitumen weight. The polymer material shall be milled or blended into the asphalt emulsifier solution prior to the emulsification process.

Aggregates for each process will be purchased and delivered by the Agency. All aggregates shall conform to the requirements of Section 703-02 Coarse Aggregate. The Agency will select the size designation of aggregate stone to be used. Sampling and testing of the aggregate shall be the responsibility of the Vendor / Contractor.

EQUIPMENT

All equipment shall be maintained in satisfactory working condition at all times.

Paver - The bituminous asphalt Vendor/Contractor will provide a self-propelled paver capable of producing, mixing, and placing a cold mix bituminous pavement. The Paver shall meet the requirements of the current version of the NYSDOT Standard Specifications Section 405 Cold Mix Bituminous Pavement (Open Graded).

ITEM 3 LIQUID BITUMINOUS (COLD MIX/MOTOPAVE)

Preparation of the Surface

All areas to be treated will be prepared by the Agency. Any portion of the existing pavement surface to be treated deemed to be deficient by the Vendor/Contractor and agreed to by the Agency shall receive an additional treatment by either application of fog seal or an additional single surface treatment.

METHOD OF MEASUREMENT

The liquid bituminous material shall be the number of 60 °F gallons of specified material applied and in place.

BASIS OF AWARD

The County will award by each individual item as shown in the proposal.

ASPHALT PRICE ADJUSTMENTS

Asphalt price adjustments will be made according to the provisions provided in the asphalt adjustment Appendix. Each oil used in the treatment is eligible for adjustments according to the provisions contained in the Appendix.

BASIS OF PAYMENT

Payment will be made under the following items:

DESCRIPTION	UNIT
Cold Mix/Motopave using HFMS-2 High Float Medium Setting Asphalt Emulsion	Gallon (Gal)
Cold Mix/Motopave using HFMS-2h High Float Medium Setting Asphalt Emulsion	Gallon (Gal)
Cold Mix/Motopave using HFMS-2GH High Float Medium Setting asphalt Emulsion	Gallon (Gal)
Cold Mix/Motopave using CMS-2 Cationic Medium Setting Asphalt Emulsion	Gallon (Gal)
Cold Mix/Motopave using CMS-2h Cationic Medium Setting Asphalt Emulsion	Gallon (Gal)
Cold Mix/Motopave using CSS-1 Cationic Slow Setting Asphalt Emulsion	Gallon (Gal)
Cold Mix/Motopave using CSS-1h Cationic Slow Setting Asphalt Emulsion	Gallon (Gal)
Cold Mix/Motopave using CQS-1h Cationic Quick Setting Asphalt Emulsion	Gallon (Gal)

ITEM 4 HAND SPRAY APPLICATION OF BITUMINOUS MATERIALS

DESCRIPTION

The work will involve the Hand Spray Application of Bituminous Materials with an operator for use in spray patching of various areas at any point in Monroe County.

MATERIALS

All materials shall meet the requirements of the current version of the New York State Department of Transportation Standard Specifications Section 702 Bituminous Materials.

The bituminous material shall be obtained from a primary source/supplier that has been approved by the NYSDOT Materials Bureau. The liquid bituminous material for Surface Treatment shall be selected by the Vendor/Contractor from the following list:

702-3101	RS-2	Rapid Setting Asphalt Emulsion
702-3102	HFRS-2	High Float Rapid Setting Asphalt Emulsion
702-4101	CRS -2	Cationic Rapid Setting Asphalt Emulsion
702-3701	RS-2p	Polymer Modified Rapid Setting Asphalt Emulsion
702-3801	HFRS-2p	Polymer Modified High Float Rapid Setting Asphalt Emulsion
702-4702	CRS-2p	Polymer Modified Cationic Rapid Setting Asphalt Emulsion

If polymer modifiers are chosen for use, the bitumen content shall be determined by the laboratory performing the mix designs. The minimum polymer modifier content shall be 3% polymer solids, based on bitumen weight. The polymer material shall be milled or blended into the asphalt emulsifier solution prior to the emulsification process.

Aggregates for each process will be purchased, delivered, and spread by the Agency. All aggregates shall conform to the requirements of Section 703-02 Coarse Aggregate. The Agency will select the size designation of aggregate stone to be used. Sampling and testing of the aggregate shall be the responsibility of the Vendor / Contractor.

EQUIPMENT

All equipment shall be maintained in satisfactory working condition at all times.

Maintenance and Protection of Traffic

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required during Hand Spray Application of Bituminous Materials. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

ITEM 4 HAND SPRAY APPLICATION OF BITUMINOUS MATERIALS

BASIS OF BID

The unit bid price shall be the cost per Gallon (GAL) to apply bituminous materials with a distributor and operator using hand spray methods for spray patching in surface treat applications. **The cost of the distributor and operator shall be paid at a fixed rate of \$185.00/Hour.** The cost per Gallon (GAL) to apply each material shall be based on the fixed operator and distributor rate. The charge for the distributor and operator shall include time at the project location for all costs incurred in applying specific material, including waiting time with an approved bituminous distributor. It shall be agreed upon as per the number of hours charged for each project at the end of the working period by the Agency. **This shall not include travel time to and from job site or mechanical breakdown of the distributor.** This item shall only be utilized with the application of the materials listed in the Material section of the specification. The unit price for the hand spray distributor and operator will be by the hour.

BASIS OF AWARD

The County will award by each individual item as shown in the proposal.

ASPHALT PRICE ADJUSTMENTS

Asphalt price adjustments will be made according to the provisions provided in the asphalt adjustment Appendix. Each oil used in the treatment is eligible for adjustments according to the provisions contained in the Appendix.

BASIS OF PAYMENT

Payment will be made under the following items:

DESCRIPTION	UNIT
Hand Spray Application using RS-2 (Rapid Setting Asphalt Emulsion)	Gallon (GAL)
Hand Spray Application using HFRS-2 (High Float Rapid Setting Asphalt Emulsion)	Gallon (GAL)
Hand Spray Application using CRS –2 (Cationic Rapid Setting Asphalt Emulsion)	Gallon (GAL)
Hand Spray Application using RS-2p (Polymer Modified Rapid Setting Asphalt Emulsion)	Gallon (GAL)
Hand Spray Application using HFRS-2p (Polymer Modified High Float Rapid Setting Asphalt Emulsion)	Gallon (GAL)
Hand Spray Application using CRS-2p (Polymer Modified Cationic Rapid Setting Asphalt Emulsion)	Gallon (GAL)
Bituminous Distributor with Operator for Hand Spray Chip Seal Patching	Fixed Price \$185 / Hour

ITEM 5 FIBER REINFORCED SURFACE TREATMENT

DESCRIPTION

The work shall consist in the construction of a Fiber Reinforced Bituminous Membrane Surface Treatment known as:

- **FiberMat – Type A**, Stress Absorbing Membrane (SAM)
- **FiberMat – Type B**, Stress Absorbing Membrane Interlayer (SAMI)

This is accomplished by using a specific applicator, which can be mounted on an asphalt distributor modified for applying the surface treatment of bituminous binder reinforced with glass fibers. The applicator comprises an open bottomed spray bar housing fan or blower for producing a down draft in the housing, and at least one spray bar mounted on the housing and adapted to extend transversely in the direction of movement of the asphalt distributor on which the unit can be mounted.

A number of nozzles spaced longitudinally along the spray bar for spraying bituminous material, means of controlling the nozzles, and a number of sources for dispensing the cut glass fibers through the open bottomed housing to the surface of the bituminous material previously sprayed shall also be included.

Asphalt emulsion, aggregate, and in-place chopped fibers are combined to form a versatile treatment, ideal for sealing as a SAM and arresting severely alligator cracked surfaces. The in-place chopped fiber gives the surface an improved tensile strength and resilience.

When applied within the pavement structure, the Fiber Reinforced Bituminous Membrane Surface Treatment acts as a SAMI for the treatment of reflective cracking prior to the construction or placement of subsequent layers.

MATERIALS

All materials shall meet the requirements of the current version of the New York State Department of Transportation Standard Specifications Section 702 Bituminous Materials and Section 703 Aggregates. Bituminous cold mix shall meet the requirements of Section 405 Cold Mix Bituminous Pavement (Open Graded).

Bituminous Materials

Bituminous Material Approval - The bituminous material shall be obtained from a storage facility that has been approved by the Director of the NYSDOT Materials Bureau within the current calendar year, before the start of work.

Bituminous Material Selection - The selected bituminous material shall be compatible with the aggregate to be used. It is the contractor's responsibility to ensure compatibility between the bituminous material and the aggregate. The selection of bituminous material shall be subject to the approval of the NYSDOT, Materials Bureau Engineer, and conform to the standards below with the following exceptions.

ITEM 5 FIBER REINFORCED SURFACE TREATMENT

Surface Treatment –

Material	Designation Grade	Description
702-4701	CRS-1p	Polymer modified cationic asphalt emulsion; OR
	CRS-2p	Polymer modified cationic asphalt emulsion

Elastic recovery, 10°C – minimum 60%.

Aggregates

The aggregates for the Fiber Reinforced Bituminous Membrane Surface Treatment shall meet the requirements of the current version of the New York State Department of Transportation Standard Specifications Section 703-02 Coarse Aggregate and be from an approved source. Where aggregates for pavement surface treatment are from more than one source or of more than one type of material, they shall be proportioned and blended to provide a uniform mixture.

Where the Fiber Reinforced Bituminous Membrane Surface Treatment is to be considered as a SAM, the aggregate size shall be size 1ST, 3/8", or 1A; or a combination of both as in a double dressing.

Where the Fiber Reinforced Bituminous Surface Treatment is to be considered as a SAMI, the aggregate size shall be Size 1A only.

In both cases, the aggregate shall meet one of the following:

1. Limestone having an acid insoluble content of not less than 20%, excluding particles of chert and similar siliceous rocks. Blends of siliceous and non-siliceous and non-siliceous limestone will not be permitted.
2. Dolomite.
3. Sandstone, granite, chert, trap rock, ore tailings, or other non-carbonate materials.
4. Gravel, or a natural or manufactured blend of two or more of the following types of material: limestone, dolomite, gravel, sandstone, granite, chert, trap rock, ore tailings, slag or other similar materials meeting the following requirements:
 - Non-carbonate plus 3.2mm particles must comprise a minimum 10% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities).
 - For Size 1A a minimum of 20% of plus 4.75mm particles must be non-carbonate.
 - For Size 1 ST a minimum of 20% of plus 9.5mm particles must be non-carbonate.

ITEM 5 FIBER REINFORCED SURFACE TREATMENT

Polymer Modifier - The ideal amount of solid or dry polymer modifier shall be 3%, based on the asphalt weight. The polymer materials shall be milled or blended into the asphalt or blended with the "soap phase" or post added to the emulsion, but at all times ensuring good homogenization of the polymer with in the asphalt emulsion.

Fiber - The glass fiber is E Class from an approved source determined by the license holder. The glass fiber spools are supplied internally wound, in coils or cheeses. Typically, the spools are cut in-place into nominally 2.38" lengths which are distributed uniformly across and between the two parallel applications of modified asphalt emulsion. Glass fiber spread rates are up to 4oz with additional asphalt emulsion rates of spread, depending on the site requirements.

Determination of the Quantities of Materials to be Applied

In conjunction with the Agency, the Vendor/Contractor will decide upon the appropriate rates of asphalt emulsion and fiber for and during the job. Typical rates of application for the asphalt emulsion range from 0.4-0.6 Gal/SY and fiber application rates from approx. 1-4oz/SY.

- a) For SAM applications, the aggregate shall be of the 6mm, 10mm, or 12.5mm maximum size and be added at rates as per conventional chip sealing operations (typically 12-26lb/SY).
- b) For SAMI applications, only the 6mm maximum size aggregate is used (typically 10-15lb/SY) to bind in the surface if it is to be overlaid within a few weeks. Otherwise, higher aggregate application rates are employed and approved by the Agency.

Preparation of Surface

A self-propelled power broom shall be used to clear any loose material from the surface to be treated immediately prior to the application of the Fiber Reinforced Bituminous Membrane Surface Treatment. Any surface-defects such as potholes shall be repaired prior to commencement of work. Manhole covers, drop inlets, catch basins, curbs, and any other structure within the roadway area shall be protected against the Fiber Reinforced Bituminous Membrane Surface Treatment. Any cracks greater than 1/4" shall be pre-treated with approved hot or cold polymer modified bituminous crack filler. Information on suitable crack fillers for use in-conjunction with the Fiber Reinforced Bituminous Membrane Surface Treatment can be given by the license holder.

Application of the Fiber Reinforced Bituminous Membrane Surface Treatment

Fibers and bituminous materials shall be applied by means of pressure distributor in a uniform, continuous spread over the section to be treated and within the temperature range, sandwiching the in-place chopped fibers between the two layers of asphalt emulsion. The quantities of fibers and bituminous materials shall be agreed upon by the Agency and Vendor/Contractor dependent on the job site. The distributor shall be moving forward at the proper application speed at the time the spray bar and fiber chopper bars are opened. If any skipped areas or deficiencies occur, the operation shall be immediately stopped. Junctions of spreads shall be carefully made to assure a

ITEM 5 FIBER REINFORCED SURFACE TREATMENT

smooth riding surface and the deficient areas corrected in a manner approved by the Agency. Overlaps of the membrane shall be made up to 6”.

The Fiber Reinforced Bituminous Membrane Surface Treatment shall not be applied more than 150ft, in advance of the self-propelled chip spreader. Under no circumstances shall operations proceed in such a manner that Fiber Reinforced Bituminous Membrane Surface Treatment will be allowed to chill, set-up, dry, or otherwise impair retention of the cover aggregate. Traffic shall not be allowed to run on the unprotected Fiber Reinforced Bituminous Membrane Surface Treatment.

The distributor, when not spreading, shall be parked so that the spray bar or mechanism will not drip on the surface of the traveled way.

Application of the Cover Aggregate

Immediately following the application of the Fiber Reinforced Bituminous Membrane Surface Treatment, cover aggregate shall be spread at the rate agreed upon by the Agency and Vendor/Contractor. Spreading shall be accomplished in such a manner that the tires of the aggregate spreader at no time contact the uncovered and newly applied Fiber Reinforced Bituminous Membrane Surface Treatment.

Immediately after the cover aggregate is spread, any deficient areas shall be covered by additional material. Pneumatic tire rolling shall begin immediately. The initial pass shall be completed within 5 minutes of the application of the Fiber Reinforced Bituminous Membrane Surface Treatment and shall be continued until three complete passes are obtained within 30 minutes of the application of the Fiber Reinforced Bituminous Membrane Surface Treatment. Pneumatic tire rollers shall come to a complete stop prior to a change in direction. For overlaps the first pass of aggregate and the space uncovered shall be up to 6”. Upon the return pass, the aggregate coverage shall be complete and over by up to 6” to insure full coverage of the membrane.

Opening to Traffic

Unless otherwise specified, the highway shall be kept open to traffic at all times. Traffic shall be discontinued on the lane being surface treated; and as soon as the final layer is applied and rolled, controlled traffic may be permitted thereon. "Loose Stone" meeting the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS), shall be posted at 1 mile intervals throughout the length of the project. These signs shall be erected before treatment commences and removed after contract is accepted. Traffic shall be maintained at a speed not to exceed 15mph for a period of four hours after placement of the Fiber Reinforced Bituminous Membrane Surface Treatment using two-way radio-equipped patrol vehicles in accordance with the MPOT details. All patrol vehicles shall be equipped with signs meeting the requirements of the current version of the MUTCD.

Immediately after completion of the Fiber Reinforced Bituminous Membrane Surface Treatment, the project area shall be posted at a speed limit of 30 mph for a period of three days. The signs should be posted at 0.5mile intervals; signs showing other speed limits should be covered during

ITEM 5 FIBER REINFORCED SURFACE TREATMENT

this period. All construction signs shall meet the requirements of the current version of the MUTCD.

CONSTRUCTION DETAILS

Weather and Seasonal Limitations - The Fiber Reinforced Bituminous Membrane Surface Treatment may be applied on a dry or damp surface, but should not be laid where there is standing water or on a wet surface. Application should only be undertaken when the surface temperature is at least 50°F and rising, subject to site inspection. Greater initial traffic speed control may be required in certain circumstances, for example when the surface temperature is low.

The Fiber Reinforced Bituminous Membrane Surface Treatment shall be placed normally in New York State during the period May 1st to the third Saturday in September. Application outside of these times is permissible only with the approval of the Agency.

The following items will be performed by the Agency, unless otherwise directed:

- a) Manhole covers, water valves, catch basins, and other drainage structures shall be clearly referenced for location and adjustment.
- b) Thermoplastic traffic markings shall be removed.
- c) All vegetation at the edge of the pavement shall be removed.
- d) Compaction equipment with operator.
- e) Furnish aggregate delivered to the Chip-Spreader.
- f) Maintenance and Protection of Traffic.
- g) Furnish self-propelled Power Broom or Vacuum.

EQUIPMENT

The following equipment shall be required:

Bituminous Material Distributor - A vehicle mounted liquid bituminous fiber applicator is used for applying a surface treatment of bituminous binder with reinforced glass fibers. The applicator shall comprise an open bottomed spray bar housing, a fan or blower producing a down draft in the housing, and at least one spray bar mounted on the housing and adapted to extend transversely in the direction of movement of the vehicle on which the applicator is mounted. A number of nozzles spaced longitudinally along the spray bar for spraying binder material, means for controlling the nozzles, and a number of sources for dispensing cut glass fiber through the open bottomed housing to the surface of the binder material previously sprayed shall also be included.

The applicator shall have been calibrated within the previous 12 months for transverse and longitudinal distribution application rates according to ASTM D2995, Practice for Determining Application Rate of Bituminous Applicator or other suitable method. The bituminous fiber applicator shall be equipped, maintained, and operated so that the bituminous materials can be applied at controlled rates from 0.022gal/SY to 0.56gal/SY. The fiber is applied at controlled rates from nominally approx.1-4oz/SY. These applications shall be such that a uniform first layer of asphalt emulsion is applied followed by uniform layer of glass fibers that is chopped in-place and covered with a uniform second layer of asphalt emulsion.

ITEM 5 FIBER REINFORCED SURFACE TREATMENT

Self-Propelled Aggregate Spreader - Aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of 6" wider than the width of the lane to be treated. The spreader shall meet the approval of the Agency and be calibrated similar to the test method used in ASTM D2995, within the previous 12 months, for transverse and longitudinal distribution.

Pneumatic Rubber Tire Roller - The Agency will require a sufficient number of pneumatic rubber tire rollers to permit the initial rolling of the aggregate to occur within 5 minutes of the application of the Fiber Reinforced Bituminous Membrane Surface Treatment. The pneumatic rubber tire roller shall be self-propelled and have oscillating wheels with smooth tread tires and will have a minimum ballasted weight of 10 US tons. The tire pressure for all wheels shall be uniform within 2psi. The rollers shall be operated at a maximum speed of 5mph. To prevent pick-up of the aggregate on the tires, the pneumatic rubber tires shall be kept moistened with water mixed with small quantities of detergent or other material approved by the Agency. In no case shall a solvent having an effect upon the Fiber Reinforced Bituminous Membrane Surface Treatment be used.

Static Steel-Wheel Rollers - Shall be self-propelled and be 7 to 9 ton tandem two-axle type. This shall be used particularly when a SAMI application is specified for the Fiber Reinforced Bituminous Membrane Surface Treatment following the pneumatic rubber tire roller. The aim is to crush the aggregate and blind the surface prior to the application of the new overlay.

Self-Propelled Rotary Power Broom - A self-propelled rotary power broom shall so be designed, equipped, maintained, and operated so that the pavement surface can be swept clean. The broom shall have an adjustment to control downward pressure. The power broom shall meet the approval of the Agency. In the case where a SAMI is being overlaid the same or the following day, a Vacuum sweeper shall be used.

METHOD OF MEASUREMENT

Fiber Reinforced Bituminous Membrane Surface Treatment will be measured by the number of Square Yards (SY) per Day of compacted material placed making no deductions for minor untreated areas such as catch basins and manholes.

ASPHALT PRICE ADJUSTMENTS

Asphalt price adjustments will be made according to the provisions provided in the asphalt adjustment Appendix. Each oil used in the treatment is eligible for adjustments according to the provisions contained in the Appendix.

The price adjustment per gallon shall be multiplied by a factor 0.4 to calculate the price adjustment per square yard:

$$\begin{array}{rclclcl} \text{Price Adj.} & & \text{New Avg. FOB} & - & \text{Base Avg.} & & \text{Total} \\ \text{Per SY} & = & \text{Terminal Price} & & \text{Terminal Price} & \times & \text{Allowable} \\ & & 235 & & \text{Petroleum \%} & \times & 0.4 \end{array}$$

ITEM 5 FIBER REINFORCED SURFACE TREATMENT**BASIS OF PAYMENT**

Payment will be made under the following items:

OPTION	DESCRIPTION	UNIT
FIBERMAT A (SAM)	Fiber Reinforced Surface Treat 1-5,000 SY / DAY	Square Yard (SY)
	Fiber Reinforced Surface Treat 5,001 – 10,000 SY / DAY	Square Yard (SY)
	Fiber Reinforced Surface Treat 10,001 - 20,000 SY / DAY	Square Yard (SY)
	Fiber Reinforced Surface Treat > 20,000 SY / DAY	Square Yard (SY)
FIBERMAT B (SAMI)	Fiber Reinforced Surface Treat 1-5,000 SY / DAY	Square Yard (SY)
	Fiber Reinforced Surface Treat 5,001 – 10,000 SY / DAY	Square Yard (SY)
	Fiber Reinforced Surface Treat 10,001 - 20,000 SY / DAY	Square Yard (SY)
	Fiber Reinforced Surface Treat > 20,000 SY / DAY	Square Yard (SY)

ITEM 6 PAVER PLACED SURFACE TREATMENT (NOVA CHIP)

DESCRIPTION

The Paver Placed Surface Treatment (Nova Chip) system shall consist of a warm polymer modified emulsion sprayed immediately preceding the application of a hot mix asphalt wearing course which forms a homogeneous well-textured and wearing surface that can be opened to traffic immediately upon cooling.

MATERIALS

The Asphalt Binder used can be either a conventional PG64S-22 or a polymer modified PG64V-22.

Type	Nominal Thickness
A	1/4"
B	3/8"
C	1/2"

Polymer Modified Asphalt Emulsion Material

The liquid material shall be a cationic, rapid setting, asphalt emulsion meeting the requirements of the current version of the New York State Department of Transportation (NYSDOT) Standard Specifications Section 702 Bituminous Materials, except as modified in **Data Table I – Polymer Modified Asphalt Emulsion**. The emulsion shall be obtained from a storage facility that has been approved by the Director of the NYSDOT Materials Bureau within the calendar year, prior to the start of work.

Hot Mix Asphalt Material for Wearing Course:

The wearing course shall be a mixture of single size coarse aggregate, fine aggregate, mineral filler, and asphalt cement. The single size coarse aggregate shall be nominal 1/4" for Type-A mix, nominal 3/8" for Type-B mix, or nominal 1/2" for Type-C mix, according to the gradation specifications in **Data Table II**. The hot mix asphalt concrete shall be obtained from a facility that has been approved by the Director of the NYSDOT Materials Bureau within the calendar year, prior to the start of work. The asphalt content of the mix shall be 4.8-5.3% by weight of the total mix and must be computed based on the actual job mix. **Standard and Polymer Grade PG Asphalts are presented as options.**

CONSTRUCTION DETAILS

Surface Preparation

The following items will be performed by the Agency, unless otherwise directed:

- a) Manhole covers, water valves, catch basins, and other such drainage structures shall be clearly referenced for location and adjustment after the resurfacing operation.

ITEM 6 PAVER PLACED SURFACE TREATMENT (NOVA CHIP)

- b) Thermoplastic traffic markings shall be removed.
- c) All vegetation at the edge of the pavement shall be removed.
- d) Pavement cracks and joints greater than 1/4" wide shall be cleaned and filled with an approved material prior to surfacing operation.
- e) Before applying Paver Placed Surface Treatment (Nova Chip), serious surface irregularities shall be corrected. Wheel ruts greater than 1" in depth shall be filled prior to the resurfacing operation.
- f) The pavement surface area to be overlaid shall be cleaned and made free of any debris that may hinder bonding of the overlay.

Application

Paver Placed Surface Treatment (Nova Chip) shall be placed on a dry or damp, but not on a wet pavement surface. The pavement temperature shall not be less than 50°F and rising.

The polymer modified asphalt emulsion shall be applied by the asphalt emulsion spray system mounted on the self-priming paver. The spray system shall accurately, uniformly, and continuously monitor the rate of application across the entire width to be overlaid.

The rate of spray shall be 0.2 ± 0.05 gallons per square yard. The asphalt emulsion shall be applied at a temperature of 140–180°F. No wheel or other part of the paving machine shall come into contact with the polymer modified asphalt emulsion before the hot mix asphalt-wearing course is applied.

The hot asphalt concrete wearing course shall be delivered to the self-priming paver at a temperature of $315 \pm 15^\circ\text{F}$. The application rate of the hot asphalt aggregate mixture shall be:

Type A (nominal 1/4") 60 ± 10 pounds per square yard

Type B (nominal 3/8") 65 ± 10 pounds per square yard

Type C (nominal 1/2") 70 ± 10 pounds per square yard

The hot mix asphalt-wearing course shall be spread over the polymer modified asphalt emulsion within seconds of the spray application. Where shape correction is necessary or the old surface is porous, the application rate of the emulsion and hot mix asphalt wearing course may need to be increased.

Compaction

Compaction shall be provided by the Vendor/Contractor. Begin compaction immediately after application of the wearing course. A minimum of two passes of compaction of the wearing course shall be carried out using a minimum of a double drum roller with a minimum deadweight of 10 ton, before the material temperature has fallen below 180°F at mid-layer. The roller(s) will not be

ITEM 6 PAVER PLACED SURFACE TREATMENT (NOVA CHIP)

allowed to stop on the freshly placed wearing course. Use an adequate number of rollers to complete compaction before the pavement temperature falls below 180 °F. The wearing course must be protected from traffic until the rolling operation is complete and the material has cooled sufficiently to resist damage. Because of the speed of the paving machine, two double drum rollers are necessary if the project is over 10,000 square yards.

Maintenance and Protection of Traffic

Maintenance and Protection of Traffic (MPOT) will be provided by the Agency per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS), or provided by Vendor/Contractor under the Optional Item.

The new pavement surface may be opened to traffic when rolling is completed and proper cooling has taken place. In general, traffic can use the new surface at a distance of 300 feet behind the last roller.

Verification of Quantities and Testing

At the end of each working day or completed job site, a check shall be made to determine the quantities of polymer modified asphalt emulsion used. The check shall be made by means of the gauge on the self-priming paver or the unit used to transport the material. The total gallons of material sprayed shall be divided by the total square yards sprayed to determine yield per square yard.

The hot mix asphalt concrete spread rate shall be calculated by dividing the tonnage by the square yards covered to determine yield per square yard.

Samples of hot mix asphalt shall be taken at a rate of 1 per 250 tons and tested for aggregate gradation and asphalt cement content. Samples of the polymer modified asphalt emulsion shall be taken once per tanker load or once per day.

At the conclusion of each day's production, delivery ticket or invoice shall be completed by the Vendor/Contractor and signed by a representative of the Agency.

Optional Items (Additions)

The Vendor/Contractor shall be equipped to perform the following services as directed by the Agency under the pay items described below:

1. **Hauling:** Vendor/Contractor to furnish the hauling (trucking) of the Paver Placed Surface Treatment (Nova Chip) to the paver.
2. **Maintenance & Protection of Traffic:** Vendor/Contractor is to supply all necessary labor and equipment to provide adequate MPOT per the current version of the national MUTCD, including the NYSS.

ITEM 6 PAVER PLACED SURFACE TREATMENT (NOVA CHIP)

3. **Milling:** Vendor/Contractor shall supply all the necessary labor and equipment to rebate mill and clean up the milled area (Min 2' Wide).
 - A. Along gutters / curbs for proper reveal
 - B. Transitions to existing pavement and side streets.
4. **Abrading:** Fine milling of 4" wide pavement marking lines.
5. **Abrading:** Fine milling of pavement marking symbols and letters.

DATA TABLE I

Polymer Modified Asphalt Emulsion: This material shall be cationic asphalt emulsion modified with an approved polymer, using either natural or synthetic latex. It shall be smooth and homogeneous and shall conform to the following requirements and be available on site at a temperature of not less than 140°F.

