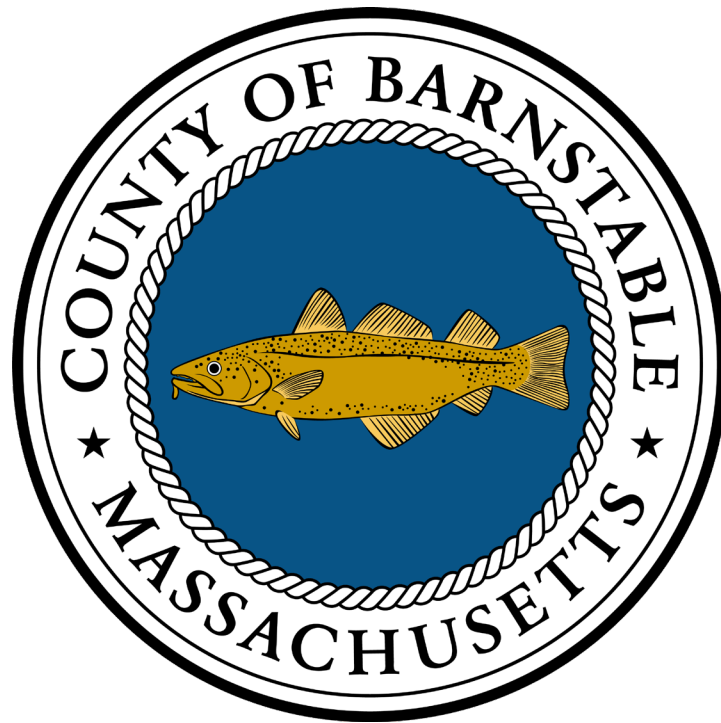


Barnstable County Purchasing Department



CONTRACT # BC-24-8032

Road Construction Items and Materials

Rafferty Fine Grading, Inc.

Barnstable County

Bid No. 8032

Roadway Construction Items and Materials

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Barnstable County

Regional Government of Cape Cod

Purchasing Department

Jennifer L.V. Frates, Chief Procurement Officer



Advertisement

Barnstable County on behalf of the Towns in the County requests bids from qualified contractors for:

Road Construction Items and Materials per Bid No. 8032

&

Road Resurfacing Specific Projects per Bid No. 8033

The bid documents may be obtained electronically online at <https://barnstablecounty.bonfirehub.com> where they are publicly available as of December 20, 2023 at 8:00AM.

Bids are due January 17, 2024, at 11:00AM. **THESE PROJECTS ARE BEING ELECTRONICALLY BID AND HARD COPY BIDS WILL NOT BE ACCEPTED.** It is the bidder's sole responsibility to familiarize themselves with the Bonfire Online Bid Submission Platform and the online bid submission process and requirements.

The County of Barnstable reserves the right to accept or reject any or all bids, to waive any informality contained therein, and to award the contract as decided to be in the best interest of the County.

All submissions for this project are subject to the provisions of Massachusetts General Laws, Chapter 30, 39M. Prevailing wages apply, where applicable. MassDOT Prequalification will be required on some items.

The County of Barnstable fully complies with federal, state, and local laws and directives governing equal opportunity, affirmative action and non-discrimination in all county activities and actively solicits bids/proposals from MBE/WBE businesses in accordance with County policy.

Jennifer Frates
Chief Procurement Officer

3195 Main Street | P.O. Box 427 | Barnstable, Massachusetts 02630

P: (508) 375-6637 E: Jennifer.frates@capecod.gov



Submission Instructions for Suppliers

Please follow these instructions to submit via our Public Portal.

1. Prepare your submission materials:

Requested Information

Name	Type	# Files	Requirement	Instructions
Signed Form for General Bid	File Type: PDF (.pdf)	1	Required	
Bid Bond 5%	File Type: PDF (.pdf)	1	Required	
8032 Road Construction Items and Materials (BT-23KY)	BidTable: Excel (.xlsx)	1	Required	You will need to fill out the provided Response Template for this BidTable. The Response Template can be downloaded from the project listing on the Bonfire portal.
List of Subcontractors	File Type: PDF (.pdf)	1	Optional	
References	File Type: PDF (.pdf)	Multiple	Required	

Commodity Codes



Commodity Set	Commodity Code	Title	Description
UNSPSC	3012	Roads and landscape	
UNSPSC	301215	Bituminous derivatives	
UNSPSC	301216	Asphalts	
UNSPSC	301217	Road and railroad construction materials	

Requested Documents:

Please note the type and number of files allowed. The maximum upload file size is 1000 MB.

Please do not embed any documents within your uploaded files, as they will not be accessible or evaluated.

Requested BidTables:

The BidTable Response Templates can be obtained at <https://barnstablecounty.bonfirehub.com/opportunities/112380>.

Please note that BidTables may take a significant amount of time to prepare.

2. Upload your submission at:

<https://barnstablecounty.bonfirehub.com/opportunities/112380>

The Vendor Discussion period for this opportunity starts Dec 20, 2023 8:00 AM EST. The Vendor Discussion period for this opportunity ends Jan 10, 2024 5:00 PM EST. You will not be able to send messages after this time.



Your submission must be uploaded, submitted, and finalized prior to the Closing Time of **Jan 17, 2024 11:00 AM EST**. We strongly recommend that you give yourself sufficient time and **at least ONE (1) day** before Closing Time to begin the uploading process and to finalize your submission.

Important Notes:

Each item of Requested Information will only be visible after the Closing Time.

Uploading large documents may take significant time, depending on the size of the file(s) and your Internet connection speed.

You will receive an email confirmation receipt with a unique confirmation number once you finalize your submission.

Minimum system requirements: Microsoft Edge, Google Chrome, or Mozilla Firefox. Javascript must be enabled. Browser cookies must be enabled.

Need Help?

Barnstable County, MA uses a Bonfire portal for accepting and evaluating proposals digitally. Please contact Bonfire at Support@GoBonfire.com for technical questions related to your submission. You can also visit their help forum at <https://vendorsupport.gobonfire.com/hc/en-us>

NOTICE TO BIDDERS

1. Project Description/Scope of Work
2. Examination of Site & Documents
3. Sub-Contractors
4. Fair Employment Practices
5. Substitute Material and Equipment
6. Pre-Bid Meeting
7. Bid Response Instructions
8. Required Bid Response Date
9. Bid Security
10. Bid Signature
11. Official Date and Time
12. Time for Bid Acceptance
13. Modification or Withdrawal of Bids, Mistakes, and Minor Informalities
14. Bid Prices to Remain Firm
15. Questions and County POC
16. Changes & Addenda
17. References
18. Wages
19. References to General Laws
20. Cost of Preparation
21. County Tax Exemption
22. Political Activity Prohibited, Anti-Boycott Warranty
23. Contractor Compliance
24. Public Record Request
25. Bid Evaluation Process
26. Vendor Self Service (VSS) – Online Supplier Portal
27. Collective Purchasing

IFB# 8032

Roadway Construction Items & Materials

Barnstable County on behalf of the Towns in the County requests bids from qualified contractors for Roadway Construction Items and Materials.

1. Project Description/Scope of Work

Bidders are to submit responses based upon the item specifications as outlined within "Special Provisions" All pricing should be inclusive all cost associated with providing services as specified.

ALL BIDS FOR THIS PROJECT ARE SUBJECT TO THE PROVISIONS OF MASS. GENERAL LAW CHAPTER 149 SECTION 44A-44J AS AMENDED.

The General Contractor shall provide all labor, materials, environmental notifications and permits, transportation and equipment required.

The Towns will require a Payment Bond in the amount of Fifty Percent (50%) on a project by project basis for any project over \$25,000.

2. Examination of Site and Documents

Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the Towns or location to familiarize themselves with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize himself with federal, state and local laws, by laws, rules and regulations that may in any manner affect cost, progress or performance of the Work; and (d) study and carefully correlate Bidder's observations with the Contract Documents.

The submission of a Bid will constitute an incontrovertible representation by the Bidder that they have complied with every requirement of this Article and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

3. Sub Contractors

If the General Conditions require the identity of certain Subcontractors and other persons and organizations to be submitted in advance of the Notice of Award, the apparent Successful Bidder, and any other Bidder so requested, will within seven days after the day of the Bid opening submit a list of all Subcontractors and other persons and organizations (including those who are to furnish the principal items of material and equipment) proposed for those portions of the Work as to which such identification is so required. Such list shall be accompanied by an experience statement with pertinent information as to similar projects and other evidence of qualification for each such Subcontractor, person and organization if requested. If, after due investigation, reasonable objection exists to any proposed Subcontractor, other person or organization, the apparent Successful Bidder will be requested to submit an acceptable substitute without an increase in Bid price.

If the apparent Successful Bidder declines to make any such substitution, the Contract shall not be awarded to such Bidder. Any Subcontractor, other person or organization so listed and for whom the County has no written objection is submitted prior to the giving of the Notice of Award will be deemed acceptable.

No Contractor shall be required to employ any Subcontractor, other person or organization against whom they has reasonable objection.

4. Fair Employment Practices.

During the performance of this project, the Bidder and all of their Subcontractors, for themselves , their assignees, and successors in interest, agree as follows: The Bidder, in the performance of all work during, after and prior to completion of work under this Agreement, will not discriminate on grounds of race, color, religious creed, national origin, age or sex in employment practices, in the selection or retention of subcontractors, or in the procurement of materials and rentals of equipment. (Fair Employment Practices law of the Commonwealth M.G.L. Chapter 151B.) The Bidder by signing this Agreement agrees to abide by the above paragraph to the best of their ability.

5. Substitute Material and Equipment.

The Contract, if awarded, will be on the basis of material and equipment described/specified in the Contract Specifications. Whenever it is indicated in the Contract Specifications that a substitute or "approved equivalent" item of material or equipment may be furnished or used by Contractor if acceptable, application for such acceptance will not be considered by the County until after the "effective date of the Agreement".

6. Pre-Bid Meeting

A pre-bid meeting has not been schedule for this IFB.

7. Bid Response Instructions

All bid responses will be received online prior to the date and time specified below for the project titled IFB # 8032: Roadway Construction Items & Materials to the Bonfire Online Bidding Tool which can be accessed online at <https://barnstablecounty.bonfirehub.com> All required documents must be submitted in the format specified, all fields must be completed as specified and the documents must be submitted to the correct project folder in order for the bid response to be complete. **Hard copy bid responses will not be accepted.** It is the bidder's sole responsibility to familiarize themselves with the Bonfire Online Bid Submission Platform and the online bid submission process and requirements.

8. Required Bid Response Date

Vendors who wish to be considered for this project should submit their bids per the instructions above to the County prior to the date and time specified below.

Bids are due on or before **11:00 AM on January 17, 2024**. No late bids will be accepted.

Bids will be opened publicly online immediately after the bid closes through Microsoft Teams. A link is provided in the Bonfire Submission Instructions for any member of the public who would like to join.

9. Bid Security

Bid Security shall be made payable to the County in an amount of five percent (5%) of the Bidder's maximum Bid price and in the form of a Bid Bond.

The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract Security (Payment & Performance Bonds, when required) and Insurance Binders, where upon it will be returned; if the Successful Bidder fails to execute and deliver the Agreement and furnish the required documents within five (5) working days of the Notice of Award, the County may

annul the Notice of Award and the Bid Security of that Bidder will be forfeited. The Bid Security of any Bidder whom the County believes to have a reasonable chance of receiving the award may be retained by the County until the earlier of the seventh (7th) day after the "effective date of the Agreement" (which term is defined in the General Conditions) by the County to Contractor and the required Contract Security is furnished or the sixty first (61st) day after the Bid opening. Bid Security of other Bidders will be returned within seven (7) days of the Bid opening.

10. Bid Signature

A bid must be signed as follows: 1) if the bidder is an individual, by her/him personally; 2) if the bidder is a partnership, by the name of the partnership, followed by the signature of each general partner; and 3) if the bidder is a corporation, by the authorized officer, whose signature must be attested to by the clerk/secretary of the corporation, and with the corporate seal affixed.

11. Official Date & Time

A bid will not be considered delivered unless the bid has been received online by the Bonfire Online Bidding Tool (in the correct project) which can be accessed at <https://barnstablecounty.bonfirehub.com> prior to the date and time specified in the documents. The official date and time shall be the date and time shown online at <https://barnstablecounty.bonfirehub.com>

12. Time for Bid Acceptance

The contract will be awarded within 60 days after the bid opening.

13. Modification or Withdrawal of Bids, Mistakes, and Minor Informalities

Any bids may be withdrawn or modified prior to the date and time stated in the bid for the opening of bids. Such withdrawal or modification must be done by the bidder online through the Bonfire Online Bidding Tool.

After the bid opening, a Bidder may not change any provision of the bid in a manner prejudicial to the interests of the County for fair competition. Minor informalities will be waived or the Bidder will be allowed to correct them. If a mistake and the intended bid are clearly evident on the face of the bid document, the mistake will be corrected to reflect the intended correct bid, and the Bidder will be notified in writing; the Bidder may not withdraw the bid. A Bidder may withdraw a bid if a mistake is clearly evident on the face of the bid document, but the intended correct bid is not similarly evident.

If this bid is received electronically, Bidders are solely responsible for obtaining and completing required attachments that are identified in this bid and for checking for any addenda or modifications that are subsequently made to this bid or attachments. Barnstable County accepts no liability and will provide no accommodation to Bidders who fail to check for amended bids and submit inadequate or incorrect responses.

Bidders may not alter (manually or electronically) the bid language or any bid documents. Unauthorized modifications to the body of the bid, specifications, terms or conditions, or which change the intent of this bid are prohibited and may disqualify a response.

14. Bid Prices to Remain Firm

All bid prices submitted in response to this bid must remain firm for 60 days following the bid opening.

15. Questions and County POC

Any clarification of requirements or requests for additional information by bidders must be made in writing to the Bonfire Opportunity Vendor Discussion and submitted no later than **January 10, 2024 @ 5:00PM E.S.T.** to <https://barnstablecounty.bonfirehub.com>. Answers to all questions will be made in writing and posted online as an addendum to the **IFB # 8032: Roadway Construction Items & Materials** on the bid website as an attachment under the bid information: <https://barnstablecounty.bonfirehub.com>. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

16. Changes & Addenda

For any IFB document and any addenda that are received electronically, it is the responsibility of every Bidder who receives this IFB

and all associated documents to check this website for any addenda. Barnstable County accepts no liability to provide accommodation to Bidders who submit a response based upon information obtained from its website. Bidders may not alter (manually or electronically) the bid language or any bid documents.

17. References

Provide the contact information (entity name, contact name, title, phone number & email address) for three client references on projects of similar type, scale, and complexity.

18. Wages

All bids for this project are subject to the provisions of either or both Mass. G. L., Chapter 30, Section 39M as amended and/or Mass. G. L. Chapter 149, Section 44A - 44J inclusive as amended. Attention is directed to the minimum wage rates to be paid on the work as determined by the Commissioner of Labor and Industries under the provisions of Mass. G. L. Chapter 149, Section 26 - 27D inclusive. The Awarding Authority reserves the right to waive any informality in or to reject any and all bids if the Awarding Authority determines it is in the public interest so to do.

Please note prevailing wages do not apply to materials Item numbers 200 – 218

19. Reference to General Laws

Whenever in the bid, contract, plans, drawings or specifications, reference is made to General Laws it shall be construed to include all amendments thereto effective as of the date of issue of invitation to bid on the proposed work.

20. Cost of Preparation

The cost of preparation and delivery of the bids will be borne solely by the Vendor.

21. County Tax Exemption

Any material furnished to Barnstable County is to be exempt from Massachusetts Sales Tax (Massachusetts Sales Tax Exemption No. E-04-6001419).

22. Political Activity Prohibited, Anti-Boycott Warranty

The Contractor may not use any Contract funds and none of the services to be provided by the Contractor may be used for any partisan political activity or to further the election or defeat of any candidate for public office. During the term of this Contract, neither the Contractor nor any controlled group, within the meaning of s.993 (a) (3) of the Internal Revenue Code, as amended, shall participate in or cooperate with any international boycott, as defined in s.999 (b) (3) and (4) of the Internal Revenue Code of 1954, as amended; nor shall either engage in conduct declared to be unlawful by M.G.L. c.151Es.2.

23. Contractor Compliance

The successful Contractor must comply with provisions of The Copeland Anti-Kickback Act (18 USC 874) as supplemented in Department of Labor 29 CFR Part 3, the Davis-Bacon Act (40 USC 276a et.seq.), Sections 103 and 107 of the contract Work Hours and Safety Standard Act (50 USC 327-330) as supplemented by Department of Labor Regulation 29 CFR Part 5, and the Clean Air Act of 1970 (42 USC 1857, et.seq.) to the extent that they are applicable.

24. Public Record Request

All bids received are subject to Massachusetts General Laws Chapter 4, Section 7, Section 26 and Chapter 66, Section 10 regarding public access to such documents. Statements or endorsements inconsistent with those statutes will be disregarded.

25. Selection and Notice

The awarding authority may cancel an invitation for bids, a request for bids, or other solicitation, or may reject in whole or in part any and all bids or bids when the awarding authority determines that cancellation or rejection serves the best interests of the County of Barnstable.

Basis for Acceptance:

Any bid made will be accepted only on the basis that the Bidder represents that it is made in good faith without fraud, collusion or connection of any kind with any other Bidder for the same work; that the Bidder is competing solely in its own behalf without connection with, or obligation to, any undisclosed person, firm or corporation; that no other person, firm or corporation has any interest in the contract; that no officer, agent or employee of the County is financially interested in the contract; that the Bidder is fully informed in regard to all provisions of the Contract Documents, including, without limitation, the specifications and drawings, if any; the damages, bonds and insurance, if any. The awarding of the contract is subject to the approval of the Barnstable County Commissioners.

Rule for Award:

Bid selection will be by each item and will be based on the lowest, qualified, responsible, and responsive bid for each item for each Town. Any exception is noted on the General Bid Form for items that are grouped or if items are awarded to the two lowest.

Contract Award:

The Chief Procurement Officer shall award the contract by written notice to the selected Bidder within 30 days of the IFB deadline. The parties may extend the time for acceptance by mutual agreement. In accordance with M.G.L. c.30B, the awarding of the contract is subject to the approval of the Barnstable County Commissioners.

26. Vendor Self Service (VSS) – Online Supplier Portal

For Vendors doing business with the Departments within the County Regional Government, Vendor Self Service (VSS) is available to enter and maintain contact and remittance information, discount and payment terms, designated contact persons, view current and prior 1099 data, purchase orders, invoices and checks.

Vendors are encouraged to visit: <https://selfservice.capecod.gov/vss> to register and click Vendor Self Service. Instructions are available on the landing page to help with the registration.

If you have done business with the County before, please be sure to have your vendor number and register as an existing vendor.

If you need your login information or have general questions, please email accounts.payable@capecod.gov, purchasing questions, please email purchasing@capecod.gov and banking information questions, please email treasury@capecod.gov

Registration process takes 1-5 business days to finalize upon receipt of a completed, correct and signed W-9. For a blank W-9 form, visit IRS Website for the most recent version.

27. Collective Purchasing

In the event that the County is the lead agency in the procurement of goods and services on behalf of the Towns in Barnstable County and Political Subdivisions listed in Attachment A, the following shall apply:

- A. *Participating Entities:* Reserve the right to reject their portion of the bid, waive any informalities.

Towns and Agencies not included in the bid and/or award will not be allowed to “piggyback” on this procurement.

- B. *Contractual Terms and Conditions:* A Barnstable County contract for services will be executed as part of this procurement process.

Termination of a contract or services by any municipality shall not invalidate or alter the terms of a contract or services with any other municipality.

Some Towns or suppliers may require entering into their own specific agreements in addition to the execution of the County contract. Please note that the terms and conditions of these additional agreements shall not supersede the County contract terms and conditions. Participants are encouraged to submit these documents to their legal counsel for review.

- C. *Supplier Disputes:* Participating entities are to attempt to resolve any matters directly with the Supplier with no involvement from the County. Only in the event of an unresolved dispute will the County attempt to settle the issue if they pertain to the services provided in the subject contract.

END OF IFB

GENERAL BID FORM

FORM FOR GENERAL BID

The undersigned also hereby certify under the penalties of perjury that they are the only persons interested in this proposal; that it is made without any connection with any other person making any bid for the same work; that no person acting for, or employed by, Barnstable County is directly or indirectly interested in this proposal, or in any contract which be made under it, or in expected profits to arise therefrom; and without directly or indirectly influencing or attempting to influence any other person or corporation to bid or to refrain from bidding or to influence the amount of the bid of any other person or corporation; and that this proposal is made in good faith without collusion or connection with any other person bidding for the same work; and that this proposal is made with distinct reference and relation to the plans and specifications prepared for this contract and herein mentioned. The undersigned further declare that in regard to the conditions affecting the work to be done and the labor and materials needed, this proposal is based solely on their own investigation and research and not in reliance upon any representation of any employee, officer or agent of Barnstable County.

Any proposals may be withdrawn or modified prior to the date and time stated in the proposal for the opening of proposals. Such withdrawal or modification must be done by the bidder online through the Bonfire Online Bidding Tool.

After the bid opening, a bidder may not change any provision of the bid in a manner prejudicial to the interests of the County for fair competition. Minor informalities will be waived or the bidder will be allowed to correct them. If a mistake and the intended bid are clearly evident on the face of the bid document, the mistake will be corrected to reflect the intended correct bid, and the bidder will be notified in writing; the bidder may not withdraw the bid. A bidder may withdraw a bid if a mistake is clearly evident on the face of the bid document, but the intended correct bid is not similarly evident.

If this bid is received electronically, bidders are solely responsible for obtaining and completing required attachments that are identified in this bid and for checking for any addenda or modifications that are subsequently made to this bid or attachments. Barnstable County accepts no liability and will provide no accommodation to bidders who fail to check for amended bids and submit inadequate or incorrect responses.

Bidders may not alter (manually or electronically) the bid language or any bid documents. Unauthorized modifications to the body of the bid, specifications, terms or conditions, or which change the intent of this bid are prohibited and may disqualify a response.

Name of General Bidder:

Rafferty Fine Grading, Inc.

PROJECT NO. 8032

Each Town has provided estimated quantities for each bid item that it presently intends to order. These estimated quantities are for bid purposes only and cannot be guaranteed. The estimated amounts are also a total aggregate which the town intends to use during the contract period and the bidder should familiarize themselves with the minimum job quantities defined in the individual specifications for each item.

THIS BID IS SUBMITTED TO:

(Name and Address
of Owner)

Office of the County Commissioners
Superior Court House
P.O. Box 427
Barnstable, Massachusetts 02630

- A. The undersigned proposes to furnish all labor and materials required for **IFB #8032 Roadway Construction Items and Materials** in accordance with the accompanying plans and specifications by Barnstable County.
- B. The undersigned BIDDER proposes and agrees, if the Bid is accepted to enter into an Agreement with the County, to complete all Work as specified or indicated in the Contract Documents for the Contract Unit Prices during the contract period of April 1, 2024 to March 31, 2025 with one, one year option to renew.
- C. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that the BIDDER has examined copies of all the Contract Documents and of the following addenda:
- Bidder acknowledges addenda numbered 1, 2, 3, 4
- D. Bidders are to complete the Bid Table provided in the Bonfire Online Bidding Tool.
- E. Bid comparison will be based on each item unit price provided for each Town. Bidders may bid on any or all items for any or all Towns listed. Bid selection will be by each item by Town and will be based on the lowest, qualified, responsible, and responsive bid for each item for each Town.
- F. It is the intent to award a contract to the two (2) lowest, qualified, responsible, and responsive bidders for Item Numbers: **1- 7, 18 and 19.**

It is the intent to award a contract to the two (2) lowest, qualified, responsible, and responsive bidders for Bid Items **115 to 122.**

It is the intent to group items **100-107A** together and award to one vendor.

It is the intent to award Item **200** based on the shortest distance.

The undersigned BIDDER proposes and agrees, if the Bid is accepted to enter into an Agreement with the County, to complete all Work as specified or indicated in the Contract Documents.

BIDDER accepts all of the terms and conditions of the Notice to Bidders. This Bid will remain open for sixty (60) days after the day of Bid opening. BIDDER will sign the Agreement and submit other documents (e.g. Bonds, Insurance Binders) required by the Contract Documents within five (5) working days after the date of the County's Notice of Award.

BIDDER will complete all the Work assigned for the lump sum price listed in the Bid Form.

Bid selected will be awarded to the qualified, responsive and responsible Bidder, offering the lowest price.

The undersigned also certifies: that they are able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; and, that all employees at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated there under.

Should the notice to contractors, bid form, contract, plans or specifications require submission of special data to accompany the bid, the Awarding Authority reserves the right to rule the bidders failure to submit such data an informality and to receive said data subsequently, within a reasonable time as set by the Awarding Authority.

Project No. 8032

Date 01/16/2024

Rafferty Fine Grading Inc.
(Name of General Bidder)
By Rhonda L. Rafferty
(Name of Person Signing Bid and Title)
Rhonda L. Rafferty

The following information is furnished by the bidder for the information of the County.

If a Corporation:

Incorporated in what State Connecticut

President Rhonda L. Rafferty Treasurer Kurt F. Rafferty

Secretary Rhonda L. Rafferty

If a foreign corporation, are you registered to do business in Mass.? Yes X No _____

If selected for this work you are required under Mass. G.L. C30 S39L to obtain from the Secretary of State, Foreign Corp. Section, State House, Boston, a certificate stating that your corporation is registered: and furnish said certificate to the awarding authority prior to the award.

If a Partnership: (Name all partners)

Name of partner _____ Residence _____

Name of partner _____ Residence _____

If an Individual:

Name _____ Residence _____

If an Individual doing business under a firm name:

Name of firm _____

Business Address _____

Name of Individual _____ Residence _____

**CERTIFICATE OF COMPLIANCE WITH STATE TAX LAWS AND
WITH UNEMPLOYMENT COMPENSATION CONTRIBUTION REQUIREMENTS**

Pursuant to M.G.L., Ch. 62C, s. 49A and M.G.L. Ch. 151A, s. 1 9A, I, Rhonda L. Rafferty authorized
signatory for Rafferty Fine Grading Inc. whose principal place of business is at
57 South Rd Enfield, CT 06082 do hereby certify under penalties of perjury that
Rafferty Fine Grading Inc. has filed all state tax returns and paid all taxes as required by law
and has complied with all state laws pertaining to contributions to the unemployment compensation fund
and to payments in lieu of contributions.

The Business Organization Federal Identification Number or Social Security Number is 06-1608252

Signed under the penalties of perjury the 15th day of January 20 24

Signature: _____

Name and Title: _____

Rhonda L. Rafferty, President



New England's Premiere Asphalt Recycling Company

SECRETARY'S CERTIFICATE

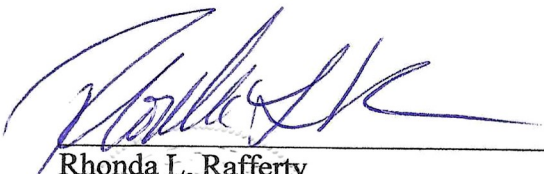
The undersigned, Rhonda L. Rafferty, Secretary of Rafferty Fine Grading, Inc., a Connecticut corporation, (the "Corporation"), does hereby certify that the following are true and complete resolutions which were Unanimously adopted at a duly called and held meeting of the Board of Directors of Rafferty Fine Grading, Inc. on the 4th day of January, 2024, and that such resolutions have not been amended or modified and continue to be in full force and effect as of this date:

RESOLVED, that the corporation may execute and deliver any and all contracts which it deems to be necessary or appropriate to carry out its business: and

FURTHER RESOLVED, that Rhonda L. Rafferty as President & Secretary and Kurt F. Rafferty as Vice President & Treasurer of the Corporation, are authorized and directed to execute and deliver any and all contracts on behalf of the Corporation and to do and perform all acts and things which she/he deems to be necessary or appropriate to carry out the terms of such contracts, including but not limited to executing and delivering all agreements and documents contemplated by such contracts.