Test	Method	Minimum	Maximum
(Polymer Content) ER Value%	ASTM D 6084	50	---
Demulsibility, % by wt. of Residue	ASTM D 6936	40	---

DATA TABLE II

Single Size Coarse Aggregate Component Gradation

AASHTO Standard Sieves		Total Percent Passing By Weight		
US	mm	Type A (1/4")	Type B (3/8")	Type C (1/2")
3/4	19	-	-	100
1/2	12.5	-	100	85-100
3/8	9.5	100	85-100	25-50
1/4	6.3	85-100	0-15	0-15
4	4.75	25-50	0-3	0-3
8	2.36	0-3	0	0

DATA TABLE III

Coarse Aggregate

Tests	Method	Light Traffic vehicles/day	Medium Traffic <200 heavy vehicles/day	Heavy Traffic >200 heavy vehicles/day
Los Angeles Abrasion value %	ASTM C131	<25		<20
Water Absorption %	ASTM C127	<2		<2
Flatness index %	NFP 18-561	<20		<15
Flatness Coefficient (G/E) ¹	NFP 19-561	<1.59		<1.58
Crushing Ratio %	Observation	100		100
Overall cleanliness (% Pas # 30)	ASTM C142	<2		<2
Resistance to Stripping ²	ASTM D3625	>95		>95

ITEM 6 PAVER PLACED SURFACE TREATMENT (NOVA CHIP)

¹ Where “G” is the smallest square opening through which the particles can pass and “E” is the slot through which the particles can pass.

² Anti-stripping agents may be required to provide acceptable values.

DATA TABLE IV

Fine Aggregate Component Gradation

AASHTO Standard Sieves		Percent Passing by Wt.
US	Metric	Type A, B or C
#4	4.75	100
#8	2.36	90 – 100
#16	1.18	60 – 80
#30	0.60	45 – 60
#50	0.30	30 – 40
#100	0.15	20 – 30
#200	0.075	15 – 25
Crushing Ratio, percent minimum (Observation)		100
Sand Equivalency, percent minimum (ASTM D2419)		

Mineral Filler, if required, may be hydrated lime, fly ash, or bag-house fines 100% passing #100; 80% passing #200.

DATA TABLE V

Combined Aggregate Gradations-Design Target Envelopes

AASHTO Standard Sieves		Total Percent by Weight		
US	Metric	Type A (1/4")	Type B (3/8")	Type C (1/2")
3/4	19	---	---	100
1/2	12.5	---	100	85 – 100
3/8	9.5	100	85 – 100	70 – 90
1/4	6.3	85 – 100	30 – 55	30 – 55
#4	4.75	40 – 80	24 – 45	24 – 45
#8	2.36	21 – 45	21 – 37	21 – 37
#16	1.18	16 – 32	16 – 26	16 – 26
#30	0.60	12 – 25	12 – 20	12 – 20
#50	0.30	8 – 16	8 – 16	8 – 16
#100	0.15	5 – 10	5 – 10	5 – 10
#200	0.075	5 – 7	5 – 7	5 – 7
% PGB		4.9 – 5.3	4.8 – 5.2	4.8 – 5.2

Note: All aggregate percentages are based on the total weight of aggregate.

Asphalt Binder - Use the appropriate Performance Graded (PG) asphalt binder for the project geographical location and design traffic level; **PG 64S-22 or PG 64V-22**.

ASPHALT PRICE ADJUSTMENTS

Price adjustments allowed will be based on the **December 2023** NYSDOT average posted price for asphalt (performance graded binder). The new monthly average posted price for asphalt (performance graded binder) will be determined by the NYSDOT based on prices of pre-approved

ITEM 6 PAVER PLACED SURFACE TREATMENT (NOVA CHIP)

primary sources of performance graded binder in accordance with NYSDOT Standard Specifications. Instructions for calculating the Asphalt Price Adjustment (Item 698.04) are contained in the NYSDOT Standard Specifications; the formula is included below.

The December 2023 average posted price for asphalt is \$615.00 per US Ton.

Price Adjustment per square yard = New Average Terminal Price (per Gallon) - Base Average Terminal Price (per Gallon) x Total Allowable Petroleum % x 0.033

TOTAL ALLOWABLE PETROLEUM FOR LIQUID BITUMINOUS MATERIAL

The percentage of total allowable Petroleum for each item is as follows:

Item #	Material Designation	Grade	Total Allowable Petroleum (%)
18406.221xxx	702-PG64S-22& 702-4701	PG 64S-22&CRS-1p	7.5%
18406.222xxx	702-PG64S-22& 702-4701	PG 64S-22&CRS-1p	7.5%
18406.223xxx	702-PG64S-22& 702-4701	PG 64S-22&CRS-1p	7.5%
18406.224xxx	702-PG64S-22& 702-4701	PG 64S-22&CRS-1p	7.5%
18406.225xxx	702-PG64S-22& 702-4701	PG 64S-22&CRS-1p	7.5%
18406.226xxx	702-PG64S-22& 702-4701	PG 64S-22&CRS-1p	7.5%

Asphalt Price adjustments **will not** be allowed for materials which **do not** have an asphalt cement base.

Example:

Item 18403.12020218

Base Average Price = \$461.00

New Average Price = \$471.00

Total Allowable Petroleum = 7.5 %

$$(\$471.00 - \$461.00) = \$10.00 \times 0.075 = \$0.75 \times 0.033 = \$0.025$$

METHOD OF MEASUREMENT

Paver Placed Surface Treat shall be paid by Square Yard (SY) by Type. All incidental options shall be paid by adding the unit cost as described in **Table II** below.

ITEM 6 PAVER PLACED SURFACE TREATMENT (NOVA CHIP)**BASIS OF PAYMENT**

Payment will be made under the following items:

Paver Placed Surface Treatment (Nova Chip) PG 64S-22 & CRS-1p			
	1 – 12,500 SY	12,501 – 25,000 SY	> 25,000 SY
TYPE A (1/4")			
TYPE B (3/8")			
TYPE C (1/2")			
Paver Placed Surface Treatment (Nova Chip) PG 64V-22&CRS-1p			
TYPE A (1/4")			
TYPE B (3/8")			
TYPE C (1/2")			

Table II – Optional Items

Allowable Additions per Square Yard (SY)	Unit Price
Hauling: Vendor/Contractor to furnish the hauling (trucking) of the Paver Placed Surface Treatment (Nova Chip) to the paver.	Per Square Yard (SY)
Maintenance & Protection of Traffic: Vendor/Contractor to provide adequate traffic control per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).	Per Square Yard (SY)
Milling: Vendor/Contractor shall supply all necessary labor and equipment to rebate mill and clean up the milled area. (Minimum 2' Wide)	Per Square Yard (SY)
Abrading: Vendor/Contractor to provide fine milling of 4" wide pavement marking lines.	Per Linear Foot (LF)
Abrading: Vendor/Contractor to provide fine milling of pavement marking symbols / letters.	Per Each (EA)

ITEM 7 HOT IN PLACE RECYCLING OF EXISTING ASPHALT PAVEMENT

DESCRIPTION

This work shall consist of recycling the existing hot mix asphalt (HMA) pavement surface. This multi-step recycling process requires the use of a recycling agent for Hot In-Place Recycling as a rejuvenator. The HMA pavement surface is heated using specialized equipment causing the asphalt to soften. This work requires the use of a rejuvenating process that incorporates a milling head to increase the scarification depth and enhance the blending of the rejuvenating agent with the asphalt surface material. In a continuous process, the softened HMA surface is scarified to a specified depth as directed by the Agency. The scarified and milled asphalt pavement is then mixed with a recycling agent that rejuvenates the asphalt. This mix is then placed and compacted back onto to the roadway.

This work shall consist of using a recycling agent as a rejuvenator for hot in-place recycled projects. The recycling agent shall meet the requirements detailed in this specification. This material will improve the penetration value of the recycled hot mix asphalt which will increase the overall life of the existing pavement.

NOTE: The Hot In-Place recycled layer is not a finished / final wearing surface. The Hot In-Place recycled layer must be covered with a final wearing surface that meets Agency standards and specifications and must be placed during the same paving season.

EQUIPMENT

Each unit shall have an integrated water spray system and water misters to pre-wet vegetation and provide heat control. Hand hoses with adjustable nozzles will be placed on each unit to allow for pre-wetting specific plants or objects. Each unit shall have integrated water tanks having a minimum 500 gallon capacity. The operation of these systems shall be demonstrated to the Agency to be fully functional prior to the commencement of work and shall be refilled as required during daily production. Water shall be supplied by the Vendor/Contractor for the water spray systems.

All propane tanks on recycling equipment units shall conform to the manufacturing standards and regulations of the Federal Motor Carrier Safety Administration Section 178.345. Tanks are to be inspected and certified by a Federal and DOT registered inspection and repair facility and are not to exceed 1,000 gallons in accordance with U.S. Department of Transportation regulations. External visual tank inspections and tank leakage tests shall be performed annually per regulations. Hydro pressure tests shall be performed every 5 years per regulations. Certification compliance stickers shall be prominently displayed on recycling units. Each propane tank on the recycling units shall have a ground fill system and meter to ensure safety of personnel during propane fill operations.

Recycling units shall be equipped with a Wireless Remote Safety Shutdown System. This safety feature allows the operators to immediately shut down propane flow, hydraulic power units, and activate brakes on the recycling units in the event of any unforeseen circumstances. Each recycling unit operator shall carry a wireless remote control device and shall be trained at least annually on the system. The wireless remote system shall meet all FCC requirements and have proper documentation.

ITEM 7 HOT IN PLACE RECYCLING OF EXISTING ASPHALT PAVEMENT

Heating Unit – This unit shall generate sufficient heat to soften the asphalt pavement to the depth required. Care should be taken not to overheat the existing pavement thereby softening the underlying asphalt pavement not to be scarified. The burner assembly shall be adjustable to heat up to 14 feet in width. The entire heating unit shall be enclosed and vented to contain the heat and prevent damage to adjacent properties and landscape. In cooler temperatures, an additional heating unit may be required. A minimum of two pre-heater units shall be used to allow lower heating temperatures and longer durations to enhance temperature penetration into the existing roadway surface. A third pre-heater unit shall be available if warranted or required for project.

Heater Scarification Train – This equipment shall be a self-contained machine designed to reprocess only the upper layers of the existing HMA pavement. The heater scarification train shall be self-propelled and capable of operating at speeds of 8 to 26 feet per minute while uniformly heating and scarifying the existing HMA pavement. Listed below are the various units that are part of the heater scarification train.

- *Scarifying Unit* – The scarifying unit shall contain at least 2 rows of carbide spring-loaded tines that are adjustable to scarify up to 14 feet wide. The tines in row shall be no more than 1.0 inch apart. This unit shall also have a center break and be able to conform to the pavement contours to insure a uniform penetration from the tines and prevent damage to utility structures.
- *Spray Unit* – This unit shall be immediately behind the scarifying unit and capable of applying the recycling agent to the reclaimed asphalt pavement at the approved rate. The size of the nozzles located on the spray unit shall be selected based upon the rate of application and the forward speed of the heater scarification unit.

This unit shall be equipped with self-calibrating meter measuring system. The system shall be capable of accurately maintaining the required application rate of the recycling agent adjusting to forward ground speed with a tolerance of $\pm 5\%$ of the mix design. The self-calibrating meter technology shall be a continuous flow system that verifies and validates the application rate on-demand and at any time during production. The measuring system shall continuously verify and display the application rate of recycling agent and cumulative total with respect to volume of recycled material for the recycled surface.

Calibration of the self-calibration system shall be performed prior to the start of a project and/or at any time the contracting agency deems necessary. The self-calibration system is an on-demand and continuous process utilizing meters with no interruption to production. The recycling agent calibration results will be provided to the contracting agency for verification.

- *Mill/Re-Mixer Unit* – Immediately following the application of the recycling agent, a dual-drum milling head(s) shall follow the configuration of the screed and mill the asphalt pavement to a loose mix depth up to 1.5 inches. The milling heads shall produce a resized gradation representative of the existing materials being recycled in the 1.5 inch layer. The milling heads shall then thoroughly mix the recycling agent with the scarified and milled pavement to produce a well coated homogenous recycled mixture.

ITEM 7 HOT IN PLACE RECYCLING OF EXISTING ASPHALT PAVEMENT

The mill/ re-mixer unit shall be an integral part of the recycling machine and be located between the recycling agent spray bar unit, which applies the rejuvenator, and the screed. The mills shall have automated guided depth control system where hydraulic cylinders with sensors maintain pavement surface contact which shall ensure a consistent cut and achieve the desired recycling depth. The mills shall be operated hydraulically, able to work at variable speeds up to 120 rpm(s), shall be retractable and adjustable up to 14 feet wide. In addition, the mills shall be able to break in the center and allow for quarter point and crown control.

- *Screed Unit* – The hot recycled material shall be uniformly distributed to the desired longitudinal and transverse section by the use of an attached heated, augured vibratory screed. The screed shall be equipped with center break for adjustable crown control and shoulder break for slope control. Each end of the screed shall have hand wheel adjusting screws for providing the desired longitudinal grade and transverse slope.
- *Compaction Unit* – Immediate compaction shall take place with rolling equipment of sufficient type and size to compact the recycled bituminous material to the required density. Normally this can be established with the application of an eight (8) to twelve (12) ton steel vibratory roller.

MATERIALS

Materials shall meet the requirements of ASTM D 4552, Standard Practice for Classifying Hot-Mix Recycling Agents, grades RA25 or ERA25 (Emulsified RA25) petroleum-based recycling agents. Only materials that are designed to perform as rejuvenating agents and meeting the requirements outlined in Table 1 – Recycling Agent shall be permitted. At the start of production and during production, certified test results and documented quantities shall be provided to the Agency for each shipment of recycling agent. Acceptance of this material is based on a signed Manufacturer's Certification stating conformance to this specification. The use of any other grade of recycling agent shall require prior approval.

Table 1 – Recycling Agent

Test Requirements	Test Method	Minimum	Maximum
Tests on Residue from Distillation			
Viscosity, 140°F cSt	T201	901	4500
Flash Point, CSC, °F	T48	215	-
Test on Residue from RTFO, 325°F			
Viscosity Ratio	T240	-	3
Weight Change, \pm , %		-	4
Specific Gravity	T228	Report	Report
Saybolt Furol Viscosity @77°F, s	T59*	15	85
Storage Stability, 24 hrs, %		-	1.0
Sieve, %		-	0.1
Cement Mixing, %		-	2.0
Asphalt Content by Evaporation, %		65.0	

*This testing requirement is only for ERA25.

ITEM 7 HOT IN PLACE RECYCLING OF EXISTING ASPHALT PAVEMENT

MIXTURE DESIGN

The Vendor/Contractor will take representative surface course cores a minimum of two (2) to a maximum of twenty (20) cores per project from the existing HMA pavement for analysis and mixture design if required by the Agency; for projects over 50,000 square yards.

The Vendor/Contractor shall provide the following mixture design data to the Agency:

- Descriptive notes of the core locations along with their test results showing percent of asphalt content, aggregate gradation, and penetration value for each sample.
- The depth, in inches, of the loose heater scarified HMA behind the screed unit. Based on the information above, the Vendor/Contractor shall determine the application rate of the recycling agent such that the penetration value of the recovered performance-graded (PG) binder from the recycled mix samples is at least 30% increase of the average penetration value of the existing pavement cores. Testing of all samples for the penetration values required using this specification will be performed in accordance with AASHTO T49, Penetration of Bituminous Materials.
- Recycling Agent shall be heated in a thermostatically controlled tank on the recycling machine and maintained between 160°F and 170°F per product requirements.
- The Vendor/Contractor shall include with bid a letter of supply of the recycling agent from an approved manufacturer and ability to meet the above specifications.
- The Vendor/Contractor shall include with a bid the name of the Accredited Laboratory of who will be performing the mix design and testing of recycled samples from field during recycling operations.

CONSTRUCTION DETAILS

Weather and Seasonal Limitations – Heater scarification is allowed only when the surface temperature is 45° F & rising.

Cleaning – Clean the existing pavement and shoulder to be scarified by using mechanical sweepers, hand brooms, or other effective means until the surface is free of all materials, which might interfere with the scarification process is the responsibility of the Agency.

Start – Stop Lines – Prior to the start of the recycling process, the contracting municipality will mark with paint the start and stop lines of each road to be recycled. The recycling operation will not start on any roads unless these painted lines are clearly visible.

Heater Scarification – Operate the heating unit in a manner to prevent damage to adjacent property and vegetation. Repair all heat damaged areas immediately at no additional cost to the Agency, control the heater scarification equipment to ensure that the temperature of the scarified mixture is

ITEM 7 HOT IN PLACE RECYCLING OF EXISTING ASPHALT PAVEMENT

maintained between 275° F and 325° F. Verify this temperature within 5 feet behind the screed unit.

Control the speed of the equipment to ensure that the recycled pavement is properly milled, mixed, and uniformly distributed to the proper thickness, slope, and crown shown as required by the Agency. Take extra care in controlling heater scarification equipment to prevent segregation of the recycled mix at the start and end of paving production as well as any points where the heater scarification train needs to stop and restart. Tolerances shall be within ¼ inch of the specified depth.

Measure the depth of the loose scarified mix behind the screed unit prior to rolling operation. Adjust the paving equipment if the loose mix depth does not meet the depth as required by the Agency. Control the width of each pass to provide proper placement of longitudinal joints including a 3 inch overlap onto adjacent lane passes.

Add recycling agent uniformly to the scarified HMA pavement at the predetermined application rate to produce a homogenous HMA recycled mix.

In areas such as catch basins or manholes not accessible to scarifying equipment, the Agency will determine if they require repair. Pavement surfaces that are in good condition and are less than one square yard in size do not require repair. Areas with cracks or spalls that are greater than one square yard in size shall be repaired as approved by the Agency at no additional cost.

Compaction – Vibratory compaction is required immediately behind the screed. Rollers shall be in 8 ton to 12 ton class. Recycling operations shall cease immediately upon break-down or other impairment of the vibratory roller.

Low Hanging Tree Branches – Any branches that may physically interfere with the recycling and compaction equipment may be trimmed by the Vendor/Contractor during the recycling process and placed on the side of the road. The Vendor/Contractor will be responsible to pick up trimmed branches daily; the Agency will identify a location to discard of them.

Scarified Mixture Verification – On roadway projects more than 50,000 square yards, the Vendor/Contractor shall take two loose mix samples prior to compaction in the first 500 feet of the day's production. These samples will be representative of the day's production. Take samples either behind the screed or any place after the spraying and mixing units. Identify all samples by their locations at the project site. Production may continue while the Vendor/Contractor tests for penetration. Penetration data shall be provided to the Agency. The average penetration value of the loose mix samples must be 30% or higher than the average penetration of the core samples from the existing pavement. If the average penetration values of the loose mix samples fail to meet this requirement, adjust the application rate and submit a new adjusted application rate to the Agency. Also, if the recycled pavement is not satisfactory to the Agency, additional tests must be performed at no cost.

Traffic Control – Maintenance and Protection of Traffic (MPOT) will be provided by the Vendor/Contractor per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS). Vendor/Contractor will

ITEM 7 HOT IN PLACE RECYCLING OF EXISTING ASPHALT PAVEMENT

provide all necessary MPOT signs. All operators and laborers shall be OSHA Certified and Flagger Certified per the ATSSA (American Traffic Safety Services Association).

Temporary Pavement Markings – Vendor/Contractor shall apply yellow reflectorized tape at 40 feet intervals on centerline with current days recycling production.

Temporary No Parking Signs – Upon completion of a road, temporary no parking signs (if supplied and/or installed by the Agency) will be picked up by the Vendor/Contractor and returned to the Agency.

Overlay – The heater scarified HMA pavement can be overlaid once work is completed to the satisfaction of the Agency. The overlay shall be placed prior to the end of the paving season. Any overlay work shall be performed under separate pay items and are not included to this Item.

METHOD OF MEASUREMENT

Asphalt recycling performed and application of rejuvenating agent shall be measured by the Square Yard (SY).

BASIS OF PAYMENT

Prices shall include all labor, equipment, materials, fuels, supplies, rejuvenating agent, mobilization, core sampling, mix design, quality control testing required to complete the above item. Payment for heating, scarifying, application of rejuvenating agent, milling/remixing, and compaction will be made at the price bid per square yard.

Payment will be made under the following items:

DESCRIPTION	UNIT
Hot In Place Asphalt Recycle 1 – 10,000 SY @ 3/4” to 2” Depth	Square Yard (SY)
Hot In Place Asphalt Recycle Over 10,000 SY @ 3/4” to 2” Depth	Square Yard (SY)

ITEM 8 POLYMER MODIFIED ASPHALT JOINT AND CRACK SEALANT

GENERAL

This specification covers joint sealants of the hot-poured type intended for use in sealing joints and cracks in portland cement concrete and asphalt concrete pavements.

The work shall consist of cleaning and sealing cracks and joints in the existing pavement. All sealant shall be an asphalt cement. The Vendor/Contractor shall provide a listing of municipal and/or private projects where installation of D6690, Type II (705-02) has occurred over the past two years. Before beginning the work, the Vendor/Contractor will be required to demonstrate compliance with the specification to the satisfaction of the Agency.

DESCRIPTION

The work shall consist of performing all operations and furnishing all labor, equipment, and materials for cleaning and sealing miscellaneous cracks and joints in the pavement using ASTM D3405. Work shall commence within 14 days' of receipt of instruction, unless otherwise agreed between the Agency and the Vendor/Contractor.

MATERIALS

The material used shall meet the following requirements:

ASTM Standard D 6690 Testing Joint Sealants, Hot-poured, for Concrete and Asphalt Pavements.

General Requirements

The joint sealant shall be composed of a mixture of materials that will form a resilient and adhesive compound capable of effectively sealing joints and cracks in concrete and asphaltic pavements against the infiltration of moisture and foreign material throughout repeated cycles of expansion and contraction with temperature changes, and that will not flow from the joint or be picked up by vehicles tires at ambient temperatures. The material shall be capable of being brought to a uniform pouring consistency suitable or completely filling the joints without inclusion of large air holes or discontinuities and without damage to the material. It shall remain relatively unchanged at pouring temperature in the field.

Physical Requirements

Safe Heating Temperature – The safe heating temperature is the highest temperature to which the sealant can be heated and still conform to all the requirements specified herein. For purpose of testing as specified hereafter, the pouring temperature shall be the same as safe heating temperature. The safe heating temperature shall be set forth by the Manufacturer and shall be shown on all containers and shall be provided to the testing agency before any laboratory tests are begun.

Penetration at 77°F, 150g, 5s, shall not exceed 90.

ITEM 8 POLYMER MODIFIED ASPHALT JOINT AND CRACK SEALANT

Flow at 140°F shall not exceed 3.0mm.

Bond – The sealant shall be tested at -20°F for three complete cycles. The development at any time during the test procedure of a crack, separation, or other opening that at any point is over ¼" deep, in the sealer or between the sealer and mortar block, shall constitute failure of the test specimen. The depth of the crack, separation, or opening shall be measured perpendicular to the side of the sealer showing the defect. All three specimens must meet this requirement for bond.

As an alternative to the bond test as specified, the Agency may permit testing at 0° in the alternative procedure. Methods D 6690.

Resilience – When tested at 77°F, the recovery shall be a minimum of 60%.

Asphalt Compatibility – There shall be no failure in adhesion, formation of an oily exudate at the interface between the sealant and the asphaltic concrete, or softening or other deleterious effects on the asphaltic concrete or sealant when tested at 140°F.

Packaging and Marking – The sealing compound shall be delivered in the Manufacturer's original sealed containers. Each container shall be legibly marked with the name of the Manufacturer, the tradename of the Dealer, the Manufacturer's batch number or lot, the pouring temperature, and the safe heating temperature.

Test Methods – The physical requirements enumerated in this specification shall be determined in accordance with Methods D3407.

CONSTRUCTION DETAILS

Heat, haul, deliver (in hot oil-heated, containerized, mobile tanks), clean cracks (air compressor with minimum 125 cfm), and seal cracks at the specified locations. Vendor/Contractor to supply and operate all equipment required to clean and seal cracks. Only well defined, single cracks shall be sealed. Sealing shall be limited to cracks not less than one eighth inch wide not more than one inch wide, at locations as directed by the Agency. Cracks with varying widths, portions of which are one eighth inch wide or greater, shall be sealed along their entire length.

Longitudinal cracks in the travel lane shall be sealed. Centerline cracks, cracks between lanes, and edge or pavement cracks may be filled or sealed. Where secondary cracking exists, seal only the primary (widest) crack. Do not seal secondary cracks, or excessive material width and thickness will result.

All cracks shall be thoroughly cleaned of dust, dirt, foreign material, sand and any other extraneous materials by high pressure air or a hot air lance. When using a hot air lance, care shall be taken so as not to burn, scorch or ignite the adjoining pavement to prevent recontamination of the crack. The crack sides shall appear thoroughly clean and dry immediately prior to sealing. The Vendor/Contractor shall re-clean cracks, if in the opinion of the Agency, adequate cleaning and drying is not evident. Any cracks not sealed the same day shall be re-cleaned prior to sealing.

ITEM 8 POLYMER MODIFIED ASPHALT JOINT AND CRACK SEALANT

Cracks shall be sealed by placing the applicator wand in or directly over the crack recess and carefully discharging the sealant just to fill the crack. The material shall be struck off flush with the pavement surface using a sealing shoe and/or "V" shaped squeegee pressed firmly against the roadway surface.

Only a narrow, thin "film" or material shall be permitted on the pavement surface, no greater than two inches wide and one thirty-second inch thick. Sealant in excess of the specified thin "film" amount shall be removed from the pavement surface and disposed of properly, at the Vendor's/Contractor's expense.

Traffic shall not be allowed on the sealant until it has cooled sufficiently and will not track. A low pressure, light spray of water may be used to accelerate cooling of the filler or sealant. Blotting with fine aggregate will not be allowed.

Sealant that becomes damaged from traffic or from the removal of over applied amounts shall be repaired. The areas shall be cleaned with high pressure air and then have additional sealant applied to the satisfaction of the Agency, at the Vendor's expense. Deficient areas where sealant has sunk into the crack more than three eighths inch below the pavement surface shall be cleaned with high pressure air and additional sealant installed to the satisfaction of the Agency, at the bid price. Cleaning of damaged or deficient areas shall not require removal of the sealant from a crack that has been sealed.

QUALIFICATION OF BIDDERS

- a. All bidders will be required to have a minimum of 2 years' experience installing hot fiber reinforced asphalt sealing similar to those specified herein.
- b. Within 3 working days of request by the Agency, the Bidder must present evidence of experience as an asphalt sealant contractor for jobs equivalent to those of this contract and possessing financial standing, plant, machinery and equipment adequate to handle this contract. The Bidder must provide a list of contract work performed within the last 2 years.

ROADS TO BE CRACK SEALED

Roads to be crack sealed will be designated by Agency.

TIMEFRAME

Roads shall be crack sealed between April 1 and September 30 unless otherwise directed by Agency. Ideally, roads should be crack sealed when pavement temperatures greater than 50°F (and rising) and less than 75°F. Agency shall pre-approve installations outside of this temperature range.

ITEM 8 POLYMER MODIFIED ASPHALT JOINT AND CRACK SEALANT

MAINTENANCE AND PROTECTION OF TRAFFIC

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while placing the crack sealant. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

- a. The working hours of construction may have to be restricted on arterial functional classification streets. In general, lane reduction may be prohibited during the peak rush traffic hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM Monday through Friday. The Vendor/Contractor shall exhibit the ability to maintain adequate traffic flows to the satisfaction of the Agency.
- b. Temporary “No Parking” signs may be necessary to facilitate traffic flow or to crack seal curb lanes. The Vendor/Contractor shall furnish, install, and remove these temporary signs. The construction material for these signs may be on a lightweight card board paper stock or as otherwise approved by the Agency. The temporary “No Parking” signs shall be in accordance with R7 Series (No Parking Signs) of the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS). Placement of signs will be as approved by the Agency on a per street basis.
- c. The Vendor/Contractor must provide a minimum of one flag person at all times. The purpose of this flag person is to maintain directional vehicular and pedestrian traffic. An arrow board shall also be utilized to provide advance warning of lane changes and construction operations in addition to a flag person.
- d. Vendor/Contractor work crews shall have all OSHA required clothing and safety equipment.

METHOD OF MEASUREMENT

The quantity to be paid shall be the actual installed number of Gallons of polymer modified crack sealant cement at 60°F. The Gallons will be verified by delivery tickets and measurements of asphalt cement volumes in the kettle prior to addition of fibers. No payment will be made for wasted material.

ASPHALT PRICE ADJUSTMENTS

Asphalt price adjustments will be made according to the provisions provided in the asphalt adjustment Appendix.