The undersigned further certifies that Rhonda L. Rafferty now holds the office of President & Secretary, and that Kurt F. Rafferty now holds the office of Vice President & Treasurer and that they both have held these offices since July 10, 2012.

IN WITNESS WHEREOF, the undersigned has executed this Certificate this 4th day of January, 2024.



Rhonda L. Rafferty
Secretary & President

ATTESTED by



Kurt F. Rafferty
Vice President & Treasurer

BID BOND

AMCO Insurance Company
Nationwide Mutual Insurance Company
Allied Property & Casualty Insurance Company
1100 Locust St., Dept 2006 Des Moines, IA 50391-2006
(866) 387-0457

CONTRACTOR:

Rafferty Fine Grading Inc
57 South Road
Enfield, CT 06082

SURETY:

Nationwide Mutual Insurance Company
1100 Locust Street, Dept 2006
Des Moines, IA 50391-2006

OWNER:

Barnstable County
3195 Main Street
Barnstable, MA 02630

BOND AMOUNT: Five Percent (5%) of total amount bid

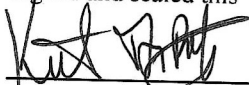
PROJECT: Road construction items and materials IFB#8032

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be a Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 17th day of January, 2024


(Witness)

Rafferty Fine Grading Inc

(Principal)



(Title)

Nationwide Mutual Insurance Company

(Surety)


(Title)

Kenneth P Morotto Jr Attorney-in-Fact


(Witness)



Power of Attorney

KNOW ALL MEN BY THESE PRESENTS THAT:

Nationwide Mutual Insurance Company, an Ohio corporation

hereinafter referred to severally as the "Company" and collectively as "the Companies" does hereby make, constitute and appoint:
AARON STEFFEY; CHRISTOPHER KOLGER; JOSEPH J PERSCHY; KENNETH P MOROTTO JR;

each in their individual capacity, its true and lawful attorney-in-fact, with full power and authority to sign, seal, and execute on its behalf any and all bonds and undertakings, and other obligatory instruments of similar nature, in penalties not exceeding the sum of

FIVE MILLION AND NO/100 DOLLARS (\$5,000,000.00)

and to bind the Company thereby, as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Company; and all acts of said Attorney pursuant to the authority given are hereby ratified and confirmed.

This power of attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the board of directors of the Company:

"RESOLVED, that the president, or any vice president be, and each hereby is, authorized and empowered to appoint attorneys-in-fact of the Company, and to authorize them to execute and deliver on behalf of the Company any and all bonds, forms, applications, memorandums, undertakings, recognizances, transfers, contracts of indemnity, policies, contracts guaranteeing the fidelity of persons holding positions of public or private trust, and other writings obligatory in nature that the business of the Company may require; and to modify or revoke, with or without cause, any such appointment or authority; provided, however, that the authority granted hereby shall in no way limit the authority of other duly authorized agents to sign and countersign any of said documents on behalf of the Company."

"RESOLVED FURTHER, that such attorneys-in-fact shall have full power and authority to execute and deliver any and all such documents and to bind the Company subject to the terms and limitations of the power of attorney issued to them, and to affix the seal of the Company thereto; provided, however, that said seal shall not be necessary for the validity of any such documents."

This power of attorney is signed and sealed under and by the following bylaws duly adopted by the board of directors of the Company.

Execution of Instruments. Any vice president, any assistant secretary or any assistant treasurer shall have the power and authority to sign or attest all approved documents, instruments, contracts, or other papers in connection with the operation of the business of the company in addition to the chairman of the board, the chief executive officer, president, treasurer or secretary; provided, however, the signature of any of them may be printed, engraved, or stamped on any approved document, contract, instrument, or other papers of the Company.

IN WITNESS WHEREOF, the Company has caused this instrument to be sealed and duly attested by the signature of its officer the 20th day of August, 2021.

Antonio C. Albanese, **Vice President** of Nationwide Mutual Insurance Company

ACKNOWLEDGMENT

STATE OF NEW YORK COUNTY OF NEW YORK: ss

On this 20th day of August, 2021, before me came the above-named officer for the Company aforesaid, to me personally known to be the officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, deposes and says, that he is the officer of the Company aforesaid, that the seal affixed hereto is the corporate seal of said Company, and the said corporate seal and his signature were duly affixed and subscribed to said instrument by the authority and direction of said Company.



Stephanie Rubino McArthur
Notary Public, State of New York
No. 02MC6270117
Qualified in New York County
Commission Expires October 19, 2024

Notary Public
My Commission Expires
October 19, 2024

CERTIFICATE

I, Laura B. Guy, Assistant Secretary of the Company, do hereby certify that the foregoing is a full, true and correct copy of the original power of attorney issued by the Company; that the resolution included therein is a true and correct transcript from the minutes of the meetings of the boards of directors and the same has not been revoked or amended in any manner; that said Antonio C. Albanese was on the date of the execution of the foregoing power of attorney the duly elected officer of the Company, and the corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority of said board of directors; and the foregoing power of attorney is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of said Company this 17th day of January, 2024.

Assistant Secretary

BARNSTABLE COUNTY

This agreement, made this 13th day of March 2024 between Barnstable County hereinafter called the County, and Rafferty Fine Grading, Inc. a corporation, partnership, individual organized under the laws of the state of Connecticut and having a usual place of business in 57 South Rd. Enfield, CT 06082 in the county of Hartford hereinafter called the Contractor.

Witnesseth, That the parties to this agreement, each in consideration of the agreements on the part of the other herein contained, do hereby agree, the County Rhonda Rafferty, President (authorized agent of general Contractor) for Rafferty Fine Grading, Inc. (general Contractor) and All heirs, executors, administrators, successors assigns, as follows:

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ARTICLE I - DEFINITIONS OF TERMS

1. County means the County of Barnstable, MA through the County Commissioners.
2. Successful Bidder means the lowest, qualified, responsible, and responsive Bidder to whom the County makes an award.
3. Owner means the following entities/municipalities participating in this contract in Massachusetts: Barnstable, Brewster, Dennis, Eastham, Falmouth, Harwich, Orleans, Sandwich, Wellfleet and Yarmouth.
4. Town means the individual town identified in the "Owner"
5. Designer, Architect, Engineer or any pronoun or phrase in place thereof: N/A Designer(s) shall perform the duties and exercise the rights herein conferred. In the case of death, resignation, inability or refusal of said Designer to act, or the termination of his employment, the County may appoint another person as Designer of which notice shall be given in writing to the Contractor, which person shall perform all the duties and exercise all the rights of the Designer hereunder.
6. Contractor or General Contractor or a pronoun in place of it: the party or parties Contracting to perform the work covered by this Contract or the legal representatives of said party or parties.
7. Superintendent or Construction Supervisor or a pronoun in place of it: the competent, responsible employee regularly employed by the Contractor and designated to be in full time attendance at the project site throughout the prosecution and progress of the work and who shall have complete authority to act for the Contractor.
8. As Directed, As Permitted, As Required, As Determined or words of like effect: the direction, permission, requirement or determination of the Designer. Similarly, approved, acceptable, satisfactory or words of like import shall mean approved by or acceptable or satisfactory to the Designer, except as may be otherwise determined by the Director.
9. Or equal or words of like import: equal in the opinion of the Designer except as may be otherwise determined by the County pursuant to the provisions of G.L. Chapter 30, section 39M.
10. Contract Documents or Contract: the Notice to Contractors, Information to Bidders, Form of General Bid, Contract, General Conditions, Specifications and Plans and all addenda issued during the bidding period, change orders and policies and procedures of the County attached hereto or referred to, all of which constitute one instrument.
11. Mass State Building Code: all applicable rules and regulations to which the County is subject and which are contained in the code authorized by Chapter 802 of the Acts of 1972 including all amendments thereto.
12. Plan(s):drawing(s).

13. Change Order: a written order not requiring the consent of the Contractor, signed by the Awarding Authority or the Director and designated as an approved change order, directing the Contractor to make changes in the work within the general scope of the Contract, or, any written or oral order from the Awarding Authority or the Director which causes any change in the work, provided that the Contractor gives the County written notice stating the date, circumstances, and source of the order and that the Contractor regards the order as a change order.
14. Contract Modification: any written alteration in plans or specifications, period of performance, price, quantity, or any other provisions of the Contract accomplished by mutual action of the parties to the Contract.

Where reference is made in the Contract documents to Publications, Standards or Codes issued by Associations or Societies, the intent shall be to specify the current edition of such publication or standard including revision in effect on the date of the Contract advertisement notwithstanding any reference to a particular date.

ARTICLE 2 – CONTRACT DOCUMENTS, INTENT, AMENDING, AND REUSE

Intent:

- 2.1 The Contract Documents comprise the entire Agreement between the COUNTY and CONTRACTOR concerning the Work. The Contract Documents are complementary: what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.
- 2.2 It is the intent of the Contract Documents to describe a functionally complete Project or Service (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the County, the Towns or CONTRACTOR, or any of their agents or employees from those set forth in the Contract Documents, nor the Notice to Proceed.

ARTICLE 3 CONTRACTOR'S LIABILITY INSURANCE

- 3.1 CONTRACTOR shall purchase and maintain such comprehensive general liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR'S performance and furnishing of the Work and CONTRACTOR'S other obligations under the Contract Documents, whether it is to be performed or furnished by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly

employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

3.1.1 Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts;

3.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR'S employees;

3.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR'S employees;

3.1.4 Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (b) by any other person for any other reason;

3.1.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom;

3.1.6 Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and

3.1.7 Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

The insurance required above shall include the specific coverages and be written for not less than the limits of liability and coverages provided as follows:

1. Workmen's Compensation: In accordance with the Workmen's Compensation Laws that are applicable to the employees engaged in the Work. The limit of Employer's Liability Insurance shall be not less than \$500,000 each accident.
2. Public Liability Insurance for Personal Injury:
 - a. Individual limit of \$1,000,000 each person.
 - b. Total limit of \$ 3,000,000 for each accident.
3. Property Damage Insurance:
 - a. Each claim \$ 1,000,000.
 - b. Aggregate \$ 3,000,000.
4. If the CONTRACTOR sublets any portion of his work, then he shall also provide:
 - a. Contractor's Protective Liability Insurance:
 - (1) Individual limit for personal injury of \$1,000,000.
 - (2) Total limit for personal injury for one accident of \$3,000,000.
 - b. Contractor's Protective Property Damage Insurance with a limit of \$1,000,000/\$3,000,000.

Any Subcontractor under contract with CONTRACTOR to perform Work on the Project shall hold the County, the Towns and agents harmless, and purchase and maintain such comprehensive general liability and other insurance as will provide protection from claims set forth herein.

The County and the Towns shall be specifically named as additional insureds on all required insurance policies of the CONTRACTOR and any Subcontractors.

In addition, CONTRACTOR shall maintain such completed operations insurance for at least one year after final payment and furnish the County with evidence of continuation of such insurance at final payment.

ARTICLE 4 – CONTRACTOR’S RESPONSIBILITIES

Supervision and Superintendence:

4.1 CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.

Labor, Materials and Equipment

4.2 CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without the County or Owner’s written consent.

4.3 All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by the County or a Owner, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

Laws and Regulations

4.4 CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, the County or Owners shall not be responsible for monitoring CONTRACTOR’S compliance with any Laws or Regulations.

Taxes

4.5 State taxes will be excluded from all General and Sub-bids. The Towns shall provide their exemption certificate number(s) to the CONTRACTOR. CONTRACTOR shall pay all taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

Use of Premises

4.6 CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against the County or any Town by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold the County and all Towns harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against the County and all Towns to the extent based on a claim arising out of CONTRACTOR'S performance of the Work.

Safety and Protection

4.7 CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work (examples: OSHA Regulations regarding Excavation safety: 29 CFR Part 1926 and Confined Space Procedures: 29 CFR 1910.146). CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

4.7.1 all employees on the Work and other persons and organizations who may be effected thereby:

4.7.2 all the Work and materials and equipment to be incorporated there-in, whether in storage on or off the site; and

4.7.3 other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable Laws, regulations and Guidelines of any public body (examples: OSHA, DIGSAFE, MHD Work Zone Safety Guidelines) having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all

necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph 3.7.1 or 3.7.2 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any sub-contractor, supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of the County or any Towns or anyone employed or contracted by any of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR). CONTRACTOR'S duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed.

Indemnification

4.8 To the fullest extent permitted by Laws and Regulations CONTRACTOR shall indemnify and hold harmless the County, the Towns and their consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Work.

Separate Contracts

4.9 The Towns have the right to let other contracts in connection with the Work and the CONTRACTOR shall properly cooperate with any such other contractors.

Invoicing

4.10 Each Town shall be solely responsible for payment of invoices due to Contractor for quantities ordered and received by that Town only or for the project awarded.

4.10.1 "As per MGL, Chapter 7, section 22, each political subdivision participating in this bid is solely responsible for any payment due vendor for its share of such purchase. Barnstable County, as lead purchasing agent shall not be liable for payment or for any claim based upon a breach of warranty or defects in the design, manufacture or installation of material, supplies or equipment purchase pursuant to this bid."

4.11 Award Price.

The County or Towns shall pay and the Contractor shall receive as full compensation for everything furnished and done by the Contractor under the Contract, including all work required but not included in the items hereinafter mentioned, and also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements or from any difficulty incurred by or in consequence of the suspension or discontinuance of the work as herein specified, and for well and faithfully completing the work, and the whole thereof, as herein provided, as follows:

ARTICLE 5 – UNIT PRICE WORK

5.1 Initially, the Contract Price will be deemed to include for Unit Price Work an amount equal to the established unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classification of Unit Price Work performed by CONTRACTOR will be made by each Town.

5.2 Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.

5.3 When the accepted quantities of Work vary from the estimated quantities, the CONTRACTOR shall accept as payment in full, so far as contract items are concerned, payment at the original Contract unit prices for the accepted quantities of Work done. No allowance will be made for any increased expenses, loss of expected reimbursement or loss of anticipated profits suffered or claimed by the Contractor, resulting either directly or indirectly from such increased or decreased quantities.

5.4 The CONTRACTOR shall make monthly estimates of the materials complete in place for the amount of Work performed in accordance with the Contract. The estimates will be itemized for review and approval by each Town. Each estimate will show the total value of the Work done to date, the total money due the CONTRACTOR since the previous estimate and the money paid the CONTRACTOR to date. This estimate will be considered approximate only and shall be subject to correction. Five (5%) percent of all payments due the CONTRACTOR for Work done and materials furnished will be withheld until final completion of the Work. The acceptance by the CONTRACTOR of the final payment, including the retainage of five (5%) percent, shall operate as a release to the specific Town of all claims and all liabilities to the CONTRACTOR for all Work done or materials furnished in connection with the Contract. Final payment shall be as provided in G.L. Ch.30, Section 39G. The payment to the CONTRACTOR of said final payment does not, however, release them or their sureties from any obligation under this contract.

5.5 It shall be the responsibility of the CONTRACTOR to inform each Town when the sum of all orders for units of work is within 90% of the total Contract price for that Town. The CONTRACTOR'S total billing cannot exceed the total Contract price without prior written approval by each Town.

5.6 All monies not paid when due hereunder shall bear interest at the maximum rate allowed by law at the place of the Project.

ARTICLE 6 – WARRANTY AND GUARANTEE; TESTS AND INSPECTION; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

Category	Items	Item#	Unit	Town	Quantity	Estimated	Vendor	Unit Price	Second Lowest Vendor	Unit Price
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	Bourne	5000		PJ Keating	\$111.74	Lawrence-Lynch Corp	\$125.00
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	Brewster	5000		MCE Dirtworks, Inc.	\$129.00	Lawrence-Lynch Corp	\$130.00
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	Dennis	3000		MCE Dirtworks, Inc.	\$126.00	Lawrence-Lynch Corp	\$129.70
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	Falmouth	4000		Lawrence-Lynch Corp	\$125.00	MCE Dirtworks, Inc.	\$139.00
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	Harwich	1000		Lawrence-Lynch Corp	\$130.00	MCE Dirtworks, Inc.	\$131.00
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	JBCC	300		Lawrence-Lynch Corp	\$164.00	PJ Keating	\$250.00
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	Orleans	1681		MCE Dirtworks, Inc.	\$127.00	Lawrence-Lynch Corp	\$133.00
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	Sandwich	2500		PJ Keating	\$113.94	Lawrence-Lynch Corp	\$125.00
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	Wellfleet	3000		MCE Dirtworks, Inc.	\$137.00	Lawrence-Lynch Corp	\$140.00
Road Construction	Hot Mix Asphalt Pavement (Machine Placed)	1	TON	Yarmouth	500		MCE Dirtworks, Inc.	\$129.00	Lawrence-Lynch Corp	\$133.00
Road Construction	Hot Mix Asphalt Pavement (Handwork Greater than 40 Tons/	2	TON	Bourne	1000		PJ Keating	\$248.00	Lawrence-Lynch Corp	\$264.00
Road Construction	Hot Mix Asphalt Pavement (Handwork Greater than 40 Tons/	2	TON	Brewster	300		Coastal Paving LLC	\$220.00	Lawrence-Lynch Corp	\$280.00
Road Construction	Hot Mix Asphalt Pavement (Handwork Greater than 40 Tons/	2	TON	Dennis	500		Lawrence-Lynch Corp	\$280.00		
Road Construction	Hot Mix Asphalt Pavement (Handwork Greater than 40 Tons/	2	TON	Falmouth	250		Lawrence-Lynch Corp	\$211.00		
Road Construction	Hot Mix Asphalt Pavement (Handwork Greater than 40 Tons/	2	TON	Harwich	100		Lawrence-Lynch Corp	\$280.00		
Road Construction	Hot Mix Asphalt Pavement (Handwork Greater than 40 Tons/	2	TON	Sandwich	150		Lawrence-Lynch Corp	\$230.50		
Road Construction	Hot Mix Asphalt Pavement (Handwork Greater than 40 Tons/	2	TON	Yarmouth	100		Lawrence-Lynch Corp	\$280.00		
Road Construction	Hot Mix Asphalt Pavement (Handwork Less than 40 Tons/	3	TON	Bourne	1000		Lawrence-Lynch Corp	\$320.00		
Road Construction	Hot Mix Asphalt Pavement (Handwork Less than 40 Tons/	3	TON	Brewster	300		Coastal Paving LLC	\$260.00	Lawrence-Lynch Corp	\$320.00
Road Construction	Hot Mix Asphalt Pavement (Handwork Less than 40 Tons/	3	TON	Dennis	500		Lawrence-Lynch Corp	\$320.00		
Road Construction	Hot Mix Asphalt Pavement (Handwork Less than 40 Tons/	3	TON	Falmouth	200		Lawrence-Lynch Corp	\$230.00		
Road Construction	Hot Mix Asphalt Pavement (Handwork Less than 40 Tons/	3	TON	Harwich	100		Coastal Paving LLC	\$260.00	Lawrence-Lynch Corp	\$300.00
Road Construction	Hot Mix Asphalt Pavement (Handwork Less than 40 Tons/	3	TON	Orleans	80		Lawrence-Lynch Corp	\$285.00		
Road Construction	Hot Mix Asphalt Pavement (Handwork Less than 40 Tons/	3	TON	Wellfleet	200		Lawrence-Lynch Corp	\$330.00		
Road Construction	Hot Mix Asphalt Pavement (Handwork Less than 40 Tons/	3	TON	Yarmouth	120		Lawrence-Lynch Corp	\$320.00		
Road Construction	Hot Mix Asphalt Pavement (Shim)	4	TON	Brewster	2000		MCE Dirtworks, Inc.	\$136.00	Lawrence-Lynch Corp	\$146.00
Road Construction	Hot Mix Asphalt Pavement (Shim)	4	TON	Dennis	3000		MCE Dirtworks, Inc.	\$135.00	Lawrence-Lynch Corp	\$146.00
Road Construction	Hot Mix Asphalt Pavement (Shim)	4	TON	Orleans	50		MCE Dirtworks, Inc.	\$134.00	Lawrence-Lynch Corp	\$146.00
Road Construction	Hot Mix Asphalt Pavement (Shim)	4	TON	Sandwich	1500		MCE Dirtworks, Inc.	\$134.00	Lawrence-Lynch Corp	\$140.00
Road Construction	Pavement Reclamation (Including FG&C)	5	SY	Brewster	3500		murray paving & reclamation inc	\$3.90	Garrity Asphalt Reclaiming	\$5.19
Road Construction	Pavement Reclamation (Including FG&C)	5	SY	Dennis	6000		murray paving & reclamation inc	\$2.82	Garrity Asphalt Reclaiming	\$4.50
Road Construction	Pavement Reclamation (Including FG&C)	5	SY	Falmouth	4000		murray paving & reclamation inc	\$3.45	Garrity Asphalt Reclaiming	\$5.19
Road Construction	Pavement Reclamation (Including FG&C)	5	SY	JBCC	2500		murray paving & reclamation inc	\$3.75	Garrity Asphalt Reclaiming	\$5.75
Road Construction	Pavement Reclamation (Including FG&C and Calcium Chloride)	6	SY	Brewster	3500		murray paving & reclamation inc	\$5.15	All States Construction, Inc.	\$7.00
Road Construction	Pavement Reclamation (Including FG&C and Calcium Chloride)	6	SY	Orleans	5322		murray paving & reclamation inc	\$4.38	All States Construction, Inc.	\$4.75
Road Construction	Pavement Reclamation (Including FG&C and Calcium Chloride)	6	SY	Sandwich	10000		murray paving & reclamation inc	\$3.45	All States Construction, Inc.	\$4.25
Road Construction	Bituminous Concrete Excavation by Cold Planer	7	SY	Bourne	50000		PJ Keating	\$1.92	Rafferty Fine Grading, Inc.	\$2.68
Road Construction	Bituminous Concrete Excavation by Cold Planer	7	SY	Brewster	10000		MCE Dirtworks, Inc.	\$2.95	Lawrence-Lynch Corp	\$3.75
Road Construction	Bituminous Concrete Excavation by Cold Planer	7	SY	Dennis	5000		MCE Dirtworks, Inc.	\$2.95	Lawrence-Lynch Corp	\$3.40
Road Construction	Bituminous Concrete Excavation by Cold Planer	7	SY	Falmouth	10000		Lawrence-Lynch Corp	\$3.30	MCE Dirtworks, Inc.	\$3.50
Road Construction	Bituminous Concrete Excavation by Cold Planer	7	SY	Orleans	4739		Lawrence-Lynch Corp	\$3.30	MCE Dirtworks, Inc.	\$3.50
Road Construction	Bituminous Concrete Excavation by Cold Planer	7	SY	Sandwich	5000		MCE Dirtworks, Inc.	\$3.50	PJ Keating	\$3.79
Road Construction	Bituminous Concrete Excavation by Cold Planer	7	SY	Yarmouth	4000		MCE Dirtworks, Inc.	\$3.50	Lawrence-Lynch Corp.	\$4.27
Road Construction	Cold Planed (Milled) Paving Joints	8	SY	Bourne	5000		Garrity Asphalt Reclaiming	\$50.00		
Road Construction	Cold Planed (Milled) Paving Joints	8	SY	Brewster	500		Garrity Asphalt Reclaiming	\$40.00		
Road Construction	Cold Planed (Milled) Paving Joints	8	SY	Dennis	600		Garrity Asphalt Reclaiming	\$35.00		
Road Construction	Cold Planed (Milled) Paving Joints	8	SY	Falmouth	200		Garrity Asphalt Reclaiming	\$60.00		
Road Construction	Cold Planed (Milled) Paving Joints	8	SY	Orleans	76		Lawrence-Lynch Corp	\$50.00		
Road Construction	Cold Planed (Milled) Paving Joints	8	SY	Sandwich	250		Garrity Asphalt Reclaiming	\$50.00		
Road Construction	Microsurfacing (Two Lifts)	10	SY	Falmouth	30000		Sealcoating, Inc. d/b/a indus	\$6.47		
Road Construction	Asphalt-Rubber Surface Treatment (20% Rubber)	11	SY	Brewster	50000		All States Construction, Inc.	\$6.15		
Road Construction	Asphalt-Rubber Surface Treatment (20% Rubber)	11	SY	Dennis	60000		All States Construction, Inc.	\$6.15		
Road Construction	Asphalt-Rubber Surface Treatment (20% Rubber)	11	SY	Falmouth	15000		All States Construction, Inc.	\$6.15		
Road Construction	Asphalt-Rubber Surface Treatment (20% Rubber)	11	SY	Orleans	27035		All States Construction, Inc.	\$6.15		
Road Construction	Asphalt-Rubber Surface Treatment (20% Rubber)	11	SY	Sandwich	50000		All States Construction, Inc.	\$6.15		
Road Construction	Asphalt-Rubber Surface Treatment (20% Rubber)	11	SY	Yarmouth	15000		All States Construction, Inc.	\$6.15		
Road Construction	Asphalt-Rubber Surface Treatment (10% Rubber)	12	SY	Dennis	60000		All States Construction, Inc.	\$5.05		
Road Construction	Asphalt-Rubber Surface Treatment (10% Rubber)	12	SY	Orleans	13316		All States Construction, Inc.	\$5.05		
Road Construction	Asphalt-Rubber Surface Treatment (10% Rubber)	12	SY	Sandwich	70000		All States Construction, Inc.	\$5.05		
Road Construction	Asphalt-Rubber Surface Treatment (10% Rubber)	12	SY	Yarmouth	180000		All States Construction, Inc.	\$5.05		
Road Construction	Single Stone Seal Surface Treatment	13	SY	Falmouth	30000		All States Construction, Inc.	\$4.05		
Road Construction	Porous Pavement Full Depth Construction	15	SY	Dennis	1500		Lawrence-Lynch Corp	\$165.00		
Road Construction	Porous Pavement Full Depth Construction	15	SY	Yarmouth	500		Lawrence-Lynch Corp	\$165.00		
Road Construction	Porous Pavement Sidewalk Construction	16	SY	Dennis	500		Lawrence-Lynch Corp	\$250.00		
Road Construction	Bituminous Pavement Repair Infra-Red Method	17	SY	Brewster	250		No Bid	No Bid		
Road Construction	Bituminous Pavement Repair Infra-Red Method	17	SY	Dennis	750		No Bid	No Bid		
Road Construction	Bituminous Pavement Repair Infra-Red Method	17	SY	Falmouth	100		No Bid	No Bid		
Road Construction	Bituminous Pavement Repair Infra-Red Method	17	SY	Orleans	100		No Bid	No Bid		
Road Construction	Partial Depth Pavement Patch	18	SY	Bourne	10000		MCE Dirtworks, Inc.	\$55.00	Lawrence-Lynch Corp	\$68.00
Road Construction	Partial Depth Pavement Patch	18	SY	Dennis	600		Lawrence-Lynch Corp	\$58.00	MCE Dirtworks, Inc.	\$60.00
Road Construction	Partial Depth Pavement Patch	18	SY	Harwich	500		MCE Dirtworks, Inc.	\$60.00	Lawrence-Lynch Corp	\$66.00
Road Construction	Partial Depth Pavement Patch	18	SY	JBCC	300		Lawrence-Lynch Corp	\$66.00	MCE Dirtworks, Inc.	\$75.00
Road Construction	Partial Depth Pavement Patch	18	SY	Orleans	12550		Lawrence-Lynch Corp	\$44.00	MCE Dirtworks, Inc.	\$58.00
Road Construction	Partial Depth Pavement Patch	18	SY	Sandwich	500		MCE Dirtworks, Inc.	\$60.00	Lawrence-Lynch Corp	\$68.00
Road Construction	Partial Depth Pavement Patch	18	SY	Yarmouth	1500		Lawrence-Lynch Corp	\$58.00	MCE Dirtworks, Inc.	\$59.00
Road Construction	Miscellaneous Pavement Patch	19	TON	Bourne	1000		Lawrence-Lynch Corp	\$375.00	MCE Dirtworks, Inc.	\$400.00
Road Construction	Miscellaneous Pavement Patch	19	TON	Dennis	200		Lawrence-Lynch Corp	\$315.00	MCE Dirtworks, Inc.	\$400.00
Road Construction	Miscellaneous Pavement Patch	19	TON	Falmouth	175		Lawrence-Lynch Corp	\$369.00		
Road Construction	Miscellaneous Pavement Patch	19	TON	Harwich	100		MCE Dirtworks, Inc.	\$400.00	Lawrence-Lynch Corp	\$420.00
Road Construction	Miscellaneous Pavement Patch	19	TON	JBCC	100		Lawrence-Lynch Corp	\$310.00	MCE Dirtworks, Inc.	\$400.00
Road Construction	Miscellaneous Pavement Patch	19	TON	Sandwich	100		MCE Dirtworks, Inc.	\$400.00	Lawrence-Lynch Corp	\$420.00
Road Construction	Miscellaneous Pavement Patch	19	TON	Yarmouth	200		Lawrence-Lynch Corp	\$315.00	MCE Dirtworks, Inc.	\$400.00
Road Construction	Velocity Spray Injection Pothole Repair	20	DAY	Harwich	10		No Bid	No Bid		
Road Construction	Cape Seal w/Double Stone Seal Surface Treatment	22	SY	Falmouth	30000		Sealcoating, Inc. d/b/a indus	\$12.97		
Road Construction	Textured Synthetic Pavement	23	SY	Brewster	100		No Bid	No Bid		
Road Construction	Textured Synthetic Pavement	23	SY	Dennis	200		No Bid	No Bid		
Road Construction	Textured Synthetic Pavement	23	SY	Sandwich	100		No Bid	No Bid		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Barnstable	2200000		MARKINGS INC.	\$0.09		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Bourne	175000		MARKINGS INC.	\$0.09		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Brewster	600000		MARKINGS INC.	\$0.09		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Dennis	500000		MARKINGS INC.	\$0.09		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Falmouth	850000		MARKINGS INC.	\$0.09		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Harwich	1100000		MARKINGS INC.	\$0.09		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Orleans	374398		MARKINGS INC.	\$0.09		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Sandwich	150000		MARKINGS INC.	\$0.09		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Wellfleet	100000		MARKINGS INC.	\$0.09		
Miscellaneous Public Works	Chlorinated Rubber Paint and Beads for 4" ReflectORIZED	100	LF	Yarmouth	1000000		MARKINGS INC.	\$0.09		

Miscellaneous Public Works	Steel Beam (Weathering) Highway Guardrail-Terminal End	117	EA	Brewster	12	Bartlett Consolidated DE LLC	\$800.00		
Miscellaneous Public Works	Steel Beam (Weathering) Highway Guardrail-Terminal End	117	EA	Dennis	10	Bartlett Consolidated DE LLC	\$800.00		
Miscellaneous Public Works	Steel Beam (Weathering) Highway Guardrail-Terminal End	117	EA	Harwich	10	Bartlett Consolidated DE LLC	\$800.00		
Miscellaneous Public Works	Steel Beam (Weathering) Highway Guardrail-Terminal End	117	EA	Orleans	4	Bartlett Consolidated DE LLC	\$800.00		
Miscellaneous Public Works	Steel Beam (Weathering) Highway Guardrail-Terminal End	117	EA	Sandwich	5	Bartlett Consolidated DE LLC	\$800.00		
Miscellaneous Public Works	Steel Beam (Weathering) Highway Guardrail-Terminal End	117	EA	Wellfleet	10	Bartlett Consolidated DE LLC	\$800.00		
Miscellaneous Public Works	Steel Beam (Weathering) Highway Guardrail-Terminal End	117	EA	Yarmouth	30	Bartlett Consolidated DE LLC	\$800.00		
Miscellaneous Public Works	Steel Beam Highway Guardrail (Single Faced/Wood Posts)	118	LF	Barnstable	500	Bartlett Consolidated DE LLC	\$50.00		
Miscellaneous Public Works	Steel Beam Highway Guardrail (Single Faced/Wood Posts)	118	LF	Falmouth	500	Bartlett Consolidated DE LLC	\$50.00		
Miscellaneous Public Works	Steel Beam Highway Guardrail (Single Faced/Wood Posts)	118	LF	Orleans	20	Bartlett Consolidated DE LLC	\$50.00		
Miscellaneous Public Works	Steel Beam Highway Guardrail (Single Faced/Wood Posts)	118	LF	Sandwich	100	Bartlett Consolidated DE LLC	\$50.00		
Miscellaneous Public Works	Steel-Backed Timber Guardrail	119	LF	Barnstable	300	Bartlett Consolidated DE LLC	\$180.00		
Miscellaneous Public Works	Steel-Backed Timber Guardrail	119	LF	Brewster	250	Bartlett Consolidated DE LLC	\$180.00		
Miscellaneous Public Works	Steel-Backed Timber Guardrail	119	LF	Dennis	200	Bartlett Consolidated DE LLC	\$180.00		
Miscellaneous Public Works	Steel-Backed Timber Guardrail	119	LF	Sandwich	100	Bartlett Consolidated DE LLC	\$180.00		
Miscellaneous Public Works	Wooden Guardrail	120	LF	Barnstable	500	Bartlett Consolidated DE LLC	\$65.00		
Miscellaneous Public Works	Wooden Guardrail	120	LF	Brewster	250	Bartlett Consolidated DE LLC	\$65.00		
Miscellaneous Public Works	Wooden Guardrail	120	LF	Dennis	200	Bartlett Consolidated DE LLC	\$65.00		
Miscellaneous Public Works	Wooden Guardrail	120	LF	Falmouth	500	Bartlett Consolidated DE LLC	\$65.00		
Miscellaneous Public Works	Wooden Guardrail	120	LF	Orleans	275	Bartlett Consolidated DE LLC	\$65.00		
Miscellaneous Public Works	Wooden Guardrail	120	LF	Sandwich	100	Bartlett Consolidated DE LLC	\$65.00		
Miscellaneous Public Works	Wooden Guardrail	120	LF	Yarmouth	1400	Bartlett Consolidated DE LLC	\$65.00		
Miscellaneous Public Works	Granite Curb Type VB-Straight	121	LF	Barnstable	300	Lawrence-Lynch Corp	\$82.00		
Miscellaneous Public Works	Granite Curb Type VB-Straight	121	LF	Brewster	250	Lawrence-Lynch Corp	\$82.00		
Miscellaneous Public Works	Granite Curb Type VB-Straight	121	LF	Dennis	750	Lawrence-Lynch Corp	\$82.00		
Miscellaneous Public Works	Granite Curb Type VB-Straight	121	LF	Falmouth	500	Lawrence-Lynch Corp	\$82.00		
Miscellaneous Public Works	Granite Curb Type VB-Straight	121	LF	Sandwich	300	Lawrence-Lynch Corp	\$82.00		
Miscellaneous Public Works	Granite Curb Type VA4-Straight	122	LF	Barnstable	300	Lawrence-Lynch Corp	\$82.00		
Miscellaneous Public Works	Granite Curb Type VA4-Straight	122	LF	Sandwich	600	Lawrence-Lynch Corp	\$82.00		
Miscellaneous Public Works	Pave Shield Pavement Sealing (1500 Square Yards or Gre	123	SY	Barnstable	5000	Coastal Paving LLC	\$1.80		
Miscellaneous Public Works	Pave Shield Pavement Sealing (1500 Square Yards or Gre	123	SY	Brewster	12000	Coastal Paving LLC	\$1.80		
Miscellaneous Public Works	Pave Shield Pavement Sealing (1500 Square Yards or Gre	123	SY	Dennis	6000	Coastal Paving LLC	\$1.80		
Miscellaneous Public Works	Pave Shield Pavement Sealing (1500 Square Yards or Gre	123	SY	Sandwich	5000	Coastal Paving LLC	\$1.80		
Miscellaneous Public Works	Pave Shield Pavement Sealing (1500 Square Yards or Gre	123	SY	Yarmouth	1500	Coastal Paving LLC	\$4.25		
Miscellaneous Public Works	Pave Shield Pavement Sealing (Under 1500 Square Yards)	124	SY	Barnstable	1500	Sealcoating, Inc. d/b/a indus	\$5.95		
Miscellaneous Public Works	Pave Shield Pavement Sealing (Under 1500 Square Yards)	124	SY	Dennis	1000	Coastal Paving LLC	\$4.35		
Miscellaneous Public Works	Pave Shield Pavement Sealing (Under 1500 Square Yards)	124	SY	JBCC	500	Coastal Paving LLC	\$4.25		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Barnstable	15000	Sealcoating, Inc. d/b/a indus	\$13.07		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Bourne	4500	Sealcoating, Inc. d/b/a indus	\$13.07		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Brewster	5000	Sealcoating, Inc. d/b/a indus	\$13.61		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Dennis	10000	Sealcoating, Inc. d/b/a indus	\$13.61		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Falmouth	200	Sealcoating, Inc. d/b/a indus	\$13.07		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Harwich	5000	Sealcoating, Inc. d/b/a indus	\$13.61		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Orleans	2892	Sealcoating, Inc. d/b/a indus	\$13.62		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Sandwich	7000	Sealcoating, Inc. d/b/a indus	\$13.07		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Wellfleet	3000	Sealcoating, Inc. d/b/a indus	\$13.72		
Miscellaneous Public Works	Modified Asphalt-Fiber Crackfiller	125	GAL	Yarmouth	5000	Sealcoating, Inc. d/b/a indus	\$13.61		
Miscellaneous Public Works	Rubber Crackfiller	126	GAL	Barnstable	15000	Coastal Paving LLC	\$17.75		
Miscellaneous Public Works	Rubber Crackfiller	126	GAL	Bourne	5000	Sealcoating, Inc. d/b/a indus	\$22.85		
Miscellaneous Public Works	Rubber Crackfiller	126	GAL	Brewster	5000	Sealcoating, Inc. d/b/a indus	\$23.70		
Miscellaneous Public Works	Rubber Crackfiller	126	GAL	Dennis	1000	Sealcoating, Inc. d/b/a indus	\$23.70		
Miscellaneous Public Works	Rubber Crackfiller	126	GAL	Harwich	500	Sealcoating, Inc. d/b/a indus	\$23.70		
Miscellaneous Public Works	Rubber Crackfiller	126	GAL	JBCC	250	Sealcoating, Inc. d/b/a indus	\$38.29		
Miscellaneous Public Works	Rubber Crackfiller	126	GAL	Sandwich	1000	Sealcoating, Inc. d/b/a indus	\$22.85		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	Barnstable	750	Aggregate Industries	\$96.00		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	Brewster	500	Aggregate Industries	\$96.00		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	Dennis	500	Aggregate Industries	\$96.00		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	Falmouth	500	Lawrence-Lynch Corp	\$89.00		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	Harwich	200	Aggregate Industries	\$96.00		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	JBCC	100	Lawrence-Lynch Corp	\$89.00		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	Orleans	100	Aggregate Industries	\$96.00		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	Sandwich	1000	Aggregate Industries	\$96.00		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	Wellfleet	250	Aggregate Industries	\$96.00		
Roadway Materials	Hot Mix Asphalt Pavement (Loaded on Town Trucks)	200	TON	Yarmouth	500	Aggregate Industries	\$96.00		
Roadway Materials	Sand Borrow	201	TON	Barnstable	500	P.A. Landers, Inc.	\$25.50		
Roadway Materials	Sand Borrow	201	TON	Brewster	2000	P.A. Landers, Inc.	\$26.75		
Roadway Materials	Sand Borrow	201	TON	Dennis	200	P.A. Landers, Inc.	\$26.00		
Roadway Materials	Sand Borrow	201	TON	Falmouth	300	P.A. Landers, Inc.	\$24.50		
Roadway Materials	Sand Borrow	201	TON	Orleans	100	P.A. Landers, Inc.	\$27.75		
Roadway Materials	Sand Borrow	201	TON	Sandwich	200	P.A. Landers, Inc.	\$23.50		
Roadway Materials	Sand Borrow	201	TON	Wellfleet	500	P.A. Landers, Inc.	\$28.50		
Roadway Materials	Loam Borrow	202	TON	Barnstable	500	Robert Childs Inc.	\$20.00		
Roadway Materials	Loam Borrow	202	TON	Brewster	500	Robert Childs Inc.	\$19.00		
Roadway Materials	Loam Borrow	202	TON	Dennis	500	Robert Childs Inc.	\$19.00		
Roadway Materials	Loam Borrow	202	TON	Falmouth	200	Robert B Our Co Inc	\$24.50		
Roadway Materials	Loam Borrow	202	TON	Orleans	100	Robert Childs Inc.	\$20.00		
Roadway Materials	Loam Borrow	202	TON	Sandwich	200	Robert Childs Inc.	\$20.00		
Roadway Materials	Loam Borrow	202	TON	Wellfleet	100	Robert B Our Co Inc	\$24.50		
Roadway Materials	1-1/2" Crushed Stone (Double Washed)	203	TON	Barnstable	100	Cape Cod Aggregates Corp.	\$33.50		
Roadway Materials	1-1/2" Crushed Stone (Double Washed)	203	TON	Bourne	1000	Robert Childs Inc.	\$30.75		
Roadway Materials	1-1/2" Crushed Stone (Double Washed)	203	TON	Brewster	2000	P.A. Landers, Inc.	\$34.75		
Roadway Materials	1-1/2" Crushed Stone (Double Washed)	203	TON	Dennis	500	P.A. Landers, Inc.	\$34.50		
Roadway Materials	1-1/2" Crushed Stone (Double Washed)	203	TON	Falmouth	1500	Cape Cod Aggregates Corp.	\$32.25		
Roadway Materials	1-1/2" Crushed Stone (Double Washed)	203	TON	Orleans	50	P.A. Landers, Inc.	\$35.75		
Roadway Materials	1-1/2" Crushed Stone (Double Washed)	203	TON	Sandwich	200	Cape Cod Aggregates Corp.	\$31.00		
Roadway Materials	1-1/2" Crushed Stone (Double Washed)	203	TON	Wellfleet	100	P.A. Landers, Inc.	\$37.00		
Roadway Materials	1-1/2" Crushed Stone (Double Washed)	203	TON	Yarmouth	500	P.A. Landers, Inc.	\$34.25		
Roadway Materials	3/4" Crushed Stone (Double Washed)	204	TON	Barnstable	50	P.A. Landers, Inc.	\$33.75		
Roadway Materials	3/4" Crushed Stone (Double Washed)	204	TON	Bourne	1000	P.A. Landers, Inc.	\$32.75		
Roadway Materials	3/4" Crushed Stone (Double Washed)	204	TON	Brewster	250	P.A. Landers, Inc.	\$34.75		
Roadway Materials	3/4" Crushed Stone (Double Washed)	204	TON	Dennis	500	P.A. Landers, Inc.	\$34.50		
Roadway Materials	3/4" Crushed Stone (Double Washed)	204	TON	Orleans	50	P.A. Landers, Inc.	\$35.75		
Roadway Materials	3/4" Crushed Stone (Double Washed)	204	TON	Sandwich	200	Robert Childs Inc.	\$29.00		
Roadway Materials	3/4" Crushed Stone (Double Washed)	204	TON	Wellfleet	100	P.A. Landers, Inc.	\$37.00		
Roadway Materials	3/8" Peastone (Double Washed)	205	TON	Barnstable	50	P.A. Landers, Inc.	\$34.75		
Roadway Materials	3/8" Peastone (Double Washed)	205	TON	Bourne	500	P.A. Landers, Inc.	\$33.75		
Roadway Materials	3/8" Peastone (Double Washed)	205	TON	Brewster	250	P.A. Landers, Inc.	\$35.75		
Roadway Materials	3/8" Peastone (Double Washed)	205	TON	Dennis	200	P.A. Landers, Inc.	\$34.75		

Roadway Materials	3/8" Peastone (Double Washed)	205	TON	Orleans	50	P.A. Landers, Inc.	\$36.50		
Roadway Materials	3/8" Peastone (Double Washed)	205	TON	Sandwich	200	P.A. Landers, Inc.	\$32.75		
Roadway Materials	3/4" Dense Graded Crushed Stone	206	TON	Barnstable	500	Robert Childs Inc.	\$29.00		
Roadway Materials	3/4" Dense Graded Crushed Stone	206	TON	Brewster	500	P.A. Landers, Inc.	\$33.50		
Roadway Materials	3/4" Dense Graded Crushed Stone	206	TON	Dennis	1500	P.A. Landers, Inc.	\$33.00		
Roadway Materials	3/4" Dense Graded Crushed Stone	206	TON	Falmouth	2000	Cape Cod Aggregates Corp.	\$28.25		
Roadway Materials	3/4" Dense Graded Crushed Stone	206	TON	JBCC	200	Cape Cod Aggregates Corp.	\$30.00		
Roadway Materials	3/4" Dense Graded Crushed Stone	206	TON	Orleans	250	Cape Cod Aggregates Corp.	\$31.00		
Roadway Materials	3/4" Dense Graded Crushed Stone	206	TON	Sandwich	200	Cape Cod Aggregates Corp.	\$27.00		
Roadway Materials	3/4" Dense Graded Crushed Stone	206	TON	Wellfleet	100	P.A. Landers, Inc.	\$35.50		
Roadway Materials	3/4" Dense Graded Crushed Stone	206	TON	Yarmouth	1500	Robert Childs Inc.	\$29.00		
Roadway Materials	Recycled Asphalt	207	TON	Brewster	500	Robert Childs Inc.	\$18.00		
Roadway Materials	Recycled Asphalt	207	TON	Dennis	1500	Robert Childs Inc.	\$16.00		
Roadway Materials	Recycled Asphalt	207	TON	Orleans	100	Robert Childs Inc.	\$18.00		
Roadway Materials	Recycled Asphalt	207	TON	Sandwich	200	Robert Childs Inc.	\$18.00		
Roadway Materials	Recycled Asphalt	207	TON	Wellfleet	500	Robert Childs Inc.	\$23.00		
Roadway Materials	4'x4' Precast Leaching Galley	208	EA	Barnstable	10	Acme Shorey Precast	\$435.00		
Roadway Materials	4'x4' Precast Leaching Galley	208	EA	Brewster	50	Acme Shorey Precast	\$435.00		
Roadway Materials	4'x4' Precast Leaching Galley	208	EA	Dennis	20	Acme Shorey Precast	\$435.00		
Roadway Materials	4'x4' Precast Leaching Galley	208	EA	Sandwich	8	Acme Shorey Precast	\$435.00		
Roadway Materials	4'x4' Precast Leaching Galley	208	EA	Wellfleet	10	Acme Shorey Precast	\$435.00		
Roadway Materials	1000 Gallon Precast Catch Basin	209	EA	Barnstable	10	Acme Shorey Precast	\$1,256.00		
Roadway Materials	1000 Gallon Precast Catch Basin	209	EA	Bourne	10	Acme Shorey Precast	\$1,256.00		
Roadway Materials	1000 Gallon Precast Catch Basin	209	EA	Brewster	25	Acme Shorey Precast	\$1,256.00		
Roadway Materials	1000 Gallon Precast Catch Basin	209	EA	Dennis	5	Acme Shorey Precast	\$1,256.00		
Roadway Materials	1000 Gallon Precast Catch Basin	209	EA	Falmouth	45	Acme Shorey Precast	\$1,256.00		
Roadway Materials	1000 Gallon Precast Catch Basin	209	EA	Sandwich	5	Acme Shorey Precast	\$1,256.00		
Roadway Materials	1000 Gallon Precast Catch Basin	209	EA	Wellfleet	5	Acme Shorey Precast	\$1,256.00		
Roadway Materials	1000 Gallon Precast Leach Pit	210	EA	Barnstable	10	Acme Shorey Precast	\$928.00		
Roadway Materials	1000 Gallon Precast Leach Pit	210	EA	Bourne	10	Acme Shorey Precast	\$928.00		
Roadway Materials	1000 Gallon Precast Leach Pit	210	EA	Brewster	15	Acme Shorey Precast	\$928.00		
Roadway Materials	1000 Gallon Precast Leach Pit	210	EA	Dennis	10	Acme Shorey Precast	\$928.00		
Roadway Materials	1000 Gallon Precast Leach Pit	210	EA	Falmouth	50	Acme Shorey Precast	\$928.00		
Roadway Materials	1000 Gallon Precast Leach Pit	210	EA	Sandwich	5	Acme Shorey Precast	\$928.00		
Roadway Materials	1000 Gallon Precast Leach Pit	210	EA	Wellfleet	5	Acme Shorey Precast	\$928.00		
Roadway Materials	1000 Gallon Precast Leach Pit	210	EA	Yarmouth	5	Acme Shorey Precast	\$928.00		
Roadway Materials	4' Diameter Precast Catch Basin w/Offset Top	211	EA	Barnstable	5	Acme Shorey Precast	\$685.00		
Roadway Materials	4' Diameter Precast Catch Basin w/Offset Top	211	EA	Bourne	5	Acme Shorey Precast	\$685.00		
Roadway Materials	4' Diameter Precast Catch Basin w/Offset Top	211	EA	Brewster	15	Acme Shorey Precast	\$685.00		
Roadway Materials	4' Diameter Precast Catch Basin w/Offset Top	211	EA	Dennis	10	Acme Shorey Precast	\$685.00		
Roadway Materials	4' Diameter Precast Catch Basin w/Offset Top	211	EA	Falmouth	20	Acme Shorey Precast	\$685.00		
Roadway Materials	4' Diameter Precast Catch Basin w/Offset Top	211	EA	Sandwich	5	Acme Shorey Precast	\$685.00		
Roadway Materials	4' Diameter Precast Catch Basin w/Offset Top	211	EA	Wellfleet	4	Acme Shorey Precast	\$685.00		
Roadway Materials	4' Diameter Precast Catch Basin w/Offset Top	211	EA	Yarmouth	5	Acme Shorey Precast	\$685.00		
Roadway Materials	Precast Gutter Inlet	212	EA	Barnstable	5	Acme Shorey Precast	\$300.00		
Roadway Materials	Precast Gutter Inlet	212	EA	Brewster	10	Acme Shorey Precast	\$3.00		
Roadway Materials	Precast Gutter Inlet	212	EA	Dennis	10	Acme Shorey Precast	\$300.00		
Roadway Materials	Precast Gutter Inlet	212	EA	Falmouth	25	Acme Shorey Precast	\$300.00		
Roadway Materials	Precast Gutter Inlet	212	EA	Sandwich	5	Acme Shorey Precast	\$300.00		
Roadway Materials	Precast Gutter Inlet	212	EA	Wellfleet	6	Acme Shorey Precast	\$300.00		
Roadway Materials	8" Frame and Cover w/1 inch vent hole	213	EA	Brewster	24	Cape Cod Winwater	\$697.67		
Roadway Materials	8" Frame and Cover w/1 inch vent hole	213	EA	Dennis	5	Cape Cod Winwater	\$697.67		
Roadway Materials	8" Frame and Cover w/1 inch vent hole	213	EA	Falmouth	50	Cape Cod Winwater	\$697.67		
Roadway Materials	8" Frame and Cover w/1 inch vent hole	213	EA	Sandwich	20	Cape Cod Winwater	\$697.67		
Roadway Materials	8" Frame and Cover w/1 inch vent hole	213	EA	Wellfleet	12	Cape Cod Winwater	\$697.67		
Roadway Materials	8" Frame and Grate Municipal Standard	214	EA	Barnstable	15	Cape Cod Winwater	\$636.55		
Roadway Materials	8" Frame and Grate Municipal Standard	214	EA	Brewster	24	Cape Cod Winwater	\$636.55		
Roadway Materials	8" Frame and Grate Municipal Standard	214	EA	Dennis	10	Cape Cod Winwater	\$636.55		
Roadway Materials	8" Frame and Grate Municipal Standard	214	EA	Falmouth	50	Cape Cod Winwater	\$636.55		
Roadway Materials	8" Frame and Grate Municipal Standard	214	EA	Sandwich	20	Cape Cod Winwater	\$636.55		
Roadway Materials	8" Frame and Grate Municipal Standard	214	EA	Wellfleet	12	Cape Cod Winwater	\$636.55		
Roadway Materials	12" Hood	215	EA	Brewster	36	Cape Cod Winwater	\$319.75		
Roadway Materials	12" Hood	215	EA	Dennis	10	Cape Cod Winwater	\$319.75		
Roadway Materials	12" Hood	215	EA	Falmouth	25	Cape Cod Winwater	\$319.75		
Roadway Materials	12" Hood	215	EA	Sandwich	10	Cape Cod Winwater	\$319.75		
Roadway Materials	12" Hood	215	EA	Wellfleet	12	Cape Cod Winwater	\$319.75		
Roadway Materials	12" Reinforced Concrete Pipe	216	EA	Brewster	6	No Bid	No Bid		
Roadway Materials	12" Reinforced Concrete Pipe	216	EA	Dennis	100	No Bid	No Bid		
Roadway Materials	12" Reinforced Concrete Pipe	216	LF	Sandwich	100	No Bid	No Bid		
Roadway Materials	12" Corrugated Plastic (Polyethylene) Pipe	217	LF	Barnstable	100	Cape Cod Winwater	\$13.82		
Roadway Materials	12" Corrugated Plastic (Polyethylene) Pipe	217	LF	Brewster	200	Cape Cod Winwater	\$13.82		
Roadway Materials	12" Corrugated Plastic (Polyethylene) Pipe	217	LF	Dennis	500	Cape Cod Winwater	\$13.82		
Roadway Materials	12" Corrugated Plastic (Polyethylene) Pipe	217	LF	Falmouth	250	Cape Cod Winwater	\$13.82		
Roadway Materials	12" Corrugated Plastic (Polyethylene) Pipe	217	LF	Orleans	300	Cape Cod Winwater	\$13.82		
Roadway Materials	12" Corrugated Plastic (Polyethylene) Pipe	217	LF	Sandwich	200	Cape Cod Winwater	\$13.82		
Roadway Materials	12" Corrugated Plastic (Polyethylene) Pipe	217	LF	Wellfleet	500	Cape Cod Winwater	\$13.82		
Roadway Materials	Riprap	218	CY	Barnstable	500	Robert Childs Inc.	\$29.50		
Roadway Materials	Riprap	218	CY	Bourne	100	Robert Childs Inc.	\$24.00		
Roadway Materials	Riprap	218	CY	Brewster	50	Robert Childs Inc.	\$32.00		
Roadway Materials	Riprap	218	CY	Dennis	200	Robert Childs Inc.	\$31.00		
Roadway Materials	Riprap	218	CY	Falmouth	100	No Bid	No Bid		
Roadway Materials	Riprap	218	CY	JBCC	100	No Bid	No Bid		
Roadway Materials	Riprap	218	CY	Orleans	100	Robert Childs Inc.	\$34.00		
Roadway Materials	Riprap	218	CY	Sandwich	100	Robert Childs Inc.	\$31.00		
Roadway Materials	Riprap	218	CY	Wellfleet	50	Robert Childs Inc.	\$41.00		
Miscellaneous Public Works	Pavement Marking Removal for Items 101, 102, 104 & 10	107A	SF	Barnstable	10000	No Bid	No Bid		
Miscellaneous Public Works	Pavement Marking Removal for Items 101, 102, 104 & 10	107A	SF	Brewster	500	No Bid	No Bid		
Miscellaneous Public Works	Pavement Marking Removal for Items 101, 102, 104 & 10	107A	SF	Dennis	500	No Bid	No Bid		
Miscellaneous Public Works	Pavement Marking Removal for Items 101, 102, 104 & 10	107A	SF	Falmouth	200	No Bid	No Bid		
Miscellaneous Public Works	Pavement Marking Removal for Items 101, 102, 104 & 10	107A	SF	Orleans	500	No Bid	No Bid		
Miscellaneous Public Works	Pavement Marking Removal for Items 101, 102, 104 & 10	107A	SF	Sandwich	500	No Bid	No Bid		
Miscellaneous Public Works	Dranage Pipe Cleaning	108A	DAY	Brewster	2	No Bid	No Bid		

Warranty and Guarantee

6.1 CONTRACTOR warrants and guarantees to the County and the Towns that all Work will be in accordance with the Contract Documents and will not be DEFECTIVE. Prompt notice of all defects shall be given to CONTRACTOR. All DEFECTIVE Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.