BASIS OF PAYMENT

The unit price bid shall be per Gallon and shall include the cost of all MPOT, labor, equipment, and materials necessary to complete the work. Payment will be made under:

ITEM 8 POLYMER MODIFIED ASPHALT JOINT AND CRACK SEALANT

DESCRIPTION	UNIT
Polymer Modified Crack Seal, D6690	Gallon (GAL)

ITEM 9 FIBER REINFORCED ASPHALT CRACK SEALER (PG 64-22)

GENERAL

The work shall consist of cleaning and sealing cracks and joints in the existing pavement. All sealant shall be a fiber reinforced asphalt cement. The Vendor/Contractor shall provide a listing of municipal and/or private projects where installation of asphalt cement sealant has occurred over the last two years. Before beginning the work, the Vendor/Contractor will be required to demonstrate compliance with the specification to the satisfaction of the Agency.

DESCRIPTION

The work shall consist of performing all operations and furnishing all labor, equipment, and materials for cleaning and sealing miscellaneous cracks and joints in the pavement using asphalt cement reinforced with polyester fiber. Work shall commence within 14 days' of receipt of instruction, unless otherwise agreed between the Agency and the Vendor/Contractor.

MATERIALS

The material used shall meet the following requirements:

- a. Asphalt cement shall be paving grade asphalt with a material designation 702 of the New York State Department of Transportation (NYSDOT) Standard Specifications with a viscosity grade of PG 64-22.
- b. The fibers shall meet the following requirements:
 1. Material: Polyester.
 2. Length: 1/4" (one quarter inch).
 3. Tensile Strength: 75,000 psi \pm 5,000 psi (pounds per square inch).
 4. Specific Gravity: 1.32 to 1.40.
 5. Melt Temperature: 480°F minimum.
 6. Elongation: 45%.
- c. The asphalt cement and fiber proportion shall be based on weight. The weight of the polyester fibers added to the asphalt cement shall be a minimum of 5% of the weight of the raw asphalt cement.
- d. The fiber reinforced asphalt cement shall be mixed at the temperatures recommended by the fiber manufacturers, but shall not exceed 325°F.
- e. Blotting material shall be Black Beauty manufactured by H.B. Reed & Company, utility grade #1040, or approved equal. If the Bidder is proposing an alternate material, this must be clearly identified on the Proposal sheet.

CONSTRUCTION DETAILS

Surface Preparation – The sealant shall be applied only when the joints and cracks and adjacent pavement surfaces are dry and free of dirt, vegetation, loose material, debris and loose sealant.

ITEM 9 FIBER REINFORCED ASPHALT CRACK SEALER (PG 64-22)

Joints and cracks and adjacent pavement surfaces shall be cleaned by air blasting. Joints and cracks in excess of 1 inch width shall be repaired by the Agency before application of the sealant.

Preparation of Asphalt Fiber Mixture – The sealant shall be mixed in a double jacketed kettle equipped with an agitator and re-circulating pump. The mixing unit shall be capable of maintaining the specified mixing temperature.

Equipment – The asphalt kettle shall be a double jacket kettle with asphalt cement heated by transfer oil. The asphalt sealant shall be mixed by full sweep agitation.

Application of Sealant – The pavement surface temperature shall be a minimum of 50°F during application. The sealant shall be pumped directly into the crack or joint from the mixing unit. The mixing unit shall have a distributor wand with a pancake design, with the applicator specifically designed to apply the sealant under pressure which compresses the sealant onto the pavement surface. The sealant shall overlap the crack at the pavement surface. The finished height of the sealant above the pavement surface shall be 1/8" to 3/16".

Blotting Material – Blotting with fine aggregate shall directly follow sealant application if traffic is permitted immediately after crack sealing, within pedestrian areas, or if the ambient temperature exceeds 75°F.

Demonstration – Before beginning the work, the Vendor/Contractor will be required to demonstrate competence in mixing and applying the fiber reinforced asphalt sealant in accordance with the specification to the satisfaction of the Agency.

QUALIFICATION OF BIDDERS

- a. All bidders will be required to have a minimum of 2 years' experience installing hot fiber reinforced asphalt sealing similar to those specified herein.
- b. Within 3 working days of request by the Agency, the Bidder must present evidence of experience as an asphalt sealant contractor for jobs equivalent to those of this contract and possessing financial standing, plant, machinery and equipment adequate to handle this contract. The Bidder must provide a list of contract work performed within the last 2 years.

ROADS TO BE CRACK SEALED

Roads to be crack sealed will be designated by Agency.

TIMEFRAME

Roads shall be crack sealed between April 1 and June 30 unless otherwise directed by Agency. Ideally, roads should be crack sealed when pavement temperatures greater than 50°F (and rising) and less than 75°F. Agency shall pre-approve installations outside of this temperature range.

ITEM 9 FIBER REINFORCED ASPHALT CRACK SEALER (PG 64-22)

MAINTENANCE AND PROTECTION OF TRAFFIC

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while placing the crack sealant. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

- a. The working hours of construction may have to be restricted on arterial functional classification streets. In general, lane reduction may be prohibited during the peak rush traffic hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM Monday through Friday. The Vendor/Contractor shall exhibit the ability to maintain adequate traffic flows to the satisfaction of the Agency.
- b. Temporary “No Parking” signs may be necessary to facilitate traffic flow or to crack seal curb lanes. The Vendor/Contractor shall furnish, install, and remove these temporary signs. The construction material for these signs may be on a lightweight card board paper stock or as otherwise approved by the Agency. The temporary “No Parking” signs shall be in accordance with R7 Series (No Parking Signs) of the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS). Placement of signs will be as approved by the Agency on a per street basis.
- c. The Vendor/Contractor must provide a minimum of one flag person at all times. The purpose of this flag person is to maintain directional vehicular and pedestrian traffic. An arrow board shall also be utilized to provide advance warning of lane changes and construction operations in addition to a flag person.
- d. Vendor/Contractor work crews shall have all OSHA required clothing and safety equipment.

Method of Measurement: The quantity to be paid for shall be the actual installed number of gallons of asphalt cement at 60 degrees F. used within the fiber reinforced asphalt sealant. The gallons will be verified by asphalt cement delivery tickets and measurements of asphalt cement volumes in the kettle prior to additions of fibers. No payment will be made for wasted material. Expanded volume of the fiber reinforced asphalt sealant due to temperature and addition of fibers will be reduced by corresponding expansion when calculating waste materials.

ASPHALT PRICE ADJUSTMENTS

Asphalt price adjustments will be made according to the provisions provided in the asphalt adjustment Appendix.

ITEM 9 FIBER REINFORCED ASPHALT CRACK SEALER (PG 64-22)

BASIS OF PAYMENT

The unit price bid shall be per Gallon and shall include the cost of all MPOT, labor, equipment, and materials necessary to complete the work. Payment will be made under:

DESCRIPTION	UNIT
Fiber Reinforced Asphalt Crack Sealer (PG 64-22)	Gallons (GAL)

ITEM 10

PAVER RENTAL

DESCRIPTION

The Vendor/Contractor shall supply on a rental basis a hot mix asphalt (HMA) Paver/Finishing Machine of approved type to any project site within Monroe County. The Paver rental price shall include mobilization and demobilization of all required equipment at the project site, including all necessary maintenance and fuel. The Paver shall be available within 7 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and Agency. The Vendor/Contractor will be responsible for the delivery and pickup of the Paver to any project site within Monroe County.

Bituminous material will be hauled to the Paver by Others as coordinated by the Agency.

EQUIPMENT

1. Standard Paver equipment shall meet the requirements of the latest revision of the New York State Department of Transportation (NYSDOT) Standard Specifications, Section 400 Asphalt Mixture and Pavement, and be in good working condition. The Finishing Machine shall be designed with standard compaction equipment such as tamping bars and/or pressure screed. The use of electronic screed and leveling devices are required. Auger and tunnel extensions shall be mounted on the Paver when the screed is extended more than one (a) foot for fixed paving widths wider than twelve (12) feet.
2. Sidewalk Paver shall meet the requirements of the Agency. The equipment shall be able to pave 4' – 7' as requested by the Agency.

MAINTENANCE AND PROTECTION OF TRAFFIC

Maintenance and Protection of Traffic (MPOT) will be provided by the Agency per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

The Vendor/Contractor will be responsible for MPOT during delivery and pickup of the Paver from the project site, in accordance with the current version of the national MUTCD, including the NYSS.

METHOD OF MEASUREMENT

The quantity to be paid under this item shall be the number of Half Days or Full Days of rental provided.

BASIS OF PAYMENT

The unit price will include all costs for equipment associated with use of the Paver. Payment will be made for either a Half Day (4 hours or less) or a Full Day (more than 4 hours). Payment will be made under:

ITEM 10**PAVER RENTAL**

DESCRIPTION	UNIT
Standard Paver Rental – Full Day	Full Day
Standard Paver Rental – Half Day	Half Day
Sidewalk Paver Rental – Full Day	Full Day
Sidewalk Paver Rental – Half Day	Half Day

ITEM 11**PAVER OPERATOR****DESCRIPTION**

This item will provide a qualified person to operate the hot mix asphalt (HMA) Paver on an hourly basis (both regular time and over time) as required by the Agency, irrespective of the asphalt quantity. Over time is defined as hours worked per Day over 8 hours. The Paver Operator shall have all OSHA required clothing, safety equipment, and OSHA Training.

MATERIALS

None.

METHOD OF MEASUREMENT

The quantity to be paid shall be the number of Hours (HR) of Straight Time (up to 8 Hours per Day) or Over Time (over 8 Hours per Day) worked.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Paver Operator – Straight Time	Hour (HR)
Paver Operator – Over Time	Hour (HR)

ITEM 12**PAVER SCREED OPERATOR****DESCRIPTION**

This item will provide a qualified person to operate the Paver Screed on an hourly basis (both regular time and over time) as required by the Agency, irrespective of the asphalt quantity. Over time is defined as hours worked per Day over 8 hours. The Screed Operator shall have all OSHA required clothing, safety equipment, and OSHA Training.

MATERIALS

None.

METHOD OF MEASUREMENT

The quantity to be paid shall be the number of Hours (HR) of Straight Time (up to 8 Hours per Day) or Over Time (over 8 Hours per Day) worked.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Paver Screed Operator – Straight Time	Hour (HR)
Paver Screed Operator – Over Time	Hour (HR)

ITEM 13**HEAVY LABORER (PAVING OPERATIONS)****DESCRIPTION**

This item will provide a qualified person to act as a Heavy Labor (Paving Operations) on an hourly basis (both regular time and over time) as required by the Agency, regardless of the asphalt quantity. Over time is defined as hours worked per Day over 8 hours. The Heavy Laborer (Paving Operations) shall have all OSHA required clothing, safety equipment, and OSHA Training.

MATERIALS

None.

METHOD OF MEASUREMENT

The quantity to be paid shall be the number of Hours (HR) of Straight Time (up to 8 Hours per Day) or Over Time (over 8 Hours per Day) worked.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Heavy Laborer (Paving Operations) – Straight Time	Hour (HR)
Heavy Laborer (Paving Operations) – Over Time	Hour (HR)

ITEM 14

ASPHALT ROLLER RENTAL WITH OPERATOR

DESCRIPTION

The Vendor/Contractor shall supply on a rental basis a 5 Ton or 10 Ton dual drum hot mix asphalt (HMA) Roller to any project site within Monroe County. The Roller rental price shall include mobilization and demobilization of all required equipment at the project site, including all necessary maintenance and fuel. The Roller shall be available within 5 days' notice from the Agency. A Roller Operator shall be provided as an option.

EQUIPMENT

1. The 5 Ton Steel Vibratory / Static Roller equipment shall meet the requirements of the latest revision of the New York State Department of Transportation (NYSDOT) Standard Specifications, Section 400 Asphalt Mixture and Pavement, and be in good working condition.
2. The 10 Ton Steel Vibratory / Static Roller equipment shall meet the requirements of the latest revision of the NYSDOT Standard Specifications, Section 400 Section 400 Asphalt Mixture and Pavement, and be in good working condition.

Water – The Agency shall be responsible for supplying a source of water. The Vendor/Contractor shall be responsible to provide the labor and equipment to haul and distribute the necessary water to the project site.

OPERATOR

This item will provide a qualified person to operate the Roller on an hourly basis (both regular time and over time) as required by the Agency, irrespective of the asphalt quantity. Overtime is defined as the hours worked per Day over 8 hours. The Roller Operator will have all OSHA required clothing, safety equipment, and OSHA Training.

METHOD OF MEASUREMENT

Equipment – The quantity to be paid under this item shall be the number of Half Days (0 – 4 hours) or Full Days (more than 4 hours) of rental provided.

Operator – The quantity to be paid shall be the number of Straight Time (up to 8 hours per Day) or Over Time hours (over 8 hours per Day) worked.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
5 Ton Roller Rental – Full Day	Full Day
5 Ton Roller Rental – Half Day	Half Day
10 Ton Roller Rental – Full Day	Full Day

ITEM 14**ASPHALT ROLLER RENTAL WITH OPERATOR**

10 Ton Roller Rental – Half Day	Half Day
Roller Operator – Straight Time	Hour (HR)
Roller Operator – Over Time	Hour (HR)

DESCRIPTION

The work will involve providing bituminous liquid tack coat material and distributor with operator to apply material in accordance with the Manufacturer's and Agency's recommendations.

MATERIALS

All materials shall meet the requirements of the current version of the New York State Department of Transportation (NYSDOT) Standard Specifications Section 702 Bituminous Materials. Three (3) different types of tack coat material are included:

1. Tack Coat Base Material **CSS-1h**
2. Tack Coat Base Material **HFMS-2**
3. Rapid Breaking Tack Coat

CONSTRUCTION REQUIREMENTS

The material shall be delivered to the site upon 24 hours' notice and applied in accordance with the current version of the NYSDOT Standard Specifications, Section 407 Tack Coat.

Equipment – A distributor shall be used for applying tack coat. The distributor shall be capable of applying the tack coat uniformly on variable widths of surface up to 15 feet. The distributor equipment shall include a quantity measuring system and a thermometer for measuring temperature of tank contents. Prior to being used on a project, this equipment shall be calibrated in accordance with ASTM D 2995 Standard Practice for Estimating Application Rate of Bituminous Distributors or an equivalent calibration procedure acceptable to the Agency. The Agency shall either observe the equipment calibration or require the Vendor/Contractor to provide documentation certifying the calibration. Distributors shall be equipped with circulation spray bars which shall be adjustable both laterally and vertically. An attached bristle broom that drags on the pavement behind the spray bars may be attached to the distributor. If a broom is used, it shall be adjustable laterally and vertically so that the full width of the applied tack coat is bristled uniformly into the pavement surface. A bituminous material sampling valve shall be attached to the distributor. The distributor tank shall be equipped with an agitator that is capable of ensuring the tack coat remains homogeneous. Tack coat stored in the distributor tank shall be heated and maintained at a temperature between 85°F and 160°F. Hand operated spray units will be permitted only in areas where the use of a distributor is impractical. The Agency shall determine the final acceptance of all equipment used for applying the tack coat.

Application of Tack Coat – The tack coat contained in the distributor tank shall be homogeneous. The tack coat shall be applied to a prepared clean pavement. Material shall be applied uniformly across the width of the designated area. The tack coat shall not be applied on a wet pavement surface or when the pavement surface temperature is below 40°F. The application rate shall be as determined in Table I - Tack Coat Application Rates. These are recommended application rates for tack coat on various surface types and may be modified by the Agency.

ITEM 15**TACK COAT – APPLIED****Table I – Tack Coat Application Rates**

Surface Type	Application Rate (Gal. / SY)	
	Diluted Tack Coat	Straight Tack Coat
New Hot Mix Asphalt	0.05 -0 .06	0.03 – 0.04
Milled Surfaces and Existing Hot Mix Asphalt	0.08 - 0.10	1.05 – 0.06

BASIS OF BID

The unit price bid shall include all costs to furnish, deliver and install the material at the recommended and/or agreed upon application rates.

The unit bid price shall be the cost per Gallon factoring in an established price of **\$155/ Hour** for the rental of the bituminous distributor with operator.

METHOD OF MEASUREMENT

The quantity of material to be paid for shall be measured by the number of gallons used. The number of hours charged for the distributor truck and operator will only be for hours on the project site. **No payment will be made for travel to and from the project site or for mechanical breakdown of the distributor.** The time charged shall be agreed upon for the project at the end of each working period by the project superintendent.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Tack Coat Base Material CSS-1h	Gallon (GAL)
Tack Coat Base Material HFMS-2	Gallon (GAL)
Rapid Breaking Tack Coat	Gallon (GAL)
Tack Coat Distributor Equipment with Operator	Fixed Price \$155 / Hr.

ITEM 16 COLD IN PLACE RECYCLING OF BITUMINOUS PAVEMENTS (TYPE II)

DESCRIPTION

The work shall consist of recycling the existing bituminous pavement using the Type II process as indicated in the bid item to a specified depth and width in a single pass per lane width. The single pass recycling system shall have the capability to incorporate additional aggregate (if required), excavate existing pavement by cold milling (Type II), proportion, mix and compact the Reclaimed Asphalt Pavement (RAP*) with Asphalt Emulsion and place in accordance with the lines, grades and depth established by the Agency. After the existing pavement has been removed, it shall not be returned to grade until it has been completely processed for final placement.

MATERIALS

Materials shall meet the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials.

Bituminous Material – Asphalt emulsion shall meet the requirements of the most current version of NYSDOT Standard Specifications Section 702 Bituminous Materials. Liquid materials required for remixing with the recycled pavement material shall be medium setting asphalt emulsion grade HFMS-2 or grade CMS-2. The material shall be obtained from a storage facility that has been approved by the Director of the NYSDOT Materials Bureau.

Additives – Additives may be used to improve the quality of the resulting recycled pavement. Rejuvenators may be added to increase the penetration of the existing asphalt cement. Additives may be combined with the asphalt emulsion prior to construction or may be added during construction. HFMS-2 asphalt emulsion with a polymer modification may be substituted for unmodified HFMS-2 asphalt emulsion and payment shall be made at the bid price approved for the project.

Water shall meet the requirements of the most recent version of NYSDOT Standard Specifications Section 712-01 Water.

Aggregate, if required, shall meet the requirements of the most recent version of NYSDOT Standard Specifications Section 703 Aggregates.

Prior to the mixing and placing operation, the RAP and imported aggregate, if required, shall meet the following gradation:

Sieve Size	Percent Passing
1 1/2"	100

EQUIPMENT

The equipment shall consist of a self-propelled machine capable of pulverizing in-situ bituminous pavement to a depth as directed by the Agency, in one pass per lane width. The machine shall have a minimum rotor cutting width of 10 feet, standard automated grade and slope controls, and the capability of maintaining a consistent depth of cut.

ITEM 16 COLD IN PLACE RECYCLING OF BITUMINOUS PAVEMENTS (TYPE II)

Work crews shall have all OSHA required clothing, safety equipment, and OSHA Training.

The asphalt emulsion stabilizing additive shall be applied through a separate mixing machine capable of blending the sized RAP into a homogeneous mixture. Placement of the blend materials to grade shall be such that segregation is minimized.

The mixing equipment shall have a positive displacement asphalt emulsion pump which shall be interlocked with the dry materials feeding system so that wet and dry components are volumetrically consistent.

The Vendor/Contractor shall supply all compaction equipment. All compaction equipment shall appear on the current NYSDOT Approved List. Compaction equipment shall be pneumatic tire and/or dual drum vibratory roller of adequate weight and drum diameter to complete the consolidation of the recycled mat. The roller shall have a pressure water spray system and scrapers to keep the recycled pavement from adhering to the drums.

CONSTRUCTION DETAILS

The pavement to be recycled shall be excavated by cold milling to the length, width, and depth as specified by the Agency; processed and placed per this specification. The cold milling machine shall be capable of cutting to the depth and lane width required and shall be equipped with automatic grade and slope controls.

When required by the Job Mix Formula, additional aggregate shall be imported and placed on the existing pavement prior to the removal of the pavement to be recycled. The imported aggregate shall be incorporated with the recycled asphalt pavement (RAP) by the milling machine as it progresses forward.

Water is required for cooling of the milling machine cutter head and is added to enhance mixing and compaction. Such additional water shall be added at the cutting head prior to the mixing and placing of the processed material.

Introduction of the asphalt emulsion into the mixing chamber shall be through a positive displacement liquid metering system. The flow of the asphalt emulsion shall be electronically interlocked with the processed recycled material feed so they will start and stop simultaneously.

Placing of the processed recycled material shall be done to the specified lane width and depth in the path removed by the cold milling operation. Placement shall be done after the cold milling and mixing are completed with no material being returned to the newly milled surface until final placement can be accomplished. Final placement shall be done with a floating, vibrating screed which can be crowned at the center. The screed shall be capable of placing the recycled material without “scars” or “drags” in the finished mat.

Compaction shall be completed by the Vendor/Contractor upon placement of the recycled mat and shall be included in the price bid per Square Yard. A proper rolling sequence shall be determined at the time of construction. In general, rolling will begin at the shoulder edge of the new mat and

ITEM 16 COLD IN PLACE RECYCLING OF BITUMINOUS PAVEMENTS (TYPE II)

progressively work toward the centerline of the road. On each successive lane, the joint shall be creased with approximately 4" - 5" of the compactor drum overlapping the new lane of recycled pavement. Upon the creasing of the joint, the compaction shall continue at the edge of the mat opposite the joint and work progressively toward the joint in parallel passes of the compactor.

Maintenance and Protection of Traffic

Maintenance and Protection of Traffic (MPOT) will be provided by the Agency per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS), **or provided by Vendor/Contractor under the Optional MPOT Item.**

The following functions are specific responsibilities of the Agency, **or provided by the Vendor/Contractor under the Optional Hauling Item:**

1. Purchase, delivery, and proper placement of new aggregate to support the mix design.
2. Supply an approved water source where Vendor's/Contractor's hauling vehicle can be loaded, as required.
3. Supply dump trucks to remove excess RAP from milling machine and/or place RAP by tailgating in front of milling machine to make up for deficiencies in the pavement.

If the Agency elects to Fog Seal the recycled pavement, payment shall be made per Gallon delivered and applied at 60°F using the price bid for Tack Coat; Item #15 in this bid package.

JOB MIX FORMULA

The Vendor/Contractor shall provide the Agency a complete Job Mix Formula at least 5 working days before the start of work. The Job Mix Formula shall include detailed construction recommendations. Recommendations shall be based on field cores of the actual pavement to be recycled inclusive of the depth of cut. Cores shall be obtained from alternating lane locations each 1000 feet for the entire length of the project. Laboratory analysis of the pavement cores shall include at least the following:

1. Residual asphalt content by weight percent (ASTM D 1856).
2. Penetration of residual asphalt at 77°F, 100g, 5 sec (ASTM D5).
3. Gradation of aggregate after extraction (ASTM C 136).

The Job Mix Formula shall include:

1. Specifications of aggregate to be added.
2. Amount of aggregate to be added per Square Yard.

ITEM 16 COLD IN PLACE RECYCLING OF BITUMINOUS PAVEMENTS (TYPE II)

3. Complete and detailed specification of liquid additive.
4. Amount of liquid additive to be added per ton of RAP/aggregate mix.
5. Core Reports.

METHOD OF MEASUREMENT

The unit price bid for Cold In Place Recycling of Bituminous Pavements (Type II) shall be measured by the number of Square Yards of recycled pavement and for the depth of cut specified and measured at the centerline of the existing bituminous pavement.

Asphalt emulsion delivered and incorporated into the mix shall be measured by the Gallon at 60°F.

All Optional Items shall be an additional cost per Square Yard added to the base cost of recycled pavement placed.

ASPHALT PRICE ADJUSTMENTS

Asphalt price adjustments will be made according to the provisions provided in the asphalt adjustment Appendix. All asphalt emulsion incorporated in the project will be eligible for adjustment under the provisions of the asphalt price Appendix.

BASIS OF AWARD

The County will award by each individual item as shown in the proposal.

BASIS OF BID

The unit price bid per Square Yard shall include all equipment and labor to operate the recycling train; including the placement and compaction of the recycled material.

TYPE II – The recycling train will excavate by cold milling the existing pavement, crush the reclaimed material, mix imported aggregate (if any), combine the processed RAP aggregate mixture with the asphalt emulsion, and place the mixture to finished grade.

The unit price bid per Day is solicited for a bituminous paver for placing the mix. The price bid shall include delivery, two operators, fuel, and all necessary supplies. The paver shall be of the Barber-Greene SB-140, or equal, equipped with automatic transverse slope and longitudinal grade screed controls.

The unit price bid per Gallon of asphalt emulsion shall include delivery, labor, and equipment necessary to incorporate the material in the mix. The quantity specified in the Job Mix Formula is approximate and may be adjusted as required by the Agency. Payment for asphalt emulsion material added to the work shall be by the Gallon; temperature corrected to 60° F.

ITEM 16 COLD IN PLACE RECYCLING OF BITUMINOUS PAVEMENTS (TYPE II)

The following asphalt emulsions as described in the Material section of this specification will be used in Type II:

HFMS-2	HFMS-2p	HFMS-2 with Rejuvenator
CMS-2	CMS-2h	

The bid price shall include the cost of coring, analysis, reporting, and the development and submittal of the Job Mix Formula.

Optional Items

The Vendor/Contractor shall be responsible for MPOT per the current version of the national MUTCD, including the NYSS. Basis of payment shall be the additional cost per Square Yard added to the base cost of recycled pavement placed.

BASIS OF PAYMENT

Cold In Place Recycling of Bituminous Pavements (Type II) shall be paid by Square Yard (SY) by thickness (3" or 4"). Costs for equipment associated with use of the Cold Mix Bituminous Paver shall be paid by Day. The Cold in Place Emulsion used shall be paid by the Gallon (Gal.). All Optional Items shall be paid as an additional cost per Square Yard added to the base cost of recycled pavement placed as described in Table II:

DESCRIPTION	UNIT
Cold in Place Recycle TYPE II Up to 10,000 SY @ 3 inches	Square Yard (SY)
Cold in Place Recycle TYPE II Up to 10,000 SY @ 4 inches	Square Yard (SY)
Cold in Place Recycle TYPE II Over 10,000 SY @ 3 inches	Square Yard (SY)
Cold in Place Recycle TYPE II Over 10,000 SY @ 4 inches	Square Yard (SY)
Cold in Place Recycle TYPE II Cold Mix Bituminous Paver	Day
Cold In Place Emulsion HFRA	Gallon (GAL)
Cold In Place Emulsion HFMS-2	Gallon (GAL)
Cold In Place Emulsion HFMS-2p	Gallon (GAL)
Cold In Place Emulsion HFMS-2 with Rejuvenator	Gallon (GAL)
Cold In Place Emulsion CMS-2	Gallon (GAL)

ITEM 16 COLD IN PLACE RECYCLING OF BITUMINOUS PAVEMENTS (TYPE II)

Cold In Place Emulsion CMS-2h	Gallon (GAL)
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TABLE II – Optional Items

Allowable Additions per Square Yard (SY)	Unit Price
Hauling: Vendor/Contract to furnish the hauling (trucking) of the aggregate to the paver.	Per Square Yard (SY)
Maintenance & Protection of Traffic: Vendor/Contractor to provide adequate traffic control per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).	Per Square Yard (SY)

ITEM 17 PAVEMENT RECYCLING PUGMILL MIX - CENTRAL PLANT

DESCRIPTION

The work shall consist of recycling of existing bituminous pavements using high float emulsified rejuvenating agent (HFRA) with reclaimed asphalt pavement (RAP). Under this item, the Vendor/Contractor shall provide all necessary labor and equipment to grind the existing pavement and to load the grindings into trucks supplied by the Agency. In addition, the Vendor/Contractor shall provide all equipment and labor required to recycle the existing bituminous pavement at a central mixing plant location and place the recycled material using an approved paver.

MATERIALS

Bituminous Material – The HFRA shall meet the requirements of the following material designation and shall conform to the following requirements:

TEST	REQUIREMENT
Sieve Test, %	0.10 max.
Storage Stability, 1 day	1.0 max.
Stone Coating, shall pass Distillation Test	Note #1 or #2
Residue From Distillation % Min.	65
Oil Distillate	0-5
Test on Residue from Distillation Penetration	77°F
00 grams, 5 seconds	200+
Float Test @ 140°F, Note #3	1.200+
Solubility in Trichloroethylene, %	97.5+
Flash Point, COC, °F Min	350
Saturates, % Max.	20

Additional Requirements – To rejuvenate aged asphalt having a penetration between 10-20 to a penetration of 60 or more, the solids from the HFRA shall not exceed 30% by weight of the aged asphalt.

ASTM Tests –

- **Note #1** – ASTM Method D244, except that the mixture of stone and asphalt emulsion shall be capable of being mixed vigorously for 5 minutes, at the end of which period the stone shall be thoroughly and uniformly coated. The mixture shall then be completely immersed in tap water and the water poured off. The stone shall then be not less than 90% coated.
- **Note #2** – ASTM Method D244, except that the mixture of stone and asphalt emulsion shall be mixed vigorously for 5 minutes, then allowed to stand for 3 hours, after which the mixture shall be capable of being mixed an additional 5 minutes. The mixture shall then be rinsed twice with approximately its own volume of tap water without showing appreciable loss in bituminous film. After the second mixing, the aggregate shall be at least 90% coated.