Access to Work

6.2 The County's or Town's representatives, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

Tests and Inspections

6.3 CONTRACTOR shall give each Town timely notice of readiness of the Work for all required inspections, tests or approvals. CONTRACTOR shall furnish written information to each Town stating the original sources of all materials manufactured away from the actual site of the Work. In order to insure a proper time sequence for required inspection and approval, this information shall be furnished at least two weeks in advance of the incorporation in the Work of any such materials.

6.4 If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of a specific Town, it must, if requested by that Town, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given that Town timely notice of CONTRACTOR'S intention to cover the same and that Town has not acted with reasonable promptness in response to such notice.

6.5 Neither observations by the County or a Town, nor inspection, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR'S obligations to perform the Work in accordance with the Contract Documents.

Two Year Correction Period

6.6 If within two (2) years after the date of Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be DEFECTIVE, CONTRACTOR shall promptly, without cost to the Town and in accordance with Town's written instructions, either correct such DEFECTIVE Work, or, if it has been rejected by the Town, remove it from the site and replace it with NONDEFECTIVE Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the Town may have the DEFECTIVE Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous

service before Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

ARTICLE 7 – PAYMENT BONDS

7.1 CONTRACTOR shall furnish a Labor and Materials Bonds in an amount of 50% of the Contract Price as security for the faithful payment of all CONTRACTOR'S obligations under the Contract Documents. These Bonds shall remain in effect at least until two (2) years after the date when final payment becomes due, except as otherwise provided by Law or Regulation or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the forms prescribed by Law or Regulation or by the Contract Documents and be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

7.2 If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 6.1, CONTRACTOR shall within five (5) days thereafter substitute another Bond and Surety, both of which must be acceptable to the County and the Towns.

ARTICLE 8 – EFFECTIVE DATE

The Effective Date of the Agreement shall be the date that the County determines that the Contract is complete, signs the Agreement and forwards a Notice to Proceed to CONTRACTOR.

ARTICLE 9 - CHANGES IN THE WORK

9.1 The County or any Town, without invalidating the Contract may order Changes in the Work consisting of additions, deletions, or modifications, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by written Change Order signed by the County, Town or the Engineer as their duly authorized agent.

9.2 The Contract Sum and the Contract Time may be changed only by Change Order.

9.3 The cost or credit to the Town from a Change in the Work shall be determined by mutual agreement.

ARTICLE 10 - WAGE RATES

10.1 Full compliance with applicable federal, state and local wage laws is required on all Work done for any Town.

10.2 The County and Towns shall not be held liable should the CONTRACTOR fail to compensate any person(s) in accordance with the prevailing (minimum) wage rates included herein. The CONTRACTOR claims full responsibility to compensate the person(s) associated with the project accordingly and will assume any liability on behalf of the County and Towns, should a person(s) associated with the project file a claim pursuant to MGL Chapter 149.

10.3 The "work classifications" provided by the CONTRACTOR on the required "Weekly Payroll Report Form" shall exactly match the classifications provided in the "Minimum Wage Rates". Should the CONTRACTOR use an unlisted classification, it shall be the CONTRACTOR's responsibility to contact the Department of Labor and Industries in order to determine a matching classification or obtain minimum wage rate for the new classification.

ARTICLE 11 - ENGINEER

11.1 The Engineer (as designated by each Town) will provide general administration of the Contract and will be the Town's representative during the construction period.

11.2 The Engineer shall at all times have access to the Work wherever it is in preparation and progress.

11.3 The Engineer will make periodic visits to the site to become generally familiar with the progress and quality of the Work in accordance with the Contract Documents. On the basis of on-site observations by the Engineer, he will keep the Town informed of the progress of the Work, and will endeavor to guard the Town against defects and deficiencies in the Work of the CONTRACTOR. The Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Engineer will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the CONTRACTOR'S failure to carry out the Work in accordance with the Contract Documents.

11.4 Based on such observations and the CONTRACTOR'S Application for Payment, the Engineer will determine the amounts owed to the CONTRACTOR.

11.5 The Engineer will be, in the first instance, the interpreter of the requirements of the Contract Documents.

11.6 The Engineer will have authority to reject Work which does not conform to the Contract Documents.

ARTICLE 12 - TERMINATION OF CONTRACT

The County and the Towns reserve the right to terminate this Contract or Services whenever it deems that the CONTRACTOR is in violation of laws, regulations and/or provisions of this Contract. Termination of a Contract or Services by any Town shall not invalidate or alter the terms of a similar Contract or Services with any other Town.

ARTICLE 13 – MISCELLANEOUS

13.1 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically, but without limitation, moneys that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

13.2 The County and CONTRACTOR each binds himself, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

13.3 This CONTRACT shall be deemed to include all terms and requirements imposed by laws related to the performance of the Work on the Project or Services.

13.4 This is not an exclusive contract to provide services or materials to the County and Towns. The County and Towns reserve the right to contract for similar services or materials.

PREVAILING WAGES



MAURA HEALEY
Governor

KIM DRISCOLL
Lt. Governor

**THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS**

Prevailing Wage Rates

**As determined by the Director under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H**

LAUREN JONES
Secretary

MICHAEL FLANAGAN
Director

Awarding Authority: Barnstable County

Contract Number: **City/Town:** BARNSTABLE

Description of Work: Barnstable County on behalf of the Towns in the County requests bids from qualified contractors for Road Construction Items and Materials

Job Location: varies

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- **The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor.** For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The annual update requirement is not applicable to 27F "rental of equipment" contracts. **The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.**
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the "Wage Request Number" on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2023	\$38.95	\$14.57	\$18.67	\$0.00	\$72.19
	01/01/2024	\$38.95	\$15.07	\$18.67	\$0.00	\$72.69
	06/01/2024	\$39.95	\$15.07	\$18.67	\$0.00	\$73.69
	12/01/2024	\$39.95	\$15.07	\$20.17	\$0.00	\$75.19
	01/01/2025	\$39.95	\$15.57	\$20.17	\$0.00	\$75.69
	06/01/2025	\$40.95	\$15.57	\$20.17	\$0.00	\$76.69
	12/01/2025	\$40.95	\$15.57	\$21.78	\$0.00	\$78.30
	01/01/2026	\$40.95	\$16.17	\$21.78	\$0.00	\$78.90
	06/01/2026	\$41.95	\$16.17	\$21.78	\$0.00	\$79.90
	12/01/2026	\$41.95	\$16.17	\$23.52	\$0.00	\$81.64
	01/01/2027	\$41.95	\$16.77	\$23.52	\$0.00	\$82.24
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2023	\$39.02	\$14.57	\$18.67	\$0.00	\$72.26
	01/01/2024	\$39.02	\$15.07	\$18.67	\$0.00	\$72.76
	06/01/2024	\$40.02	\$15.07	\$18.67	\$0.00	\$73.76
	12/01/2024	\$40.02	\$15.07	\$20.17	\$0.00	\$75.26
	01/01/2025	\$40.02	\$15.57	\$20.17	\$0.00	\$75.76
	06/01/2025	\$41.02	\$15.57	\$20.17	\$0.00	\$76.76
	12/01/2025	\$41.02	\$15.57	\$21.78	\$0.00	\$78.37
	01/01/2026	\$41.02	\$16.17	\$21.78	\$0.00	\$78.97
	06/01/2026	\$42.02	\$16.17	\$21.78	\$0.00	\$79.97
	12/01/2026	\$42.02	\$16.17	\$23.52	\$0.00	\$81.71
	01/01/2027	\$42.02	\$16.77	\$23.52	\$0.00	\$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2023	\$39.14	\$14.57	\$18.67	\$0.00	\$72.38
	01/01/2024	\$39.14	\$15.07	\$18.67	\$0.00	\$72.88
	06/01/2024	\$40.14	\$15.07	\$18.67	\$0.00	\$73.88
	12/01/2024	\$40.14	\$15.07	\$20.17	\$0.00	\$75.38
	01/01/2025	\$40.14	\$15.57	\$20.17	\$0.00	\$75.88
	06/01/2025	\$41.14	\$15.57	\$20.17	\$0.00	\$76.88
	12/01/2025	\$41.14	\$15.57	\$21.78	\$0.00	\$78.49
	01/01/2026	\$41.14	\$16.17	\$21.78	\$0.00	\$79.09
	06/01/2026	\$42.14	\$16.17	\$21.78	\$0.00	\$80.09
	12/01/2026	\$42.14	\$16.17	\$23.52	\$0.00	\$81.83
	01/01/2027	\$42.14	\$16.77	\$23.52	\$0.00	\$82.43
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
	06/01/2024	\$39.94	\$9.65	\$17.14	\$0.00	\$66.73
	12/01/2024	\$41.27	\$9.65	\$17.14	\$0.00	\$68.06
	06/01/2025	\$42.66	\$9.65	\$17.14	\$0.00	\$69.45
	12/01/2025	\$44.04	\$9.65	\$17.14	\$0.00	\$70.83
	06/01/2026	\$45.48	\$9.65	\$17.14	\$0.00	\$72.27
	12/01/2026	\$46.92	\$9.65	\$17.14	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASBESTOS WORKER (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (SOUTHERN MASS)</i>	12/01/2023	\$40.80	\$14.50	\$11.05	\$0.00	\$66.35
	06/01/2024	\$41.80	\$14.50	\$11.05	\$0.00	\$67.35
	12/01/2024	\$42.80	\$14.50	\$11.05	\$0.00	\$68.35
	06/01/2025	\$43.80	\$14.50	\$11.05	\$0.00	\$69.35
	12/01/2025	\$44.80	\$14.50	\$11.05	\$0.00	\$70.35
ASPHALT RAKER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
	06/01/2024	\$39.94	\$9.65	\$17.14	\$0.00	\$66.73
	12/01/2024	\$41.27	\$9.65	\$17.14	\$0.00	\$68.06
	06/01/2025	\$42.66	\$9.65	\$17.14	\$0.00	\$69.45
	12/01/2025	\$44.04	\$9.65	\$17.14	\$0.00	\$70.83
	06/01/2026	\$45.48	\$9.65	\$17.14	\$0.00	\$72.27
	12/01/2026	\$46.92	\$9.65	\$17.14	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2023	\$47.37	\$7.07	\$20.31	\$0.00	\$74.75
	01/01/2024	\$48.12	\$7.07	\$20.60	\$0.00	\$75.79

Apprentice - *BOILERMAKER - Local 29*

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$30.79	\$7.07	\$13.22	\$0.00	\$51.08
2	65	\$30.79	\$7.07	\$13.22	\$0.00	\$51.08
3	70	\$33.16	\$7.07	\$14.23	\$0.00	\$54.46
4	75	\$35.53	\$7.07	\$15.24	\$0.00	\$57.84
5	80	\$37.90	\$7.07	\$16.25	\$0.00	\$61.22
6	85	\$40.26	\$7.07	\$17.28	\$0.00	\$64.61
7	90	\$42.63	\$7.07	\$18.28	\$0.00	\$67.98
8	95	\$45.00	\$7.07	\$19.32	\$0.00	\$71.39

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57
2	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57
3	70	\$33.68	\$7.07	\$14.23	\$0.00	\$54.98
4	75	\$36.09	\$7.07	\$15.24	\$0.00	\$58.40
5	80	\$38.50	\$7.07	\$16.25	\$0.00	\$61.82
6	85	\$40.90	\$7.07	\$17.28	\$0.00	\$65.25
7	90	\$43.31	\$7.07	\$18.28	\$0.00	\$68.66
8	95	\$45.71	\$7.07	\$19.32	\$0.00	\$72.10

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) <i>BRICKLAYERS LOCAL 3 (NEW BEDFORD)</i>	08/01/2023	\$62.40	\$11.49	\$22.34	\$0.00	\$96.23
	02/01/2024	\$63.65	\$11.49	\$22.34	\$0.00	\$97.48
	08/01/2024	\$65.75	\$11.49	\$22.34	\$0.00	\$99.58
	02/01/2025	\$67.05	\$11.49	\$22.34	\$0.00	\$100.88
	08/01/2025	\$69.20	\$11.49	\$22.34	\$0.00	\$103.03
	02/01/2026	\$70.55	\$11.49	\$22.34	\$0.00	\$104.38
	08/01/2026	\$72.75	\$11.49	\$22.34	\$0.00	\$106.58
	02/01/2027	\$74.15	\$11.49	\$22.34	\$0.00	\$107.98

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 New Bedford						
Effective Date - 08/01/2023						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.20	\$11.49	\$22.34	\$0.00	\$65.03
2	60	\$37.44	\$11.49	\$22.34	\$0.00	\$71.27
3	70	\$43.68	\$11.49	\$22.34	\$0.00	\$77.51
4	80	\$49.92	\$11.49	\$22.34	\$0.00	\$83.75
5	90	\$56.16	\$11.49	\$22.34	\$0.00	\$89.99
Effective Date - 02/01/2024						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.83	\$11.49	\$22.34	\$0.00	\$65.66
2	60	\$38.19	\$11.49	\$22.34	\$0.00	\$72.02
3	70	\$44.56	\$11.49	\$22.34	\$0.00	\$78.39
4	80	\$50.92	\$11.49	\$22.34	\$0.00	\$84.75
5	90	\$57.29	\$11.49	\$22.34	\$0.00	\$91.12
Notes:						
Apprentice to Journeyworker Ratio:1:5						
<hr/>						
BULLDOZER/GRADER/SCRAPER OPERATING ENGINEERS LOCAL 4	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
CAISSON & UNDERPINNING BOTTOM MAN LABORERS - FOUNDATION AND MARINE	12/01/2023	\$45.48	\$9.65	\$18.22	\$0.00	\$73.35
	06/01/2024	\$46.96	\$9.65	\$18.22	\$0.00	\$74.83
	12/01/2024	\$48.43	\$9.65	\$18.22	\$0.00	\$76.30
	06/01/2025	\$49.93	\$9.65	\$18.22	\$0.00	\$77.80
	12/01/2025	\$51.43	\$9.65	\$18.22	\$0.00	\$79.30
	06/01/2026	\$52.98	\$9.65	\$18.22	\$0.00	\$80.85
	12/01/2026	\$54.48	\$9.65	\$18.22	\$0.00	\$82.35
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING LABORER LABORERS - FOUNDATION AND MARINE	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	For apprentice rates see "Apprentice- LABORER"					
CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	03/01/2023	\$45.12	\$9.33	\$19.97	\$0.00	\$74.42

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 03/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.56	\$9.33	\$1.73	\$0.00	\$33.62
2	60	\$27.07	\$9.33	\$1.73	\$0.00	\$38.13
3	70	\$31.58	\$9.33	\$14.78	\$0.00	\$55.69
4	75	\$33.84	\$9.33	\$14.78	\$0.00	\$57.95
5	80	\$36.10	\$9.33	\$16.51	\$0.00	\$61.94
6	80	\$36.10	\$9.33	\$16.51	\$0.00	\$61.94
7	90	\$40.61	\$9.33	\$18.24	\$0.00	\$68.18
8	90	\$40.61	\$9.33	\$18.24	\$0.00	\$68.18

Notes:
% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$30.71/ 3&4 \$36.93/ 5&6 \$56.82/ 7&8 \$63.06

Apprentice to Journeyworker Ratio:1:5

CARPENTER WOOD FRAME <i>CARPENTERS-ZONE 3 (Wood Frame)</i>	04/01/2023	\$24.16	\$7.21	\$4.80	\$0.00	\$36.17
All Aspects of New Wood Frame Work						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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Apprentice - CARPENTER (Wood Frame) - Zone 3**Effective Date - 04/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$14.50	\$7.21	\$0.00	\$0.00	\$21.71
2	60	\$14.50	\$7.21	\$0.00	\$0.00	\$21.71
3	65	\$15.70	\$7.21	\$0.00	\$0.00	\$22.91
4	70	\$16.91	\$7.21	\$0.00	\$0.00	\$24.12
5	75	\$18.12	\$7.21	\$3.80	\$0.00	\$29.13
6	80	\$19.33	\$7.21	\$3.80	\$0.00	\$30.34
7	85	\$20.54	\$7.21	\$3.80	\$0.00	\$31.55
8	90	\$21.74	\$7.21	\$3.80	\$0.00	\$32.75

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
 Step 1&2 \$17.86/ 3&4 \$20.22/ 5&6 \$27.57/ 7&8 \$29.94

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	07/01/2023	\$48.19	\$13.00	\$23.57	\$1.30	\$86.06
BRICKLAYERS LOCAL 3 (NEW BEDFORD)	01/01/2024	\$49.33	\$13.00	\$23.57	\$1.30	\$87.20

Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (New Bedford)**Effective Date - 07/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.10	\$13.00	\$15.93	\$0.00	\$53.03
2	60	\$28.91	\$13.00	\$18.57	\$1.30	\$61.78
3	65	\$31.32	\$13.00	\$19.57	\$1.30	\$65.19
4	70	\$33.73	\$13.00	\$20.57	\$1.30	\$68.60
5	75	\$36.14	\$13.00	\$21.57	\$1.30	\$72.01
6	80	\$38.55	\$13.00	\$22.57	\$1.30	\$75.42
7	90	\$43.37	\$13.00	\$23.57	\$1.30	\$81.24

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.67	\$13.00	\$15.93	\$0.00	\$53.60
2	60	\$29.60	\$13.00	\$18.57	\$1.30	\$62.47
3	65	\$32.06	\$13.00	\$19.57	\$1.30	\$65.93
4	70	\$34.53	\$13.00	\$20.57	\$1.30	\$69.40
5	75	\$37.00	\$13.00	\$21.57	\$1.30	\$72.87
6	80	\$39.46	\$13.00	\$22.57	\$1.30	\$76.33
7	90	\$44.40	\$13.00	\$23.57	\$1.30	\$82.27

Notes:

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CHAIN SAW OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$56.13	\$15.00	\$16.40	\$0.00	\$87.53
	06/01/2024	\$57.45	\$15.00	\$16.40	\$0.00	\$88.85
	12/01/2024	\$58.93	\$15.00	\$16.40	\$0.00	\$90.33
	06/01/2025	\$60.26	\$15.00	\$16.40	\$0.00	\$91.66
	12/01/2025	\$61.73	\$15.00	\$16.40	\$0.00	\$93.13
	06/01/2026	\$63.06	\$15.00	\$16.40	\$0.00	\$94.46
	12/01/2026	\$64.54	\$15.00	\$16.40	\$0.00	\$95.94
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 2</i>	07/01/2023	\$55.51	\$9.65	\$23.70	\$0.00	\$88.86
	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - PAINTER Local 35 - BRIDGES/TANKS						
Effective Date - 07/01/2023						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.76	\$9.65	\$0.00	\$0.00	\$37.41
2	55	\$30.53	\$9.65	\$6.55	\$0.00	\$46.73
3	60	\$33.31	\$9.65	\$7.14	\$0.00	\$50.10
4	65	\$36.08	\$9.65	\$7.74	\$0.00	\$53.47
5	70	\$38.86	\$9.65	\$20.13	\$0.00	\$68.64
6	75	\$41.63	\$9.65	\$20.73	\$0.00	\$72.01
7	80	\$44.41	\$9.65	\$21.32	\$0.00	\$75.38
8	90	\$49.96	\$9.65	\$22.51	\$0.00	\$82.12
Effective Date - 01/01/2024						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14
<div>Notes:<div>Steps are 750 hrs.</div></div>						
Apprentice to Journeyworker Ratio:1:1						
DEMO: ADZEMAN LABORERS - ZONE 2	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
For apprentice rates see "Apprentice- LABORER"						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 2	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS LABORERS - ZONE 2	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 2	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 2	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER LABORERS - ZONE 2	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$68.70	\$9.40	\$23.12	\$0.00	\$101.22
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$73.60	\$9.40	\$23.12	\$0.00	\$106.12
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) <i>DRAWBRIDGE - SEIU LOCAL 888</i>	07/01/2020	\$26.77	\$6.67	\$3.93	\$0.16	\$37.53
ELECTRICIAN <i>ELECTRICIANS LOCAL 223</i>	09/01/2023	\$47.87	\$11.75	\$16.86	\$0.00	\$76.48

Apprentice - *ELECTRICIAN - Local 223*

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.15	\$11.75	\$0.57	\$0.00	\$31.47
2	45	\$21.54	\$11.75	\$0.65	\$0.00	\$33.94
3	50	\$23.94	\$11.75	\$0.72	\$0.00	\$36.41
4	55	\$26.33	\$11.75	\$7.79	\$0.00	\$45.87
5	60	\$28.72	\$11.75	\$8.31	\$0.00	\$48.78
6	65	\$31.12	\$11.75	\$8.65	\$0.00	\$51.52
7	70	\$33.51	\$11.75	\$9.38	\$0.00	\$54.64
8	75	\$35.90	\$11.75	\$9.90	\$0.00	\$57.55

Notes:

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2022	\$65.62	\$16.03	\$20.21	\$0.00	\$101.86
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - ELEVATOR CONSTRUCTOR - Local 4						
Effective Date - 01/01/2022						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.81	\$16.03	\$0.00	\$0.00	\$48.84
2	55	\$36.09	\$16.03	\$20.21	\$0.00	\$72.33
3	65	\$42.65	\$16.03	\$20.21	\$0.00	\$78.89
4	70	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
5	80	\$52.50	\$16.03	\$20.21	\$0.00	\$88.74
Notes: Steps 1-2 are 6 mos.; Steps 3-5 are 1 year						
Apprentice to Journeyworker Ratio:1:1						
ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2022	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$50.30	\$14.50	\$16.15	\$0.00	\$80.95
	05/01/2024	\$51.54	\$14.50	\$16.15	\$0.00	\$82.19
	11/01/2024	\$52.83	\$14.50	\$16.15	\$0.00	\$83.48
	05/01/2025	\$54.27	\$14.50	\$16.15	\$0.00	\$84.92
	11/01/2025	\$55.56	\$14.50	\$16.15	\$0.00	\$86.21
	05/01/2026	\$57.00	\$14.50	\$16.15	\$0.00	\$87.65
	11/01/2026	\$58.29	\$14.50	\$16.15	\$0.00	\$88.94
	05/01/2027	\$59.72	\$14.50	\$16.15	\$0.00	\$90.37
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$51.87	\$14.50	\$16.15	\$0.00	\$82.52
	05/01/2024	\$53.12	\$14.50	\$16.15	\$0.00	\$83.77
	11/01/2024	\$54.42	\$14.50	\$16.15	\$0.00	\$85.07
	05/01/2025	\$55.87	\$14.50	\$16.15	\$0.00	\$86.52
	11/01/2025	\$57.17	\$14.50	\$16.15	\$0.00	\$87.82
	05/01/2026	\$58.62	\$14.50	\$16.15	\$0.00	\$89.27
	11/01/2026	\$59.92	\$14.50	\$16.15	\$0.00	\$90.57
	05/01/2027	\$61.37	\$14.50	\$16.15	\$0.00	\$92.02
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$24.93	\$14.50	\$16.15	\$0.00	\$55.58
	05/01/2024	\$25.66	\$14.50	\$16.15	\$0.00	\$56.31
	11/01/2024	\$26.42	\$14.50	\$16.15	\$0.00	\$57.07
	05/01/2025	\$27.27	\$14.50	\$16.15	\$0.00	\$57.92
	11/01/2025	\$28.03	\$14.50	\$16.15	\$0.00	\$58.68
	05/01/2026	\$28.88	\$14.50	\$16.15	\$0.00	\$59.53
	11/01/2026	\$29.64	\$14.50	\$16.15	\$0.00	\$60.29
	05/01/2027	\$30.49	\$14.50	\$16.15	\$0.00	\$61.14
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 223</i>	09/01/2020	\$43.66	\$10.90	\$14.66	\$0.00	\$69.22
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS LOCAL 223</i>	09/01/2020	\$36.86	\$10.90	\$12.45	\$0.00	\$60.21
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$44.47	\$15.00	\$16.40	\$0.00	\$75.87
	06/01/2024	\$45.53	\$15.00	\$16.40	\$0.00	\$76.93
	12/01/2024	\$46.71	\$15.00	\$16.40	\$0.00	\$78.11
	06/01/2025	\$47.77	\$15.00	\$16.40	\$0.00	\$79.17
	12/01/2025	\$48.94	\$15.00	\$16.40	\$0.00	\$80.34
	06/01/2026	\$50.00	\$15.00	\$16.40	\$0.00	\$81.40
	12/01/2026	\$51.18	\$15.00	\$16.40	\$0.00	\$82.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$25.48	\$9.65	\$17.14	\$0.00	\$52.27
	06/01/2024	\$26.51	\$9.65	\$17.14	\$0.00	\$53.30
	12/01/2024	\$26.51	\$9.65	\$17.14	\$0.00	\$53.30
	06/01/2025	\$27.59	\$9.65	\$17.14	\$0.00	\$54.38
	12/01/2025	\$27.59	\$9.65	\$17.14	\$0.00	\$54.38
	06/01/2026	\$28.71	\$9.65	\$17.14	\$0.00	\$55.50
	12/01/2026	\$28.71	\$9.65	\$17.14	\$0.00	\$55.50
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE II</i>	03/01/2022	\$47.96	\$9.33	\$20.27	\$0.00	\$77.56

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - FLOORCOVERER - Local 2168 Zone II						
Effective Date - 03/01/2022						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.98	\$9.33	\$1.79	\$0.00	\$35.10
2	55	\$26.38	\$9.33	\$1.79	\$0.00	\$37.50
3	60	\$28.78	\$9.33	\$14.90	\$0.00	\$53.01
4	65	\$31.17	\$9.33	\$14.90	\$0.00	\$55.40
5	70	\$33.57	\$9.33	\$16.69	\$0.00	\$59.59
6	75	\$35.97	\$9.33	\$16.69	\$0.00	\$61.99
7	80	\$38.37	\$9.33	\$18.48	\$0.00	\$66.18
8	85	\$40.77	\$9.33	\$18.48	\$0.00	\$68.58
<div>Notes: Steps are 750 hrs. % After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps) Step 1&2 \$31.90/ 3&4 \$38.39/ 5&6 \$58.70/ 7&8 \$65.26</div>						
Apprentice to Journeyworker Ratio:1:1						
FORK LIFT/CHERRY PICKER OPERATING ENGINEERS LOCAL 4	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS OPERATING ENGINEERS LOCAL 4	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) GLAZIERS LOCAL 1333	06/01/2020	\$39.18	\$10.80	\$10.45	\$0.00	\$60.43