ITEM 17 PAVEMENT RECYCLING PUGMILL MIX - CENTRAL PLANT

- **Note #3** – Float Test ASTM Method D-139, except that the residue from distillation shall be poured immediately into the float collar at 500°F and not through a No. 50 sieve; or if the residue had been allowed to cool, it shall again be heated to 500°F and poured into a collar. The water bath shall be maintained at the specified test temperature $\pm 1^\circ\text{F}$.

Composition of Completed Recycled Asphalt Mixture

TYPE III	
Mixture screen sizes	General Limits % passing (1)
2"	100
1"	90-100
½"	60-90
¼"	38-74
1/8"	25-62
80	4-16
200	2-8
Bituminous Material % of residual bitumen (2)	4.5-7.0

Notes:

1. Aggregate percentages are based on total weight of aggregate.
2. The bitumen content is based on the total weight of the mix, exclusive of water or oil distillate.

Test on Abson Recovery of Completed Recycled Asphalt Mix

Test	Minimum	Maximum
Penetration, 77 F, 100 g, 5 sec	60	200
Solubility in trichloroethylene, %	99.0	-
Ductility, 60°F, 5 cm/min, cm	40	-
Flash Point, °F	350	-
Loss on Heating, %	-	1.5

Aggregate – The mineral aggregate shall conform to the requirements set out in the following reference subsections in the New York State Department of Transportation (NYSDOT) Standard Specifications:

- 703-01 Fine Aggregate
- 703-02 Coarse Aggregate

EQUIPMENT

Grinding/ Milling – The equipment for grinding and profiling pavement surface shall be a power operated, planing machine or grinder capable of removing, in one pass, a thickness of asphaltic concrete necessary to provide profile, cross slope, and desired texture uniformly across the entire

ITEM 17 PAVEMENT RECYCLING PUGMILL MIX - CENTRAL PLANT

pavement surface up to 7 inches in one pass. Minimum drum cutting width shall be 6 feet 3 inches. The equipment shall be self-propelled with sufficient power, traction, and stability to maintain accurate depth of cut and slope. The cutting drum shall have bi-directional cutting capability in order to control chunk size meeting the following gradation:

Chunk Size Gradation	
Sieve Size	Percent Passing
3"	100
2"	95-100
#200	0-12

In addition, the machine shall be so designed that the drum is capable of cutting with a zero side clearance on at least one side. The reclaimed material will be discharged to the rear of the machine onto a 24" pick-up conveyor belt. This conveyor will transfer material to a minimum 24" wide truck loading conveyor into Agency owned trucks. The loose material resulting from the operation shall remain the property of the Agency. The grindings shall not be stockpiled higher than 10 feet.

The equipment shall be capable of accurately establishing profile grades along each edge of the machine (within $\pm 1/8"$) by referencing from the existing pavement by means of a ski or matching shoe or from an independent grade control and shall be controlled by an automatic system for controlling grade elevation and cross slope at a given rate. The machine shall be equipped with means to control dust and other particulate matter created by the cutting action. The speed of the machine shall be variable in order to leave the desired grid pattern surface texture. Determination of the type carbide milling teeth shall be the sole discretion of the Agency if the intended milling is to be used as a serviceable riding texture for an indeterminate time.

The pavement surface shall be removed to the depth, width, grade, and cross section as directed by the Agency. The Agency may require that the pavement planing operations be referenced from an independent grade control in those areas where he deems this type of control to be appropriate. For this type of operation, the independent grade control shall be established and maintained by the Vendor/Contractor in a manner acceptable to the Agency. In the event the entire pavement width along a section of highway has not been planed to a flush surface by the end of a work day, resulting in a vertical or near vertical longitudinal face exceeding 1 1/4" in height, this longitudinal face shall be sloped in a manner acceptable to the Agency as not to create a hazard to traffic using the facility during periods when construction is not in progress. Transverse faces that are present at the end of a work day will be tapered in the manner approved by the Agency to avoid creating a hazard for traffic.

Mixing – Mixing equipment shall meet the requirements of the most recent version of NYSDOT Standard Specification 405-3.02 Equipment. Mixing shall be done with a rotating twin paddle shaft pugmill providing suitable pressure-kneading action in mixing. Mixing by blading, shoveling, and/or scooping will not be permitted. The mixer shall be either a continuous traveling type, central continuous, or batch type pugmill designed to accurately proportion either by volume or by weight, so that when the aggregate and bituminous materials are incorporated in the mix; a thorough and uniform coating will result. The mixer shall be equipped to mechanically or electrically interlock

ITEM 17 PAVEMENT RECYCLING PUGMILL MIX - CENTRAL PLANT

the bituminous feed with the aggregate feed such that uniformity of the mixture is assured at all times.

The pugmill mixer (central type), shall be provided with weighing, volumetric or other gauging equipment which shall be capable of providing accurate control at all times of the amount of aggregate entering the mixer per time interval. The mixer shall be equipped with a positive displacement metering system capable of totalizing the quantity of bituminous material applied to the mixing chamber. The aggregate feed system must contain a minimum of 2 compartments or bins; each compartment or bin shall have adjustable feed gates so that the RAP material and virgin aggregate, if needed, can be proportioned at the specified rate. The capacities of the cold feed bins shall be sufficient to maintain a continuous flow of material. Each bin shall have a mechanical device for uniform feed of the aggregate. The mixer shall be approved by the Agency prior to commencing any work.

Paving – Bidder shall bid rental rate for Barber-Greene SB-140, or equal, equipped with automatic transverse slope and longitudinal grade screed controls which will be used in spreading the RAP. The Agency will load and haul RAP from the mixing site to the paver. Compaction will be provided by the Agency, **or provided by Vendor/Contractor under the Optional Compaction Item.**

CONSTRUCTION DETAILS

Maintenance and Protection of Traffic

Maintenance and Protection of Traffic (MPOT) will be provided by the Agency per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS), **or provided by Vendor/Contractor under the Optional MPOT Item.**

Vendor/Contractor work crews shall have all OSHA required clothing and safety equipment.

The following functions are specific responsibilities of the Agency, **or provided by the Vendor/Contractor under the Optional Hauling Item:**

1. Delivery and proper placement of new aggregate to support the mix design.
2. Supply sufficient trucks to haul RAP or recycled material.
3. Furnish suitable stockpile area with adequate room for mixing and stockpiling.

The following functions are specific responsibilities of the Agency:

1. Furnish loader and operator to stockpile RAP and charge pugmill mixer during mixing operation.
2. Supply an approved water source where Vendor's/Contractor's hauling vehicle can be loaded, as required.

ITEM 17 PAVEMENT RECYCLING PUGMILL MIX - CENTRAL PLANT

Design, Certification, and Demonstrations

Prior to commencing any mixing work, the Vendor/Contractor shall sample the RAP to be used on the project. The RAP material shall then be extracted by standard ASTM methods and, at a minimum, the following shall be determined:

1. Percent of asphalt residue in RAP.
2. Penetration of aged asphalt in RAP.
3. Sieve analysis of aggregate in RAP.
4. Percent of HFRA needed to be added to bring the aged asphalt in RAP to desired penetration.

After analyzing the RAP material, the Supplier shall then submit a certified recommended Job Mix Formula to the Agency. The recommended job mix should include the following at a minimum:

1. Complete analysis of RAP material.
2. Percent of RAP material to be used.
3. Percent of virgin aggregate and sizes to be added, if any.
4. Combined aggregate gradation.
5. Percent of asphalt residue in finished mix.
6. Percent of HFRA to be added.
7. Type and percentage of standard emulsion to be blended with HFRA, if any.
8. Target or design penetration of finished mix.
9. Test on residue from Abson Recovery of Completed Recycled Asphalt Mix (RAM) as required in Composition of Completed Recycled mixtures section.

Acceptance of the formula by the Agency is solely for the purpose of quality control, and in no way releases the Vendor/Contractor from his responsibilities.

Either during or immediately after construction, the Vendor/Contractor shall provide complete certified test analyses of all Job Mix Formula parameters on the completed cold recycled mixture as directed by the Agency.

Vendor/Contractor Qualifications

1. Vendor/Contractor shall have access to a complete and permanently operating manufacturing plant with facilities located within a reasonable delivery distance to the job site.
2. Operator of plant facilities shall have a minimum of 2 years' experience in the production of the type of material specified to ensure proper mixtures and satisfactory service. The Vendor/Contractor at the time of bidding shall own the equipment with which he intends to use to complete the contract, if so awarded.
3. The Vendor/Contractor shall be prepared, upon 12 hours prior notice, to load all required HFRA at temperatures requested by the Agency for the specific project.

ITEM 17 PAVEMENT RECYCLING PUGMILL MIX - CENTRAL PLANT

4. The Vendor/Contractor shall own, operate, and maintain a working laboratory at his plant. The laboratory shall be equipped with all equipment necessary to perform all specified tests on the HFRA sample and RAP material. The laboratory shall be operated by a full time qualified technician and shall be available for use by Agency personnel. In addition, the laboratory shall also include sufficient equipment to test aggregates and mixes required by NYSDOT Materials Method #5. The Agency may at any time have samples tested by a certified independent testing laboratory.
5. The Vendor/Contractor shall supply documentation with his bid showing that he has manufactured and supplied any non-NYSDOT specification items on at least 4 successful projects in the previous 2 years. This documentation should list name, location, quantities, date of completion, and a contact person for verification. Any bid on non-NYSDOT specification items which is not documented as above will be considered unresponsive to this specification and will be rejected.

METHOD OF MEASUREMENT

The unit price bid per Square Yard (SY) shall include all labor and equipment for cold milling in accordance with the attached specifications loaded on Agency trucks. The work crews shall have all OSHA required clothing and safety equipment and OSHA training.

The unit price bid per Gallon (GAL) shall include HFRA and a rotating twin shaft central plant pugmill in accordance with the attached specifications supplied with all testing, labor, fuel, and necessary supplies.

The unit price bid per Day is solicited for a bituminous paver for placing the mix. The price bid shall include delivery, two operators, fuel, and all necessary supplies. The paver shall be of the Barber-Greene SB-140, or equal, equipped with automatic transverse slope and longitudinal grade screed controls.

All Optional Items shall be an additional cost per Square Yard (SY) added to the base cost of recycled pavement placed.

ASPHALT PRICE ADJUSTMENTS

Asphalt price adjustments will be made according to the provisions provided in the asphalt adjustment Appendix. All asphalt emulsion incorporated in the project will be eligible for adjustment under the provisions of the asphalt price Appendix.

BASIS OF PAYMENT

Pavement Recycling Pugmill Mix – Central Plant shall be paid by Square Yard (SY) by thickness (3" or 4"). Costs for equipment associated with use of the Cold Mix Bituminous Paver shall be paid by Day. The Cold in Place Emulsion used shall be paid by the Gallon (GAL). All Optional Items shall be paid as an additional cost per Square Yard (SY) added to the base cost of recycled pavement placed as described in Table II:

ITEM 17 PAVEMENT RECYCLING PUGMILL MIX - CENTRAL PLANT

DESCRIPTION	UNIT
Pavement Recycling Pugmill Mix – Central Plant Up to 10,000 SY @ 3 inches	Square Yard (SY)
Pavement Recycling Pugmill Mix – Central Plant Up to 10,000 SY @ 4 inches	Square Yard (SY)
Pavement Recycling Pugmill Mix – Central Plant Over 10,000 SY @ 3 inches	Square Yard (SY)
Pavement Recycling Pugmill Mix – Central Plant Over 10,000 SY @ 4 inches	Square Yard (SY)
Pavement Recycling with HFRA	Gallon (GAL)
Cold Mix Bituminous Paver	Day

TABLE II – Optional Items

Allowable Additions per Square Yard (SY)	Unit Price
Hauling: Vendor/Contract to furnish the hauling (trucking) of the aggregate to the paver.	Per Square Yard (SY)
Maintenance & Protection of Traffic: Vendor/Contractor to provide adequate traffic control per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).	Per Square Yard (SY)
Compaction: The Vendor/Contractor shall supply either a Pneumatic Rubber Tire Roller or a Steel Drum 10 Ton Roller with an experienced Operator: <i>Pneumatic Rubber Tire Roller (Option)</i> <i>Steel Drum 10 Ton Roller (Option)</i>	Per Square Yard (SY)

ITEM 18 FULL DEPTH RECLAMATION PAVEMENT RECYCLING

DESCRIPTION

This work shall consist of pulverizing an existing roadway to a specified length, width, and depth, upgrading with virgin aggregate (as required), and blending with an additive to produce a recycled in-place stabilized base material.

MATERIALS

1. The stabilizing additive shall be furnished by the Vendor/Contractor. The additive shall be the type and quantity specified in the Job Mix Formula and will be paid for under a separate pay item.
2. Virgin aggregate for grade or gradation control shall be furnished by the Agency and spread to a depth and width as necessary to assure conformity with the Job Mix Formula.
3. Water for dust control or compaction aid shall be furnished by the Agency and placed evenly across the surface or the work to assure conformity with the Job Mix Formula.
4. The pulverized aggregate material in the roadway, including virgin aggregate (if any) shall meet the following specification:

Sieve Size	Percent Passing (by Weight)
3"	100
2"	90-100
1/4"	30-65
#200	0-10

Note: The top size of the pulverized material shall not exceed 1/2 the depth of the total recycled base course thickness after final compaction. Resident cobbles and oversize materials in the sub-base beneath the recycled mat are not subject to this requirement.

CONSTRUCTION REQUIREMENTS

1. The roadway to be recycled shall be pulverized to the length, width, and depth as specified by the Agency. The Vendor/Contractor shall be equipped to verify the actual depth of cut at any point throughout the project.
2. Where Calcium Chloride Solution is the stabilizing additive of choice, the percent passing the #200 sieve shall be 10-20% per Section 411 Stabilized Gravel Surface Course of the New York State Department of Transportation (NYSDOT) Standard Specifications.
3. When required by the Job Mix Formula, additional aggregate shall be imported and spread over the pavement to be pulverized. This "new" aggregate shall then be combined with the material being recycled with the initial pass of the pulverizing machine.

ITEM 18 FULL DEPTH RECLAMATION PAVEMENT RECYCLING

4. Shaping of the grade for profile may be required during various stages of the construction and shall be provided by the Agency.
5. Application of the stabilizing material shall be through the computerized liquid metering spray system on the pulverizing machine. The type and amount of stabilizing agent to be added shall be as specified in the Job Mix Formula.
6. Shaping and compacting of the pulverized material throughout all construction phases shall be the responsibility of the Agency.

JOB MIX FORMULA

1. It shall be the responsibility of the Vendor/Contractor to analyze the existing pavement structure. At least five (5) working days prior to the start of work, written construction recommendations, laboratory analysis, and Job Mix Formula shall be delivered to the Agency for approval.
2. The Job Mix Formula shall be determined from field samples. Field samples shall be obtained from the pavement that is to be recycled and shall consider the entire length of the project and depth inclusive of the actual intended cut. The samples shall be submitted to a qualified laboratory for extraction of bituminous materials and analysis.
3. The specifics of the proposed mix design, analysis parameters, and the number and location of core samples shall be a joint recommendation of the Vendor/Contractor and the Agency.
4. Upon completion of the laboratory evaluation, a Job Mix Formula for the optimum mix design and a Vendor's/Contractor's cost estimate for each project will be submitted to the Agency for approval.

EQUIPMENT & LABOR

1. The Vendor/Contractor shall furnish a self-propelled machine capable of pulverizing, in-place, the existing pavement and mixing any added aggregate to a depth of sixteen (16) inches.
2. The machine shall be equipped with a computerized liquid proportioning system capable of regulating and monitoring the liquid application rate relative to forward speed and shall be able to handle a complete range of liquid additives. The equipment shall be capable of mixing the liquid additives and the pulverized reclaimed pavement into a homogeneous mixture.
3. The cutting drum shall be fully maintained with adequate cutting teeth at all times throughout the work.
4. The Vendor/Contractor shall furnish a qualified operator and will be responsible for all movement of the equipment including trailer moves to and from the work site.

ITEM 18 FULL DEPTH RECLAMATION PAVEMENT RECYCLING

5. Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

METHOD OF MEASUREMENT

The quantity for payment will be measured by the Square Yard (SY) for material pulverized and mixed within the length, width, and depth of each project as ordered by the Agency. Liquid additives will be measured by the Gallon (Gal).

BASIS OF PAYMENT

Payment will be based on the Square Yards (SY) of recycling work completed plus the Gallons (GAL) of stabilizing additive included in the work. The unit price per Square Yard (SY) includes the cost of equipment, maintenance, materials and labor necessary to operate the pulverizing equipment, perform the laboratory analysis, and to prepare and submit the Job Mix Formula. The unit price for the stabilizing additive includes the cost of the supply and delivery of the stabilizing additive to the pulverizing machine.

The Full Depth Pavement Reclamation shall be paid by the Square Yard (SY). The Stabilizing Additive shall be paid by the Gallon (GAL).

DESCRIPTION	UNIT
Full Depth Pavement Reclamation Up to 10,000 SY	Square Yard (SY)
Full Depth Pavement Reclamation Over 10,000 SY	Square Yard (SY)
Stabilizing Additive Calcium Chloride	Gallon (GAL)
Stabilizing Additive Asphalt Emulsion HFMS-2	Gallon (GAL)

ITEM 19 STABILIZED SHOULDER MATERIAL

DESCRIPTION

It shall be the purpose and intent of this award to make available to end users a per Gallon (GAL) price to have the Vendor/Contractor deliver, mix, and stockpile a lignosulfate based product suitable for stabilizing aggregate road shoulders.

MATERIALS

The material shall be suitable for stockpile storage and shall consist of the following:

- Sodium/Calcium Chloride 13%
- Lignin 19%

EQUIPMENT

The Vendor/Contractor shall deliver the necessary pug mill mixing equipment plant to the Agency storage facility. The mixing equipment shall be supplied with adjustable liquid flow controls and a qualified operator trained by the Vendor/Contractor. The pugmill shall be capable of receiving different blends of aggregates to produce a homogeneous blend of aggregates and liquid as desired by the Agency. The Agency will provide the loader and operators to assist in the mixing process to obtain optimal mixing production.

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

The Agency will provide the Agency storage facility location and supply the aggregate to be mixed.

METHOD OF MEASUREMENT

The quantity of material to be paid for shall be by the Gallon (GAL). The price per Gallon (GAL) shall include mixing by the Vendor/Contractor.

BASIS OF BID

The unit price per Gallon (GAL) shall include all costs for the Vendor/Contractor furnishing, delivering the liquid material, and mixing (with a portable pugmill) the liquid material with Agency supplied aggregate at the Agency storage facility.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Stabilized Shoulder Material	Gallon (GAL)

ITEM 20 LIQUID CALCIUM CHLORIDE

DESCRIPTION

This work shall consist of furnishing and applying Liquid Calcium Chloride material for gravel road stabilization or furnishing Liquid Calcium Chloride for snow and ice control to any point in Monroe County.

MATERIALS

Material shall meet the following requirements:

Specifications		Typical Breakdown (#/GAL)	
Calcium Chloride	34% (+/- 1%)	Calcium Chloride	3.8
Alkali Chloride as NaCl	2% max	Sodium Chloride	0.2
Magnesium as Mg	0.01% max	Magnesium Chloride	0.004
		Calcium Sulfate	0.004
		Water	7.162
		Total	11.170

METHOD OF MEASUREMENT

The quantity for payment will be measured by the Gallon (GAL); with a minimum order of 500 Gallons (GAL).

BASIS OF BID

The unit price per Gallon (GAL) for Gravel Road Stabilization will be Free On Board (FOB) to any point in Monroe County including application at the rate designated by the Agency within 7 days after order. The unit price bid shall include all labor, equipment, and material as required for the competent application of the mix.

The unit price per Gallon (GAL) for Snow and Ice Control will be delivered Free On Board (FOB) to any point in Monroe County designated by the Agency within 7 days after order. The unit price bid shall include all labor, equipment, and material to deliver material to Agency facility.

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

BASIS OF AWARD

The County will award by each individual item as shown in the proposal.

BASIS OF PAYMENT

Payment will be made under the following items:

ITEM 20 LIQUID CALCIUM CHLORIDE

DESCRIPTION	UNIT
Liquid Calcium Chloride (Snow & Ice Control)	Gallon (GAL)
Liquid Calcium Chloride (Gravel Road Stabilization)	Gallon (GAL)

DESCRIPTION

The Vendor/Contractor shall supply on a rental basis a 4 Foot, 5 Foot, or 7 Foot wide Milling Machine to any project site within Monroe County. The Milling Machine rental price shall include mobilization and demobilization of all required equipment at the project site, including all necessary maintenance and fuel. The Milling Machine rental shall be coordinated with the Agency, and the estimated rental timeframe shall be agreed upon prior to delivery. The Milling Machine shall be provided in working condition with an operator and a ground man. The Vendor/Contractor shall provide the equipment for milling of asphalt or mixed composition, capable of any depth up to the maximum cutting depth of the machine. The Milling Machine shall be available within 7 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and Agency. The Vendor/ Contractor will be responsible for the delivery and pick up of the Milling Machine to any project site within Monroe County.

The Agency shall provide chipping, sweeping, haul trucks, disposal site, disposal site loader, and operator.

EQUIPMENT

Milling Machine shall meet the requirements of the latest revision of the New York State Department of Transportation (NYSDOT) Standard Specifications, Section 490 Cold Milling, and be in good working condition.

Milling Machines shall be power operated, self-propelled machines capable of removing the desired thickness of existing surfaces. The machines shall have sufficient power, traction, and stability to accurately maintain depth of cut and slope. They shall be capable of producing a finished profile and cross slope to within 1/4 inch of that required and shall produce a uniform surface texture free from gouges and ridges greater than 3/8 inch in depth. The machines shall be equipped with a means to control dust and other particulate matter created by the cutting action. The machines shall have an integral loading system or sufficient equipment shall be provided to accomplish complete removal of milled material at a rate equivalent to the milling rate.

If the Agency requests a mill head smaller than the "standard" 4 foot, a separate payment will be made at the fixed price indicated in the proposal for the Milling Head Change.

Water – The Agency shall be responsible for supplying a source of water and the labor and equipment to haul and distribute the necessary water to the project site. In the event that that the Agency cannot supply the water to the project, the Vendor/Contactor shall supply the water; a separate payment will be made at the fixed price indicated in the proposal for supplying water either by the Half Day (4 hours or less) or the Full Day (more than 4 hours). No additional compensation will be made for overtime for supplying water.

Maintenance and Protection of Traffic

Maintenance and Protection of Traffic (MPOT) will be provided by the Agency per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

ITEM 21

MILLING MACHINE RENTAL & OPERATORS

The Vendor/Contractor will be responsible for MPOT during delivery and pickup of the Milling Machine from the project site, in accordance with the current version of the national MUTCD, including the NYSS.

Optional Item (Addition)

The Vendor/Contractor shall be equipped to perform the following service as directed by the Agency under the pay item described below:

1. **Multiplex Profile Milling:** Vendor/Contractor to furnish all necessary equipment and attachments required to model the pavement surface to perform profile milling to reset or restore the crown of the roadway.

LABOR

Labor items will provide a qualified Milling Machine Operator and Ground Person to operate the equipment. Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

METHOD OF MEASUREMENT

Equipment – The quantity to be paid under this item shall be the number of Half Days (4 hours or less) or Full Days (more than 4 hours) of rental provided.

Operator – The quantity for the Milling Machine Operator and Ground Person shall be an hourly charge for Regular Hours (8 hours or less) and Overtime Hours (more than 8 hours).

The initial equipment move shall be included in the daily rate for Half Day or Full Day rental. Any additional equipment moves to another location during the rental period requiring a low boy trailer shall be paid as Additional Mobilization – Equipment Moves at a fixed rate of \$625 per move.

All incidental options shall be paid by adding the unit cost as described in **Table II** below.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
7' Milling Machine Rental – Full Day	Full Day
7' Milling Machine Rental – Half Day	Half Day
5' Milling Machine Rental – Full Day	Full Day
5' Milling Machine Rental – Half Day	Half Day
4' Milling Machine Rental – Full Day	Full Day
4' Milling Machine Rental – Half Day	Half Day
Milling Machine Operator – Regular Hours	Hour (HR)

ITEM 21**MILLING MACHINE RENTAL & OPERATORS**

Milling Machine Operator – Overtime Hours	Hour (HR)
Ground Person – Regular Hours	Hour (HR)
Ground Person – Overtime Hours	Hour (HR)
Milling Head Change	Fixed Price \$450/Change
Vendor/Contractor Water Supply – Full Day	Full Day
Vendor/Contractor Water Supply – Half Day	Half Day
Additional Mobilization – Equipment Moves	Fixed Price \$625/Move

Table II – Optional Items

Allowable Additions	Unit Price
Multiplex Profile Milling – Full Day: Vendor/Contractor to furnish all necessary equipment and attachments required to model the pavement surface to perform profile milling to reset or restore the crown of the roadway.	Per Full Day
Multiplex Profile Milling – Half Day: Vendor/Contractor to furnish all necessary equipment and attachments required to model the pavement surface to perform profile milling to reset or restore the crown of the roadway.	Per Half Day

DESCRIPTION

The services to be provided by the Vendor/Contractor shall consist of power sweeping roadways including paved shoulders of those highways that are designated by the Agency. The sweeping shall be classified as one of the four categories described below:

- *Maintenance Sweeping* – Sweeping of a designated area as part of a routine maintenance program.
- *Construction Sweeping* – Sweeping of a road as part of an active construction project.
- *Emergency After Hours Sweeping* – Dispatched after hours to sweep a particular location on a road. The materials to be swept shall be non-hazardous, non-life threatening debris. The Vendor/Contractor shall be available for emergency work requests between the hours of 4:00 PM to 6:00 AM on business days (Monday through Friday), and 24 hours on weekends and holidays. An after-hours emergency phone number shall be provided to Monroe County for use during the contract period.
- *Curb Weed Sweeping* – Sweeping of a designated areas along curbed roads for the purpose of removal of weeds growing at the curb edge.

EQUIPMENT

The Bidder must submit, when requested by Monroe County, written evidence of the ownership of at least one (1) motorized Sweeper meeting the specifications listed below:

- a) An efficient water spray system for dust control.
- b) A minimum 28" diameter powered right and left hand gutter/curb broom. A minimum 74" wide sweeping path, measured from the outermost edge of the main broom continuously to the left most edge of the main broom or vacuum intake.
- c) An efficient and thorough means of dislodging and conveying debris from the road, gutter or shoulder surface into the hopper by means of a vacuum system. Those with a vacuum should be aware that additional passes may be required for complete sweeping.
- d) The equipment used shall be properly registered, inspected, operated, and insured in accordance with the Motor Vehicle Laws of the State of New York. The equipment shall be equipped with all required warning lights/flashers and sound alarms required to perform day time and after hours (night time) work. Machines shall be kept in good working order during the term of the contract.

The Vendor/Contractor shall be solely responsible for furnishing, storage, and maintenance of equipment meeting the specification described herein. This shall include, but not be limited to, the provision of fuel, oil, hydraulic fluids, and/or replacement brooms.

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MOTORIZED SWEEPING

Curb Weed Sweeping will require the equipment to be outfitted with an optional third broom specifically for eradicating weeds both in the curb line and on top of the curb.

CONSTRUCTION DETAILS

Labor

The Vendor/Contractor shall be responsible for providing all labor necessary to perform the services described herein. This shall include, but not be limited to, direct sweeping labor, travel time, waiting time, breakdown time, and overtime. This should also include provision for competent supervision.

Debris

The Vendor/Contractor shall be responsible for the proper disposal of all debris collected during the course of the sweeping services. The disposal of all such material shall be in compliance with all rules, regulations, and laws relating to the disposal of such material.

The Vendor/Contractor shall be responsible for the removal of all dirt and assorted debris located within the areas to be swept. This shall include, but not be limited to, the removal of mufflers and assorted materials, (not exceeding 35 lbs. in weight), laying within the areas to be swept. This will **NOT** include piles or materials that have been intentionally placed within the areas to be swept.

No spillage will be allowed when a sweeper discharges a load into a transfer truck for disposal. The Vendor/Contractor will be responsible, at his own expense, to re-sweep areas where such spillage occurs. No discharge of materials onto the highway for subsequent loading onto a truck for disposal will be allowed.

Highways to Be Swept

The list of highways to be swept, together with their recorded lengths, will be provided by the Agency to the Vendor/Contractor. These highways are to be completely swept once within the time limits as specified herein. Locations may not be added to the list without the direct approval of the Agency. A complete or partial second round of sweeping may be authorized by the Agency. A minimum of 100,000 Linear Feet (LF) of curb, gutter, or paved shoulder will be guaranteed to the Vendor/Contractor for the first round of sweeping.

It shall be the responsibility of the Vendor/Contractor to examine the sites and conditions of the work areas. No claims for additional payment or pleas will be accepted regarding an inability to perform the work if based upon an alleged ignorance of existing or expected conditions, explicitly including the extent and/or type of debris on the highway(s) to be swept.

Time Limit for Start/Completion of the Work (Maintenance or Construction Sweeping)

The Vendor/Contractor shall be required to begin work upon 7 days' notice by the Agency. The first round of sweeping shall be completed within 30 days of such notice. If a second round of

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MOTORIZED SWEEPING

sweeping is ordered, this round shall also be completed within 30 days of such notice. *Maintenance and/or Construction Sweeping* shall not take place before 6:00 A.M. or after 9:00 P.M.

Time Limit for Start/Completion of the Work (Emergency After Hours Sweeping)

After Hours shall consist of the hours of 4:00 PM to 6:00 AM on business days (Monday through Friday), and all day on weekends and holidays. *Emergency After Hours Sweeping* shall commence within 1 hour after the initial call dispatched by the Agency.

Parked Vehicles and Hand Sweeping

The Vendor/Contractor will **NOT** be required to do any hand sweeping, nor will it be required to return to sweep an area previously obstructed by parked vehicles under *Maintenance and/or Construction Sweeping*.

Hand Sweeping may be required and the Vendor/Contractor shall be responsible to do as such under the *Emergency After Hours Sweeping*.

Supervision and Reporting

The Vendor/Contractor shall have a supervisor or foreman available at all times to direct the work. This person shall report to the Agency any problems that may occur and shall submit progress reports as follows:

- Daily: By telephone or email, a list of highways completed the previous day.
- A list of highways to be completed that day.

Maintenance and Protection of Traffic

It shall be the sole responsibility of the Vendor/Contractor to protect traffic and to ensure that the Sweeper(s) are properly signed and illuminated. The Vendor/Contractor shall be responsible for the Maintenance and Protection of Traffic (MPOT) in accordance with the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS)

METHOD OF MEASUREMENT

Maintenance Sweeping – Measurements shall be per 1,000 Linear Feet (LF) of curb, gutter, or paved shoulder swept. This measurement shall include all curb lanes, gutters, and paved shoulders within the sweeping path. The measurement shall also include the sweeping of all radii of intersecting streets/highways. Unless demonstrated otherwise by the Vendor/Contractor, measurements shall be determined by records maintained by the Agency. No additional payment will be made for extra passes that may be required to completely sweep the designated areas to the satisfaction of the Agency.

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MOTORIZED SWEEPING

Construction Sweeping – Measurement shall be per Hour (HR). The Vendor/Contractor shall be responsible to submit daily sheets showing the start and completion times of the employee each day. The Vendor/Contractor shall meet with the Agency and submit the daily sheet at the end of each work day.

Curb Weed Sweeping – Measurements shall be per 1,000 Linear Feet (LF) of curb swept. This measurement shall include all curb lanes. The measurement shall also include the sweeping of all radii of intersecting streets/highways. Unless demonstrated otherwise by the Vendor/Contractor, measurements shall be determined by records maintained by the Agency. No additional payment will be made for extra passes that may be required to completely sweep the designated areas to the satisfaction of the Agency.

BASIS OF BID

Maintenance Sweeping – The unit price bid shall be in full and sole consideration of all services and work required to completely sweep the designated highways per 1,000 Linear Feet (LF) of curb, gutter, or paved shoulder swept. This price will be paid regardless of the highway width or the number of passes required for a complete sweeping. Payment will be made after submission of a voucher and a detailed invoice indicating the following:

- List of highways swept.
- Starting and stopping points of sweeping (intersecting street/highway or address).
- Linear Feet (LF) of highways swept.
- Dates and times of such sweeping.

Construction Sweeping – The unit price bid shall be per Hour (HR). The Vendor's/Contractor's daily sheets will be used to verify the invoice. Certified payrolls shall accompany all invoices for work performed under Construction Sweeping.

Emergency After Hours Call Out Sweeping – The unit price bid shall be based on Each (EA) individual call out to any Location within Monroe County.

Curb Weed Sweeping – The unit price bid shall be in full and sole consideration of all services and work required to completely sweep the designated curbed sections as directed per 1,000 Linear Feet (LF) of curb swept. This price will be paid regardless of the highway width or the number of passes required for a complete sweeping. Payment will be made after submission of a voucher and a detailed invoice indicating the followings:

- List of highways swept.
- Starting and stopping points of sweeping (intersecting street/highway or address).
- Linear Feet (LF) of curbing of highways swept.
- Dates and times of such sweeping.

BASIS OF PAYMENT

Payment will be made under:

ITEM 22**MOTORIZED SWEEPING**

DESCRIPTION	UNIT
Maintenance Sweeping (Non-Construction)	Per 1,000 LF
Construction Sweeping	Per Hour (HR)
Emergency After Hours Sweeping	Each (EA) Location
Curb Weed Sweeping	Per 1,000 LF

ITEM 23 CONCRETE GUTTERS – VARIOUS OPTIONS

DESCRIPTION

The Vendor/Contractor shall supply all labor, equipment, and materials required to install new concrete gutters and/or to remove and replace existing gutters as specified in the following options. The work shall commence within 14 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency. The Vendor/Contractor shall guarantee the work as detailed in the following specifications.

MATERIALS

Materials and manufacture of concrete for this work shall meet the requirements for Class "D" Concrete as specified in the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials, Section 501 Portland Cement Concrete - General. The plant and materials shall be New York State approved.

CONSTRUCTION DETAILS

Concrete gutters shall be either conventionally formed or machine formed to the size and shape as specified by the Agency. The concrete gutters shall be 6" thick constructed in conformance with Monroe County Department of Transportation (MCDOT) Standard Details and New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials, Section 502-3 Portland Cement Concrete Pavement-Construction Details, Section 624-3.02 Conventionally Formed or Machine Formed Concrete Gutters, and Class "D" Concrete as specified in Section 501-2 Portland Cement Concrete - General. Concrete plant and materials shall be New York State approved. The Vendor/Contractor shall be responsible for the removal and proper disposal of all debris and excess material.

For options that include the restoration of grass and/or asphalt pavement areas, the following requirements will apply:

- A minimum of 3" of screened topsoil shall be installed followed by grass seed and straw.
- The existing asphalt section thickness should be matched in kind up to a maximum section thickness of 6" asphalt base, 2" asphalt binder, and 1.5" asphalt top within the roadway. A maximum section thickness of 2" asphalt binder and 1.5" asphalt top applies for driveway areas.

Guarantee – The Vendor/Contractor shall guarantee the work under this item for a period of two (2) years. The guarantee period shall commence upon the date of acceptance of the work by the Agency. The Vendor/Contractor shall remove and replace any defective work or materials appearing within the guarantee period and shall pay for any and all damages caused by such defective work or materials. The Vendor/Contractor shall commence removal and replacement of the defective work or materials within 14 days' notice of such defects by the Agency.

Damages – Gutters that do not require replacement but are damaged by the Vendor/Contractor during the course of construction shall be replaced at the Vendor's/Contractor's sole expense.

ITEM 23 CONCRETE GUTTERS – VARIOUS OPTIONS

Maintenance and Protection of Traffic

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while installing, removing, and replacing concrete gutters. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

The Vendor/Contractor shall notify each property owner in writing at least 24 hours prior to blocking any driveway access to allow the property owner sufficient time to find an alternate location to park vehicles while their driveway is inaccessible. All gutter work shall be scheduled so that no driveway is inaccessible for longer than 48 hours.

METHOD OF MEASUREMENT

Concrete gutter shall be measured by the number of Square Yards (SY) of exposed surface of concrete gutters placed. Drop inlet reconstruction shall be measured by the number of Linear Feet (LF) of adjustment or reconstruction associated with the gutter replacement.

BASIS OF BID

The item multiplier bid price shall be applied to the payment item option prices contained in the Proposal. **Do not show percentages as the multiplier.** Any bid showing percentages will be rejected. **The multiplier shall be submitted to two (2) decimal places (i.e. 0.xx or 1.xx).** Pricing for reconstructing drop inlets will be obtained for work to be done in conjunction with and adjacent to gutter replacement(s). The bid prices shall include all labor, equipment, and materials necessary to complete the work to the satisfaction of the Agency as detailed in the particular bid options listed below.

Option A – Install New Gutters (All Inclusive): The Vendor/Contractor shall provide the surveying of line and grade in areas where there are no existing gutters; saw cutting of adjacent roadway and driveway pavement; excavation to the required line and grade; removal and disposal of the excavated material; furnish and place six inches of #2 crusher run stone base to grade; form, pour, and protect new concrete gutters; and restore adjacent roadway pavement, driveway pavement, and lawns.

Option B – Remove and Replace Existing Gutters (All Inclusive): The Vendor/Contractor shall provide the saw cutting of both ends of the existing gutter, roadway pavement, and driveway pavement adjacent to the gutter; removal and disposal of the existing concrete gutters; surveying of line and grade; furnish and place crusher run stone base leveling course; form, pour, and protect the new concrete gutters; and restore adjacent roadway pavement, driveway pavement, and lawns.

ITEM 23 CONCRETE GUTTERS – VARIOUS OPTIONS

Option C – Remove and Replace Existing Gutters (Restoration by Others): The Vendor/Contractor shall provide the saw cutting of both ends of the existing gutter, roadway pavement, and driveway pavement adjacent to the gutter; removal and disposal of the existing concrete gutters; surveying of line and grade; furnish and place crusher run stone base leveling course; form, pour, and protect the new concrete gutters. The Agency shall provide the restoration of the adjacent roadway pavement, driveway pavement, and lawns.

Option D – Replace Gutter ONLY (Removal of Existing Gutters and Restoration by Others): The Vendor/Contractor shall provide the surveying of line and grade, form, pour, and protect the new concrete gutters. The Agency shall provide the saw cutting of both ends of the existing gutter, roadway pavement, and driveway pavement adjacent to the gutter; removal and disposal of the existing concrete gutters; furnish and place crusher run stone base leveling course; and restoration of the adjacent roadway pavement, driveway pavement, and lawns.

Reconstruct Drop Inlet (In Addition to Gutter Replacement): The Vendor/Contractor shall reconstruct/adjust all existing drop inlets within the gutter section, as necessary, in addition to the gutter replacement for each of the options above.

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

BASIS OF AWARD

There will be a separate award for each option; each option will be awarded to the Bidder with the lowest multiplier. The multiplier shall be submitted to two (2) decimal places (i.e. 0.xx or 1.xx). Bidders shall only submit a single multiplier for each option. Deletion or changes to items listed or scheduled unit prices will be cause for rejection of the bid. The multiplier will be applied to each of the scheduled values for the award and contract pricing.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Option A - Install New Gutters (All Inclusive) 1- 50 Square Yards	Square Yard (SY)
Option A - Install New Gutters (All Inclusive) 51 – 250 Square Yards	Square Yard (SY)
Option A - Install New Gutters (All Inclusive) Over 250 Square Yards	Square Yard (SY)
Option B - Remove and Replace Existing Gutters (All Inclusive) 1- 50 Square Yards	Square Yard (SY)
Option B - Remove and Replace Existing Gutters (All Inclusive) 51 – 250 Square Yards	Square Yard (SY)
Option B - Remove and Replace Existing Gutters (All Inclusive) Over 250 Square Yards	Square Yard (SY)

ITEM 23 CONCRETE GUTTERS – VARIOUS OPTIONS

Option C - Remove and Replace Existing Gutters (Restoration by Others) 1- 50 Square Yards	Square Yard (SY)
Option C - Remove and Replace Existing Gutters (Restoration by Others) 51 – 250 Square Yards	Square Yard (SY)
Option C - Remove and Replace Existing Gutters (Restoration by Others) Over 250 Square Yards	Square Yard (SY)
Option D – Replace Gutter ONLY(Removal of Existing Gutters and Restoration by Others) 1- 50 Square Yards	Square Yard (SY)
Option D – Replace Gutter ONLY (Removal of Existing Gutters and Restoration by Others) 51 – 250 Square Yards	Square Yard (SY)
Option D – Replace Gutter ONLY (Removal of Existing Gutters and Restoration by Others) Over 250 Square Yards	Square Yard (SY)
Reconstruct Drop Inlet (In Addition to Gutter Replacement) 0 – 1 LF	Linear Foot (LF)
Reconstruct Drop Inlet (In Addition to Gutter Replacement) Over 1 LF	Linear Foot (LF)

DESCRIPTION

The Vendor/Contractor shall supply all labor, equipment, and materials required for the installation, removal, and/or replacement of concrete sidewalks as specified in the following options. The work shall commence within 14 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency.

MATERIALS

Materials shall meet the requirements of Section 608 Sidewalks, Driveways, Bicycle Paths, and Vegetation Control Strips, Section 701 Hydraulic Cements, Section 703 Aggregates, Section 705 Joint Materials, Section 709 Reinforcing Steel, and Section 713 Landscape Development Materials, as specified in the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials.

Concrete – Concrete shall be Class K, air entrained, and have a minimum compressive strength of 4,000 psi. Concrete shall have a design slump of 3" with a maximum deviation of 1/2". Air content shall be 6% with a maximum deviation of 2%. Deviations exceeding those specified shall result in rejection of the concrete.

Samples of concrete may be taken during pouring by the Agency and may be subject to compressive strength tests by an independent laboratory.

Fill Material – Fill material shall be clean earth free of topsoil, roots, boulders, and construction debris and shall be subject to the approval of the Agency.

Expansion Joints – Expansion joints shall be pre-molded bituminous impregnated felt conforming to ASTM Designation D1751.

CONSTRUCTION DETAILS

Excavation – The Vendor/Contractor shall first make pavement cuts in the driveway along the sidewalk to be replaced at eighteen inches (18") from both edges of the walk. The only exception to this requirement would be when both the gutter and sidewalk will be replaced through a particular driveway. In that case, only one (1) cut, eighteen inches (18") from the edge of walk on the house side of the sidewalk needs to be made.

Pavement cuts shall be made neatly with either a rotary blade or pneumatic spade, and shall be kept as straight and as nearly vertical as possible.

The Vendor/Contractor shall then excavate, remove, and dispose of existing marked sidewalk, asphalt, sod, and topsoil to the depths and grades as directed by the Agency. The Vendor/Contractor shall exercise care when removing marked sidewalk in proximity of sidewalk to remain. The Vendor/Contractor shall saw cut along each abutting concrete sidewalk so as not to disturb any existing sidewalk that is to remain. If any damage occurs to the remaining abutting

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CONCRETE SIDEWALKS – VARIOUS OPTIONS

sidewalk, the Vendor/Contractor must replace the damaged sidewalk blocks at no additional cost to the Agency.

After removal of the old sidewalk, the subgrade shall be trimmed to grade and any roots shall be removed to a depth of six (6) inches or more below the finished subgrade and within six (6) inches of the edge of the new sidewalk. Where roots must be cut, they may be machine ground or cut using machine or hand methods, and shall be left cleanly cut and dressed with a black, asphaltic tree paint, liberally applied.

Preparation of Forms and Subgrade – After grubbing, the subgrade shall be brought to grade with approved fill material and thoroughly compacted. The finished subgrade shall be smooth and even. Sidewalk blocks shall be constructed using steel forms unless otherwise approved by the Agency. Forms shall be set true to line and grade and held rigid throughout construction. After forms have set, aligned, and graded, they shall be checked for proper alignment and grade. Any corrections required shall be made immediately.

The subgrade shall then be checked in the presence of the Agency with a scratch board supplied by the Vendor/Contractor to assure that the required full sidewalk depth and any high spots shall be removed and the subgrade re-compacted. No concrete shall be placed until the aforementioned criteria have been satisfied and approved by the Agency. The Agency shall direct the Vendor/Contractor to remove any undesirable subgrade material. Soft or spongy spots developed during the compaction of the sub-base course shall be removed as per the direction of the Agency. All replacement material used in place of undesirable subgrade material shall conform to that specified in *Fill Material*.

Full depth expansion joints shall be formed using premolded bituminous impregnated felt and shall be placed at a maximum of 25-foot intervals, or at street intersections between walks, gutters, curbs, changes in grade or alignment, at the end of every pour, and when abutting existing sidewalks.

Placement of Concrete – Concrete shall be placed in a uniform and workmanlike manner and progressively in a down-grade direction. Extremely dry subgrade shall be moistened ahead of placement, when required.

Concrete sidewalk blocks shall be sixty (60) inches wide, five (5) feet in length, and a minimum of five (5) inches deep, unless otherwise directed by the Agency.

Concrete shall not be placed during rain or snow, nor shall placement be allowed to commence if rain or snow appears imminent. Adequate coverings shall be made available at all times to protect any concrete placed from sudden showers.

The forms shall be filled with concrete and struck off with a screed or strike board with the surface floated with a wood or magnesium float until the concrete is thoroughly compacted and the surface free of depressions and irregularities. No water shall be introduced to the concrete surface to aid in finishing nor shall mixed mortar be used to finish and/or patch surface irregularities. As soon as surface moisture has disappeared, a broom finish shall be applied in a transverse direction and,

ITEM 24**CONCRETE SIDEWALKS – VARIOUS OPTIONS**

immediately thereafter, dummy contraction joints scored, expansion joints and sides along forms edged. Sidewalks shall be scored at regular intervals to create reasonably square blocks (i.e. sidewalks 5 feet wide shall be scored to develop blocks which are 5 feet long). Slabs shall be scored using a grooving tool a minimum of 3/4" deep and 3/8" wide. All slabs shall be edged with a 1/4" radius steel edging tool.

Detectable Warning Units – All detectable warning units (DWUs) shall be installed to meet current ADA standards. All detectable warnings shall meet current NYSDOT standards for size and color. A fixed unit price as indicated on the bid price sheets will be used for the areas requiring detectable warning units as authorized by the Agency. The detectable warning units installed under this item shall be installed using the stamping/imprinting method in fresh concrete. If the Vendor/Contractor is required to install detectable warning units, then the Fixed Price shall be used per Each (EA) detectable warning unit installed. If the Agency desires to install the detectable warning units, the Vendor/Contractor shall make the necessary provisions for the Agency to complete the installation and no payment for detectable warning units will be made. The cost for preparation shall be included in the concrete sidewalk items.

Concrete Reinforcement – The Agency will determine whether steel reinforcement is to be placed in sidewalks. It will be the Agency's decision on the use and placement of reinforcing mesh. If requested, the Fixed Price for steel reinforcement mesh will be added to the Square Yard (SY) sidewalk price as noted in the proposal. It shall be welded wire fabric, 6"x6", 10-gauge, meeting the requirements of NYSDOT Standard Specifications for Construction and Materials Section 709-02 Wire Fabric for Concrete Reinforcement. At the time concrete is placed, wire reinforcement shall be free from rust scale or other coatings that will destroy or reduce the bond. No wire partially embedded in concrete shall be field bent. Wire reinforcement shall be accurately placed two (2) inches from the bottom and sides of the concrete sidewalk.

It is the Vendor's/Contractor's responsibility to order sufficient quantities of concrete to complete the work. No partial blocks shall be placed unless authorized by the Agency.

Curing – After the concrete is finished, it shall be cured for seven (7) days using waterproof blankets or by an approved curing material applied at a minimum rate of one (1) gallon per 12 Square Yards (SY) by an approved mechanical pressure sprayer.

The Vendor/Contractor shall remove the forms as soon as the concrete has set sufficiently. Any honeycomb and voids on the sides of the walks shall be immediately patched. After patching is completed, the curing compound shall be sprayed on the sides of the concrete sidewalk.

Weather Limitations – Concrete shall not be placed at temperatures below 40°F, or on any subgrade having a ground temperature less than 35°F. At any time during the first five (5) days of curing, if the temperature is less than 35°F, special weather protection shall be required consisting of a layer of curing paper covered with straw and a second covering to hold the straw in place.

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CONCRETE SIDEWALKS – VARIOUS OPTIONS

Cleanup – The site shall be cleared of all construction debris including excess earth, paving material, and concrete accumulated during the course of construction. Cleanup shall be complete prior to the commencement of seeding operations, and shall meet the approval of the Agency.

Final Site Restoration

Lawns – The Vendor/Contractor shall grade and/or restore disturbed lawn areas within and adjacent to the construction area.

Topsoil shall consist of fertile, natural, agricultural soil, free of weeds, stumps, roots, brush, stone and similar material. Topsoil shall have an acidity within the range of 5.5 pH to 7.6 pH. The organic content shall not be less than 3% and not more than 20%. Fertilizer shall be 10-10-10, 50% organic.

Grass seed shall be the following mixture, or approved equal, in the following proportions:

- Morning Star Perennial Ryegrass - 24.28%
- Shining Star Perennial Ryegrass - 24.27%
- Pennlawn Red Fescue - 24.27%
- Kentucky Blue Grass - 21.15%
- Inert - 4.83%
- Crop - 1.09%
- Weed - .11%

Topsoil shall be spread to a 4 inch minimum thickness and shall be gradually tapered to cover disturbed areas adjacent to the sides of the sidewalk. Before seeding or fertilizing, the topsoil shall be trimmed and raked. All objectionable material shall be removed and a finely pulverized seed bed shall be formed.

Fertilizer shall be spread over the topsoil at a rate of 10 pounds per 1,000 square feet. Seed shall be spread at a rate of 2 pounds per 1,000 square feet. Both fertilizer and seed shall be spread with a cyclone spreader. The seed shall be covered using a flexible toothed seeder or other suitable equipment by stirring the ground not deeper than 1/4". Any areas which fail to show a uniform "catch" shall be reseeded by the Vendor/Contractor at his sole expense.

Driveways – Driveways will be cut eighteen inches (18") from sidewalk edge(s). The Vendor/Contractor need not provide a permanent asphalt repair to driveways under this item unless indicated in the option description. Instead, temporary repairs which will allow vehicular access to affected properties shall be completed using CR-1 crushed stone brought to the grade of the remaining portion of the driveway, after all loose asphalt pieces have been removed. For options that include the restoration asphalt pavement areas, the following will apply; in general the existing asphalt section thickness should be matched in kind up to a maximum section of 2" of asphalt binder and 1.5" of asphalt top for driveway areas.

Maintenance and Protection of Traffic

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while installing, removing, and replacing concrete sidewalks. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

METHOD OF MEASUREMENT

The quantity to be paid for shall be the number of Square Yards (SY) of concrete sidewalk block installed, removed, and/or replaced as directed by the Agency. If steel reinforcing mesh is requested by the Agency, the fixed unit price for wire reinforcement shall be added to the concrete sidewalk price. If the Vendor/Contractor is requested to install detectable warning units at sidewalk curb ramps, the Vendor/Contractor shall install the detectable warning units using stamped/imprinted methods at the fixed unit price. If the Agency desires to install the detectable warning units, the Vendor/Contractor shall leave adequate provisions for the Agency to install them at a later date; the cost shall be included in the square yard sidewalk item with no separate payment.

BASIS OF BID

This item will be paid for under the following options as indicated in the option descriptions below and detailed within this specification:

Option A – Install New Sidewalks (All Inclusive): The unit price bid for this item per Square Yard (SY) of concrete sidewalk shall include the cost of surveying line and grade in areas where there are no existing sidewalks; clearing and grubbing (defined as only low growth; tree removals will be performed or coordinated by the Agency); saw cutting of adjacent pavement; excavation and/or placement of suitable fill to the required line and grade; removal and disposal of the excavated material; furnishing and placing six inches of #2 crusher run stone base to grade; forming; placement of concrete; finishing; stripping; curing and protection of new concrete sidewalks; cleanup; and final site restoration of adjacent pavement and lawns.

Option B – Remove and Replace Existing Sidewalks (All Inclusive): The unit price bid for this item per Square Yard (SY) of concrete sidewalk shall include the cost of furnishing all equipment; materials and labor necessary to complete the work, including saw cutting both ends of the existing sidewalk and adjacent pavement; excavation, removal, and disposal of existing asphalt or concrete sidewalks; tree root removal; preparing subgrade; furnishing, placing, and compaction of subgrade material; forming and placement of concrete; finishing, stripping, curing, and protection of new concrete sidewalk; and cleanup and final site restoration of adjacent pavement and lawns.

ITEM 24**CONCRETE SIDEWALKS – VARIOUS OPTIONS**

Option C – Remove and Replace Existing Sidewalks (Restoration by Others): The unit price bid for this item per Square Yard (SY) of concrete sidewalk shall include furnishing all equipment, materials, and labor necessary to complete the work including saw cutting both ends of the existing sidewalk and adjacent pavement; excavation, removal, and disposal of the existing concrete or asphalt sidewalk; tree root removal; preparing subgrade; furnishing, placing, and compaction of subgrade material; forming and placement of concrete; finishing, stripping, curing, protection of new concrete sidewalks; and site clean-up. The Agency shall provide the restoration of the adjacent pavement and lawns.

Option D – Replace Only (Removal of Existing Sidewalk and Restoration by Others): The unit price bid for this item per Square Yard (SY) of concrete sidewalk shall include the cost of furnishing and placing any crusher run stone base leveling course; forming; placement of concrete; finishing, stripping, curing, and protection of the new concrete sidewalk; and site clean-up. The Agency shall provide the saw cutting of both ends of the existing sidewalk and adjacent pavement; removal and disposal of the existing concrete or asphalt sidewalk; and restoration of the adjacent pavement and lawns.

BASIS OF AWARD

There will be a separate award for each option; the total bid price for each option will be based on the single unit price bid for sidewalk replacement by the Square Yard (SY). The steel reinforcement and detectable warning unit options, when requested and authorized, will be paid at the fixed unit prices as indicated in the proposal.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Option A – Install New Sidewalk (All Inclusive) 1- 50 Square Yards	Square Yard (SY)
Option A – Install New Sidewalk (All Inclusive) 51 – 250 Square Yards	Square Yard (SY)
Option A – Install New Sidewalk (All Inclusive) Over 251 Square Yards	Square Yard (SY)
Option B – Remove and Replace Existing Sidewalk (All Inclusive) 1- 50 Square Yards	Square Yard (SY)
Option B – Remove and Replace Existing Sidewalk (All Inclusive) 51 – 250 Square Yards	Square Yard (SY)

ITEM 24**CONCRETE SIDEWALKS – VARIOUS OPTIONS**

Option B – Remove and Replace Existing Sidewalk (All Inclusive) Over 251 Square Yards	Square Yard (SY)
Option C – Remove and Replace Existing Sidewalk (Restoration by Others) 1- 50 Square Yards	Square Yard (SY)
Option C – Remove and Replace Existing Sidewalk (Restoration by Others) 51 – 250 Square Yards	Square Yard (SY)
Option C – Remove and Replace Existing Sidewalk (Restoration by Others) Over 251 Square Yards	Square Yard (SY)
Option D – Replace Only (Removal of Existing Sidewalk and Restoration by Others) 1- 50 Square Yards	Square Yard (SY)
Option D – Replace Only (Removal of Existing Sidewalk and Restoration by Others) 51 – 250 Square Yards	Square Yard (SY)
Option D – Replace Only (Removal of Existing Sidewalk and Restoration by Others) Over 251 Square Yards	Square Yard (SY)
Detectable Warning Unit Installation	Fixed Price \$350 / EA
Additional Price for Steel Reinforcement	Fixed Price \$5.50 / SY

ITEM 25 CONCRETE CURB – VARIOUS OPTIONS

DESCRIPTION

The Vendor/Contractor shall supply all labor, equipment, and materials required to construct conventionally formed or machine formed Concrete Curb Type BB. The work shall commence within 14 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency.

MATERIALS

Conventionally formed and machine formed Concrete Curb shall meet the requirements for Class "J" Concrete as specified in the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials, Section 501 Portland Cement Concrete - General.

CONSTRUCTION DETAILS

Conventionally formed and machine formed Concrete Curb Type BB shall have a 7" reveal and comply with the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials Section 609-3 Curb and Curb & Gutter – Construction Details. The Vendor/Contractor shall be responsible for the removal of all debris and excess material resulting from the work.

For options that include the restoration of grass and asphalt pavement areas, the following will apply: a minimum of 3" of screened topsoil shall be installed followed by grass seed and straw; the existing asphalt section thickness should be matched in kind up to a maximum section of 6" asphalt base, 2" asphalt binder and 1.5" asphalt top in the roadway, and a maximum of 2" asphalt binder and 1.5" asphalt top for driveway areas.

Maintenance and Protection of Traffic

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while installing Concrete Curb. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

METHOD OF MEASUREMENT

All Concrete Curb placed under this item will be measured for payment on the basis of linear feet (LF) along the top arris line of the Concrete Curb installed.