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - GLAZIER - Local 1333						
Effective Date - 06/01/2020						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.59	\$10.80	\$1.80	\$0.00	\$32.19
2	56	\$22.04	\$10.80	\$1.80	\$0.00	\$34.64
3	63	\$24.49	\$10.80	\$2.45	\$0.00	\$37.74
4	69	\$26.94	\$10.80	\$2.45	\$0.00	\$40.19
5	75	\$29.39	\$10.80	\$3.15	\$0.00	\$43.34
6	81	\$31.83	\$10.80	\$3.15	\$0.00	\$45.78
7	88	\$34.28	\$10.80	\$10.45	\$0.00	\$55.53
8	94	\$36.73	\$10.80	\$10.45	\$0.00	\$57.98
Notes:						
Apprentice to Journeyworker Ratio:1:3						
HOISTING ENGINEER/CRANES/GRADALLS						
OPERATING ENGINEERS LOCAL 4						
	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - OPERATING ENGINEERS - Local 4						
Effective Date - 12/01/2023						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.27	\$15.00	\$0.00	\$0.00	\$45.27
2	60	\$33.02	\$15.00	\$16.40	\$0.00	\$64.42
3	65	\$35.77	\$15.00	\$16.40	\$0.00	\$67.17
4	70	\$38.52	\$15.00	\$16.40	\$0.00	\$69.92
5	75	\$41.27	\$15.00	\$16.40	\$0.00	\$72.67
6	80	\$44.02	\$15.00	\$16.40	\$0.00	\$75.42
7	85	\$46.78	\$15.00	\$16.40	\$0.00	\$78.18
8	90	\$49.53	\$15.00	\$16.40	\$0.00	\$80.93
Effective Date - 06/01/2024						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.98	\$15.00	\$0.00	\$0.00	\$45.98
2	60	\$33.80	\$15.00	\$16.40	\$0.00	\$65.20
3	65	\$36.61	\$15.00	\$16.40	\$0.00	\$68.01
4	70	\$39.43	\$15.00	\$16.40	\$0.00	\$70.83
5	75	\$42.25	\$15.00	\$16.40	\$0.00	\$73.65
6	80	\$45.06	\$15.00	\$16.40	\$0.00	\$76.46
7	85	\$47.88	\$15.00	\$16.40	\$0.00	\$79.28
8	90	\$50.70	\$15.00	\$16.40	\$0.00	\$82.10
Notes:						
Apprentice to Journeyworker Ratio:1:6						

HVAC (DUCTWORK)	10/01/2023	\$39.74	\$14.43	\$19.04	\$2.20	\$75.41
SHEETMETAL WORKERS LOCAL 17 - B	04/01/2024	\$41.24	\$14.43	\$19.04	\$2.20	\$76.91
	10/01/2024	\$42.49	\$14.43	\$19.04	\$2.20	\$78.16
	04/01/2025	\$43.99	\$14.43	\$19.04	\$2.20	\$79.66
	10/01/2025	\$45.24	\$14.43	\$19.04	\$2.20	\$80.91
	04/01/2026	\$46.74	\$14.43	\$19.04	\$2.20	\$82.41
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (ELECTRICAL CONTROLS)	09/01/2020	\$43.66	\$10.90	\$14.66	\$0.00	\$69.22
ELECTRICIANS LOCAL 223						
For apprentice rates see "Apprentice- ELECTRICIAN"						
HVAC (TESTING AND BALANCING - AIR)	10/01/2023	\$39.74	\$14.43	\$19.04	\$2.20	\$75.41
SHEETMETAL WORKERS LOCAL 17 - B	04/01/2024	\$41.24	\$14.43	\$19.04	\$2.20	\$76.91
	10/01/2024	\$42.49	\$14.43	\$19.04	\$2.20	\$78.16
	04/01/2025	\$43.99	\$14.43	\$19.04	\$2.20	\$79.66
	10/01/2025	\$45.24	\$14.43	\$19.04	\$2.20	\$80.91
	04/01/2026	\$46.74	\$14.43	\$19.04	\$2.20	\$82.41
For apprentice rates see "Apprentice- SHEET METAL WORKER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING -WATER) <i>PLUMBERS & PIPEFITTERS LOCAL 51</i>	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PLUMBERS & PIPEFITTERS LOCAL 51</i>	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
For apprentice rates see "Apprentice- LABORER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
	06/01/2024	\$39.94	\$9.65	\$17.14	\$0.00	\$66.73
	12/01/2024	\$41.27	\$9.65	\$17.14	\$0.00	\$68.06
	06/01/2025	\$42.66	\$9.65	\$17.14	\$0.00	\$69.45
	12/01/2025	\$44.04	\$9.65	\$17.14	\$0.00	\$70.83
	06/01/2026	\$45.48	\$9.65	\$17.14	\$0.00	\$72.27
	12/01/2026	\$46.92	\$9.65	\$17.14	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (SOUTHERN MASS)</i>	09/01/2023	\$48.15	\$14.75	\$19.61	\$0.00	\$82.51
	09/01/2024	\$51.23	\$14.75	\$19.61	\$0.00	\$85.59
	09/01/2025	\$54.31	\$14.75	\$19.61	\$0.00	\$88.67
	09/01/2026	\$57.38	\$14.75	\$19.61	\$0.00	\$91.74

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Southern MA

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.08	\$14.75	\$14.32	\$0.00	\$53.15
2	60	\$28.89	\$14.75	\$15.37	\$0.00	\$59.01
3	70	\$33.71	\$14.75	\$16.43	\$0.00	\$64.89
4	80	\$38.52	\$14.75	\$17.49	\$0.00	\$70.76

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.62	\$14.75	\$14.32	\$0.00	\$54.69
2	60	\$30.74	\$14.75	\$15.37	\$0.00	\$60.86
3	70	\$35.86	\$14.75	\$16.43	\$0.00	\$67.04
4	80	\$40.98	\$14.75	\$17.49	\$0.00	\$73.22

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER <i>IRONWORKERS LOCAL 37</i>	03/16/2021	\$42.46	\$7.70	\$17.10	\$0.00	\$67.26
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - IRONWORKER - Local 37						
Effective Date - 03/16/2021						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	70	\$29.72	\$7.70	\$17.10	\$0.00	\$54.52
2	75	\$31.85	\$7.70	\$17.10	\$0.00	\$56.65
3	80	\$33.97	\$7.70	\$17.10	\$0.00	\$58.77
4	85	\$36.09	\$7.70	\$17.10	\$0.00	\$60.89
5	90	\$38.21	\$7.70	\$17.10	\$0.00	\$63.01
6	95	\$40.34	\$7.70	\$17.10	\$0.00	\$65.14
<div>Notes:</div>						
Apprentice to Journeyworker Ratio:1:4						
JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 2	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
LABORER LABORERS - ZONE 2	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65

Apprentice - LABORER - Zone 2						
Effective Date - 12/01/2023						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$22.72	\$9.40	\$16.89	\$0.00	\$49.01
2	70	\$26.50	\$9.40	\$16.89	\$0.00	\$52.79
3	80	\$30.29	\$9.40	\$16.89	\$0.00	\$56.58
4	90	\$34.07	\$9.40	\$16.89	\$0.00	\$60.36
<div>Notes:</div>						
Apprentice to Journeyworker Ratio:1:5						
LABORER (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
	06/01/2024	\$39.19	\$9.65	\$17.14	\$0.00	\$65.98
	12/01/2024	\$40.52	\$9.65	\$17.14	\$0.00	\$67.31
	06/01/2025	\$41.91	\$9.65	\$17.14	\$0.00	\$68.70
	12/01/2025	\$43.29	\$9.65	\$17.14	\$0.00	\$70.08
	06/01/2026	\$44.73	\$9.65	\$17.14	\$0.00	\$71.52
	12/01/2026	\$46.17	\$9.65	\$17.14	\$0.00	\$72.96

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - LABORER (Heavy & Highway) - Zone 2						
Effective Date - 12/01/2023						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$22.72	\$9.65	\$17.14	\$0.00	\$49.51
2	70	\$26.50	\$9.65	\$17.14	\$0.00	\$53.29
3	80	\$30.29	\$9.65	\$17.14	\$0.00	\$57.08
4	90	\$34.07	\$9.65	\$17.14	\$0.00	\$60.86
Effective Date - 06/01/2024						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.51	\$9.00	\$16.89	\$0.00	\$49.40
2	70	\$27.43	\$9.00	\$16.89	\$0.00	\$53.32
3	80	\$31.35	\$9.00	\$16.89	\$0.00	\$57.24
4	90	\$35.27	\$9.00	\$16.89	\$0.00	\$61.16
<div>Notes:</div>						
Apprentice to Journeyworker Ratio:1:5						
LABORER: CARPENTER TENDER <i>LABORERS - ZONE 2</i>	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.36	\$9.40	\$16.89	\$0.00	\$64.65
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 2</i>	12/01/2023	\$37.95	\$9.65	\$17.20	\$0.00	\$64.80
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 2</i>	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 2</i>	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2023	\$47.89	\$11.49	\$20.37	\$0.00	\$79.75
	02/01/2024	\$48.89	\$11.49	\$20.37	\$0.00	\$80.75
	08/01/2024	\$50.57	\$11.49	\$20.37	\$0.00	\$82.43
	02/01/2025	\$51.61	\$11.49	\$20.37	\$0.00	\$83.47
	08/01/2025	\$53.33	\$11.49	\$20.37	\$0.00	\$85.19
	02/01/2026	\$54.41	\$11.49	\$20.37	\$0.00	\$86.27
	08/01/2026	\$56.17	\$11.49	\$20.37	\$0.00	\$88.03
	02/01/2027	\$57.29	\$11.49	\$20.37	\$0.00	\$89.15

Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.95	\$11.49	\$20.37	\$0.00	\$55.81
2	60	\$28.73	\$11.49	\$20.37	\$0.00	\$60.59
3	70	\$33.52	\$11.49	\$20.37	\$0.00	\$65.38
4	80	\$38.31	\$11.49	\$20.37	\$0.00	\$70.17
5	90	\$43.10	\$11.49	\$20.37	\$0.00	\$74.96

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.45	\$11.49	\$20.37	\$0.00	\$56.31
2	60	\$29.33	\$11.49	\$20.37	\$0.00	\$61.19
3	70	\$34.22	\$11.49	\$20.37	\$0.00	\$66.08
4	80	\$39.11	\$11.49	\$20.37	\$0.00	\$70.97
5	90	\$44.00	\$11.49	\$20.37	\$0.00	\$75.86

Notes:

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE MASONS,TILELAYERS & TERRAZZO MECH <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	08/01/2023	\$62.42	\$11.49	\$22.31	\$0.00	\$96.22
	02/01/2024	\$63.67	\$11.49	\$22.31	\$0.00	\$97.47
	08/01/2024	\$65.77	\$11.49	\$22.31	\$0.00	\$99.57
	02/01/2025	\$67.07	\$11.49	\$22.31	\$0.00	\$100.87
	08/01/2025	\$69.22	\$11.49	\$22.31	\$0.00	\$103.02
	02/01/2026	\$70.57	\$11.49	\$22.31	\$0.00	\$104.37
	08/01/2026	\$72.77	\$11.49	\$22.31	\$0.00	\$106.57
	02/01/2027	\$74.17	\$11.49	\$22.31	\$0.00	\$107.97

Apprentice - MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.21	\$11.49	\$22.31	\$0.00	\$65.01
2	60	\$37.45	\$11.49	\$22.31	\$0.00	\$71.25
3	70	\$43.69	\$11.49	\$22.31	\$0.00	\$77.49
4	80	\$49.94	\$11.49	\$22.31	\$0.00	\$83.74
5	90	\$56.18	\$11.49	\$22.31	\$0.00	\$89.98

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.84	\$11.49	\$22.31	\$0.00	\$65.64
2	60	\$38.20	\$11.49	\$22.31	\$0.00	\$72.00
3	70	\$44.57	\$11.49	\$22.31	\$0.00	\$78.37
4	80	\$50.94	\$11.49	\$22.31	\$0.00	\$84.74
5	90	\$57.30	\$11.49	\$22.31	\$0.00	\$91.10

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MILLWRIGHT (Zone 2) MILLWRIGHTS LOCAL 1121 - Zone 2	01/02/2023	\$41.92	\$8.58	\$21.57	\$0.00	\$72.07
Apprentice - MILLWRIGHT - Local 1121 Zone 2						
Effective Date - 01/02/2023						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$23.06	\$8.58	\$5.72	\$0.00	\$37.36
2	65	\$27.25	\$8.58	\$17.93	\$0.00	\$53.76
3	75	\$31.44	\$8.58	\$18.98	\$0.00	\$59.00
4	85	\$35.63	\$8.58	\$20.01	\$0.00	\$64.22
Notes: Step 1&2 Appr. indentured after 1/6/2020 receive no pension, but do receive annuity. (Step 1 \$5.72, Step 2 \$6.66) Steps are 2,000 hours						
Apprentice to Journeyworker Ratio:1:4						
MORTAR MIXER LABORERS - ZONE 2	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
OILER (OTHER THAN TRUCK CRANES,GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2023	\$24.41	\$15.00	\$16.40	\$0.00	\$55.81
	06/01/2024	\$25.01	\$15.00	\$16.40	\$0.00	\$56.41
	12/01/2024	\$25.67	\$15.00	\$16.40	\$0.00	\$57.07
	06/01/2025	\$26.27	\$15.00	\$16.40	\$0.00	\$57.67
	12/01/2025	\$26.93	\$15.00	\$16.40	\$0.00	\$58.33
	06/01/2026	\$27.52	\$15.00	\$16.40	\$0.00	\$58.92
	12/01/2026	\$28.19	\$15.00	\$16.40	\$0.00	\$59.59
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2023	\$29.86	\$15.00	\$16.40	\$0.00	\$61.26
	06/01/2024	\$30.58	\$15.00	\$16.40	\$0.00	\$61.98
	12/01/2024	\$31.38	\$15.00	\$16.40	\$0.00	\$62.78
	06/01/2025	\$32.10	\$15.00	\$16.40	\$0.00	\$63.50
	12/01/2025	\$32.90	\$15.00	\$16.40	\$0.00	\$64.30
	06/01/2026	\$33.62	\$15.00	\$16.40	\$0.00	\$65.02
	12/01/2026	\$34.42	\$15.00	\$16.40	\$0.00	\$65.82
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 - ZONE 2	07/01/2023	\$55.51	\$9.65	\$23.70	\$0.00	\$88.86
	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
Apprentice - PAINTER Local 35 - BRIDGES/TANKS							
Effective Date - 07/01/2023							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$27.76	\$9.65	\$0.00	\$0.00	\$37.41	
2	55	\$30.53	\$9.65	\$6.55	\$0.00	\$46.73	
3	60	\$33.31	\$9.65	\$7.14	\$0.00	\$50.10	
4	65	\$36.08	\$9.65	\$7.74	\$0.00	\$53.47	
5	70	\$38.86	\$9.65	\$20.13	\$0.00	\$68.64	
6	75	\$41.63	\$9.65	\$20.73	\$0.00	\$72.01	
7	80	\$44.41	\$9.65	\$21.32	\$0.00	\$75.38	
8	90	\$49.96	\$9.65	\$22.51	\$0.00	\$82.12	
Effective Date - 01/01/2024							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98	
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44	
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85	
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26	
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51	
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93	
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33	
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14	
Notes:							
Steps are 750 hrs.							
Apprentice to Journeyworker Ratio:1:1							
PAINTER (SPRAY OR SANDBLAST, NEW) *		07/01/2023	\$46.41	\$9.65	\$23.70	\$0.00	\$79.76
* If 30% or more of surfaces to be painted are new construction,		01/01/2024	\$46.96	\$9.95	\$23.95	\$0.00	\$80.86
NEW paint rate shall be used.PAINTERS LOCAL 35 - ZONE 2		07/01/2024	\$48.16	\$9.95	\$23.95	\$0.00	\$82.06
		01/01/2025	\$49.36	\$9.95	\$23.95	\$0.00	\$83.26

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New							
Effective Date - 07/01/2023							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$23.21	\$9.65	\$0.00	\$0.00	\$32.86	
2	55	\$25.53	\$9.65	\$6.55	\$0.00	\$41.73	
3	60	\$27.85	\$9.65	\$7.14	\$0.00	\$44.64	
4	65	\$30.17	\$9.65	\$7.74	\$0.00	\$47.56	
5	70	\$32.49	\$9.65	\$20.13	\$0.00	\$62.27	
6	75	\$34.81	\$9.65	\$20.73	\$0.00	\$65.19	
7	80	\$37.13	\$9.65	\$21.32	\$0.00	\$68.10	
8	90	\$41.77	\$8.65	\$22.51	\$0.00	\$72.93	
Effective Date - 01/01/2024							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$23.48	\$9.95	\$0.00	\$0.00	\$33.43	
2	55	\$25.83	\$9.95	\$6.66	\$0.00	\$42.44	
3	60	\$28.18	\$9.95	\$7.26	\$0.00	\$45.39	
4	65	\$30.52	\$9.95	\$7.87	\$0.00	\$48.34	
5	70	\$32.87	\$9.95	\$20.32	\$0.00	\$63.14	
6	75	\$35.22	\$9.95	\$20.93	\$0.00	\$66.10	
7	80	\$37.57	\$9.95	\$21.53	\$0.00	\$69.05	
8	90	\$42.26	\$9.95	\$22.74	\$0.00	\$74.95	
Notes:							
Steps are 750 hrs.							
Apprentice to Journeyworker Ratio:1:1							
PAINTER (SPRAY OR SANDBLAST, REPAINT)							
PAINTERS LOCAL 35 - ZONE 2		07/01/2023	\$44.47	\$9.65	\$23.70	\$0.00	\$77.82
		01/01/2024	\$45.02	\$9.95	\$23.95	\$0.00	\$78.92
		07/01/2024	\$46.22	\$9.95	\$23.95	\$0.00	\$80.12
		01/01/2025	\$47.42	\$9.95	\$23.95	\$0.00	\$81.32

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint							
Effective Date - 07/01/2023							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$22.24	\$9.65	\$0.00	\$0.00	\$31.89	
2	55	\$24.46	\$9.65	\$6.55	\$0.00	\$40.66	
3	60	\$26.68	\$9.65	\$7.14	\$0.00	\$43.47	
4	65	\$28.91	\$9.65	\$7.74	\$0.00	\$46.30	
5	70	\$31.13	\$9.65	\$20.13	\$0.00	\$60.91	
6	75	\$33.35	\$9.65	\$20.73	\$0.00	\$63.73	
7	80	\$35.58	\$9.65	\$21.32	\$0.00	\$66.55	
8	90	\$40.02	\$9.65	\$22.51	\$0.00	\$72.18	
Effective Date - 01/01/2024							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$22.51	\$9.95	\$0.00	\$0.00	\$32.46	
2	55	\$24.76	\$9.95	\$6.66	\$0.00	\$41.37	
3	60	\$27.01	\$9.95	\$7.26	\$0.00	\$44.22	
4	65	\$29.26	\$9.95	\$7.87	\$0.00	\$47.08	
5	70	\$31.51	\$9.95	\$20.32	\$0.00	\$61.78	
6	75	\$33.77	\$9.95	\$20.93	\$0.00	\$64.65	
7	80	\$36.02	\$9.95	\$21.53	\$0.00	\$67.50	
8	90	\$40.52	\$9.95	\$22.74	\$0.00	\$73.21	
Notes:							
Steps are 750 hrs.							
Apprentice to Journeyworker Ratio:1:1							
PAINTER / TAPER (BRUSH, NEW) *		07/01/2023	\$45.01	\$9.65	\$23.70	\$0.00	\$78.36
* If 30% or more of surfaces to be painted are new construction,		01/01/2024	\$45.56	\$9.95	\$23.95	\$0.00	\$79.46
NEW paint rate shall be used.PAINTERS LOCAL 35 - ZONE 2		07/01/2024	\$46.76	\$9.95	\$23.95	\$0.00	\$80.66
		01/01/2025	\$47.96	\$9.95	\$23.95	\$0.00	\$81.86

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW							
Effective Date - 07/01/2023							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$22.51	\$9.65	\$0.00	\$0.00	\$32.16	
2	55	\$24.76	\$9.65	\$6.55	\$0.00	\$40.96	
3	60	\$27.01	\$9.65	\$7.14	\$0.00	\$43.80	
4	65	\$29.26	\$9.65	\$7.74	\$0.00	\$46.65	
5	70	\$31.51	\$9.65	\$20.13	\$0.00	\$61.29	
6	75	\$33.76	\$9.65	\$20.73	\$0.00	\$64.14	
7	80	\$36.01	\$9.65	\$21.32	\$0.00	\$66.98	
8	90	\$40.51	\$9.65	\$22.51	\$0.00	\$72.67	
Effective Date - 01/01/2024							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$22.78	\$9.95	\$0.00	\$0.00	\$32.73	
2	55	\$25.06	\$9.95	\$6.66	\$0.00	\$41.67	
3	60	\$27.34	\$9.95	\$7.26	\$0.00	\$44.55	
4	65	\$29.61	\$9.95	\$7.87	\$0.00	\$47.43	
5	70	\$31.89	\$9.95	\$20.32	\$0.00	\$62.16	
6	75	\$34.17	\$9.95	\$20.93	\$0.00	\$65.05	
7	80	\$36.45	\$9.95	\$21.53	\$0.00	\$67.93	
8	90	\$41.00	\$9.95	\$22.74	\$0.00	\$73.69	
Notes:							
Steps are 750 hrs.							
Apprentice to Journeyworker Ratio:1:1							
PAINTER / TAPER (BRUSH, REPAINT)		07/01/2023	\$43.07	\$9.65	\$23.70	\$0.00	\$76.42
PAINTERS LOCAL 35 - ZONE 2		01/01/2024	\$43.62	\$9.95	\$23.95	\$0.00	\$77.52
		07/01/2024	\$44.82	\$9.95	\$23.95	\$0.00	\$78.72
		01/01/2025	\$46.02	\$9.95	\$23.95	\$0.00	\$79.92

Classification		Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT							
Effective Date - 07/01/2023							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$21.54	\$9.65	\$0.00	\$0.00	\$31.19	
2	55	\$23.69	\$9.65	\$6.27	\$0.00	\$39.61	
3	60	\$25.84	\$9.65	\$6.84	\$0.00	\$42.33	
4	65	\$28.00	\$9.65	\$7.41	\$0.00	\$45.06	
5	70	\$30.15	\$9.65	\$19.78	\$0.00	\$59.58	
6	75	\$32.30	\$9.65	\$20.35	\$0.00	\$62.30	
7	80	\$34.46	\$9.65	\$20.92	\$0.00	\$65.03	
8	90	\$38.76	\$9.65	\$22.06	\$0.00	\$70.47	
Effective Date - 01/01/2024							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$21.81	\$9.95	\$0.00	\$0.00	\$31.76	
2	55	\$23.99	\$9.95	\$6.66	\$0.00	\$40.60	
3	60	\$26.17	\$9.95	\$7.26	\$0.00	\$43.38	
4	65	\$28.35	\$9.95	\$7.87	\$0.00	\$46.17	
5	70	\$30.53	\$9.95	\$20.32	\$0.00	\$60.80	
6	75	\$32.72	\$9.95	\$20.93	\$0.00	\$63.60	
7	80	\$34.90	\$9.95	\$21.53	\$0.00	\$66.38	
8	90	\$39.26	\$9.95	\$22.74	\$0.00	\$71.95	
Notes:							
Steps are 750 hrs.							
Apprentice to Journeyworker Ratio:1:1							

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
	06/01/2024	\$39.19	\$9.65	\$17.14	\$0.00	\$65.98
	12/01/2024	\$40.52	\$9.65	\$17.14	\$0.00	\$67.31
	06/01/2025	\$41.91	\$9.65	\$17.14	\$0.00	\$68.70
	12/01/2025	\$43.29	\$9.65	\$17.14	\$0.00	\$70.08
	06/01/2026	\$44.73	\$9.65	\$17.14	\$0.00	\$71.52
	12/01/2026	\$46.17	\$9.65	\$17.14	\$0.00	\$72.96

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PANEL & PICKUP TRUCKS DRIVER <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2023	\$38.78	\$14.57	\$18.67	\$0.00	\$72.02
	01/01/2024	\$38.78	\$15.07	\$18.67	\$0.00	\$72.52
	06/01/2024	\$39.78	\$15.07	\$18.67	\$0.00	\$73.52
	12/01/2024	\$39.78	\$15.07	\$20.17	\$0.00	\$75.02
	01/01/2025	\$39.78	\$15.57	\$20.17	\$0.00	\$75.52
	06/01/2025	\$40.78	\$15.57	\$20.17	\$0.00	\$76.52
	12/01/2025	\$40.78	\$15.57	\$21.78	\$0.00	\$78.13
	01/01/2026	\$40.78	\$16.17	\$21.78	\$0.00	\$78.73
	06/01/2026	\$41.78	\$16.17	\$21.78	\$0.00	\$79.73
	12/01/2026	\$41.78	\$16.17	\$23.52	\$0.00	\$81.47
	01/01/2027	\$41.78	\$16.77	\$23.52	\$0.00	\$82.07
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i> For apprentice rates see "Apprentice- PILE DRIVER"	08/01/2020	\$46.11	\$9.40	\$23.12	\$0.00	\$78.63
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$46.11	\$9.40	\$23.12	\$0.00	\$78.63

Apprentice - PILE DRIVER - Local 56 Zone 2

Effective Date - 08/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Notes: Apprentice wages shall be no less than the following Steps;
(Same as set in Zone 1)
1\$57.06/2\$61.96/3\$66.87/4\$69.32/5\$71.78/6\$71.78/7\$76.68/8\$76.68

Apprentice to Journeyworker Ratio:1:5

PIPELAYER <i>LABORERS - ZONE 2</i> For apprentice rates see "Apprentice- LABORER"	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
PIPELAYER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
PLUMBER & PIPEFITTER <i>PLUMBERS & PIPEFITTERS LOCAL 51</i>	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - PLUMBER/PIPEFITTER - Local 51						
Effective Date - 08/28/2023						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$20.80	\$10.15	\$2.50	\$0.00	\$33.45
2	50	\$26.00	\$10.15	\$2.50	\$0.00	\$38.65
3	60	\$31.19	\$10.15	\$8.80	\$0.00	\$50.14
4	70	\$36.39	\$10.15	\$14.08	\$0.00	\$60.62
5	80	\$41.59	\$10.15	\$17.60	\$0.00	\$69.34
Effective Date - 08/26/2024						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$21.90	\$10.15	\$2.50	\$0.00	\$34.55
2	50	\$27.37	\$10.15	\$2.50	\$0.00	\$40.02
3	60	\$32.84	\$10.15	\$8.80	\$0.00	\$51.79
4	70	\$38.32	\$10.15	\$14.08	\$0.00	\$62.55
5	80	\$43.79	\$10.15	\$17.60	\$0.00	\$71.54
Notes:						
Steps 2000hrs. Prior 9/1/05; 40/40/45/50/55/60/65/75/80/85						
Apprentice to Journeyworker Ratio:1:3						
PNEUMATIC CONTROLS (TEMP.)	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
PLUMBERS & PIPEFITTERS LOCAL 51	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
PNEUMATIC DRILL/TOOL OPERATOR	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
LABORERS - ZONE 2						
For apprentice rates see "Apprentice- LABORER"						
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWDERMAN & BLASTER	12/01/2023	\$38.86	\$9.65	\$17.14	\$0.00	\$65.65
LABORERS - ZONE 2						
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	12/01/2023	\$39.36	\$9.40	\$16.89	\$0.00	\$65.65
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	06/01/2024	\$40.69	\$9.40	\$16.89	\$0.00	\$66.98
	12/01/2024	\$42.02	\$9.40	\$16.89	\$0.00	\$68.31
	06/01/2025	\$43.41	\$9.40	\$16.89	\$0.00	\$69.70
	12/01/2025	\$44.79	\$9.40	\$16.89	\$0.00	\$71.08
	06/01/2026	\$46.23	\$9.40	\$16.89	\$0.00	\$72.52
	12/01/2026	\$47.67	\$9.40	\$16.89	\$0.00	\$73.96

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 653 - Southeastern Concrete (Weymouth)</i>	08/01/2023	\$25.00	\$13.91	\$6.90	\$0.00	\$45.81
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROOFER (Inc.Roofer Waterproofing &Roofer Damproofg) <i>ROOFERS LOCAL 33</i>	08/01/2023	\$50.03	\$12.78	\$20.20	\$0.00	\$83.01
	02/01/2024	\$51.28	\$12.78	\$20.20	\$0.00	\$84.26
	08/01/2024	\$52.78	\$12.78	\$20.20	\$0.00	\$85.76
	02/01/2025	\$54.03	\$12.78	\$20.20	\$0.00	\$87.01
	08/01/2025	\$55.53	\$12.78	\$20.20	\$0.00	\$88.51
	02/01/2026	\$56.78	\$12.78	\$20.20	\$0.00	\$89.76

Apprentice - ROOFER - Local 33

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.02	\$12.78	\$5.59	\$0.00	\$43.39
2	60	\$30.02	\$12.78	\$20.20	\$0.00	\$63.00
3	65	\$32.52	\$12.78	\$20.20	\$0.00	\$65.50
4	75	\$37.52	\$12.78	\$20.20	\$0.00	\$70.50
5	85	\$42.53	\$12.78	\$20.20	\$0.00	\$75.51

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.64	\$12.78	\$5.59	\$0.00	\$44.01
2	60	\$30.77	\$12.78	\$20.20	\$0.00	\$63.75
3	65	\$33.33	\$12.78	\$20.20	\$0.00	\$66.31
4	75	\$38.46	\$12.78	\$20.20	\$0.00	\$71.44
5	85	\$43.59	\$12.78	\$20.20	\$0.00	\$76.57

Notes: ** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1

Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.