ITEM 25 CONCRETE CURB – VARIOUS OPTIONS

BASIS OF BID

The item multiplier bid price shall be applied to the payment item prices contained in the Proposal. **Do not show percentages as the multiplier.** Any bid showing percentages will be rejected. **The multiplier shall be submitted to two (2) decimal places (i.e. 0.xx or 1.xx).** The bid prices shall include all labor, equipment, and materials necessary to complete the work to the satisfaction of the Agency as detailed in the particular bid options listed below:

Option A – Concrete Curb (All Inclusive): The bid price shall include forming and installing new Concrete Curb Type BB including MPOT, excavation, subbase preparation, backfill, asphalt restoration, lawn restoration, and disposal of spoil material.

Option B – Concrete Curb (Forming and Installing Only): The bid price shall include forming and installing new Concrete Curb Type BB including MPOT. The Agency will be responsible for the excavation, subbase preparation, and all restoration items.

BASIS OF AWARD

There will be a separate award for each option; each option will be awarded to the Bidder with the lowest multiplier. The multiplier shall be submitted to two (2) decimal places (i.e. 0.xx or 1.xx). Bidders shall only submit a single multiplier for each option. Deletion or changes to items listed or scheduled unit prices will be cause for rejection of the bid. The multiplier will be applied to each of the scheduled values for the award and contract pricing.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Option A – Concrete Curb (All Inclusive) 1 LF – 100 LF	Linear Foot (LF)
Option A – Concrete Curb (All Inclusive) 101 LF – 500 LF	Linear Foot (LF)
Option A – Concrete Curb (All Inclusive) Over 500 LF	Linear Foot (LF)
Option B – Concrete Curb (Forming and Installing Only) 1 LF – 100 LF	Linear Foot (LF)
Option B – Concrete Curb (Forming and Installing Only) 101 LF – 500 LF	Linear Foot (LF)
Option B – Concrete Curb (Forming and Installing Only) Over 500 LF	Linear Foot (LF)

DESCRIPTION

The Vendor/Contractor shall supply all labor, equipment, and materials required to install stone curbing and/or reset existing stone (granite) or precast concrete curb in accordance with these specifications and the lines and grades established by the Agency. The work shall commence within 14 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency.

MATERIALS

Materials shall meet the requirements as specified in the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials:

- | | |
|--------------------------------------|----------------|
| • Mortar Sand | Section 703-03 |
| • Premolded Resilient Joint Filler | Section 705-07 |
| • Masonry Mortar | Section 705-21 |
| • Stone Curb Anchor Bars | Section 709-07 |
| • Stone Curb | Section 714-01 |
| • Epoxy Polysulfide Grout | Section 721-03 |
| • Portland Cement Concrete (Class A) | Section 501-02 |

Stone (Granite) Curb – Stone Curb shall be granite and meet the material requirements of Section 714 of the NYSDOT Standard specifications latest revision. The stone shall be sound and durable, free from seams which impair its structural integrity and of a smooth splitting and machining character. Natural color variations that are characteristic of the deposit will be permitted. Curb veins shall not exceed one inch (1”) in width.

CONSTRUCTION DETAILS

All Stone Curb used adjacent to flexible (asphalt) pavement shall be set on continuous concrete backing. Dry concrete mix, Class A shall be used for the portion of such backing below the bottom of the curb. Existing pavement shall be saw cut for the limits of curb replacement a width of 2 feet from the curb face and removed to subgrade elevation.

All Stone Curb used adjacent to rigid (concrete) pavement shall be set on a firm and uniform continuous bed of dry concrete mix. Concrete backing shall be placed behind the curb joints for at least 12 inches on each side of each joint. Granular material used as a bed shall be properly compacted and carefully shaped to receive the Stone Curb with a minimal amount of filling in the remaining voids.

All Stone Curb shall be set true to line and grade on a 6 inch dry concrete bedding which shall be placed directly upon a compacted stone subbase of 6 inch deep #2 stone. Concrete backing details shall be in accordance with the current NYSDOT Standard Sheet for curb unless other special construction details are required by the Agency. All spaces beneath the curb shall be carefully and thoroughly compacted to provide a firm and uniform bearing.

ITEM 26

STONE CURB – VARIOUS OPTIONS

After the curb has been set, it shall be backfilled with approved material and the material thoroughly tamped before proceeding with any further work in the area adjacent to the curb.

Curb sections shall not be fitted together closer than 1/4 inch at the arris line.

The joints in the curb shall be carefully filled with cement mortar, mixed, and rodded in place as specified in the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials, Section 705-21 Masonry Mortar. The top and exposed front face of the joint shall be neatly pointed flush with curb surfaces and satisfactorily cleaned of all excess mortar.

All pavement, driveways, and lawns shall be replaced with an “in kind” section as ordered by the Agency. If any underdrain is encountered or disturbed during the curb installation, it shall be retained and/or replaced by the Vendor/Contractor.

The Vendor/Contractor shall keep the curb clean, aligned, and protected from damage until completion of the contract.

Maintenance and Protection of Traffic

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while installing Stone Curb. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

BASIS OF BID

The item multiplier bid price shall be applied to the payment item prices contained in the Proposal. **Do not show percentages as the multiplier.** Any bid showing percentages will be rejected. **The multiplier shall be submitted to two (2) decimal places** (i.e. 0.xx or 1.xx). The bid prices shall include all labor, equipment, and materials necessary to complete the work to the satisfaction of the Agency as detailed in the particular bid options listed below:

Option A – Install Stone Curb (All Inclusive): The bid price shall include furnishing and installing new Stone Curb including MPOT, excavation, subbase, drymix bedding, concrete backing, backfill, asphalt restoration, lawn restoration, and disposal of spoil material.

Option B – Install Stone Curb (Furnish and Install Only): The bid price shall include furnishing and installing new Stone Curb including MPOT, drymix bedding, and concrete backing. The Agency will be responsible for the excavation, subbase preparation, and all restoration items.

ITEM 26**STONE CURB – VARIOUS OPTIONS**

Option C – Reset Existing Curb (All Inclusive): The bid price shall include resetting of existing curbing including all MPOT, excavation, subbase, drymix bedding, concrete backing, backfill, asphalt restoration, lawn restoration, and disposal of spoil material.

Option D – Reset Existing Curb (Excluding Prep and Restoration): The bid price shall include resetting of existing curbing including all MPOT, drymix bedding, and concrete backing. The Agency will be responsible for the excavation, subbase preparation, and all restoration items.

Option E – Furnish Stone Curb: The Vendor/Contractor shall furnish Type C Stone Curb in the quantities listed in the proposal within 7 working days of notification by the Agency. Installation is not required as part of this option.

BASIS OF AWARD

There will be a separate award for each option; each option will be awarded to the Bidder with the lowest multiplier. The multiplier shall be submitted to two (2) decimal places (i.e. 0.xx or 1.xx). Bidders shall only submit a single multiplier for each option. Deletion or changes to items listed or scheduled unit prices will be cause for rejection of the bid.

The multiplier will be applied to each of the scheduled values for the award and contract pricing.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Option A – Stone Curb (All Inclusive) 1 LF – 100 LF	Linear Foot (LF)
Option A – Stone Curb (All Inclusive) 101 LF – 500 LF	Linear Foot (LF)
Option A – Stone Curb (All Inclusive) Over 500 LF	Linear Foot (LF)
Option B – Stone Curb (Furnish and Install Only) 1 LF – 100 LF	Linear Foot (LF)
Option B – Stone Curb (Furnish and Install Only) 101 LF – 500 LF	Linear Foot (LF)
Option B – Stone Curb (Furnish and Install Only) Over 500 LF	Linear Foot (LF)
Option C – Reset Existing Curb (All Inclusive) 1 LF – 100 LF	Linear Foot (LF)
Option C – Reset Existing Curb (All Inclusive) 101 LF – 500 LF	Linear Foot (LF)
Option C – Reset Existing Curb (All Inclusive) Over 500 LF	Linear Foot (LF)

ITEM 26**STONE CURB – VARIOUS OPTIONS**

Option D – Reset Existing Curb (Excluding Prep and Restoration) 1 LF – 100 LF	Linear Foot (LF)
Option D – Reset Existing Curb (Excluding Prep and Restoration) 101 LF – 500 LF	Linear Foot (LF)
Option D – Reset Existing Curb (Excluding Prep and Restoration) Over 500 LF	Linear Foot (LF)
Option E – Furnish Stone Curb 1 LF – 100 LF	Linear Foot (LF)
Option E – Furnish Stone Curb 101 LF – 500 LF	Linear Foot (LF)
Option E – Furnish Stone Curb Over 500 LF	Linear Foot (LF)

DESCRIPTION

The Vendor/Contractor shall supply all labor, equipment, and materials required to remove all deteriorated portions of Drop Inlets and to replace those portions removed with cast in place structural concrete. The work shall commence within 14 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency.

MATERIALS

Materials and manufacture of concrete for this work shall meet the requirements for Class "A" Concrete as specified in the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials, Section 555 Structural Concrete and Table 501-3 Concrete Mixtures. The plant and materials shall be New York State approved.

All frames and grates required under this item shall be supplied by the Agency.

CONSTRUCTION DETAILS

No drop inlet shall be repaired with less than a 12 inch vertical concrete cap. Construction details shall conform to the most recent version of the NYSDOT Standard Specifications for Construction and Materials, Section 604-3 Drainage Structures. The Vendor/Contractor shall be responsible for the removal and proper disposal of all debris and surplus material.

Maintenance and Protection of Traffic

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while Reconstructing Drop Inlets. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

Damages – Gutters that do not require replacement but are damaged by the Vendor/Contractor during the course of Drop Inlet Reconstruction shall be replaced at the Vendor's/Contractor's sole expense.

METHOD OF MEASUREMENT

Reconstructed Drop Inlets shall be measured to the nearest tenth of a Linear Foot (LF) of total vertical reconstruction measured from the top of the reset frame down to the existing structure to remain.

ITEM 27**RECONSTRUCTION OF EXISTING DROP INLETS****BASIS OF BID**

The item multiplier bid price shall be applied to the payment item prices contained in the Proposal. **Do not show percentages as the multiplier.** Any bid showing percentages will be rejected. **The multiplier shall be submitted to two (2) decimal places (i.e. 0.xx or 1.xx).** The bid prices shall include all labor, equipment, and materials necessary to complete the work to the satisfaction of the Agency.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Reconstruct Drop Inlet – Up to 1.0 LF of Total Vertical Reconstruction	Linear Foot (LF)
Reconstruct Drop Inlet – 1.1 to 2.0 LF of Total Vertical Reconstruction	Linear Foot (LF)
Reconstruct Drop Inlet – 2.1 to 3.0 LF of Total Vertical Reconstruction	Linear Foot (LF)
Reconstruct Drop Inlet – 3.1 to 4.0 LF of Total Vertical Reconstruction	Linear Foot (LF)
Reconstruct Drop Inlet – More than 4.0 LF of Total Vertical Reconstruction	Linear Foot (LF)

ITEM 28

HYDROSEEDING OF ROADSIDE AREAS

DESCRIPTION

The Vendor/Contractor shall furnish all necessary labor, equipment, and materials required for Hydroseeding; including application of fertilizer, seed, lime mulch, and water to roadside areas. The work shall commence within 7 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency.

MATERIALS

Materials shall meet the requirements as specified in the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials, Section 610 Ground Vegetation – Preparation, Establishment, and Management.

Seed shall be of the latest season's crop delivered in unopened bags or containers showing weight, analysis, name of vendor, and last germination test.

CONSTRUCTION DETAILS

Seed Bed Preparation – Unless specifically requested by the Agency to re-grade, the Vendor/Contractor shall Hydroseed exposed soil as it is found.

Re-Seeding – Upon notice from Agency, the Vendor/Contractor shall return within 3 days' notice to complete any necessary re-seeding operations.

Acceptance – Upon inspection and approval by the Agency (minimum of 3-4 weeks after Hydroseeding), the Vendor/Contractor may submit an invoice for payment. Payment will be made per Square Foot (SF) for accepted work.

Maintenance and Protection of Traffic

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while Hydroseeding. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

BASIS OF BID

The item multiplier bid price shall be applied to the payment item prices contained in the Proposal. **Do not show percentages as the multiplier.** Any bid showing percentages will be rejected. **The multiplier shall be submitted to two (2) decimal places** (i.e. 0.xx or 1.xx). The multiplier bid will be applied to all items in each Square Foot (SF) range. The bid prices shall include all labor, equipment, and materials necessary to complete the work to the satisfaction of the Agency as detailed in the particular bid options listed below:

ITEM 28**HYDROSEEDING OF ROADSIDE AREAS**

Option A – Hydroseeding Grass Area Mix: The bid price shall include Hydroseeding grass areas with the following mix: 50% Pennfine Perennial Ryegrass; 25% Pennlawn Red Fescue; 15% Kentucky Bluegrass; and 10% Crep. Fescue; at a rate of 200 lbs./Acre.

Option B – Hydroseeding Non-Grass Areas (Reclamation Mix): The bid price shall include Hydroseeding non-grass areas with the following mix: 50% Penngift Crownvetch* and 50% Pennfine Perennial Ryegrass at a rate of 80 lbs./Acre. Add to above Select Empire Birdsfoot Trefoil** at a rate of 5 lbs./Acre and Weeping Love Grass at a rate of 1 lb./Acre.

* 10 times Inoculant - Keep in cool area.

** Add Birdsfoot Trefoil Inoculant.

Option C – Hydroseeding Non-Grass Areas (Revitalization Mix): The bid price shall include Hydroseeding non-grass areas with the following mix: 100% Penngift Crownvetch* at a rate of 40 lbs./Acre. Add to above Select Empire Birdsfoot Trefoil** at a rate of 5 lbs./Acre and Weeping Love Grass at a rate of 1 lb./Acre.

* 10 times Inoculant - Keep in cool area.

** Add Birdsfoot Trefoil Inoculant.

Option D – Watering of Hydroseeded Areas: The Hydroseeded areas shall be watered at least once daily at a rate of one-half inch of water per day, unless sufficiently watered by precipitation. Payment shall be made for the total number of Gallons (GAL) of water used multiplied by the bid price per Gallon (GAL) of water.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Option A: Hydroseeding Grass Area Mix 1 SF – 10,000 SF	Square Foot (SF)
Option A: Hydroseeding Grass Area Mix 10,001 SF – 30,000 SF	Square Foot (SF)
Option A: Hydroseeding Grass Area Mix Over 30,000 SF	Square Foot (SF)
Option B: Hydroseeding Non-Grass Areas (Reclamation Mix) 1 SF – 10,000 SF	Square Foot (SF)
Option B: Hydroseeding Non-Grass Areas (Reclamation Mix) 10,001 SF – 30,000 SF	Square Foot (SF)
Option B: Hydroseeding Non-Grass Areas (Reclamation Mix) Over 30,000 SF	Square Foot (SF)
Option C: Hydroseeding Non-Grass Areas (Revitalization Mix) 1 SF – 10,000 SF	Square Foot (SF)
Option C: Hydroseeding Non-Grass Areas (Revitalization Mix) 10,001 SF – 30,000 SF	Square Foot (SF)
Option C: Hydroseeding Non-Grass Areas (Revitalization Mix) Over 30,000 SF	Square Foot (SF)
Option D: Watering of Hydroseeded Areas 1 SF – 10,000 SF	Gallons (GAL)
Option D: Watering of Hydroseeded Areas 10,001 SF – 30,000 SF	Gallons (GAL)

ITEM 28**HYDROSEEDING OF ROADSIDE AREAS**

Option D: Watering of Hydroseeded Areas Over 30,000 SF	Gallons (GAL)
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NOTE: The minimum charge per order shall be \$350.00.

DESCRIPTION

The Vendor/Contractor shall furnish all necessary labor, equipment, and materials for Slice Seeding; including application of fertilizer and seed. The work shall commence within 7 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency.

MATERIALS

Materials shall meet the requirements as specified in the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials, Section 610 Ground Vegetation – Preparation, Establishment, and Management.

Seed shall be of the latest season's crop delivered in unopened bags or containers showing weight, analysis, name of vendor, and last germination test.

Grass Area Mix – 50% Pennfine Perennial Ryegrass; 25% Pennlawn Red Fescue; 15% Kentucky Bluegrass; and 10% Crep. Fescue; at a rate of 4 lbs / 1,000 Square Feet (SF).

EQUIPMENT

The equipment shall be a walk behind Slice Seeding/overseeding machine. The vertical blades shall have the ability to penetrate a minimum of 1/2" into the exposed soil.

CONSTRUCTION DETAILS

Re-Seeding – Upon notice from Agency, the Vendor/Contractor shall return within 3 days' notice to complete any necessary re-seeding operations.

Acceptance – Upon inspection and approval by the Agency (minimum of 3-4 weeks after Slice Seeding), the Vendor/Contractor may submit an invoice for payment. Payment will be made per Square Foot (SF) for accepted work.

Maintenance and Protection of Traffic

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while Slice Seeding. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

The Vendor/Contractor will be responsible for MPOT during delivery and pickup of the equipment from the project site, in accordance with the current version of the national MUTCD, including the NYSS.

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

ITEM 29**SLICE SEEDING****Optional Items (Additions)**

The Vendor/Contractor shall be equipped to perform the following services as directed by the Agency under the pay items described below:

1. **Watering of Slice Seeded Areas:** The Slice Seeded areas shall be watered at least once daily at a rate of one-half inch of water per day, unless sufficiently watered by precipitation. Payment shall be made for the total number of Gallons (GAL) of water used multiplied by the bid price per Gallon (GAL) of water.
2. **Core Aerate Turf Areas:** The Vendor/Contractor shall core aerate turf areas using a walk behind aerator. The cores shall be a minimum of 1” in depth. Payment shall be made for the total number of Square Feet (SF) aerated.

BASIS OF BID

The unit bid price shall include all labor, equipment, and materials necessary to complete the work to the satisfaction of the Agency.

BASIS OF AWARD

Bid award will be based on the lowest unit price per Square Foot (SF) for Slice Seeding. The two options will be awarded to the low bidder for Slice Seeding.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	UNIT
Slice Seeding	Square Foot (SF)
OPTION: Watering of Slice Seeded Areas	Gallons (GAL)
OPTION: Core Aerate Turf Areas	Square Foot (SF)

ITEM 30 TREES AND SHRUBS (FURNISH, DELIVER, AND/OR PLANT)

DESCRIPTION

The Vendor/Contractor shall provide unit prices for furnishing, delivering, and/or planting the specified trees and shrubs to any project site(s) within Monroe County. The work shall commence within 14 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency.

MATERIALS

Materials shall meet the requirements as specified in the most recent version of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials, Section 611 Planting, Transplanting, and Post Planting Care.

The following shall be the selection of deciduous trees, coniferous trees, and evergreen shrubs available to be specified by the Agency for delivery and/or planting:

Deciduous Trees (shall be 2"- 2.5" DBH with a 24" diameter root ball):

- Norway Maple (*Acer platanoides*)
- Red Maple (*Acer rubum*)
- Northern Red Oak (*Quercus rubra*)
- Pin Oak (*Quercus palustris*)
- Thornless Cockspur Hawthorn (*Crataegus crus-galli inermis*)
- Washington Hawthorn (*Crataegus phaenopyrum*)

Coniferous Trees (shall be 5'- 6' tall with a 24" diameter root ball):

- Colorado Blue Spruce (*Picea pungens glauca*)
- Australian Pine (*Pinus nigra*)

Evergreen Shrubs (shall be as specified below):

- Dense Spreading Yew (*Taxus densiformis*); shall be 18"- 24" tall with an 18" root ball
- Dark American Arborvitae (*Thuja occidentalis nigra*); shall be 5'- 6' tall with 18"-24" root ball

CONSTRUCTION DETAILS

Maintenance and Protection of Traffic

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while delivering and planting. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

ITEM 30 TREES AND SHRUBS (FURNISH, DELIVER, AND/OR PLANT)

BASIS OF BID

The bid prices shall include all labor, equipment, and materials necessary to complete the work to the satisfaction of the Agency as detailed in the particular bid options listed below:

Option A – Furnish and Deliver: The bid price shall include furnishing and delivering the specified trees and/or shrubs from the list above to any project site(s) within Monroe County.

Option B – Furnish and Plant: The bid price shall include furnishing, delivering, and planting the specified trees and/or shrubs from the list above to any project site(s) within Monroe County without a guarantee. This option shall include plant materials; excavation; soil preparation and conditioning; and staking and mulching.

Option C – Furnish, Plant, and Guarantee: The bid price shall include furnishing, delivering, and planting the specified trees and/or shrubs from the list above to any project site(s) within Monroe County with a one-year guarantee. This option shall include plant materials; excavation; soil preparation and conditioning; staking and mulching; and any re-planting as required within the one-year guarantee period.

BASIS OF AWARD

There will be a separate award for each option; the total bid price for each option will be the sum of the unit prices for each item under that specific option.

BASIS OF PAYMENT

The unit bid price shall include all of the labor, equipment and materials required under each of the following options. The Items under Option A and Option B shall not require a guarantee. The Items under Option C shall be guaranteed for a period of one year from the time of planting.

DESCRIPTION	UNIT
Deciduous Tree – Norway Maple (<i>Acer platanoides</i>)	Each (EA)
Deciduous Tree – Red Maple (<i>Acer rubum</i>)	Each (EA)
Deciduous Tree – Northern Red Oak (<i>Quercus rubra</i>)	Each (EA)
Deciduous Tree – Pin Oak (<i>Quercus palustris</i>)	Each (EA)
Deciduous Tree – Thornless Cockspur Hawthorn (<i>Crataegus crus-galli inermis</i>)	Each (EA)
Deciduous Tree – Washington Hawthorn (<i>Crataegus phaenopyrum</i>)	Each (EA)
Coniferous Tree – Colorado Blue Spruce (<i>Picea pungens glauca</i>)	Each (EA)
Coniferous Tree – Australian Pine (<i>Pinus nigra</i>)	Each (EA)
Evergreen Shrub – Dense Spreading Yew (<i>Taxus densiformis</i>)	Each (EA)
Evergreen Shrub – Dark American Arborvitae (<i>Thuja occidentalis nigra</i>)	Each (EA)

ITEM 30 TREES AND SHRUBS (FURNISH, DELIVER, AND/OR PLANT)

Option A	Option B	Option C
Furnish & Deliver	Furnish & Plant	Furnish, Plant & Guarantee

DESCRIPTION

The Vendor/Contractor shall furnish all the equipment and operator(s) required for cleaning/flushing and/or televising of the storm sewer system. The work shall commence within 14 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency.

EQUIPMENT**Storm Sewer Cleaning/Flushing Equipment**

Cleaning/flushing equipment shall be a combination water jet/vacuum truck mounted unit having the following capabilities:

1. Water jet performance; minimum of 60 gpm at 2,000 psi.
2. Equip unit with a minimum of 500' of 1" internal diameter sewer cleaning hose.
3. Nozzles used in cleaning process and root trimming to be proper choice for cleaning application, including rotating nozzles.
4. Use hand held control gun to thoroughly clean manholes from grade level.
5. Minimum vacuum performance: 3,600 cfm, 15-inch Hg vacuum pressure, and 10 CY debris tank.

The Vendor/Contractor shall properly dispose of all debris at no additional cost to the Agency. Documentation of the disposal site shall be made available to the Agency at their request.

Water – The Agency shall be responsible for supplying a source of water. The Vendor/Contractor shall be responsible to provide the labor and equipment to haul and distribute the necessary water to the project site.

In the event that the cleaning/flushing equipment (i.e. hose, cleaning nozzle, or root trimming cutters) becomes damaged or stuck within the storm sewer pipe, it shall be the responsibility of the Vendor/Contractor to remove and perform all necessary repairs to the storm sewer, asphalt pavement, concrete gutter, and/or curb as required to free their equipment at no additional cost to the Agency. All repairs must be made to the satisfaction of the Agency.

Storm Sewer Televising and Recording Equipment

Video camera:

1. Pan and tilt capabilities.
2. High resolution color with adjustable iris focus.
3. Minimum 1,000' camera cable.
4. Operative in 100% humidity conditions.
5. Proper illumination to provide clear video image of entire periphery of pipe.

ITEM 31**STORM SEWER CLEANING AND TELEVISIONING**

Camera, monitor, and other components of the video system shall be capable of producing high quality picture and video to the satisfaction of the Agency; if the Agency determines that video quality is unsatisfactory, the Vendor/Contractor shall re-televising the storm sewer at no additional cost to the Agency.

Footage distance measured by the video system shall be accurate within 1% and can be checked by the Agency. Structure centerlines shall be reference points to determine footage measurements for reporting and payment purposes.

Video inspection system shall be equipped with audio capabilities. Any delays or changes in the televising process during the course of the inspection shall be explained with audio notes on the video recording. The photo and video recording files shall be saved on a USB thumb drive and/or a file sharing server; photo and video recording files will become the property of the Agency.

In the event that the televising equipment (i.e. camera or hose) becomes damaged or stuck within the storm sewer pipe, it shall be the responsibility of the Vendor/Contractor to remove and perform all necessary repairs to the storm sewer, asphalt pavement, concrete gutter, and/or curb as required to free their equipment at no additional cost to the Agency. All repairs must be made to the satisfaction of the Agency.

CONSTRUCTION DETAILS**Maintenance and Protection of Traffic**

The Vendor/Contractor shall be responsible for all Maintenance and Protection of Traffic (MPOT) required while cleaning and/or televising the storm sewer. MPOT shall meet the requirements of Section 619 of the current version of NYSDOT Standard Specifications and the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

- a. The working hours of construction may have to be restricted on arterial functional classification streets. In general, lane reduction may be prohibited during the peak rush traffic hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM Monday through Friday. The Vendor/Contractor shall exhibit the ability to maintain adequate traffic flows to the satisfaction of the Agency.
- b. Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

METHOD OF MEASUREMENT

Storm Sewer Cleaning shall be measured per Linear Foot (LF) of storm sewer pipe cleaned and categorized by pipe diameter and percent (%) of pipe blocked by debris. A field meeting shall be held whereas the Agency and the Vendor/Contractor will agree on the Category as stated below prior to any work commencing:

ITEM 31**STORM SEWER CLEANING AND TELEVISIONING****Categories:**

- Light (L) is defined as <25% blockage/debris.
- Medium (M) is defined as 25% - 50% blockage/debris.
- Heavy (H) is defined as > 50% blockage/debris.

An Emergency Surcharge Lump Sum (LS) amount shall be added to the unit price for any unscheduled Storm Sewer Cleaning work required within 5 days of notification by the Agency.

Storm Sewer Televising and Recording shall be measured by Linear Foot (LF) of storm sewer pipe televised and recorded.

BASIS OF BID

The unit bid prices shall include all costs for equipment and labor associated with the delivery and use of the Storm Sewer Cleaning and Televising equipment.

BASIS OF AWARD

The County will award the Storm Sewer Cleaning/Flushing and Storm Sewer Televising and Recording as separate groups of items to the lowest Bidder for each group.

The award for the Storm Sewer Cleaning/Flushing group will be based on the lowest sum of Light, Medium, and High categories for all pipe sizes; the Emergency Surcharge will not be considered as part of bid award.

The award for the Storm Sewer Televising and Recording group will be based on the lowest sum of all pipe sizes.

BASIS OF PAYMENT

Payment will be made under:

DESCRIPTION	CATEGORY			UNIT
Storm Sewer Cleaning/Flushing 8" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 12" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 15" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 18" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 24" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 30" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 36" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 42" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 48" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 54" Diameter	L	M	H	Linear Foot (LF)
Storm Sewer Cleaning/Flushing 60" Diameter	L	M	H	Linear Foot (LF)

ITEM 31**STORM SEWER CLEANING AND TELEVISIONING**

Emergency Surcharge for Storm Sewer Cleaning/Flushing	Lump Sum (LS)
Storm Sewer Televising and Recording 8" Diameter	Linear Foot (LF)
Storm Sewer Televising and Recording 12" Diameter	Linear Foot (LF)
Storm Sewer Televising and Recording 15" Diameter	Linear Foot (LF)
Storm Sewer Televising and Recording 24" Diameter	Linear Foot (LF)
Storm Sewer Televising and Recording 30" Diameter	Linear Foot (LF)
Storm Sewer Televising and Recording 36" Diameter	Linear Foot (LF)
Storm Sewer Televising and Recording 42" Diameter	Linear Foot (LF)
Storm Sewer Televising and Recording 48" Diameter	Linear Foot (LF)
Storm Sewer Televising and Recording 54" Diameter	Linear Foot (LF)
Storm Sewer Televising and Recording 60" Diameter	Linear Foot (LF)

DESCRIPTION

The Vendor/Contractor shall furnish, deliver, and operate either a truck mounted or portable/towable trailer Concrete Pump for any concrete pumping application as directed by the Agency. The work may include pumping of concrete, shotcrete, grout, mortar, foamed concrete, or flowable fill. The work shall commence within 14 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and the Agency.