(Hot Pitch Mechanics' receive \$1.00 hr. above ROOFER)

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE <i>ROOFERS LOCAL 33</i>	08/01/2023	\$50.28	\$12.78	\$20.20	\$0.00	\$83.26
	02/01/2024	\$51.53	\$12.78	\$20.20	\$0.00	\$84.51
	08/01/2024	\$53.03	\$12.78	\$20.20	\$0.00	\$86.01
	02/01/2025	\$54.28	\$12.78	\$20.20	\$0.00	\$87.26
	08/01/2025	\$55.78	\$12.78	\$20.20	\$0.00	\$88.76
	02/01/2026	\$57.03	\$12.78	\$20.20	\$0.00	\$90.01

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 17 - B</i>	10/01/2023	\$39.74	\$14.43	\$19.04	\$2.20	\$75.41
	04/01/2024	\$41.24	\$14.43	\$19.04	\$2.20	\$76.91
	10/01/2024	\$42.49	\$14.43	\$19.04	\$2.20	\$78.16
	04/01/2025	\$43.99	\$14.43	\$19.04	\$2.20	\$79.66
	10/01/2025	\$45.24	\$14.43	\$19.04	\$2.20	\$80.91
	04/01/2026	\$46.74	\$14.43	\$19.04	\$2.20	\$82.41

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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Apprentice - SHEET METAL WORKER - Local 17-B

Effective Date - 10/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$15.90	\$14.27	\$4.18	\$1.06	\$35.41
2	45	\$17.88	\$14.27	\$4.71	\$1.13	\$37.99
3	50	\$19.87	\$14.27	\$11.44	\$1.40	\$46.98
4	55	\$21.86	\$14.27	\$11.44	\$1.46	\$49.03
5	60	\$23.84	\$14.27	\$14.99	\$1.59	\$54.69
6	65	\$25.83	\$14.27	\$15.28	\$1.65	\$57.03
7	70	\$27.82	\$14.27	\$15.58	\$1.72	\$59.39
8	75	\$29.81	\$14.27	\$15.87	\$1.79	\$61.74
9	80	\$31.79	\$14.27	\$16.17	\$1.86	\$64.09
10	85	\$33.78	\$14.27	\$16.46	\$1.92	\$66.43

Effective Date - 04/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.50	\$14.27	\$4.18	\$1.06	\$36.01
2	45	\$18.56	\$14.27	\$4.71	\$1.13	\$38.67
3	50	\$20.62	\$14.27	\$11.44	\$1.40	\$47.73
4	55	\$22.68	\$14.27	\$11.44	\$1.46	\$49.85
5	60	\$24.74	\$14.27	\$14.99	\$1.59	\$55.59
6	65	\$26.81	\$14.27	\$15.28	\$1.65	\$58.01
7	70	\$28.87	\$14.27	\$15.58	\$1.72	\$60.44
8	75	\$30.93	\$14.27	\$15.87	\$1.79	\$62.86
9	80	\$32.99	\$14.27	\$16.17	\$1.86	\$65.29
10	85	\$35.05	\$14.27	\$16.46	\$1.92	\$67.70

Notes:

Apprentice to Journeyworker Ratio:1:3

SPECIALIZED EARTH MOVING EQUIP < 35 TONS	12/01/2023	\$39.24	\$14.57	\$18.67	\$0.00	\$72.48
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	01/01/2024	\$39.24	\$15.07	\$18.67	\$0.00	\$72.98
	06/01/2024	\$40.24	\$15.07	\$18.67	\$0.00	\$73.98
	12/01/2024	\$40.24	\$15.07	\$20.17	\$0.00	\$75.48
	01/01/2025	\$40.24	\$15.57	\$20.17	\$0.00	\$75.98
	06/01/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$76.98
	12/01/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$78.59
	01/01/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$79.19
	06/01/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$80.19
	12/01/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$81.93
	01/01/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$82.53

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2023	\$39.53	\$14.57	\$18.67	\$0.00	\$72.77
	01/01/2024	\$39.53	\$15.07	\$18.67	\$0.00	\$73.27
	06/01/2024	\$40.53	\$15.07	\$18.67	\$0.00	\$74.27
	12/01/2024	\$40.53	\$15.07	\$20.17	\$0.00	\$75.77
	01/01/2025	\$40.53	\$15.57	\$20.17	\$0.00	\$76.27
	06/01/2025	\$41.53	\$15.57	\$20.17	\$0.00	\$77.27
	12/01/2025	\$41.53	\$15.57	\$21.78	\$0.00	\$78.88
	01/01/2026	\$41.53	\$16.17	\$21.78	\$0.00	\$79.48
	06/01/2026	\$42.53	\$16.17	\$21.78	\$0.00	\$80.48
	12/01/2026	\$42.53	\$16.17	\$23.52	\$0.00	\$82.22
	01/01/2027	\$42.53	\$16.77	\$23.52	\$0.00	\$82.82
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section B) Zone 2</i>	10/01/2023	\$61.16	\$10.90	\$23.20	\$0.00	\$95.26
	03/01/2024	\$62.78	\$10.90	\$23.20	\$0.00	\$96.88
	10/01/2024	\$64.40	\$10.90	\$23.20	\$0.00	\$98.50
	03/01/2025	\$66.02	\$10.90	\$23.20	\$0.00	\$100.12

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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Apprentice - SPRINKLER FITTER - Local 550 (Section B) Zone 2**Effective Date -** 10/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$21.41	\$10.90	\$12.80	\$0.00	\$45.11
2	40	\$24.46	\$10.90	\$13.60	\$0.00	\$48.96
3	45	\$27.52	\$10.90	\$14.40	\$0.00	\$52.82
4	50	\$30.58	\$10.90	\$15.20	\$0.00	\$56.68
5	55	\$33.64	\$10.90	\$16.00	\$0.00	\$60.54
6	60	\$36.70	\$10.90	\$16.80	\$0.00	\$64.40
7	65	\$39.75	\$10.90	\$17.60	\$0.00	\$68.25
8	70	\$42.81	\$10.90	\$18.40	\$0.00	\$72.11
9	75	\$45.87	\$10.90	\$19.20	\$0.00	\$75.97
10	80	\$48.93	\$10.90	\$20.00	\$0.00	\$79.83

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$21.97	\$10.90	\$12.80	\$0.00	\$45.67
2	40	\$25.11	\$10.90	\$13.60	\$0.00	\$49.61
3	45	\$28.25	\$10.90	\$14.40	\$0.00	\$53.55
4	50	\$31.39	\$10.90	\$15.20	\$0.00	\$57.49
5	55	\$34.53	\$10.90	\$16.00	\$0.00	\$61.43
6	60	\$37.67	\$10.90	\$16.80	\$0.00	\$65.37
7	65	\$40.81	\$10.90	\$17.60	\$0.00	\$69.31
8	70	\$43.95	\$10.90	\$18.40	\$0.00	\$73.25
9	75	\$47.09	\$10.90	\$19.20	\$0.00	\$77.19
10	80	\$50.22	\$10.90	\$20.00	\$0.00	\$81.12

Notes: Apprentice entered prior 9/30/10:
40/45/50/55/60/65/70/75/80/85
Steps are 850 hours

Apprentice to Journeyworker Ratio:1:3

STEAM BOILER OPERATOR	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN OPERATING ENGINEERS LOCAL 4	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TELECOMMUNICATION TECHNICIAN ELECTRICIANS LOCAL 223	09/01/2023	\$39.40	\$11.50	\$13.91	\$0.00	\$64.81
	09/01/2024	\$40.69	\$11.75	\$14.53	\$0.00	\$66.97

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 223

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Notes: See Electrician Apprentice Wages

Telecom Apprentice Wages shall be the same as the Electrician Apprentice Wages

Apprentice to Journeyworker Ratio:2:3***

TERRAZZO FINISHERS BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2023	\$61.34	\$11.49	\$22.34	\$0.00	\$95.17
	02/01/2024	\$62.59	\$11.49	\$22.34	\$0.00	\$96.42
	08/01/2024	\$64.69	\$11.49	\$22.34	\$0.00	\$98.52
	02/01/2025	\$65.99	\$11.49	\$22.34	\$0.00	\$99.82
	08/01/2025	\$68.14	\$11.49	\$22.34	\$0.00	\$101.97
	02/01/2026	\$69.49	\$11.49	\$22.34	\$0.00	\$103.32
	08/01/2026	\$71.69	\$11.49	\$22.34	\$0.00	\$105.52
	02/01/2027	\$73.09	\$11.49	\$22.34	\$0.00	\$106.92

Classification			Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile								
Effective Date - 08/01/2023								
Step	percent	Apprentice Base Wage		Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$30.67		\$11.49	\$22.34	\$0.00	\$64.50	
2	60	\$36.80		\$11.49	\$22.34	\$0.00	\$70.63	
3	70	\$42.94		\$11.49	\$22.34	\$0.00	\$76.77	
4	80	\$49.07		\$11.49	\$22.34	\$0.00	\$82.90	
5	90	\$55.21		\$11.49	\$22.34	\$0.00	\$89.04	
Effective Date - 02/01/2024								
Step	percent	Apprentice Base Wage		Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$31.30		\$11.49	\$22.34	\$0.00	\$65.13	
2	60	\$37.55		\$11.49	\$22.34	\$0.00	\$71.38	
3	70	\$43.81		\$11.49	\$22.34	\$0.00	\$77.64	
4	80	\$50.07		\$11.49	\$22.34	\$0.00	\$83.90	
5	90	\$56.33		\$11.49	\$22.34	\$0.00	\$90.16	
Notes:								
Apprentice to Journeyworker Ratio:1:3								

TEST BORING DRILLER	12/01/2023	\$48.33	\$9.65	\$18.22	\$0.00	\$76.20
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$49.81	\$9.65	\$18.22	\$0.00	\$77.68
	12/01/2024	\$51.28	\$9.65	\$18.22	\$0.00	\$79.15
	06/01/2025	\$52.78	\$9.65	\$18.22	\$0.00	\$80.65
	12/01/2025	\$54.28	\$9.65	\$18.22	\$0.00	\$82.15
	06/01/2026	\$55.83	\$9.65	\$18.22	\$0.00	\$83.70
	12/01/2026	\$57.33	\$9.65	\$18.22	\$0.00	\$85.20
For apprentice rates see "Apprentice- LABORER"						
TEST BORING DRILLER HELPER	12/01/2023	\$44.45	\$9.65	\$18.22	\$0.00	\$72.32
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$45.93	\$9.65	\$18.22	\$0.00	\$73.80
	12/01/2024	\$47.40	\$9.65	\$18.22	\$0.00	\$75.27
	06/01/2025	\$48.90	\$9.65	\$18.22	\$0.00	\$76.77
	12/01/2025	\$50.40	\$9.65	\$18.22	\$0.00	\$78.27
	06/01/2026	\$51.95	\$9.65	\$18.22	\$0.00	\$79.82
	12/01/2026	\$53.45	\$9.65	\$18.22	\$0.00	\$81.32
For apprentice rates see "Apprentice- LABORER"						
TEST BORING LABORER	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2023	\$39.82	\$14.57	\$18.67	\$0.00	\$73.06
	01/01/2024	\$39.82	\$15.07	\$18.67	\$0.00	\$73.56
	06/01/2024	\$40.82	\$15.07	\$18.67	\$0.00	\$74.56
	12/01/2024	\$40.82	\$15.07	\$20.17	\$0.00	\$76.06
	01/01/2025	\$40.82	\$15.57	\$20.17	\$0.00	\$76.56
	06/01/2025	\$41.82	\$15.57	\$20.17	\$0.00	\$77.56
	12/01/2025	\$41.82	\$15.57	\$21.78	\$0.00	\$79.17
	01/01/2026	\$41.82	\$16.17	\$21.78	\$0.00	\$79.77
	06/01/2026	\$42.82	\$16.17	\$21.78	\$0.00	\$80.77
	12/01/2026	\$42.82	\$16.17	\$23.52	\$0.00	\$82.51
	01/01/2027	\$42.82	\$16.77	\$23.52	\$0.00	\$83.11
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$56.56	\$9.65	\$18.67	\$0.00	\$84.88
	06/01/2024	\$58.04	\$9.65	\$18.67	\$0.00	\$86.36
	12/01/2024	\$59.51	\$9.65	\$18.67	\$0.00	\$87.83
	06/01/2025	\$61.01	\$9.65	\$18.67	\$0.00	\$89.33
	12/01/2025	\$62.51	\$9.65	\$18.67	\$0.00	\$90.83
	06/01/2026	\$64.06	\$9.65	\$18.67	\$0.00	\$92.38
	12/01/2026	\$65.56	\$9.65	\$18.67	\$0.00	\$93.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$58.56	\$9.65	\$18.67	\$0.00	\$86.88
	06/01/2024	\$60.04	\$9.65	\$18.67	\$0.00	\$88.36
	12/01/2024	\$61.51	\$9.65	\$18.67	\$0.00	\$89.83
	06/01/2025	\$63.01	\$9.65	\$18.67	\$0.00	\$91.33
	12/01/2025	\$64.51	\$9.65	\$18.67	\$0.00	\$92.83
	06/01/2026	\$66.06	\$9.65	\$18.67	\$0.00	\$94.38
	12/01/2026	\$67.56	\$9.65	\$18.67	\$0.00	\$95.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$48.63	\$9.65	\$18.67	\$0.00	\$76.95
	06/01/2024	\$50.11	\$9.65	\$18.67	\$0.00	\$78.43
	12/01/2024	\$51.58	\$9.65	\$18.67	\$0.00	\$79.90
	06/01/2025	\$53.08	\$9.65	\$18.67	\$0.00	\$81.40
	12/01/2025	\$54.58	\$9.65	\$18.67	\$0.00	\$82.90
	06/01/2026	\$56.13	\$9.65	\$18.67	\$0.00	\$84.45
	12/01/2026	\$57.63	\$9.65	\$18.67	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$50.63	\$9.65	\$18.67	\$0.00	\$78.95
	06/01/2024	\$52.11	\$9.65	\$18.67	\$0.00	\$80.43
	12/01/2024	\$53.58	\$9.65	\$18.67	\$0.00	\$81.90
	06/01/2025	\$55.08	\$9.65	\$18.67	\$0.00	\$83.40
	12/01/2025	\$56.58	\$9.65	\$18.67	\$0.00	\$84.90
	06/01/2026	\$58.13	\$9.65	\$18.67	\$0.00	\$86.45
	12/01/2026	\$59.63	\$9.65	\$18.67	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2023	\$39.24	\$14.57	\$18.67	\$0.00	\$72.48
	01/01/2024	\$39.24	\$15.07	\$18.67	\$0.00	\$72.98
	06/01/2024	\$40.24	\$15.07	\$18.67	\$0.00	\$73.98
	12/01/2024	\$40.24	\$15.07	\$20.17	\$0.00	\$75.48
	01/01/2025	\$40.24	\$15.57	\$20.17	\$0.00	\$75.98
	06/01/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$76.98
	12/01/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$78.59
	01/01/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$79.19
	06/01/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$80.19
	12/01/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$81.93
	01/01/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$82.53
WAGON DRILL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	For apprentice rates see "Apprentice- LABORER"					
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & PIPEFITTERS LOCAL 51</i>	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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Additional Apprentice Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)

Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

- ** Multiple ratios are listed in the comment field.
- *** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.
- **** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.

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SCOPE OF WORK

Barnstable County on behalf of the Towns in the County requests bids from qualified contractors for Miscellaneous Public Works and Roadway Materials.

The Work under this Contract consists of providing various materials as described herein to the Towns of Barnstable, Bourne, Brewster, Dennis, Falmouth, Harwich, Orleans, Sandwich, Wellfleet, Yarmouth and Joint Base Cape Cod through an Agreement with the County of Barnstable.

All Work done under this Contract shall be in conformance with the 1988 Massachusetts Highway Department (MassDOT) Standard Specifications for Highways and Bridges, the Supplemental Specifications, the 2005 Standard Special Provisions, the 2010 Construction Standard Details, and the 2009 Manual on Uniform Traffic Control Devices, all as amended, and these Special Provisions. The General Conditions and Special Provisions shall take precedence over the General Requirements of the Standard Specifications.

Bidders may wish to contact each Town to obtain actual quantities purchased during prior years. Bidders may bid on any or all items for any or all Towns. Bid selection will be by each item and will be based on the lowest, qualified, responsible, and responsive bid for each item for each Town.

WORK SCHEDULE

The Contractor shall commence Work within ten (10) working days of receiving a Notice to Proceed from the Owner. If the Contractor cannot begin work within the ten (10) working days, that Owner may order such services from such contractors as are available, and the Contractor shall reimburse that Owner for all expenses incurred above the Contract Price. When needing work completed for any items that will be awarded to the two (2) lowest bidders, each Town shall first forward by e-mail or fax a Notice to Proceed to the lower of the two lowest bidders. If the lowest bidder does not schedule the work requested within forty-eight (48) hours of receiving the Notice to Proceed and/or cannot begin (and remain at) work within ten (10) working days, then the Town shall have the right to forward a Notice to Proceed to the second low bidder.

Work is restricted to a normal eight-hour day, five-day week, with Contractor and all subcontractors working on the same shift.

No Work shall be done on this Contract on Saturdays, Sundays or holidays or on the day before or the day after a long weekend which involves a holiday without prior approval by the specific Town or County.

OSHA REQUIREMENT

Any employee found on the worksite without documentation of the successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal. OSHA certifications must be submitted with the certified payrolls for all workers during the first week they work on a project.

PROGRESS OF WORK

The Contractor shall promptly start and continue actual construction work under this Contract with the necessary equipment to properly execute and complete this Contract in the specified time. No cessation of

Contractor's operations will be allowed without the approval of the Engineer. The rate of progress shall be satisfactory to that Town and the Engineer. The Contractor shall furnish to the Engineer a schedule for the Work prior to the start of construction.

CONTRACT DOCUMENTS IN THE FIELD

The Contractor shall keep a copy of the Contract Documents at the work site at all times while work is being performed and said copy is to be available to those in charge of work.

POLICE SERVICES

Each Town shall provide all Town police services at no cost to the Contractor to direct traffic when such protection is required by that Town's Police Department. The Contractor shall be solely responsible for contacting and scheduling police services with the Police Department. If the Contractor must cancel police services, he must do so within the time limits set by the Police Department. If the Contractor does not cancel police services within the time limits, then Contractor shall be responsible to promptly pay the minimum required amount.

PUBLIC SAFETY AND CONVENIENCE

The Contractor shall be required without additional compensation to provide safe and convenient access to all abutters during the prosecution of the Work.

No excavation shall be left open during non-working hours.

MSDS sheets and information shall be available on site and copies submitted to a Town as requested.

NECESSARY ACCESS FOR FIRE APPARATUS AND OTHER EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH THE POLICE AND FIRE DEPARTMENTS AT ALL TIMES REGARDING ACCESS.

For the protection of life and property, all backfill operations shall follow closely behind completed work. The Contractor shall insure that no excavation be left open, unguarded, or water filled during any period of time when work is not actually in progress. It is the purpose and intent that all excavations and backfill, including consolidation operations, and temporary surfacing within an area be accomplished expeditiously before proceeding to other work areas.

Contractor shall comply with all applicable Laws, regulations and Guidelines of any public body (example: OSHA, DIGSAFE, MASSDOT Work Zone Safety Guidelines, Police) having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary signs/ safeguards for such safety and protection at no extra cost to the Owner. See General Conditions also.

CLEANUP

Cleanup shall be done on a daily basis. At the end of each working period, the Contractor shall completely backfill all holes and trenches, and remove all equipment from the traveled way. The

Contractor shall ensure that all safety marking and warning devices are satisfactorily in place prior to leaving any job.

During the course of the Work, the Contractor shall keep the site of his operations in as clean and neat condition as is possible. He shall dispose of all residue resulting from the construction work and, at the conclusion of the work, he shall remove and haul away any surplus excavation, broken pavement, lumber,

equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the work in a neat and orderly condition.

Sweeping and cleaning of surfaces beyond the limits of the Project to clean up material caused by spillage or vehicular tracking during the various phases of the work shall be considered as incidental to the Work being performed under the Contract and there will be no additional compensation.

EMERGENCY CONTACTS

The Contractor shall maintain a 24-hour, 7-day a week telephone service and a local facility to handle emergency requirements such as settled trenches, clogged drains, rain damage, work zone safety issues, etc. A list of personnel (minimum of two) and their telephone numbers shall be submitted to the Engineer, the Highway Superintendent (or his designee), the Public Works Director and to the local Police and Fire Departments. This requirement shall apply during the entire length of the Project. or Service for each Town where work is being completed. This list shall be submitted on the Contractor's letterhead and shall state that

should an emergency arise during the implementation of this Project or Service, these people are to be contacted. The Contractor shall submit this letter to the Engineer prior to initiating construction. The Highway Superintendent for each Town or his designee has the right to determine whether or not an emergency exists and to require Contractor to promptly resolve the emergency at no cost to that Town. If Contractor can not respond in a timely manner as determined by the Highway Superintendent, the Town has the right to complete the necessary work and to bill Contractor for that work.

DIGSAFE

The Contractor shall notify "Mass. DIG SAFE" and the Local Water Department or District and procure a DIG SAFE number of each location prior to disturbing ground in any way.

"DIG-SAFE" Call Center: Telephone 1-888-344-7233

Commonwealth Electric has a policy regarding the location of electric utilities. Dig-Safe can no longer be relied upon to locate electric utilities that are "privately" owned. This can include electric cables located in Public ways that run from utility poles to buildings. It is therefore incumbent upon Contractor to ascertain if any electric cables are located in any area prior to excavation. This will be done at Contractor's expense.

The Contractor shall make his own investigation to assure that no damage to existing structures, drainage lines, traffic signal conduits, and other utilities will occur as a result of his operations

PROTECTION OF UTILITIES AND PROPERTY

The Contractor, in constructing or installing facilities alongside or near sanitary sewers, storm drains, water or gas pipes, electric or telephone conduits, poles, sidewalks, walls, vaults or other structures

shall, at his expense, sustain them securely in place, cooperating with the officers and agents of the various utility companies and municipal departments which control them, so that the services of these structures shall be maintained. The Contractor shall also be responsible for the repair or replacement, at his own expense, of any damage to such structures caused by his acts or neglect, and shall leave them in the same condition as they existed prior to commencement of the Work. In case of damage to utilities, the Contractor shall promptly notify the utility owner and shall, if requested by the Engineer, furnish labor and equipment to work temporarily under the owner's direction in providing access to the utility. Pipes or other structures damaged by the operation of the Contractor may be repaired by the municipality or by utility owner which suffers the loss. The cost of such repairs shall be borne by the Contractor, without compensation therefor.

If, as the Work progresses, it is found that any of the utility structures are so placed as to render it impracticable, in the judgment of the Engineer, to do the Work called for under this Contract, the Contractor shall protect and maintain the services in such utilities and structures and the Engineer will, as soon thereafter as reasonable, cause the position of the utilities to be changed or take such other actions deemed suitable and proper.

If live service connections are to be interrupted by excavations of any kind, the Contractor shall not break the service until new services are provided. Abandoned services shall be plugged off or otherwise made secure.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all the work involved in protecting or repairing property as specified in this section, shall be considered included in the prices paid for the various Contract items of Work and no additional compensation will be allowed therefor.

PROVISIONS FOR TRAVEL AND PROSECUTION OF THE WORK

For the items that require traffic control, the Contractor shall supply and use traffic control devices, positioning and methodology, conforming with the Manual on Uniform Traffic Control Devices (MUTCD) and MASSDOT Work Zone Safety Guidelines at no additional cost to any Town. Traffic control devices required only during working hour operations shall be removed at the end of each working day. Signs having messages that are irrelevant to normal traffic conditions shall be removed or properly covered at the end of each work period. Signs shall be kept clean at all times and legends shall be distinctive and unmarred.

Particular care should be taken to establish and maintain methods and procedures which will not create unnecessary or unusual hazards to public safety.

WORK DONE BY OTHERS

Relocation and/or resetting to new grades of all private utilities, including utility poles, made necessary by the construction of this Project, will be accomplished by the respective utility companies.

DISPOSAL OF SURPLUS MATERIALS

All materials not required or needed for use on the Project, and not required to be removed and stacked, shall become the property of the CONTRACTOR and shall be removed from the site and legally disposed of. No separate payment will be made for this Work, but all costs in connection therewith shall be included in the prices bid for various Contract items.

COMPACTION

Compaction of filled areas under pavement (no matter what type of fill material) shall be completed in 6" lifts. Compaction of filled areas elsewhere (no matter what type of fill material) shall be completed in 12" lifts. Appropriate compaction equipment shall be used.

PROPERTY BOUNDS

Any bounds or markers flagged by a Town and disturbed by the Contractor shall be replaced utilizing the services of a Registered Land Surveyor. The cost of replacing flagged bounds or markers disturbed by the Contractor's operations shall be at the Contractor's expense.