MATERIALS

The concrete materials to be pumped will be purchased and coordinated by the Agency.

EQUIPMENT

In general, the Concrete Pump shall be mobile and capable of fitting into tight, confined areas of a construction site.

Steel and rubber Concrete Pump hoses that attach to an outlet on the pump shall be included as necessary for the pumping application, with the hose diameter appropriate for the material being pumped (i.e. 3"-5" diameter hoses for pumping concrete and 2" hoses for pumping grout and shotcrete).

Concrete Pump shall be able to supply and reach horizontal lengths from 20 feet to 150 feet, and be capable of meeting the needs of the project by providing a volume of up to 70 cubic yards per hour.

The Concrete Pump equipment shall be furnished with a hopper to receive concrete from a ready mix truck. An agitator within the hopper shall keep fresh concrete flowing smoothly into the pumping cylinders. Hydraulic or mechanical pumping cylinders shall deliver constant pressure on the concrete in the hoses and uninterrupted flow. The Concrete Pump shall be provided with a synchronized valve (i.e. gate valve, rock valve, swing valve, ball valve, or C tube) to channel concrete into a single discharge hose.

CONSTRUCTION DETAILS

The Vendor/Contractor shall deliver, set up, operate, and remove the Concrete Pump to any construction site within Monroe County as directed by the Agency. The Vendor/Contractor will be responsible for all maintenance, fuel, and equipment necessary to run the Concrete Pump. The type of materials to be pumped shall be agreed to by the Agency and Vendor/Contractor. The Agency shall be responsible for installing bulkheads, vent pipes, and fill tubes. The size and location of the tubes shall be coordinated with the Vendor/Contractor based on the project site conditions. The Agency will schedule the pumping work; the Vendor/Contractor shall be ready to begin pumping at the scheduled time.

Maintenance and Protection of Traffic

Maintenance and Protection of Traffic (MPOT) will be provided by the Agency per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

The Vendor/Contractor will be responsible for MPOT during delivery and pickup of the equipment from the project site, in accordance with the current version of the national MUTCD, including the NYSS.

METHOD OF MEASUREMENT

The work to be performed will be measured per Hour (HR) from the scheduled start time of the pumping operations to the completion of the pumping. A fixed mobilization price of \$350 will be paid at the completion of the work for project coordination, consultation, delivery, setup, and removal of the equipment from the project site. No additional time will be paid for travel to and from the construction site or for mechanical breakdown.

BASIS OF BID

The unit bid price shall include the cost of furnishing all labor and equipment to satisfactorily operate a Concrete Pump as directed by the Agency. Concrete material being pumped will be paid by the Agency.

BASIS OF PAYMENT

The unit price will include all costs for equipment associated with use of the Concrete Pump. Payment will be made under:

DESCRIPTION	UNIT
Concrete Pump Rental	Per Hour (HR)
Mobilization	Fixed Price \$350

ITEM 33

ROAD WIDENER RENTAL

DESCRIPTION

The Vendor/Contractor shall supply on a rental basis a Road Widener of approved type to any project site within Monroe County. The Road Widener rental price shall include mobilization and demobilization of all required equipment at the project site, including all necessary maintenance and fuel. The Road Widener shall be available within 7 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and Agency. The Vendor/Contractor will be responsible for the delivery and pickup of the Road Widener to any project site within Monroe County.

Aggregates and bituminous materials will be hauled to the Road Widener by Others as coordinated by the Agency.

EQUIPMENT

Road Widener equipment shall meet the requirements of the latest revision of the New York State Department of Transportation (NYSDOT) Standard Specifications, Section 300 Bases and Subbases and Section 400 Asphalt Mixture and Pavement, and be in good working condition.

The Road Widener shall be capable of conveying and placing aggregate and asphalt out to a width of one (1) foot to eight (8) feet from the edge of the existing pavement; shall include a dual sided (left and right side) discharge; a 3 cubic yard (CY) or larger receiving hopper; an 18 inch (18") or larger spreader blade; and shall be capable of placing up to at least 450 tons per hour. Hydraulic grade control shall be capable of 12 inches (12") above and below grade and hydraulic slope control +/- 16%.

Maintenance and Protection of Traffic

Maintenance and Protection of Traffic (MPOT) will be provided by the Agency per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

The Vendor/Contractor will be responsible for MPOT during delivery and pickup of the Road Widener from the project site, in accordance with the current version of the national MUTCD, including the NYSS.

METHOD OF MEASUREMENT

The quantity to be paid under this item shall be the number of Half Days or Full Days of rental provided.

BASIS OF PAYMENT

The unit price will include all costs for equipment associated with use of the Road Widener. Payment will be made for either a Half Day (4 hours or less) or a Full Day (more than 4 hours). Payment will be made under:

ITEM 33**ROAD WIDENER RENTAL**

DESCRIPTION	UNIT
Road Widener Rental – Full Day	Full Day
Road Widener Rental – Half Day	Half Day

DESCRIPTION

The Vendor/Contractor shall supply on a rental basis a Material Slinger Truck of approved type to any project site within Monroe County. The Material Slinger Truck rental price shall include mobilization and demobilization of all required equipment at the project site, including all necessary maintenance and fuel. The Material Slinger Truck rental shall be coordinated with the Agency, and the estimated rental timeframe shall be agreed upon prior to delivery. The Material Slinger Truck shall be provided in working condition with an operator. The Material Slinger Truck shall be available within 7 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and Agency.

Material to be dispensed with the Material Slinger will be paid under separate items as coordinated by the Agency. Pickup and/or delivery of the material shall be coordinated between the Vendor/Contractor and the Agency. Equipment costs associated with material pickup shall be included in the bid price for the Material Slinger Truck.

EQUIPMENT

Material Slinger Truck equipment shall meet the requirements of the latest revision of the New York State Department of Transportation (NYSDOT) Standard Specifications, Section 200 Earthwork and Section 300 Bases and Subbases, and be in good working condition.

The Material Slinger Truck shall be capable of hauling at least 13 Cubic Yards (CY) per load and conveying sand, gravel, up to 1 ½" stone, crusher runs, dust, and topsoil at least 65 feet from the truck. The Material Slinger Truck shall include a steel or aluminum hopper body with hydraulic vibrator; under body apron feed conveyor at least 22 inches in width; variable speed hydraulic telescopic boom placing conveyor at least 14 inches in width capable of lifting, swinging, and rotating; and full manual valve control from an elevated work station, ground level, and radio remote control;

Material Slinger Truck Operator

This item will provide a qualified Material Slinger Truck Operator to operate the equipment. Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

Maintenance and Protection of Traffic

Maintenance and Protection of Traffic (MPOT) will be provided by the Agency per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

The Vendor/Contractor will be responsible for MPOT during delivery and pickup of the equipment from the project site, in accordance with the current version of the national MUTCD, including the NYSS.

ITEM 34 MATERIAL SLINGER TRUCK RENTAL & OPERATOR

METHOD OF MEASUREMENT

Equipment – The quantity to be paid under this item shall be the number of Half Days (4 hours or less) or Full Days (more than 4 hours) of rental provided.

Operator – The quantity for the Material Slinger Truck Operator shall be an Hourly (HR) charge for Regular Hours (8 hours or less) and Overtime Hours (more than 8 hours).

BASIS OF PAYMENT

The unit price will include all costs for equipment associated with use of the Material Slinger Truck. Payment will be made for either a Half Day (4 hours or less) or a Full Day (more than 4 hours).

Payment will be made under:

DESCRIPTION	UNIT
Material Slinger Truck Rental – Full Day	Full Day
Material Slinger Truck Rental – Half Day	Half Day
Material Slinger Truck Operator – Regular Hours	Per Hour (HR)
Material Slinger Truck Operator – Overtime Hours	Per Hour (HR)

ITEM 35 RUBBER TIRE SKID STEER LOADER RENTAL & OPERATOR

DESCRIPTION

The Vendor/Contractor shall supply on a rental basis a Rubber Tire Skid Steer Loader of approved type to any project site within Monroe County. The Rubber Tire Skid Steer Loader rental price shall include mobilization and demobilization of all required equipment at the project site, including all necessary maintenance and fuel. The Rubber Tire Skid Steer Loader shall be available within 7 days' notice from the Agency, unless otherwise agreed upon between the Vendor/Contractor and Agency. The Vendor/Contractor will be responsible for the delivery and pickup of the Rubber Tire Skid Steer Loader to any project site within Monroe County.

Materials will be hauled to or from the Rubber Tire Skid Steer Loader by Others as coordinated by the Agency.

EQUIPMENT & LABOR

The Rubber Tire Skid Steer Loader shall have a rated operating capacity (ISO) of at least 2,000 lbs; a tipping load of at least 4,000 lbs; and gross power of at least 68 hp. Rubber Tire Skid Steer Loader shall be compatible with a variety of Attachments.

The following Attachments shall be available for use with the Rubber Tire Skid Steer Loader:

- Bucket
- 18 Inch (18") Mill Head
- 24 Inch (24") Mill Head
- Angle Broom
- Pickup (Hopper) Broom
- Road Widener (1 to 4 Foot Lay Down Width)

If the Agency requests the use of multiple Rubber Tire Skid Steer Loader Attachments in a single day, a separate payment will be made at the Fixed Price indicated in the proposal for each Attachment Change.

Rubber Tire Skid Steer Loader Operator

This item will provide a qualified Rubber Tire Skid Steer Loader Operator to operate the equipment. Vendor/Contractor work crews shall have all OSHA required clothing, safety equipment, and OSHA training.

Maintenance and Protection of Traffic

Maintenance and Protection of Traffic (MPOT) will be provided by the Agency per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).

ITEM 35 RUBBER TIRE SKID STEER LOADER RENTAL & OPERATOR

The Vendor/Contractor will be responsible for MPOT during delivery and pickup of the equipment from the project site, in accordance with the current version of the national MUTCD, including the NYSS.

METHOD OF MEASUREMENT

Equipment – The quantity to be paid under this item shall be the number of Half Days (4 hours or less) or Full Days (more than 4 hours) of rental provided.

Operator – The quantity for the Rubber Tire Skid Steer Loader Operator shall be an Hourly (HR) charge for Regular Hours (8 hours or less) and Overtime Hours (more than 8 hours).

BASIS OF PAYMENT

The unit price will include all costs for equipment associated with use of the Rubber Tire Skid Steer Loader. Payment will be made for either a Half Day (4 hours or less) or a Full Day (more than 4 hours). Payment will be made under:

DESCRIPTION	UNIT
Rubber Tire Skid Steer Loader Rental with Bucket – Full Day	Full Day
Rubber Tire Skid Steer Loader Rental with Bucket – Half Day	Half Day
Rubber Tire Skid Steer Loader Rental with 18” Mill Head – Full Day	Full Day
Rubber Tire Skid Steer Loader Rental with 18” Mill Head – Half Day	Half Day
Rubber Tire Skid Steer Loader Rental with 24” Mill Head – Full Day	Full Day
Rubber Tire Skid Steer Loader Rental with 24” Mill Head – Half Day	Half Day
Rubber Tire Skid Steer Loader Rental with Angle Broom – Full Day	Full Day
Rubber Tire Skid Steer Loader Rental with Angle Broom – Half Day	Half Day
Rubber Tire Skid Steer Loader Rental with Pickup (Hopper) Broom – Full Day	Full Day
Rubber Tire Skid Steer Loader Rental with Pickup (Hopper) Broom – Half Day	Half Day
Rubber Tire Skid Steer Loader Rental with Road Widener (1 to 4 Foot Lay Down Width) – Full Day	Full Day
Rubber Tire Skid Steer Loader Rental with Road Widener (1 to 4 Foot Lay Down Width) – Half Day	Half Day
Attachment Change	Fixed Price \$450/Change
Rubber Tire Skid Steer Loader Operator – Regular Hours	Hour (HR)
Rubber Tire Skid Steer Loader Operator – Over Time Hours	Hour (HR)

Monroe County Department of Transportation

**2025 Highway Equipment & Services
Group 1 and Group 3
BID AWARDS (BASE PRICES)**

BP# 0101-24

BP# 0210-24

Note: Yellow highlighted Items 10-14 and 21 were re-bid as Group 3.



ITEM	DESCRIPTION	UNIT	Midland Asphalt Materials Inc.	Suit-Kote Corporation
Item 1 SURFACE TREAT A	Surface Treat using RS-2 Rapid Setting Asphalt Emulsion	Gallon (GAL)		\$ 3.601
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)		\$ 0.100
	Surface Treat using HFRS-2 High Float Rapid Setting Asphalt Emulsion	Gallon (GAL)		\$ 3.601
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)		\$ 0.100
	Surface Treat using CRS –2 Cationic Rapid Setting Asphalt Emulsion	Gallon (GAL)	\$ 3.600	
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)	\$ 0.080	
	Surface Treat using RS-2p Polymer Modified Rapid Setting Asphalt Emulsion	Gallon (GAL)		\$ 3.871
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)		\$ 0.100
	Surface Treat using HFRS-2p Polymer Modified High Float Rapid Setting Asphalt	Gallon (GAL)		\$ 3.871
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)		\$ 0.100
	Surface Treat using CRS-2p Polymer Modified Cationic Rapid Setting Asphalt Emulsion	Gallon (GAL)	\$ 3.870	
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)	\$ 0.080	
	Surface Treat/Fog Seal using HFMS-2 High Float Rapid Setting Asphalt Emulsion	Gallon (GAL)		\$ 2.924
	Surface Treat/Fog Seal using CSS-1h Cationic Slow Setting Asphalt Emulsion	Gallon (GAL)	\$ 2.920	
Item 1 SURFACE TREAT B	Surface Treat using RS-2 Rapid Setting Asphalt Emulsion	Gallon (GAL)		\$ 3.891
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)		\$ 0.100
	Surface Treat using HFRS-2 High Float Rapid Setting Asphalt Emulsion	Gallon (GAL)		\$ 3.891
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)		\$ 0.100
	Surface Treat using CRS –2 Cationic Rapid Setting Asphalt Emulsion	Gallon (GAL)	\$ 3.890	
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)	\$ 0.080	
	Surface Treat using RS-2p Polymer Modified Rapid Setting Asphalt Emulsion	Gallon (GAL)		\$ 4.161
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)		\$ 0.100
	Surface Treat using HFRS-2p Polymer Modified High Float Rapid Setting Asphalt	Gallon (GAL)		\$ 4.161
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)		\$ 0.100
	Surface Treat using CRS-2p Polymer Modified Cationic Rapid Setting Asphalt Emulsion	Gallon (GAL)	\$ 4.160	
	OPTION: Pneumatic Rubber Tire Roller with Operator	Square Yard (SY)	\$ 0.080	

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3 BID AWARDS (BASE PRICES) BP#0101-24 AND BP#0210-24			
ITEM	DESCRIPTION	UNIT	Suit-Kote Corporation
Item 2 Dense Grade Cold Mix Paving	Paver Placed Dense Cold Mix Asphalt (HFMS-2GH)	Ton	\$ 55.61
	OPTION: Trucking for HFMS-2GH (additional cost per Ton)	Ton	\$ 7.00
	Paver Placed Dense Cold Mix Asphalt (CMS-2)	Ton	\$ 60.61
	OPTION: Trucking for CMS-2 (additional cost per Ton)	Ton	\$ 7.00
ITEM	DESCRIPTION	UNIT	Midland Asphalt Materials Inc.
Item 3 Liquid Bituminous (Cold Mix/Motopave)	Cold Mix/Motopave using High Float Medium Setting Asphalt Emulsion HFMS-2	Gallon (GAL)	\$ 4.40
	Cold Mix/Motopave w/ High Float Medium Setting Asphalt Emulsion HFMS-2h	Gallon (GAL)	\$ 4.40
	Cold Mix/Motopave w/ High Float Medium Setting Asphalt Emulsion HFMS-2GH	Gallon (GAL)	\$ 4.70
	Cold Mix/Motopave w/ Cationic Medium Setting Asphalt Emulsion CMS-2	Gallon (GAL)	\$ 4.38
	Cold Mix/Motopave w/ Cationic Medium Setting Asphalt Emulsion CMS-2h	Gallon (GAL)	\$ 4.38
	Cold Mix/Motopave w/ Cationic Slow Setting Asphalt Emulsion CSS-1	Gallon (GAL)	\$ 4.08
	Cold Mix/Motopave w/ Cationic Slow Setting Asphalt Emulsion CSS-1h	Gallon (GAL)	\$ 4.08
	Cold Mix/Motopave w/ Cationic Quick Setting Asphalt Emulsion CQS-1h	Gallon (GAL)	
ITEM	DESCRIPTION	UNIT	Suit-Kote Corporation
Item 4 Hand Spray Application of Bituminous Materials	Hand Spray Application using Rapid Setting Asphalt Emulsion RS-2	Gallon (GAL)	\$ 4.601
	Hand Spray Application using High Float Rapid Setting Asphalt Emulsion HFRS-2	Gallon (GAL)	\$ 4.601
	Hand Spray Application using Cationic Rapid Setting Asphalt Emulsion CRS-2	Gallon (GAL)	\$ 4.621
	Hand Spray Application using Polymer Modified Rapid Setting Asphalt Emulsion RS-2p	Gallon (GAL)	\$ 4.871
	Hand Spray Application using Polymer Modified High Float Rapid Setting Asphalt Emulsion HFRS-2p	Gallon (GAL)	\$ 4.871
	Hand Spray Application using Polymer Modified Cationic Rapid Setting Asphalt Emulsion CRS-2p	Gallon (GAL)	\$ 4.891
	Bituminous Distributor with Operator for Hand Spray Chip Seal Patching	Fixed Price / Hour	\$ 185.000

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Midland Asphalt Materials Inc.
Item 5 FIBERMAT A (SAM)	Fiber Reinforced Surface Treat 1-5,000 SY / DAY	Square Yard (SY)	\$ 4.73
	Fiber Reinforced Surface Treat 5,001 - 10,000 SY / DAY	Square Yard (SY)	\$ 3.19
	Fiber Reinforced Surface Treat 10,001 - 20,000 SY / DAY	Square Yard (SY)	\$ 2.69
	Fiber Reinforced Surface Treat > 20,000 SY / DAY	Square Yard (SY)	\$ 2.42
Item 5 FIBERMAT B (SAMI)	Fiber Reinforced Surface Treat 1-5,000 SY / DAY	Square Yard (SY)	\$ 4.68
	Fiber Reinforced Surface Treat 5,001 - 10,000 SY / DAY	Square Yard (SY)	\$ 3.14
	Fiber Reinforced Surface Treat 10,001 - 20,000 SY / DAY	Square Yard (SY)	\$ 2.64
	Fiber Reinforced Surface Treat > 20,000 SY / DAY	Square Yard (SY)	\$ 2.37

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	UNIT PRICE	Option A	Option B	Option C	Option D	Option E	Option F
Item 5 FIBERMAT A (SAM)	Fiber Reinforced Surface Treat 1-5,000 SY / DAY	Square Yard (SY)	\$ 4.25	\$ 0.77	\$ 0.48	\$ 0.37	\$ 0.85	\$ 0.37	\$ 0.64
	Fiber Reinforced Surface Treat 5,001 - 10,000 SY / DAY	Square Yard (SY)	\$ 2.95	\$ 0.69	\$ 0.24	\$ 0.18	\$ 0.57	\$ 0.18	\$ 0.32
	Fiber Reinforced Surface Treat 10,001 - 20,000 SY / DAY	Square Yard (SY)	\$ 2.51	\$ 0.61	\$ 0.18	\$ 0.12	\$ 0.29	\$ 0.12	\$ 0.22
	Fiber Reinforced Surface Treat 20,001 - 40,000 SY / DAY	Square Yard (SY)	\$ 2.30	\$ 0.61	\$ 0.12	\$ 0.08	\$ 0.22	\$ 0.08	\$ 0.14
	Fiber Reinforced Surface Treat > 40,000 SY / DAY	Square Yard (SY)	\$ 2.07	\$ 0.61	\$ 0.08	\$ 0.05	\$ 0.13	\$ 0.05	\$ 0.09
Item 5 FIBERMAT B (SAMI)	Fiber Reinforced Surface Treat 1-5,000 SY / DAY	Square Yard (SY)	\$ 4.20	\$ 0.77	\$ 0.48	\$ 0.37	\$ 0.85	\$ 0.37	\$ 0.64
	Fiber Reinforced Surface Treat 5,001 - 10,000 SY / DAY	Square Yard (SY)	\$ 2.90	\$ 0.69	\$ 0.24	\$ 0.18	\$ 0.57	\$ 0.18	\$ 0.32
	Fiber Reinforced Surface Treat 10,001 - 20,000 SY / DAY	Square Yard (SY)	\$ 2.46	\$ 0.61	\$ 0.18	\$ 0.12	\$ 0.29	\$ 0.12	\$ 0.22
	Fiber Reinforced Surface Treat 20,001 - 40,000 SY / DAY	Square Yard (SY)	\$ 2.25	\$ 0.61	\$ 0.12	\$ 0.08	\$ 0.22	\$ 0.08	\$ 0.14
	Fiber Reinforced Surface Treat > 40,000 SY / DAY	Square Yard (SY)	\$ 2.02	\$ 0.61	\$ 0.08	\$ 0.05	\$ 0.13	\$ 0.05	\$ 0.09
	VENDOR		Midland Asphalt Materials Inc.						

Option A – Furnish and Deliver Aggregate to Aggregate Chip Spreader: The bid price shall include furnishing and delivering aggregate to the aggregate Chip Spreader (furnished and operated By Others).
Option B – Furnish and Operate Self-Propelled Aggregate Chip Spreader: The bid price shall include furnishing and operating a Self-Propelled Chip Spreader (per Spreader).
Option C – Furnish and Operate Pneumatic Tired Roller: The bid price shall include furnishing and operating a Pneumatic Tired Roller (per Roller).
Option D – Furnish Maintrenance and Protection of Traffic (MPOT): The bid price shall include furnishing all labor and equipment required for Maintenance and Protection of Traffic (MPOT) per national Manual on Uniform Traffic Control Devices (MUTCD) requirements.
Option E – Furnish and Operate Steel Wheel Roller: The bid price shall include furnishing and operating a Steel Wheel Roller (per Roller).
Option F – Furnish and Operate Self-Propelled Broom or Vacuum Sweeper: The bid price shall include furnishing and operating a Self-Propelled Broom or Vacuum Sweeper (per Broom/Sweeper).

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Midland Asphalt Materials Inc.
Item 6 Paver Placed Surface Treatment (Nova Chip) PG 64S-22 & CRS-1p	Paver Placed Surface Treatment Type A (1/4") 1 - 12,500 SY	Square Yard (SY)	\$ 6.98
	Paver Placed Surface Treatment Type A (1/4") 12,501 - 25,000 SY	Square Yard (SY)	\$ 5.61
	Paver Placed Surface Treatment Type A (1/4") > 25,000 SY	Square Yard (SY)	\$ 5.40
	Paver Placed Surface Treatment Type B (3/8") 1 - 12,500 SY	Square Yard (SY)	\$ 6.98
	Paver Placed Surface Treatment Type B (3/8") 12,501 - 25,000 SY	Square Yard (SY)	\$ 5.61
	Paver Placed Surface Treatment Type B (3/8") > 25,000 SY	Square Yard (SY)	\$ 5.40
	Paver Placed Surface Treatment Type C (1/2") 1 - 12,500 SY	Square Yard (SY)	\$ 6.98
	Paver Placed Surface Treatment Type C (1/2") 12,501 - 25,000 SY	Square Yard (SY)	\$ 5.61
	Paver Placed Surface Treatment Type C (1/2") > 25,000 SY	Square Yard (SY)	\$ 5.40
Item 6 Paver Placed Surface Treatment (Nova Chip) PG 64V-22 & CRS-1p	Paver Placed Surface Treatment Type A (1/4") 1 - 12,500 SY	Square Yard (SY)	\$ 7.47
	Paver Placed Surface Treatment Type A (1/4") 12,501 - 25,000 SY	Square Yard (SY)	\$ 6.10
	Paver Placed Surface Treatment Type A (1/4") > 25,000 SY	Square Yard (SY)	\$ 5.89
	Paver Placed Surface Treatment Type B (3/8") 1 - 12,500 SY	Square Yard (SY)	\$ 7.47
	Paver Placed Surface Treatment Type B (3/8") 12,501 - 25,000 SY	Square Yard (SY)	\$ 6.10
	Paver Placed Surface Treatment Type B (3/8") > 25,000 SY	Square Yard (SY)	\$ 5.89
	Paver Placed Surface Treatment Type C (1/2") 1 - 12,500 SY	Square Yard (SY)	\$ 7.47
	Paver Placed Surface Treatment Type C (1/2") 12,501 - 25,000 SY	Square Yard (SY)	\$ 6.10
	Paver Placed Surface Treatment Type C (1/2") > 25,000 SY	Square Yard (SY)	\$ 5.89
Item 6 Optional Items	Hauling: Vendor/Contractor to furnish the hauling (trucking) of the Paver Placed Surface Treatment (Nova Chip) to the paver.	Per Square Yard (SY)	\$ 0.75
	Maintenance & Protection of Traffic: Vendor/Contractor to provide adequate traffic control per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).	Per Square Yard (SY)	\$ 0.22
	Milling: Vendor/Contractor shall supply all necessary labor and equipment to rebate mill and clean up the milled area. (Minimum 2' Wide)	Per Square Yard (SY)	\$ 36.00
	Abrading: Vendor/Contractor to provide fine milling of 4" wide pavement marking lines.	Per Linear Foot (LF)	\$ 0.45
	Abrading: Vendor/Contractor to provide fine milling of pavement marking symbols / letters.	Per Each (EA)	\$ 120.00

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Highway Rehabilitation Corp.
Item 7 Hot In Place Recycling of Exisiting Asphalt Pavement	Hot In Place Asphalt Recycle 1 – 10,000 SY @ ¾” to 2” Depth	Square Yard (SY)	\$ 6.30
	Hot In Place Asphalt Recycle Over 10,000 SY @ ¾” to 2” Depth	Square Yard (SY)	\$ 5.75

ITEM	DESCRIPTION	UNIT	Champion Asphalt Maintenance
Item 8 Polymer Modified Asphalt Joint and Crack Sealant	Polymer Modified Crack Seal, D6690	Gallon (GAL)	\$ 17.17

ITEM	DESCRIPTION	UNIT	Midland Asphalt Materials Inc.
Item 9 Fiber Reinforced Asphalt Crack Sealer (PG 64-22)	Fiber Reinforced Asphalt Crack Sealer (PG 64-22)	Gallon (GAL)	\$ 15.56