WEIGHING

All materials requiring payment by weight shall be weighed at a certified scale prior to delivery and the weigh slips shall be delivered to and signed by a Town representative. Each Town may provide use of its scale and require gross weights and vehicle tare weights verified at time of delivery.

DELIVERY OF ROADWAY MATERIALS

The vendor shall furnish manufacturer's certification that the materials conform to the specifications. All material shall be delivered to and off loaded at each Town's Highway Division yard or to a mutually agreeable site, except Hot Mix Asphalt which shall be loaded on Town trucks at the plant. All costs of transportation shall be included in the prices bid. If, at any time, the materials delivered are found to be sub-standard, the vendor shall be responsible for removing the offending material at their cost, within ten (10) working days after receiving notification from the Town.

All deliveries shall be made during each Town's normal business hours, Monday through Friday (except legal holidays), and in the presence of an authorized Town employee or agent.

Delivery shall be immediate unless the item is out of stock or not normally stocked, then the vendor shall notify the Town and shall make delivery within ten (10) days.

If at any time the vendor is unable to furnish materials or services as ordered by a Town:

- * The vendor shall be obligated to obtain delivery from another supplier and will in turn invoice the Town at the price specified in the Contract, or
- * The Town may order such materials or services from such places as are available, and the vendor shall reimburse the Town for all expenses incurred above the Contract price.

If services of the vendor are subsequently deemed to be unsatisfactory to any Town and/or are in violation of these specifications, a Town shall notify the said vendor in writing. If mutually agreeable arrangements cannot be achieved between the Town and the vendor, the terms of the Contract for that Town will be terminated. Notice of termination will be in writing and notification will be sent by registered or certified mail. Termination will become effective three (3) days after mailing said notification. Termination of a Contract by any Town shall not invalidate or alter the terms of a similar Contract with any other Town.

The vendor receiving an award shall, at no expense to any Town, adhere to Massachusetts General Law Chapter 111F - "Right to Know Law" as it shall apply to the items contained in the award notice.

PRICE ADJUSTMENTS

The Massachusetts Department of Transportation (MassDOT) method for calculating price adjustments due to cost fluctuations in liquid asphalt, Portland cement, diesel fuel, gasoline, and structural steel shall apply to this bid.

Liquid asphalt (variance from base price of 5% or more) adjustment will be allowed for Bid Item Numbers: 1-4, and 9-16, 18, 19, 21, 22, **125 & 126**. Diesel fuel (variance from base price of 5% or more) adjustment will be allowed for Bid Item Numbers: 1-4, and 9-16, 18, 19, 21 and 22. Gasoline (variance from base price of 5% or more) adjustment will be allowed for Bid Item Numbers: 5-8.

MASSDOT procedures shall be used to determine the adjustments, except as noted herein. The price adjustments shall be based on the difference between the “base price” and the “order price”. The “base price” shall be determined from the most recent MASSDOT published liquid asphalt, diesel fuel, gasoline, Portland cement, or steel price that precedes the bid date. The “order price” shall be the most recent published MASSDOT liquid asphalt, diesel fuel, gasoline, Portland cement, or steel price available on the day that the item is placed. A Town ordering work shall be provided with only one (1) invoice for each project. This invoice shall include the name of the item(s) installed, the quantity installed, the original unit bid price(s), and the price adjustment(s) (including back-up information such as calculations, MASSDOT publication) for each project. A second invoice for the adjustment(s) submitted at a later date shall not be acceptable. The base bid pricing shall be the price posted on the MassDOT Website for the month of **December 2023** as follows:

Base Bid Price Liquid Asphalt (Ton): 637.50

Base Bid Price Diesel (Gallon): TBD

Base Bid Price Gasoline (Gallon): TBD

TWO LOWEST BIDDERS

It is the intent to award a contract to the two (2) lowest, qualified, responsible, and responsive bidders for Bid Items 1-7, 18, 19, and 115 to 122. When needing work completed for each of these items, each Town shall first forward by e-mail or fax a Notice to Proceed to the lower of the two lowest bidders. If the lowest bidder does not schedule the work requested within forty-eight (48) hours of receiving the Notice to Proceed and/or cannot begin (and remain at) work within ten (10) working days, then the Town shall have the right to forward a Notice to Proceed to the second low bidder.

TIED BIDS

In the case of tied bids, the County tied bid policy will be used to determine the awarded bidder.

MASSDOT PREQUALIFICATION

The Towns presently intend to use Chapter 90 (State) funds to finance some of the bid items. Items noted in the Bid Table require vendors to be prequalified by Massachusetts Department of Transportation (MassDOT). Vendors who are not on the MA Highway list of pre-qualified bidders cannot be awarded bids for these items. Only bidders whose companies name appears on the MassDOT list of certified bidders will be awarded bids for the items identified on the bid form.

**NOTE: For all paving, no separate payments will be made
to mobilize to different locations.**

Item No. 1 : HOT MIX ASPHALT PAVEMENT, MACHINE PLACED

The Work shall include the furnishing and placement of top course, binder course, and/or levelling course for new pavements and existing pavement overlays by self-powered mechanical pavers. Any Town may specify any job - mix formula from Section M3.11.00 of the Standard Specifications.

A tack coat of liquid bituminous material (RS-1 or equal) shall be furnished and applied to existing pavements at the rate of 0.10 gallon per square yard immediately prior to placement of pavement overlay and the cost shall be included in the unit price bid. The tack coat shall be machine applied and sprayed uniformly. Hand application will not be allowed.

When bituminous concrete berm (Cape Cod berm) is required, the Work shall also include the berm construction and the cost shall be included in the unit price bid.

If requested by the Town, Contractor shall provide and install Mass Highway approved temporary pavement markings at no additional cost to the Town.

The measured quantity will be paid for at the Contract unit price per ton, which price shall include all labor, materials, equipment, and incidental costs required to complete the Work. Contractor shall install Owner provided risers on gate valve boxes at no additional cost to the Town. Drainage and sewer casting adjustments are paid for under a separate item.

Item Nos. 2 & 3: HOT MIX ASPHALT PAVEMENT, HANDWORK

The Work shall include the furnishing and placement of top course and binder course material by mechanical and hand methods for sidewalk resurfacing, berm, driveway, aprons, and other construction. Any Town may specify any job - mix formula from Section M3.11.00 of the Standard Specifications.

A tack coat of liquid bituminous material (RS-1 or equal) shall be applied to existing pavements at the rate of 0.10 gallon per square yard immediately prior to placement of pavement and the cost shall be included in the unit price bid.

The measured quantity will be paid for at the Contract unit price per ton, which price shall include all labor, materials, equipment, and incidental costs required to complete the Work. Contractor shall install Owner provided risers on gate valve boxes at no additional cost to the Town. Drainage and sewer casting adjustments are paid for under a separate item.

Item No. 4: HOT MIX ASPHALT SHIM

This work consists of the skilled placement of hot mix asphalt in irregularly shaped areas of various thicknesses in order to restore roadway profiles or cross-section. Typical HMA placement will be where the shimming will vary in thickness from 0.0" to 2". The contractor shall be prepared to drag the screed of their

paver and rake edges as necessary to place the mix in areas designated by the town. To obtain this rate mix placement at multiple locations may be required.

Mix and mix placement shall be in conformance with Mass DOT *Standard specifications for Highways and Bridges*.

The intent of this item is that it is to be used independent of any other hot-mix machine placed item work for the same location and timeframe. Any shimming done prior to machine work or leveling courses shall be paid for per the unit price for hot mix asphalt.

Responsibilities of the Town:

- Pre-sweep
- Traffic control
- Temporary pavement markings
- Project supervision and plan preparation when needed.

Responsibilities of the Contractor:

- Mark out areas for leveling based on directions from the town – i.e. the town will give a budget in tons for each road and will point out deficiencies/problem areas such as puddles, roughness, or plow hazards. The marking is subject to approval by the town.
- Removal of fines- It shall be noted that there may be residual fines left in depressions by the town's sweeper. The contractor shall come equipped with a portable blower capable of removing fines from the marked areas. This equipment shall also be capable of removing minor puddles and drying pavement if necessary.
- Tack – All marked out areas shall be tacked with RS-1 emulsion applied at a uniform rate of 0.05 gallons per square yard with pressurized asphalt distributor
- Mix – Mass DOT Dense Top mix.
- Mix placement – Mix shall be placed with a paver that has performance specifications similar to a Lee Boy 8500. The paver shall be adjustable from 8 – 15 feet and be able to place mix on patches narrower than 8 feet as marked. The paver shall break in the middle to allow crown to be placed in the road if necessary. The paver shall have a vibratory screed. Spreading by grader or loader is not acceptable. All structures shall sprayed/covered and uncovered after the mix is placed. The contractor shall have adequate and competent staff to rake/lute/shovel as necessary before the mix is compacted. Multiple lifts may be required.
- Compaction – Contractor shall compact mix with a vibratory roller with a minimum rating of 8 tons.

Measurement and Payment

Hot mix asphalt shim shall be measured for payment by the ton of mix placed and accepted by the Town and shall be paid at the contract unit price per ton which shall include all labor, materials, equipment and incidental costs required to satisfactorily complete the work. Including cleanup and tack.

Item No. 5: PAVEMENT RECLAMATION (Including FG&C)

The Work under this item shall conform to the provisions of Section 170 & 403 of the Standard Specifications and the following:

Fine grading and compacting (FG&C) of the subgrade shall be included in the work for this item. If requested by a Town, the Contractor shall negotiate a reasonable additional cost for related work (e.g., excavating and hauling away excess materials).

The measured quantity will be paid for at the Contract unit price per square yard, which price shall include all labor, materials, equipment, fine grading, compacting, and incidental costs required to complete the Work.

Item No. 6: PAVEMENT RECLAMATION (Including FG&C and Calcium Chloride)

The Work under this item shall conform to the provisions of Section 170 & 403 of the Standard Specifications and the following:

Fine grading and compacting (FG&C) of the subgrade, and adding and mixing liquid calcium chloride to the pulverized mass shall be included in the work for this item. If requested by a Town, the Contractor shall negotiate a reasonable additional cost for related work (e.g., excavating and hauling away excess materials).

The calcium chloride solution shall be provided by the manufacturer as a true solution and shall not be reconstituted from flake calcium chloride. The calcium shall meet the following material specifications (see ASTM Designation D98; AASHTO-M144):

Calcium Chloride	35% +/-1%
Alkali Chloride as NaCl	2% max.
Magnesium as MgCl	0.1%

Typical (Pounds per gallon)

Calcium Chloride	5.05
Sodium Chloride	0.2
Magnesium Chloride	0.004
Calcium Sulfate	0.004
Water	<u>6.002</u>
	11.26

The measured quantity will be paid for at the Contract unit price per square yard, which price shall include all labor, materials, equipment, fine grading, compacting, and incidental costs required to complete the Work.

Item No. 7: BITUMINOUS CONCRETE EXCAVATION BY COLD PLANER

The Work under this item shall conform to the relevant provisions of Section 120 of the Standard Specifications and the following:

The work shall include the cold planing of existing bituminous concrete pavement surface to various depths to shape the pavement cross-section (crown or super elevation), to meet driveways, and/or to produce a uniform surface for the application of the pavement surfacing.

Pavement areas abutting utility structures and other areas which cannot be planed by the principal cold planing machine shall be excavated with smaller mechanical cold planing equipment designed for this purpose or by manual methods at no additional cost to any Town.

The machine shall be capable of being operated at speeds from 10 to 40 feet per minute and designed so that the operator can at all times observe the planing operation without leaving his control area. Pneumatic rubber-tire mounted equipment shall be used only for trimming and edging operations.

The equipment furnished by the Contractor shall be maintained in good repair at all times.

No pavement cuttings shall remain on the project at the end of each work period. The pavement cuttings shall become the property of the Town and the Contractor shall be responsible to remove, haul, and deposit the pavement cuttings at no additional cost to a site as directed by the Town.

The measured quantity will be paid for at the Contract unit price per square yard, which price shall include all labor, materials, equipment, removal, hauling, and incidental costs required to complete the Work.

Item No. 8: COLD PLANED (MILLED) PAVING JOINTS

The work shall include the cold planing of existing bituminous concrete pavement surface to create key ways (paving joints) for the purpose of overlaying pavement. All work is to be performed no more than forty eight (48) hours prior to the scheduled start of paving.

The machine shall be capable of milling to a depth of two (2) inches and a minimum width of twenty-four (24) inches. The cutter head must be able to rotate 15 degrees to provide a beveled cut. All key ways shall be one (1) to two (2) inches in depth and twenty-four (24) inches to forty-eight (48) inches in width at the discretion of the Town. The Contractor is responsible milling and clean up of all excavated materials.

The equipment furnished by the Contractor shall be maintained in good repair at all times.

No pavement cuttings shall remain on the project at the end of each work period. The pavement cuttings shall become the property of the Town and the Contractor shall be responsible to remove, haul, and deposit the pavement cuttings at no additional cost to a site as directed by the Town.

The measured quantity will be paid for at the Contract unit price per square yard, which price shall include all labor, materials, equipment, removal, hauling, and incidental costs required to complete the Work.

Item Nos. 9 & 10: MICROSURFACING (ONE AND TWO LIFTS)

The Work under this item shall conform to the relevant provisions of the Standard Specifications and the following:

Description

Microsurfacing is a tough and durable thin overlay material which can restore the original service properties to worn but structurally sound pavements. Its properties are based on a blend of select crushed aggregate and a chemical formulation of asphalt cement, cationic emulsifiers, adhesives, and latex. This specification covers all materials, equipment, construction and application procedures for rutfilling and/or surfacing of existing paved surfaces. The microsurfacing shall be a mixture of cationic latex modified asphalt emulsion, mineral aggregate, mineral and field control additives, and water, properly proportioned, mixed and spread on the paved surface in accordance with this specification and as directed by any Town.

Materials

Emulsified Asphalt: The emulsified asphalt shall be a quick-set latex modified cationic type CSS-1H emulsion and shall conform to the requirements specified in AASHTO M208 and ASTM 2397. It shall pass all applicable storage and settlement tests. The latex shall be milled into the emulsion. The cement mixing test shall be waived for this emulsion.

Special Residue Properties: Distillation of residue will be at a temperature of 350 degrees F for 20 minutes. Softening point of the residue shall be 140 degrees F minimum. Viscosity, absolute at 140 degrees F, shall be 8,000 poise minimum.

Aggregate

General: The mineral aggregate used shall be of the type and grade specified for micro-surfacing. The aggregate shall be manufactured crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate or combination thereof.

Aggregate Physical Requirements: The aggregate including natural fines when tested by AASHTO methods T11 or T27 or ASTM C117 or C136, should meet the referenced gradation requirements. To limit the permissible amount of clay like fines in an aggregate, a sand equivalent value of 65 or higher is required when tested by ASTM 2419. The aggregate shall have a weighted loss of not more than 15% when the sodium sulfate test is used or 20% when the magnesium sulfate test is used. The aggregate wear, from resistance to abrasion, shall be a maximum of 35% when using AASHTO T96 or ASTM C131 test methods.

Water

The water shall be potable and shall be free of harmful soluble salts.

Modifier

Special quick-setting emulsifier agents shall be milled into the asphalt emulsion. The emulsified asphalt shall be so formulated that when the paving mixture is applied at thickness of one inch with the relative humidity at not more than 50% and the ambient air temperature of at least 75 degrees F. the material will cure sufficiently so that rolling traffic can be allowed in one hour with no damage to the surface.

Additives

A mineral additive shall be introduced to the mineral aggregate and may be any recognized brand of nonairentrained 26 portland cement or hydrated lime that is free of lumps, or other approved mineral additive.

The amount of mineral additive needed shall be determined by the laboratory mix design and will be considered as part of the material gradation requirement. A liquid field control additive is introduced and blended with water to provide effective control of the required quick-set properties. This additive shall be made available by the chemical supplier or emulsion manufacturer and certifiable as being compatible with the mixture.

Engineering

General: Before work commences, the Contractor shall submit a signed mix design covering the specific material to be used on the project. This design shall be performed by a qualified laboratory, suitable to the Town. Once the materials are approved, no substitution will be permitted unless first tested and approved by the laboratory preparing the mix design.

Mix Design: The qualified laboratory shall develop the job mix design and present certified test results for the Contractor's approval. Compatibility of the aggregate and emulsion shall be verified by the mix design. The job mix formula shall provide a minimum Marshall stability of 1,800 pounds and a flow of 6 to 16 units when tested according to the ASTM 1559 or AASHTO 245 procedure as modified. All component material used in the mix design shall be representative of the material proposed by the Contractor for use on the project.

Specifications: The Contractor shall guarantee the design mix and all microsurfacing materials and methods prior to use. The component materials shall be within the following limits.

Residual Asphalt	5% to 9% by dry weight of aggregate
Mineral Additive	0.5% to 3% by dry weight of aggregate
Latex Modifier	As required to provide specified properties
Field Control Additive	As required to provide the specified properties
Water	As required to produce Consistency

Aggregate Gradations:

<u>Screen Size</u>	<u>Type II % Passing</u>	<u>Type III % Passing</u>
3/8"	100	100
#4	0-100	70-90
#8	65-90	45-65
#16	40-65	30-50
#30	25-45	19-34
#50	15-30	12-25
#100	10-21	7-18
#200	5-13	4-12

Suggested Application Rate:

Type II - Urban and Residential Streets Airport Runways: 18-22 lbs per sq. yd.
 Type III- Primary and Interstate Routes: 25-30 lbs per sq. yd.
 Wheel Ruts: Application rates as required.

Equipment

General: All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high quality product.

Mixing Equipment: The material shall be mixed by a self-propelled microsurfacing mixing machine which shall be a **continuous flow** mixing unit able to accurately deliver and proportion the aggregate,

emulsified asphalt, mineral and field control additives, and water to a revolving multi-blade twin shafted mixer and discharge the mixed product on a continuous flow basis. The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral and field control additives, and water to maintain an adequate supply to the proportioning controls. **The machine may be equipped with self-loading devices which provide for the loading of materials while continuing to lay microsurfacing, thereby minimizing construction joints.**

Proportioning Devices: Individual volume or weight controls for proportioning each material to be added to the mix, i.e., aggregate, emulsified asphalt, mineral and field control additives, and water shall be provided and properly marked. These proportioning devices are usually revolution counters or similar devices and are used in material calibration and determining the materials output at any time.

Emulsion Pump: The emulsion pump shall be a heated positive displacement type.

Spreading Equipment: The surfacing mixture shall be spread uniformly by means of a mechanical type spreader box attached to the mixer, equipped with paddles to agitate and spread the materials throughout the box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as final strike off and shall be adjustable. The mixture shall be spread to fill cracks and minor surface irregularities and leave a uniform skid resistant application of material on the surface. The spreader box and rear strike off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike off. The longitudinal joint where two passes join shall be neat appearing, uniform and lapped.

All excess material shall be removed from the job site prior to opening the road. The spreader box shall have suitable means provided to side shift the box to compensate for variations in pavement width and longitudinal alignment. A Rut Box shall be available to prefill wheel ruts when necessary prior to overlay to eliminate puddles or runoff interruption. The box shall be readily adjustable from 4' – 6' width with hydraulically adjusted strike off screeds to attain maximum grade and profile.

Auxiliary Equipment: Suitable surface cleaning equipment, traffic control equipment, hand tools and any support equipment shall be provided as necessary to perform the work.

Machine Calibration

Each mixing unit to be used in performance of the work shall be calibrated in the presence of the Town prior to construction, or previous calibration documentation covering the exact materials to be used may be acceptable provided they were made during that calendar year. The documentation shall include the individual calibration of each material at various settings, which can be related to the machine metering devices.

Weather Limitations

The material shall be spread only when the road surface and atmospheric temperatures are at least 45 degrees F and rising and the weather is not rainy and there is no forecast of temperatures below 32 degrees F within 48 hours from the time of placement of the mixture.

Traffic Control

Suitable methods shall be used by the Contractor to protect the microsurface from traffic until the new surface will support traffic without damage. All traffic control methods used shall be in accordance with the specifications and shall be employed in a safe manner.

Surface Preparation

General: The area to be surfaced shall be thoroughly cleaned, by the Contractor, of pavement markings (if needed), vegetation, loose aggregate and soil, particularly soil that is bound to the surface.

Manholes, valve boxes and other service entrances shall be protected from the surfacing material.

Cracks in Surface: Cracks in the surface shall be filled prior to microsurfacing. Crackfilling shall be paid for separately.

Tack Coat: The Contractor shall apply a tack coat consisting of one part emulsified asphalt and three parts water with a distributor at .10-.15 gallons per square yard. This emulsified asphalt should be the CSS1H emulsion grade.

Stockpile

Precautions shall be taken to ensure that stockpiles do not become contaminated. The mineral aggregate shall be screened prior to being weighed for job site delivery. This weight shall be done by means of a certified scale.

Application

General: The surface shall be pre-wetted by fogging ahead of the spreader box when required by local conditions. The rate of application of the fog spray shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement surface.

The microsurfacing mixture shall be of the desired consistency upon leaving the mixer and no additional materials should be added. A sufficient amount of material shall be carried in all parts of the spreader at all times so that a complete coverage is obtained. Overloading of the spreader shall be avoided. No lumping, balling, or unmixed aggregate shall be permitted.

No streaks, such as those caused by oversized aggregate, will be left in the finished surface. If excessive oversize develops, the job will be stopped until the Contractor proves to the Town that the situation has been corrected.

Joints: No excessive buildup, uncovered areas or unsightly appearances shall be permitted on longitudinal or transverse joints. The Contractor shall provide suitable width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd width passes will be used only in minimum amounts. If half passes are used, they shall not be the last pass of any paved areas.

Mix Stability: The microsurfacing mixture shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate.

Hand Work: Areas which cannot be reached with the mixing machine shall be surfaced using hand squeegees to provide complete and uniform coverage. The area to be handworked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from handwork. The same type finish as applied by the spreader box shall be required. Handwork shall be completed at the time of the machine applying process.

Lines: Care shall be taken to insure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance.

Rolling: If required, specified areas shall be rolled by a self-propelled 10 ton pneumatic roller with a tire pressure of 50 PSI and equipped with a water spray system.

Quality Control

Materials: The Contractor will permit each Town to take samples of the aggregate and asphalt emulsion to be used in the project at the Town's discretion. Gradation and sand equivalent tests may be run on the aggregate and residual asphalt content test on the emulsion. Test results will be compared to specifications. Tests will be run by a qualified laboratory at the expense of the Contractor. The Town shall notify the Contractor immediately if any test fails to meet the specifications.

Micro-Surfacing Mixture: Samples of the mixture should be taken daily and may be taken directly from the mixing unit(s). Consistency and residual asphalt content tests may be made on the samples and compared to the specifications. Tests will be run by a qualified laboratory at the expense of the Contractor. The Town must notify the Contractor immediately if any test fails to meet specifications. Any Town may use the recorder and measuring facilities of the unit to determine application rates, asphalt emulsion content mineral and field control additives, and water.

Non-Compliance: If any two successive tests fail on the stockpile material, the job shall be stopped. It is the responsibility of the Contractor, at his own expense, to prove to the Town that the conditions have been corrected. If any two successive tests on the mix from the same machine fail, the use of the machine shall be suspended. It will be the responsibility of the Contractor, at his own expense, to prove to the Town that the problems have been corrected and that the machine is working properly.

Performance

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

Performance Warranty

The Contractor shall furnish the following warranty after completion of the work and prior to final payment:

The Contractor hereby warrants that all workmanship and all materials furnished under the Contract comply fully with requirements of these microsurfacing specifications.

If at any time within two years after the date of the final inspection, any unfaithful or defective work should appear, which in the opinion of a Town is due to inferior materials or workmanship, the Contractor warrants to do whatever is necessary to remedy the defects immediately without cost to the Town. The Town shall notify the Contractor in writing of the defects and the repairs to be made, and the Contractor will begin repairs within a mutually agreed time frame.

Measurement and Payment

The quantity, for one or two lifts of microsurfacing, to be measured for payment will be the number of square yards of microsurfacing actually completed. The accepted quantity of microsurfacing will be paid for at the Contract unit price per square yard, which shall be full compensation for furnishing, transporting, handling and placing the material specified and furnishing of all labor, tools, equipment, pavement surface cleaning, and incidentals for the satisfactory completion of the work.

Item Nos. 11 & 12: ASPHALT-RUBBER SURFACE TREATMENT

The Work under this item shall include the furnishing, application, and compaction of hot asphalt and granulated rubber, and a crushed stone cover, and the sweeping of the roads before and after application.

Materials

Asphalt Cement – Asphalt cement for the asphalt-rubber mixture shall be PG 58-28 OR PG 64-28 PG64-28 where needed to meet the requirements of ASTM D 6114 (type II), complying with the requirements of the Standard Specifications. The grade selected shall be based on laboratory testing by the asphalt-rubber supplier.

Anti-stripping Agent – An anti-stripping agent that is heat stable shall be incorporated into the asphalt-rubber material at the dosage required by the job-mix formula (up to 1.0% by weight of asphalt). It shall be added to the asphalt cement prior to blending with the granulated rubber.

Rubber – The granulated rubber shall be vulcanized rubber product from the ambient temperature processing of scrap, pneumatic tires. The granulated rubber shall meet the following gradations: No substitutions will be accepted.

<u>Sieve Size</u>	<u>Percentage Passing</u>
No.10	100
No.16	90 - 100
No.30	25 - 75
No.80	0 - 20

The use of rubber of multiple types from multiple sources is acceptable provided that the overall blend of rubber meets the gradation requirements. The length of the individual rubber particles shall not exceed 1/8". The rubber shall be accepted by certification from the rubber supplier.

Aggregate – The aggregate shall conform to the requirements of the Standard Specifications. The Flakiness Index shall be less than 30% (NFP 18-561 Test). Crushed gravel stone shall not be permitted. Percentage of wear as determined by the Los Angeles Abrasion Test (AASHTO-T96) shall be a maximum of 30. The aggregate shall be pre-heated to a temperature between 200°F and 300°F, and be pre-coated with 0.4% to 0.8% (by weight of aggregate) of AC-10 or AC-20 asphalt cement prior to application. The gradation of the aggregate shall meet the following limits:

<u>Sieve Size</u>	<u>Percentage Passing</u> <u>Nominal Size 3/4"</u>	<u>Percentage Passing</u> <u>Nominal Size 1/2"</u>
5/8"	100%	100%
1/2"	100%	85 - 100%
3/8"	85 - 100%	15 - 45%
No. 4	0 - 25%	0 - 15%
No. 8	0 - 5%	0 - 5%
No. 50	0 - 2%	0 - 2%
No.200	0 - 2%	0 - 2%

Materials Testing - A minimum of 60 days prior to construction, the Contractor shall send a representative sample of the asphalt cement and the aggregate proposed for use to the asphalt-rubber supplier for testing. Testing for stripping and asphalt content to determine and assure that appropriate characteristics are achieved when blended with the granulated rubber shall be performed.

Asphalt-rubber Mixing and Reaction

Mixing and Reaction - The percent of rubber shall be 20 +/- 3% for Item No.7 and 10±% for Item No.8, as indicated by the mixture design for specific project requirements by weight of total mixture, that is, by total weight of asphalt cement, plus granulated rubber. The exact granulated rubber content shall be determined by the mix design submitted by the asphalt-rubber supplier based on laboratory testing.

The temperature of the asphalt shall be between 350°F and 425°F, at the time of addition of the granulated reclaimed rubber. The asphalt and rubber shall be combined and mixed together in a blender unit and reacted in the distributor for a period of time as required by the mix design. The temperature of the asphalt-rubber mixture shall be above 325°F, during the reaction period.