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Iroquois Rock Products	Keeler Construction Co., Inc.	Macedon Excavating and Paving	RoadTek L.L.C.	Rochester Asphalt Materials	Sweeting Enterprises	Villager Construction, Inc.
Item 10 Paver Rental	Standard Paver Rental	Full Day	\$ 2,700.00	\$ 2,800.00	\$ 2,200.00	\$ 2,600.00	\$ 2,700.00	\$ 2,800.00	\$ 2,575.00
	Standard Paver Rental	Half Day	\$ 2,400.00	\$ 2,100.00	\$ 1,800.00	\$ 2,100.00	\$ 2,400.00	\$ 2,100.00	\$ 2,320.00
	Sidewalk Paver Rental	Full Day	\$ 2,575.00	\$ 2,100.00		\$ 2,600.00	\$ 2,575.00	\$ 2,350.00	\$ 2,370.00
	Sidewalk Paver Rental	Half Day	\$ 2,300.00	\$ 2,100.00		\$ 2,100.00	\$ 2,300.00	\$ 2,350.00	\$ 2,370.00
ITEM	DESCRIPTION	UNIT	Iroquois Rock Products	Keeler Construction Co., Inc.	Macedon Excavating and Paving	RoadTek L.L.C.	Rochester Asphalt Materials	Sweeting Enterprises	Villager Construction, Inc.
Item 11 Paver Operator	Paver Operator - Straight Time	Hour (HR)	\$ 130.00	\$ 125.00	\$ 105.00	\$ 120.00	\$ 130.00	\$ 135.00	\$ 119.00
	Paver Operator - Over Time	Hour (HR)	\$ 175.00	\$ 170.00	\$ 145.00	\$ 155.00	\$ 175.00	\$ 178.00	\$ 170.00
ITEM	DESCRIPTION	UNIT	Iroquois Rock Products	Keeler Construction Co., Inc.	Macedon Excavating and Paving	RoadTek L.L.C.	Rochester Asphalt Materials	Sweeting Enterprises	Villager Construction, Inc.
Item 12 Paver Screed Operator	Paver Screed Operator - Straight Time	Hour (HR)	\$ 125.00	\$ 115.00	\$ 95.00	\$ 120.00	\$ 125.00	\$ 125.00	\$ 114.00
	Paver Screed Operator - Overtime	Hour (HR)	\$ 170.00	\$ 155.00	\$ 130.00	\$ 155.00	\$ 170.00	\$ 165.00	\$ 155.00
ITEM	DESCRIPTION	UNIT	Iroquois Rock Products	Keeler Construction Co., Inc.	Macedon Excavating and Paving	RoadTek L.L.C.	Rochester Asphalt Materials	Sweeting Enterprises	Villager Construction, Inc.
Item 13 Heavy Laborer (Paving Operations)	Heavy Laborer (Paving Operations) - Straight Time	Hour (HR)	\$ 125.00	\$ 110.00	\$ 95.00	\$ 110.00	\$ 125.00	\$ 125.00	\$ 113.00
	Heavy Laborer (Paving Operations) - Over Time	Hour (HR)	\$ 170.00	\$ 150.00	\$ 130.00	\$ 150.00	\$ 170.00	\$ 165.00	\$ 165.00
ITEM	DESCRIPTION	UNIT	Iroquois Rock Products	Keeler Construction Co., Inc.	Macedon Excavating and Paving	RoadTek L.L.C.	Rochester Asphalt Materials	Sweeting Enterprises	Villager Construction, Inc.
Item 14 Asphalt Roller Rental with Operator	5 Ton Roller Rental	Full Day	\$ 1,000.00	\$ 850.00		\$ 1,000.00	\$ 1,000.00	\$ 850.00	\$ 930.00
	5 Ton Roller Rental	Half Day	\$ 900.00	\$ 850.00		\$ 900.00	\$ 900.00	\$ 800.00	\$ 875.00
	10 Ton Roller Rental	Full Day	\$ 1,400.00	\$ 1,400.00	\$ 800.00	\$ 1,600.00	\$ 1,400.00	\$ 1,350.00	\$ 1,240.00
	10 Ton Roller Rental	Half Day	\$ 1,200.00	\$ 1,400.00	\$ 680.00	\$ 1,400.00	\$ 1,200.00	\$ 1,200.00	\$ 1,135.00
	Roller Operator - Straight Time	Hour (HR)	\$ 130.00	\$ 125.00	\$ 105.00	\$ 120.00	\$ 130.00	\$ 135.00	\$ 119.00
	Roller Operator - Over Time	Hour (HR)	\$ 175.00	\$ 170.00	\$ 145.00	\$ 155.00	\$ 175.00	\$ 178.00	\$ 170.00

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	D. Clark Distributors LLC	Keeler Construction Co., Inc.
Item 15 Tack Coat - Applied	Tack Coat Base Material CSS-1h	Gallon (GAL)	\$ 5.91	
	Tack Coat Base Material HFMS-2	Gallon (GAL)		\$ 5.25
	Rapid Breaking Tack Coat	Gallon (GAL)		\$ 7.00
	Tack Coat Distributor Equipment with Operator	Fixed Price / HR	\$ 155.00	\$ 155.00

ITEM	DESCRIPTION	UNIT	Suit-Kote Corporation
Item 16 Cold In Place Recycling of Bituminous Pavements (Type II)	Cold In Place Recycle Type II Up to 10,000 SY @ 3 inches	Square Yard (SY)	\$ 2.900
	Cold In Place Recycle Type II Up to 10,000 SY @ 4 inches	Square Yard (SY)	\$ 3.030
	Cold In Place Recycle Type II Over 10,000 SY @ 3 inches	Square Yard (SY)	\$ 2.510
	Cold In Place Recycle Type II Over 10,000 SY @ 4 inches	Square Yard (SY)	\$ 2.560
	Cold In Place Recycle Type II Cold Mix Bituminous Paver	Day	\$ 3,600.000
Item 16 Emulsions	Cold In Place Emulsion HFRA	Gallon (GAL)	\$ 4.117
	Cold In Place Emulsion HFMS-2	Gallon (GAL)	\$ 3.717
	Cold In Place Emulsion HFMS-2p	Gallon (GAL)	\$ 3.987
	Cold In Place Emulsion HFMS-2 with Rejuvenator	Gallon (GAL)	\$ 4.047
	Cold In Place Emulsion CMS-2	Gallon (GAL)	\$ 3.737
	Cold In Place Emulsion CMS-2h	Gallon (GAL)	\$ 3.737
Item 16 Optional Items	Hauling: Vendor/Contract to furnish the hauling (trucking) of the aggregate to the paver.	Per Square Yard (SY)	\$ 0.450
	Maintenance & Protection of Traffic: Vendor/Contractor to provide adequate traffic control per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).	Per Square Yard (SY)	\$ 0.420

ITEM	DESCRIPTION	UNIT	Suit-Kote Corporation
Item 17 Pavement Recycling Pugmill Mix - Central Plant	Pavement Recycling Pugmill – Central Plant Up to 10,000 SY @ 3 inches	Square Yard (SY)	\$ 1.730
	Pavement Recycling Pugmill – Central Plant Up to 10,000 SY @ 4 inches	Square Yard (SY)	\$ 1.830
	Pavement Recycling Pugmill – Central Plant Over 10,000 SY @ 3 inches	Square Yard (SY)	\$ 1.270
	Pavement Recycling Pugmill – Central Plant Over 10,000 SY @ 4 inches	Square Yard (SY)	\$ 1.370
	Pavement Recycling with HFRA	Gallon (GAL)	\$ 4.395
	Cold Mix Bituminous Paver	Day	\$ 3,600.000
Item 17 Optional Items	Hauling: Vendor/Contract to furnish the hauling (trucking) of the aggregate to the paver.	Per Square Yard (SY)	\$ 0.450
	Maintenance & Protection of Traffic: Vendor/Contractor to provide adequate traffic control per the current version of the national Manual on Uniform Traffic Control Devices (MUTCD), including the New York State Supplement (NYSS).	Per Square Yard (SY)	\$ 0.420
	Compaction - Pneumatic Rubber Tire Roller: The Vendor/Contractor shall supply a Pneumatic Rubber Tire Roller with an experienced Operator.	Per Square Yard (SY)	\$ 0.220
	Compaction - 10 Ton Steel Drum Roller: The Vendor/Contractor shall supply a Steel Drum 10 Ton Roller with an experienced Operator.	Per Square Yard (SY)	\$ 0.250

ITEM	DESCRIPTION	UNIT	Midland Asphalt Materials Inc.	Suit-Kote Corporation
Item 18 Full Depth Pavement Reclamation Pavement Recycling	Full Depth Pavement Reclamation Up to 10,000 SY	Square Yard (SY)	\$ 1.280	
	Full Depth Pavement Reclamation Over 10,000 SY	Square Yard (SY)		\$ 1.280
	Stabilizing Additive Calcium Chloride	Gallon (GAL)	\$ 2.000	\$ 1.950
	Stabilizing Additive Asphalt Emulsion HFMS-2	Gallon (GAL)	\$ 4.000	\$ 3.678

ITEM	DESCRIPTION	UNIT	Millenium Roads, LLC
Item 19 Stabilized Shoulder Material	Stabilized Shoulder Material	Gallon (GAL)	\$ 1.40

ITEM	DESCRIPTION	UNIT	Midland Asphalt Materials Inc.	Suit-Kote Corporation
Item 20 Liquid Calcium Chloride	Liquid Calcium Chloride (Snow & Ice Control)	Gallon (GAL)	\$ 2.00	\$ 2.00
	Liquid Calcium Chloride (Gravel Road Stabilization)	Gallon (GAL)		\$ 1.95

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
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ITEM	DESCRIPTION	UNIT	Donegal Construction Corp.	Macedon Excavating and Paving	Spallina Materials, Inc.	Villager Construction, Inc.
Item 21 Milling Machine Rental & Operators	7' Milling Machine Rental – Full Day	Full Day	\$3,300.00	\$3,400.00	\$3,045.00	\$3,400.00
	7' Milling Machine Rental – Half Day	Half Day	\$3,000.00	\$3,000.00	\$1,995.00	\$3,200.00
	5' Milling Machine Rental – Full Day	Full Day	\$3,300.00			\$3,100.00
	5' Milling Machine Rental – Half Day	Half Day	\$3,000.00			\$2,900.00
	4' Milling Machine Rental – Full Day	Full Day	\$3,000.00	\$3,160.00	\$1,995.00	\$2,400.00
	4' Milling Machine Rental – Half Day	Half Day	\$2,900.00	\$2,950.00	\$1,522.50	\$2,200.00
	Milling Machine Operator – Regular Hours	Hour (HR)	\$130.00	\$105.00	\$105.00	\$119.00
	Milling Machine Operator – Over Time Hours	Hour (HR)	\$175.00	\$145.00	\$131.25	\$170.00
	Ground Person – Regular Hours	Hour (HR)	\$125.00	\$95.00	\$99.75	\$113.00
	Ground Person – Over Time Hours	Hour (HR)	\$165.00	\$130.00	\$126.00	\$165.00
	Milling Head Change	Fixed Price / Change	\$450.00	\$450.00	\$472.50	\$450.00
	Vendor/Contractor Water Supply – Full Day	Full Day	\$1,350.00	\$1,160.00	\$682.50	\$1,200.00
	Vendor/Contractor Water Supply – Half Day	Half Day	\$1,100.00	\$960.00	\$420.00	\$1,000.00
	Additional Mobilization – Equipment Moves	Fixed Price / Move	\$625.00	\$625.00	\$625.00	\$625.00
Item 21 Optional Items	Multiplex Profile Milling – Full Day: Vendor/Contractor to furnish all necessary equipment and attachments required to model the pavement surface to perform profile milling to reset or restore the crown of the roadway.	Full Day	\$1,200.00			\$875.50
	Multiplex Profile Milling – Half Day: Vendor/Contractor to furnish all necessary equipment and attachments required to model the pavement surface to perform profile milling to reset or restore the crown of the roadway.	Half Day	\$1,000.00			\$875.50

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
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ITEM	DESCRIPTION	UNIT	Cardinal Lawn & Landscape Inc.
Item 22 Motorized Sweeping	Maintenance Sweeping (Non-Construction)	Per 1,000 Linear Feet (LF)	\$ 64.50
	Construction Sweeping	Per Hour (HR)	\$ 291.00
	Emergency After Hours Sweeping	Each (EA) Location	\$ 585.00
	Curb Weed Sweeping	Per 1,000 Linear Feet (LF)	\$ 72.80

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Option A	Option B	Option C	Option D
Item 23 Concrete Gutters - Various Options	1- 50 Square Yards (SY)	Square Yard (SY)	\$ 250.56	\$ 252.72	\$ 204.12	\$ 131.54
	51 – 250 Square Yards (SY)	Square Yard (SY)	\$ 231.77	\$ 221.13	\$ 170.10	\$ 125.28
	Over 250 Square Yards (SY)	Square Yard (SY)	\$ 200.45	\$ 195.86	\$ 158.76	\$ 100.22
	Reconstruct Drop Inlet (In Addition to Gutter Replacement) 0 - 1 LF	Linear Foot (LF)	\$ 601.34	\$ 574.94	\$ 487.62	\$ 469.80
	Reconstruct Drop Inlet (In Addition to Gutter Replacement) Over 1 LF	Linear Foot (LF)	\$ 701.57	\$ 682.34	\$ 578.34	\$ 557.50
	VENDOR		Hynes Concrete Contractor Inc.			

Option A – Install New Gutters (All Inclusive): The Vendor/Contractor shall provide the surveying of line and grade in areas where there are no existing gutters; saw cutting of adjacent roadway and driveway pavement; excavation to the required line and grade; removal and disposal of the excavated material; furnish and place six inches of #2 crusher run stone base to grade; form, pour, and protect new concrete gutters; and restore adjacent roadway pavement, driveway pavement, and lawns.
Option B – Remove and Replace Existing Gutters (All Inclusive): The Vendor/Contractor shall provide the saw cutting of both ends of the existing gutter, roadway pavement, and driveway pavement adjacent to the gutter; removal and disposal of the existing concrete gutters; surveying of line and grade; furnish and place crusher run stone base leveling course; form, pour, and protect the new concrete gutters; and restore adjacent roadway pavement, driveway pavement, and lawns.
Option C – Remove and Replace Existing Gutters (Restoration by Others): The Vendor/Contractor shall provide the saw cutting of both ends of the existing gutter, roadway pavement, and driveway pavement adjacent to the gutter; removal and disposal of the existing concrete gutters; surveying of line and grade; furnish and place crusher run stone base leveling course; form, pour, and protect the new concrete gutters. The Agency shall provide the restoration of the adjacent roadway pavement, driveway pavement, and lawns.
Option D – Replace Gutter ONLY (Removal of Existing Gutters and Restoration by Others): The Vendor/Contractor shall provide the surveying of line and grade, form, pour, and protect the new concrete gutters. The Agency shall provide the saw cutting of both ends of the existing gutter, roadway pavement, and driveway pavement adjacent to the gutter; removal and disposal of the existing concrete gutters; furnish and place crusher run stone base leveling course; and restoration of the adjacent roadway pavement, driveway pavement, and lawns.
Reconstruct Drop Inlet (In Addition to Gutter Replacement): The Vendor/Contractor shall reconstruct/adjust all existing drop inlets within the gutter section, as necessary, in addition to the gutter replacement for each of the options above.

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Option A	Option B	Option C	Option D
Item 24 Concrete Sidewalks - Various Options	1- 50 Square Yards (SY)	Square Yard (SY)	\$ 225.72	\$ 213.84	\$ 204.60	\$ 180.18
	51 – 250 Square Yards (SY)	Square Yard (SY)	\$ 190.08	\$ 178.20	\$ 163.68	\$ 141.57
	Over 250 Square Yards (SY)	Square Yard (SY)	\$ 154.44	\$ 142.56	\$ 122.76	\$ 102.96
	Detectable Warning Unit Installation	Fixed Price / EA	\$ 350.00	\$ 350.00	\$ 350.00	\$ 350.00
	Additional Price for Steel Reinforcement	Fixed Price / SY	\$ 5.50	\$ 5.50	\$ 5.50	\$ 5.50
	VENDOR		Campobello Construction Co., Inc.			

Option A – Install New Sidewalks (All Inclusive): The unit price bid for this item per Square Yard (SY) of concrete sidewalk shall include the cost of surveying line and grade in areas where there are no existing sidewalks; clearing and grubbing (defined as only low growth; tree removals will be performed or coordinated by the Agency); saw cutting of adjacent pavement; excavation and/or placement of suitable fill to the required line and grade; removal and disposal of the excavated material; furnishing and placing six inches of #2 crusher run stone base to grade; forming; placement of concrete; finishing; stripping; curing and protection of new concrete sidewalks; cleanup; and final site restoration of adjacent pavement and lawns.

Option B – Remove and Replace Existing Sidewalks (All Inclusive): The unit price bid for this item per Square Yard (SY) of concrete sidewalk shall include the cost of furnishing all equipment; materials and labor necessary to complete the work, including saw cutting both ends of the existing sidewalk and adjacent pavement; excavation, removal, and disposal of existing asphalt or concrete sidewalks; tree root removal; preparing subgrade; furnishing, placing, and compaction of subgrade material; forming and placement of concrete; finishing, stripping, curing, and protection of new concrete sidewalk; and cleanup and final site restoration of adjacent pavement and lawns.

Option C – Remove and Replace Existing Sidewalks (Restoration by Others): The unit price bid for this item per Square Yard (SY) of concrete sidewalk shall include furnishing all equipment, materials, and labor necessary to complete the work including saw cutting both ends of the existing sidewalk and adjacent pavement; excavation, removal, and disposal of the existing concrete or asphalt sidewalk; tree root removal; preparing subgrade; furnishing, placing, and compaction of subgrade material; forming and placement of concrete; finishing, stripping, curing, protection of new concrete sidewalks; and site clean-up. The Agency shall provide the restoration of the adjacent pavement and lawns.

Option D – Replace Only (Removal of Existing Sidewalk and Restoration by Others): The unit price bid for this item per Square Yard (SY) of concrete sidewalk shall include the cost of furnishing and placing any crusher run stone base leveling course; forming; placement of concrete; finishing, stripping, curing, and protection of the new concrete sidewalk; and site clean-up. The Agency shall provide the saw cutting of both ends of the existing sidewalk and adjacent pavement; removal and disposal of the existing concrete or asphalt sidewalk; and restoration of the adjacent pavement and lawns.

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
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ITEM	DESCRIPTION	UNIT	Option A	Option B
Item 25 Concrete Curb - Various Options	1 – 100 Linear Feet (LF)	Linear Foot (LF)	\$ 66.74	\$ 59.94
	101 – 500 Linear Feet (LF)	Linear Foot (LF)	\$ 61.18	\$ 53.95
	Over 500 Linear Feet (LF)	Linear Foot (LF)	\$ 55.62	\$ 41.96
	VENDOR		Hynes Concrete Contractor Inc.	

Option A – Concrete Curb (All Inclusive): The bid price shall include forming and installing new Concrete Curb Type BB including MPOT, excavation, subbase preparation, backfill, asphalt restoration, lawn restoration, and disposal of spoil material.
Option B – Concrete Curb (Forming and Installing Only): The bid price shall include forming and installing new Concrete Curb Type BB including MPOT. The Agency will be responsible for the excavation, subbase preparation, and all restoration items.

ITEM	DESCRIPTION	UNIT	Option A	Option B	Option C	Option D	Option E
Item 26 Stone Curb - Various Options	1 – 100 Linear Feet (LF)	Linear Foot (LF)	No Bid	No Bid	No Bid	No Bid	No Bid
	101 – 500 Linear Feet (LF)	Linear Foot (LF)	No Bid	No Bid	No Bid	No Bid	No Bid
	Over 500 Linear Feet (LF)	Linear Foot (LF)	No Bid	No Bid	No Bid	No Bid	No Bid
	VENDOR		No Bidders				

Option A – Install Stone Curb (All Inclusive): The bid price shall include furnishing and installing new Stone Curb including MPOT, excavation, subbase, drymix bedding, concrete backing, backfill, asphalt restoration, lawn restoration, and disposal of spoil material.
Option B – Install Stone Curb (Furnish and Install Only): The bid price shall include furnishing and installing new Stone Curb including MPOT, drymix bedding, and concrete backing. The Agency will be responsible for the excavation, subbase preparation, and all restoration items.
Option C – Reset Existing Curb (All Inclusive): The bid price shall include resetting of existing curbing including all MPOT, excavation, subbase, drymix bedding, concrete backing, backfill, asphalt restoration, lawn restoration, and disposal of spoil material.
Option D – Reset Existing Curb (Excluding Prep and Restoration): The bid price shall include resetting of existing curbing including all MPOT, drymix bedding, and concrete backing. The Agency will be responsible for the excavation, subbase preparation, and all restoration items.
Option E – Furnish Stone Curb: The Vendor/Contractor shall furnish Type C Stone Curb in the quantities listed in the proposal within 7 working days of notification by the Agency. Installation is not required as part of this option.

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	UNIT PRICE
Item 27 Reconstructiun of Existing Drop Inlets	Up to 1.0 Linear Feet (LF) of Total Vertical Reconstruction	Linear Foot (LF)	\$ 6,912.00
	1.1 to 2.0 Linear Feet (LF) of Total Vertical Reconstruction	Linear Foot (LF)	\$ 6,048.00
	2.1 to 3.0 Linear Feet (LF) of Total Vertical Reconstruction	Linear Foot (LF)	\$ 5,184.00
	3.1 to 4.0 Linear Feet (LF) of Total Vertical Reconstruction	Linear Foot (LF)	\$ 4,320.00
	More than 4.0 Linear Feet (LF) of Total Vertical Reconstruction	Linear Foot (LF)	\$ 3,456.00
	VENDOR		Hynes Concrete Contractor Inc.

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Option A	Option B	Option C	Option D
Item 28 Hydroseeding of Roadside Areas	1 – 10,000 Square Feet (SF)	Square Foot (SF)	\$ 0.129	\$ 0.129	\$ 0.129	\$ 0.194
	10,001 – 30,000 Square Feet (SF)	Square Foot (SF)	\$ 0.116	\$ 0.116	\$ 0.116	\$ 0.194
	Over 30,000 Square Feet (SF)	Square Foot (SF)	\$ 0.103	\$ 0.103	\$ 0.103	\$ 0.194
	VENDOR		Cardinal Lawn & Landscape Inc.			

Minimum Charge Per Order = \$350.00

Option A – Hydroseeding Grass Area Mix: The bid price shall include Hydroseeding grass areas with the following mix: 50% Pennfine Perennial Ryegrass; 25% Pennlawn Red Fescue; 15% Kentucky Bluegrass; and 10% Crep. Fescue; at a rate of 200 lbs./Acre.
Option B – Hydroseeding Non-Grass Areas (Reclamation Mix): The bid price shall include Hydroseeding non-grass areas with the following mix: 50% Penngift Crownvetch* and 50% Pennfine Perennial Ryegrass at a rate of 80 lbs./Acre. Add to above Select Empire Birdsfoot Trefoil** at a rate of 5 lbs./Acre and Weeping Love Grass at a rate of 1 lb./Acre. * 10 times Inoculant - Keep in cool area. ** Add Birdsfoot Trefoil Inoculant.
Option C – Hydroseeding Non-Grass Areas (Revitalization Mix): The bid price shall include Hydroseeding non-grass areas with the following mix: 100% Penngift Crownvetch* at a rate of 40 lbs./Acre. Add to above Select Empire Birdsfoot Trefoil** at a rate of 5 lbs./Acre and Weeping Love Grass at a rate of 1 lb./Acre. * 10 times Inoculant - Keep in cool area. ** Add Birdsfoot Trefoil Inoculant.
Option D – Watering of Hydroseeded Areas: The Hydroseeded areas shall be watered at least once daily at a rate of one-half inch of water per day, unless sufficiently watered by precipitation. Payment shall be made for the total number of Gallons (GAL) of water used multiplied by the bid price per Gallon (GAL) of water.

ITEM	DESCRIPTION	UNIT	RAL Landscape Inc.
Item 29 Slice Seeding	Slice Seeding	Square Foot (SF)	\$ 0.03
	OPTION: Watering of Slice Seeded Areas	Gallon (GAL)	\$ 0.05
	OPTION: Core Aerate Turf Areas	Square Foot (SF)	\$ 0.02

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Option A	Option B	Option C
Item 30 Trees and Shrubs (Furnish, Deliver, and/or Plant)	Deciduous Tree – Norway Maple (Acer platanoides)	Each (EA)	\$ 315.00	\$ 510.00	\$ 560.00
	Deciduous Tree – Red Maple (Acer rubum)	Each (EA)	\$ 350.00	\$ 640.00	\$ 705.00
	Deciduous Tree – Northern Red Oak (Quercus rubra)	Each (EA)	\$ 395.00	\$ 660.00	\$ 760.00
	Deciduous Tree – Pin Oak (Quercus palustris)	Each (EA)	\$ 355.00	\$ 650.00	\$ 740.00
	Deciduous Tree – Thornless Cockspur Hawthorn (Crataegus crus-galli inermis)	Each (EA)	\$ 350.00	\$ 560.00	\$ 610.00
	Deciduous Tree – Washington Hawthorn (Crataegus phaenopyrum)	Each (EA)	\$ 340.00	\$ 560.00	\$ 610.00
	Coniferous Tree – Colorado Blue Spruce (Picea pungens glauca)	Each (EA)	\$ 230.00	\$ 520.00	\$ 590.00
	Coniferous Tree – Australian Pine (Pinus nigra)	Each (EA)	\$ 210.00	\$ 460.00	\$ 510.00
	Evergreen Shrub – Dense Spreading Yew (Taxus densiformis)	Each (EA)	\$ 70.00	\$ 105.00	\$ 131.00
	Evergreen Shrub – Dark American Arborvitae (Thuja occidentalis nigra)	Each (EA)	\$ 150.00	\$ 245.00	\$ 290.00
VENDOR			Cardinal Lawn & Landscape Inc.		

Option A – Furnish and Deliver: The bid price shall include furnishing and delivering the specified trees and/or shrubs from the list above to any project site(s) within Monroe County.
Option B – Furnish and Plant: The bid price shall include furnishing, delivering, and planting the specified trees and/or shrubs from the list above to any project site(s) within Monroe County without a guarantee. This option shall include plant materials; excavation; soil preparation and conditioning; and staking and mulching.
Option C – Furnish, Plant, and Guarantee: The bid price shall include furnishing, delivering, and planting the specified trees and/or shrubs from the list above to any project site(s) within Monroe County with a one-year guarantee. This option shall include plant materials; excavation; soil preparation and conditioning; staking and mulching; and any re-planting as required within the one-year guarantee period.

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

			PIPE DIAMETER										
ITEM	DESCRIPTION	UNIT	8" Dia.	12" Dia.	15" Dia.	18" Dia.	24" Dia.	30" Dia.	36" Dia.	42" Dia.	48" Dia.	54" Dia.	60" Dia.
Item 31 Storm Sewer Cleaning & Televising	Storm Sewer Cleaning/Flushing: Category: Light (< 25% Blockage/Debris)	Linear Foot (LF)	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
	Storm Sewer Cleaning/Flushing: Category: Medium (25% – 50% Blockage/Debris)	Linear Foot (LF)	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
	Storm Sewer Cleaning/Flushing: Category: High (> 50% Blockage/Debris)	Linear Foot (LF)	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
	VENDOR		No Bidders										
	Storm Sewer Televising and Recording	Linear Foot (LF)	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
	VENDOR		No Bidders										
Emergency Surcharge for Storm Sewer Cleaning/Flushing Amount to be added to the unit price above		Lump Sum (LS)	No Bid										

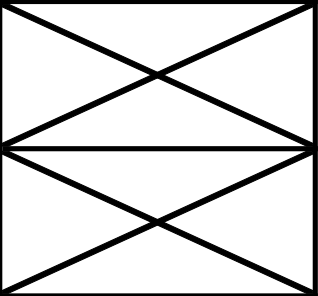
ITEM	DESCRIPTION	UNIT	UNIT PRICE
Item 32 Concrete Pump Rental	Concrete Pump Rental	Per Hour (HR)	No Bid
	Mobilization	Fixed Price	\$350.00

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Villager Construction, Inc.
Item 33 Road Widener Rental	Road Widener Rental	Full Day	\$ 2,060.00
	Road Widener Rental	Half Day	\$ 2,060.00

ITEM	DESCRIPTION	UNIT	UNIT PRICE
Item 34 Material Slinger Truck Rental & Operator	Material Slinger Truck Rental – Full Day	Full Day	No Bidders
	Material Slinger Truck Rental – Half Day	Half Day	No Bidders
	Material Slinger Truck Operator - Straight Time	Hour (HR)	No Bidders
	Material Slinger Truck Operator - Over Time	Hour (HR)	No Bidders

2024 HIGHWAY EQUIPMENT AND SERVICES - GROUP 1 AND GROUP 3
BID AWARDS (BASE PRICES)
BP#0101-24 AND BP#0210-24

ITEM	DESCRIPTION	UNIT	Villager Construction, Inc.
Item 35 Rubber Tire Skid Steer Loader Rental & Operator	Rubber Tire Skid Steer Loader Rental with Bucket – Full Day	Full Day	\$ 1,030.00
	Rubber Tire Skid Steer Loader Rental with Bucket – Half Day	Half Day	\$ 930.00
	Rubber Tire Skid Steer Loader Rental with 18" Mill Head – Full Day	Full Day	\$ 1,240.00
	Rubber Tire Skid Steer Loader Rental with 18" Mill Head – Half Day	Half Day	\$ 1,135.00
	Rubber Tire Skid Steer Loader Rental with 24" Mill Head – Full Day	Full Day	\$ 1,240.00
	Rubber Tire Skid Steer Loader Rental with 24" Mill Head – Half Day	Half Day	\$ 1,135.00
	Rubber Tire Skid Steer Loader Rental with Angle Broom – Full Day	Full Day	\$ 1,235.00
	Rubber Tire Skid Steer Loader Rental with Angle Broom – Half Day	Half Day	\$ 1,135.00
	Rubber Tire Skid Steer Loader Rental with Pickup (Hopper) Broom – Full Day	Full Day	\$ 1,235.00
	Rubber Tire Skid Steer Loader Rental with Pickup (Hopper) Broom – Half Day	Half Day	\$ 1,135.00
	Rubber Tire Skid Steer Loader Rental with Road Widener (1 to 4 Foot Lay Down Width) – Full Day	Full Day	
	Rubber Tire Skid Steer Loader Rental with Road Widener (1 to 4 Foot Lay Down Width) – Half Day	Half Day	
	Attachment Change	Fixed Price / Change	\$ 450.00
	Rubber Tire Skid Steer Loader Operator - Regular Time	Hour (HR)	\$ 119.00
	Rubber Tire Skid Steer Loader Operator - Over Time	Hour (HR)	\$ 180.00