Delays - When a job delay occurs after full reaction, the asphalt-rubber may be allowed to cool. The asphalt-rubber shall be reheated slowly just prior to application, but not to a temperature exceeding 375°F. An additional quantity of granulated rubber or additive not exceeding 3% by volume of the hot asphalt-rubber mixture may be added after reheating.

Viscosity - Viscosities shall be run, by the asphalt-rubber supplier, on each blended load of asphalt-rubber using a Haake-type field viscometer. The viscosity of the final product shall be in the range of 1,000 to 3,500 centipoise.

Equipment

Mechanical Blender – A mechanical blender shall be utilized for proper proportioning and thorough mixing of the PG asphalt binder and ground rubber. This unit shall have a Coriolis type mass flow meter capable of measuring and recording the total quantity of asphalt binder in tons. The quantity of ground rubber shall be determined by weight utilizing either a hopper equipped with load cells or a feeder equipped with a belt scale. The total weight in tons and percentage of ground rubber based on total asphalt rubber binder shall be recorded. All data shall be reported to the awarding authority.

A dedicated asphalt rubber reaction/storage tank equipped with a heating system to maintain the proper temperature of the binder and an internal mixing unit capable of maintaining a homogeneous mixture of asphalt and ground rubber.

Testing and Certification:

The materials shall be sampled once per lot at the point of manufacture, tested and certified by an AASHTO resource (formally AMRL) accredited laboratory approved for asphalt rubber binder testing. The laboratory shall certify that the material meets the requirements of ASTM D 6114 type II specifications. A lot shall be defined as each batch produced, but not to exceed the volume of the manufacturer’s dedicated asphalt rubber reaction/storage tank. In addition to the ASTM D 6114 Type II specification, to ensure adequate blending residence time and superior binder quality, every lot shall be tested under:

Test (on the produced asphalt rubber binder)	Result
AASHTO T315 Original Binder 2mm DSR @ 82:	G*/sin(d) >1.00 kPA

Prior to starting the project, the contractor shall submit a Quality Control Plan from the Asphalt Rubber supplier meeting the requirements of AASHTO R-26 format. The contractor shall submit a weekly manufacturer’s report for each lot of asphalt rubber produced that includes the following as a minimum:

- Total quantity of asphalt binder in tons
- Tons and percentage of ground rubber based on total asphalt rubber binder
- ASTM D 6114 certified test results
- AASHTO T315 Original Binder 2mm DSR @ 82

Distributor Truck - On projects exceeding 35 tons of liquid asphalt rubber, at least two pressure-type bituminous distributor trucks in good condition shall be required. The distributor shall be equipped with an internal heating device capable of heating the material evenly up to 425° F; an internal mixing unit capable of maintaining a proper mixture of asphalt cement and granulated rubber; have adequate pump capacity to maintain a high rate of circulation in the tank and to spray the asphalt-rubber at a viscosity of 1,000 to 3,500 centipoise; have adequate pressure devices and suitable manifolds to provide constant positive cut-off to prevent dripping from the nozzles. Distributor shall be equipped with an electronically controlled computerized compensation unit for controlling application rates at various width and speed changes. The application unit shall have electronic controls and a digital read out installed and operated from the inside of the cab of the distributor. The distribution bar on the distributor shall be fully circulating. Any distributor that produces a streaked or irregular distribution of the material shall be promptly repaired or removed from the project.

Distributor equipment shall include a tachometer, pressure gauges, volume measuring devices, and a thermometer for reading temperature of tank contents. Controls for spray bar shall be located in cab of truck, for controlling width and rate of spray of product. It shall be so constructed that uniform applications may be made at the specified rate per square yard with a tolerance of plus or minus 0.05 gal. / sq. yd.

A "bootman" shall accompany the distributor and ride in a position so that all spray bar nozzles are in his full view and readily accessible for unplugging.

Hauling Equipment - Trucks for hauling cover material shall be rear discharge conveyor-fed or "live bottom" trucks and shall be equipped with a device to lock onto the hitch at the rear of the chip spreader to prevent aggregate spillage. Sufficient hauling vehicles shall be available to ensure continuous operation of the distributor and chip spreader.

Aggregate Spreader - The aggregate spreader shall be hydrostatically driven and self propelled. It must be equipped with a hydraulically controlled variable adjustable head that is capable of spreading stone in widths from 4.5 to 18 feet. The spreader shall be mounted on pneumatic tires, and shall apply the stone on the road surface in a manner that ensures that the tires do not contact the road surface until after the stone has been applied. The unit shall be equipped with an electronic radar type sensor used to measure ground speed and will automatically adjust the stone application rate depending on width of application and the speed of chip spreader. It shall have the ability to apply stone on any grade from 0 - 6%. The spreader shall be equipped with an integral hopper with a minimum capacity of 5 tons of stone which shall be filled by trucks in a manner which ensures that the truck tires never come in contact with asphalt treated road surfaces until the stone has been properly applied. To maintain constant stone application, a self-locking truck hitch will permit towing of aggregate trucks without stopping the chip spreader. It shall be capable of maintaining positive engagement over irregular terrain.

Pneumatic-Tired Roller - One (1) self-propelled, multiple wheel, pneumatic-tired rollers shall be used and shall weigh between 7 and 12 tons, each roller shall have a total compacting width of at least 56 inches, have a minimum tire pressure of 60 psi, and be equipped with a watering system.

Steel-Wheel Roller - One (1) self-propelled, 2-axle (tandem) steel-wheel roller shall be used and shall weigh between 8 and 12 tons, and be equipped with scrapers, wetting pads and watering system. Combination pneumatic and steel drum-type rollers are acceptable, as one unit only.

Construction Procedures

Preparation - Potholes, other areas of pavement failure, and major depressions in the existing pavement surface, shall be repaired by each Town. The Town shall be responsible for removal of all thermoplastic traffic markings

The Contractor shall, immediately prior to application of the asphalt-rubber, thoroughly sweep the surface. The Contractor shall be responsible for covering all utility irons just prior to application and uncovering after aggregate is spread.

Seasonal and Weather Limitations - The asphalt-rubber shall not be applied when weather conditions are unfavorable to obtaining a uniform spread. Construction shall proceed only when the atmospheric temperature is at least 50°F and rising. No water shall be present on the road surface.

Application - The asphalt-rubber mixture shall be applied at a temperature of 338°F to 419°F, at a rate of 0.55 to 0.65 gallons per square yard for Item No.7 or 0.35 to 0.50 gallons per square yard for Item No.8. Exact rate to be determined by the aggregate gradation, traffic volume and pavement condition.

Longitude joints shall be reasonably true to line and parallel to centerline. Where any construction joint occurs, the edges shall be broomed back and blended so there are no gaps and the elevations are the same, and free from ridges and depressions. Longitudinal joints shall be overlapped from 4 to 6 inches.

During application, adequate provision shall be made to prevent marring and discoloration of adjacent pavements, structures, vehicles, foliage or personal property.

Aggregate Application - The application of aggregate shall follow as close as possible behind the application of the hot asphalt-rubber which shall not be spread further in advance of the aggregate spread that can be immediately covered. Construction equipment or other vehicles shall not drive on the uncovered asphalt-rubber. The hot-precoated aggregate shall be spread uniformly by a self-propelled spreader at a rate of spread generally between 30 to 40 pounds per square yard for Item No.7 or 20 to 30 pounds per square yard for Item No.8.. Any deficient areas shall be covered with additional material.

Rolling - A minimum of three (3) rollers shall be used for aggregate compaction into the hot asphalt-rubber.

Two rollers must be pneumatic-tired and one must be steel-wheel. Rolling shall commence immediately following spread of aggregate. There shall be at least three (3) coverages by the pneumatic-tired rollers to embed the aggregate firmly into the asphalt-rubber. A coverage shall be as many passes as are necessary to cover the entire width being spread with a pass being one (1) movement of a roller in either direction. Additional coverage of the steel-wheel roller will follow. Water shall be applied to the tires or wheels as required to limit sticking of the asphalt-rubber and aggregate to the rollers.

Sweeping – When the maximum amount of aggregate has been embedded into the asphalt-rubber and the pavement has cooled, all loose material shall be swept or otherwise removed to the satisfaction of the Town. This shall be done at a time and in a manner which will not displace any embedded aggregate or damage the asphalt-rubber. Pre and one post sweeping is the responsibility of the Contractor.

Staging Location

The awarding authority shall provide a staging area for equipment and materials to be used on the project. The Contractor and Director shall mutually review and agree that the location is of adequate size and condition to allow for safe and secure usage for the required operation(s).

Measurement and Payment

Asphalt-Rubber Surface Treatment shall be measured by the square yard and shall be the actual number of square yards applied. Price per square yard shall be full compensation for all labor, materials,

equipment , and incidentals required to complete the work (including street sweeping before and after treatment).

Item No. 13: SINGLE STONE SEAL SURFACE TREATMENT

The Work under this item shall include the furnishing, application, and compaction of a latex modified emulsified asphalt binder and a crushed stone cover, furnishing and installing temporary warning signs, and the sweeping of the roads before and after application. The temporary cardboard warning signs shall read "Fresh Oil, Loose Stone" (or similar wording) and shall be placed at locations as directed by the Engineer (as a minimum at all intersections).

Materials

1. Emulsified Asphalt – Emulsified asphalt for Stone Seal Surface Treatment shall be CRS-2 (cationic/3% latex) conforming to ASTM D2397 or RS-2 (36 nionic/3% latex) conforming to ASTM 977-86.
2. Latex Additive – The latex additive to the emulsified asphalt binder shall conform to the following properties. The latex shall be co-milled at the bulk emulsion facility, to ensure complete and balanced blending, and the emulsion manufacturing plant must be open to inspection by the Owner.

<u>Properties</u>	<u>Anionic</u>	<u>Cationic</u>
Monomer Ratio, Butadiene/Styrene	(76±2)/(24±2)	(76±2)/(24±2)
Solids Content, %	67	59
Solids Content, lbs./gal.	5.2	4.8
Coagulum on 80 mesh screen, max %	0.1	0.1
Mooney Viscosity of Polymer (ML 4 @ 212 deg.F) min.	100	100
Ph of latex	9.5 – 10.5	4.0 – 5.5
Surface Tension, dynes/cm	32	32
Brookfield Viscosity, cps (Model RVT, #3 Spindle @ 20 RPM)	800 – 2,000	5,000 max.
Mechanical Stability	Excellent	Excellent

3. Cover Aggregate – The cover aggregate shall be blue quarry stone with 70% fractured face, and shall be compatible with the emulsified asphalt.

The crushed stone shall be thoroughly clean and free from deleterious matter, essentially one size, sharp and conform to the following gradation requirements as determined by California Test Method No. 202.

<u>Sieve Size</u>	<u>Percentage Passing</u>
	Medium 3/8" x No.6
1/2"	100%
3/8"	85-100%
1/4"	10 – 60%
No. 4	0 – 10%
No. 8	0 - 5%

No. 16

0 - 2%

Maximum passing the #200 sieve shall not exceed 1.0%. Stone shall be wet washed for all sized aggregates used in surface treatments.

Screening shall be non-cubical in nature and shall also conform to the following quality requirements:

<u>Test</u>	<u>Method No.</u>	<u>Requirements</u>
Loss in L.A. Rattler Test (After 100 Rev.)	211	10% Maximum
(After 500 Rev.)	211	40% Maximum
Film Stripping	302	25% Maximum
Cleanliness Value	227	75% Minimum

The successful bidder shall submit a 10-pound sample of material proposed to be supplied. Samples which, in the opinion of the Town, would result in excessive stripping shall be rejected.

The quantity of asphalt material to be used shall be in the range of 0.35 to 0.50 gallons per square yard. Cover aggregate shall be spread in the range of 20 to 30 pounds per square yard. The Contractor will use lab tests to design specific material quantities to meet existing field conditions. Variations in material quantities will be made without adjustment to contract unit price. The Contractor shall maintain a laboratory open to the inspection of any Town.

Quality Assurance

A certificate of compliance shall be issued to the Town prior to the application of the stone seal surface treatment which guarantees the compatibility of the emulsified asphalt with the cover aggregate. The laboratory results from a pre-approved testing company shall be submitted with the certificate of compliance.

Emulsified asphalt and cover aggregate shall be matched to obtain compatible molecular charges.

Samples shall be supplied with the following information:

- * quarry location
- * gradation
- * certificate of material compliance

Construction Equipment

The equipment used by the Contractor shall include, but not be limited to, one or more of the following:

- a. Asphalt Distributor - The asphalt distributor shall contain suitable mechanical circulating and heating mechanisms to provide a uniform approved temperature of the entire mass of material. The distributor shall be capable of applying asphalt materials in accurately measured quantities at any

rate between 0.1 to 2.0 gallons per square yard of roadway surface, at any length of spray bar up to twenty-four feet. The distributor shall be capable of maintaining a uniform rate of distribution of asphalt material regardless of change in grade, width or direction of the road. The spray nozzles and pressure system shall provide a sufficient and uniform fan-shaped spray of asphalt material throughout the entire length of the spray bar at all times while operating. The spray shall completely cover the roadway surface receiving the treatment.

- b. Aggregate Spreader - The aggregate spreader shall be hydrostatically driven and self-propelled. It may be equipped with a hydraulically controlled variable adjustable head that is capable of spreading stone in widths from 4.5 to 18 feet. The spreader shall be mounted on pneumatic tires, and shall apply the stone on the road surface in a manner that ensures that the tires do not contact the road surface until after the stone has been applied. The unit shall be equipped with an electronic radar type sensor used to measure ground speed and will automatically adjust the stone application rate depending on width of application and the speed of chip spreader. It shall have the ability to apply stone on any grade from 0 – 6%. The spreader shall be equipped with an integral hopper with a minimum capacity of 5 tons of stone which shall be filled by trucks in a manner which ensures that the truck tires never come in contact with asphalt-treated road surfaces until the stone has been properly applied. To maintain constant stone application, a self-locking truck hitch will permit towing of aggregate trucks without stopping the chip spreader. It will be capable of maintaining positive engagement over irregular terrain.
- c. Rollers - At least one rubber tired and one steel wheeled roller shall be used on each treated surface immediately after the stone has been applied. Each roller shall have a compacting width of not less than 5 feet. Each roller shall have a gross weight of not less than 8 tons and contact pressure adjustable from 200 to 300 psi.
- d. Trucks - Rear discharge conveyor-fed trucks in sufficient number and size may be used to deliver stone to the spreader.

Construction Method

The construction of Single Stone Seal Surface Treatment by the Contractor shall conform to recommended practices of the Asphalt Institute and the following.

1. Preparation of Existing Surface - Immediately before Work begins, the existing surface shall be adequately swept by the Contractor. The Contractor shall then oil and cover with tar paper all pavement surface utility hardware within project limits. Surface preparation, which may include pothole patching, truing and leveling, adjusting of street irons (valve covers, manhole covers, drop inlet gratings), etc., will be the responsibility of each Town and will be completed before the Contractor moves onto the job.
2. Weather Limitations - Work will not be done unless the road surface is dry. No work shall be done during rain or foggy periods, or if the local forecast calls for rain or fog on that day. No work shall be done if the ambient temperature is below fifty degrees Fahrenheit (50°F).

WORK UNDER THIS CONTRACT SHALL BE PERFORMED FROM JUNE TO SEPTEMBER, AS AUTHORIZED BY EACH TOWN. EACH TOWN SHALL BE THE SOLE DETERMINING JUDGE OF WHEN THE WEATHER CONDITIONS ARE SUITABLE FOR BEGINNING WORK. ALL STREETS SELECTED FOR TREATMENT SHALL BE TREATED BEFORE OCTOBER.

3. Application of Emulsion – The pre-determined quantity of emulsified asphalt binder shall be sprayed uniformly onto the prepared surface. The asphalt material shall not be applied more than 300 feet in advance of the self-propelled aggregate spreader. AT NO TIME SHALL ANY ASPHALT MATERIAL BE ON ANY ROAD SURFACE FOR MORE THAN FIFTEEN (15) MINUTES BEFORE IT IS COVERED WITH STONE.
4. Application of Aggregate – A uniform application of the pre-determined quantity of aggregate shall immediately be spread over the emulsified asphalt binder.
5. Application Operation – The bituminous distributor and the aggregate spreader shall move at the same rate of speed. These units shall operate at a distance not exceeding 50 feet from each other.
6. Rolling – Rolling shall begin immediately after aggregate is spread and continue until at least two complete rollings have been completed over the entire width of each pass of the aggregate spreader. Rollers shall never be more than 100 feet behind the aggregate spreader.

Initial rolling shall be done with self-propelled pneumatic rollers immediately following the application of the cover aggregate. Final rolling on stone seal shall be done by steel roller weighing not less than 8 nor greater than 10 tons. The rollers shall be operated at a speed that will not displace the aggregate.

7. Traffic Control – During construction and 24 hours following construction, vehicle speed shall be posted to a maximum of 20 miles per hour. One lane of traffic shall remain open to vehicles at all times.
8. Street Sweeping/Clean Up – The roads shall be mechanically swept by the Contractor to remove excess aggregate as soon as possible but no later than 14 calendar days after the stone application as approved by the Town. The sweepings shall become the property of the Contractor unless a Town requests that the Contractor stockpile the sweepings in Town for its use. The tar paper covers over utility hardware shall also be removed by the Contractor.

Quality Control and Inspection

Each Town shall have access to all construction activities to closely supervise and inspect the rates of application and amount of rolling to ensure that proper methods are being adhered to.

1. Aggregate – The aggregate shall be washed to insure clean material. Immediately after the aggregate has substantially dried from the washing process, the stone shall be sprayed with a coating of emulsified asphalt at a rate of three (3) gallons per ton of aggregate.
2. Temperature of Emulsified Asphalt Binder – Temperature of asphalt emulsion at the time of application shall be not less than 130 deg. F nor more than 180 deg. F.
3. Latex Additive – Latex additive shall be added at the refinery or terminal. A certificate of compliance shall be submitted by the refinery or terminal attesting that the required rate of application has been provided. The latex addition should be at the rate of 3.0 gallons per 100 gallons of emulsified asphalt binder.

4. Weather - The minimum temperature shall be 50 deg.F and rising, with no rain predicted. Should any form of precipitation begin during construction, stone seal operation shall cease. Re-commencement of operations shall be as directed by each Town.
5. Sweeping - Excess aggregate shall be mechanically swept by the Contractor to the satisfaction of the Town as soon as possible after application but no later than 14 calendar days after the stone application.

Product Performance

The stone seal surface treatment elements that shall be retained on the road surface shall conform to the following minimum quantities:

1. Residual Asphalt Content: 0.20 to 0.25 gallons/square yard.
2. Stone Chips: 20 to 25 pounds/square yard (based on a specific gravity of 2.65. Quantity requirements will be adjusted based on the source of stone.)

Measurement and Payment

Single Stone Seal Surface Treatment will be measured for payment by the square yard of pavement surface area complete in place. Single Stone Seal Surface Treatment will be paid for at the Contract unit price per square yard, which price shall include all labor, materials, equipment, disposal and incidental costs required to complete the Work (including furnishing and installing temporary warning signs, and street sweeping before and after stone application).

Item No. 14: DOUBLE STONE SEAL SURFACE TREATMENT

The Work under this item shall include the furnishing, application, and compaction of a latex modified emulsified asphalt binder and crushed stone covers applied in two courses, furnishing and installing temporary warning signs, and the sweeping of the roads before and after application. The temporary cardboard warning signs shall read "Fresh Oil, Loose Stone" (or similar wording) and shall be placed at locations as directed by the Engineer (as a minimum at all intersections). The Work shall be constructed in conformance with the above specifications for SINGLE STONE SEAL SURFACE TREATMENT with the following differences:

The Contractor shall supply samples of stone and asphalt, and job mix formula to each Town for approval. The stone seal surface treatment elements that shall be retained on the road surface shall conform to the following minimum quantities:

Residual Asphalt Content: 0.45 to 0.65 gallons/square yard

Stone Chips Applied: 45 to 55 pounds/square yard
3/8" Crushed Stone

<u>Sieve Size</u>	<u>Percentage Passing</u>
1/2"	100%
3/8"	85-100%
1/4"	10-60%

No.4	0-10%
No.8	0-5%
No.16	0-2%

1/2" Crushed Stone

<u>Sieve Size</u>	<u>Percentage Passing</u>
5/8"	100%
1/2"	85-100%
3/8"	15-45%
No.4	0-10%
No.8	0-2%

Measurement and Payment

Double Stone Seal Surface Treatment will be measured for payment by the square yard of pavement surface area complete in place. Double Stone Seal Surface Treatment will be paid for at the Contract unit price per square yard, which price shall include all labor, materials, equipment, disposal and incidental costs required to complete the Work (including furnishing and installing temporary warning signs, and street sweeping before and after stone application).

Item No. 15: POROUS PAVEMENT FULL DEPTH CONSTRUCTION

The Work under this section shall conform to the relevant provisions of Sections 120, 460, M1, M2, M3, and M9 of the Standard Specifications (all as amended) and the following. The porous pavement shall meet the Standard Specifications for Polymer Modified Open-Graded Friction Course.

The Work shall include the full depth excavation and subsequent installation of a porous pavement full depth construction system consisting of, from top to bottom: a four (4) inch layer of porous pavement machine installed in separate two (2) inch lifts; an eight (8) inch layer of three eighths (3/8") to three quarter inch (3/4") blended crushed stone; and, a twelve inch (12") layer of one and one half inch (1-1/2") native (rounded) stone. Filter fabric (Mirafi 160N Non-Woven Geotextile) shall be installed along all sides and ends (not the bottom) of the porous pavement system. **Each site shall be a guaranteed minimum of 200 square yards.**

The measured quantity will be paid for at the Contract unit price per square yard, which price shall include a complete porous pavement full depth construction system in-place including all labor, materials, equipment, pavement saw cutting, excavation, hauling, disposing, grading, compacting, tack coating pavement edges, porous pavement, stone, filter fabric, and incidental costs required to complete the Work. If needed, Contractor shall install Owner provided risers on gate valve boxes at no additional cost to the Town. Drainage and sewer casting adjustments are paid for under a separate item.

Item No. 16: POROUS PAVEMENT SIDEWALK CONSTRUCTION

The Work under this section shall conform to the relevant provisions of Sections 120, 460, M1, M2, M3, and M9 of the Standard Specifications (all as amended) and the following. The porous pavement shall meet the Standard Specifications for Polymer Modified Open-Graded Friction Course.

The Work shall include the full depth excavation and subsequent installation of a porous pavement full depth sidewalk construction system consisting of: a four (4) inch layer of porous pavement machine installed in separate two (2) inch lifts over an eight (8) inch layer of three eighths (3/8") to three quarter inch (3/4") blended crushed stone. Filter fabric (Mirafi 160N Non-Woven Geotextile) shall be installed along all sides and ends (not the bottom) of the porous pavement system. It is anticipated that the new sidewalk shall range between 4 and 6 feet wide.

The measured quantity will be paid for at the Contract unit price per square yard, which price shall include a complete porous pavement sidewalk construction system in-place including all labor, materials, equipment, pavement saw cutting, excavation, hauling, disposing, grading, compacting, tack coating pavement edges, porous pavement, stone, filter fabric, and incidental costs required to complete the Work. If needed, Contractor shall install Owner provided risers on gate valve boxes at no additional cost to the Town. Drainage and sewer casting adjustments are paid for under a separate item.

Item No. 17: BITUMINOUS PAVEMENT REPAIR - INFRA-RED METHOD

The Work shall include the treatment of utility trench and other bituminous concrete patches to provide a permanent, uniform and durable patch matching the surface of the abutting pavement. The Work shall be performed by workmen skilled in the infra-red method, and with equipment and materials approved for use by the Engineer prior to start of Work. The following procedure shall be used:

- * Adequately sweep the treatment area clean, and remove all loose and foreign material.
- * Apply infrared heat to the patch area by carefully positioning an infra-red heater not to exceed 15,000 BTUs per square foot per hour for the period of time required to soften the pavement to a depth which will allow adequate raking of the asphalt without oxidation of the bitumen in the pavement material (minimum depth of 1"). The Contractor shall remove all unsuitable oxidized material and replace same with bituminous concrete.
- * Introduce a suitable proven recycling agent additive amount as approved, to the softened area. Scarify to produce a uniform workable mix and regrade the patch to a uniform grade and surface, and to match the abutting pavement.
- * Add additional Class I bituminous concrete Type I-1 material as necessary. A supply of the material shall be kept on hand in an infrared storage unit at a constant temperature during working hours. The stored material shall be kept at a temperature above 200 degrees F. No material with a temperature of less than 200 degrees F shall be used in the Work.
- * After the proper consistency of the paving material and recycling agent has been attained, the combined mixture shall be raked to the desired grade and compacted with a steel wheel roller of sufficient weight to achieve a uniform density comparable to that of the adjacent pavement.
- * Seal the edges of the repaired patch with an approved penetrating liquid asphalt emulsion to develop a stronger, more durable bond. Uniformly distribute a compatible approved petroleum resin sealant, and broadcast an approved mineral filler over the entire patch area to absorb any excess liquid and to prevent tracking.

- * Test the compacted surface with a straight edge to verify that a uniform, depression free surface has been obtained. Repeat the treatment process to remove any depressions found by the test.

The measured quantity will be paid for at the Contract unit price per square yard, which price shall include all labor, materials (excluding additional bituminous concrete), equipment, disposal costs, and incidental costs required to complete the Work. The additional bituminous concrete shall be supplied by the Town's vendor at no cost to the Contractor; however, the Contractor shall pick-up the bituminous concrete at the Town's vendor's plant at no additional cost to the Town. Contractor shall install Owner provided risers on gate valve boxes at no additional cost to the Town. Drainage and sewer casting adjustments are paid for under a separate item.

Item No. 18: PARTIAL DEPTH PAVEMENT PATCH

The Work shall consist of the construction of partial depth pavement patches at various locations as directed by the Engineer. The Work shall include the following:

Partial depth pavement patch excavation shall consist of the removal and satisfactory disposal of all bound pavement materials, the removal of which is necessary for the proper completion of the work. The excavation will be made to a minimum depth of 1.5". Contractor shall make the excavation square or rectangular with faces straight and vertical. The Contractor may use any type of pavement saw-cutting or milling equipment that will not damage adjacent pavement. A jack-hammer and compressor will not be allowed for cutting the pavement surface.

The Contractor shall swab or paint the existing vertical faces of the pavement with an approved emulsified asphalt such that a uniform film of asphalt will remain when cured.

Hot Mix Asphalt Pavement shall be placed and properly compacted with a power roller. The surface shall not deviate more than 1/8" from a straight edge placed on the existing pavement. The perimeter of the patch shall be painted with an emulsified asphalt or approved equal such that a 4" wide strip will be equally spaced on the new and existing pavement. The joint sealing material shall be dusted with stone screenings or stone dust such that no tracking or pick-up of the seal will occur.

Partial depth pavement patch will be measured for payment by the square yard complete in place. The measured quantity will be paid for at the Contract unit price per square yard, which price shall include all labor, materials, equipment, and incidental costs required to complete the Work. Contractor shall install Owner provided risers on gate valve boxes at no additional cost to the Town. Drainage and sewer casting adjustments are paid for under a separate item.

Item No. 19: MISC. PAVEMENT PATCH

The Work shall consist of the construction of miscellaneous pavement patches of various thicknesses on local roads at locations as directed by the Engineer. The Work shall include the following:

- * Because the areas to be patched are typically in very poor condition, the Contractor shall use any method at his disposal to cut and completely remove the existing failed pavement/ subbase to the depth (minimum 3" depth) as directed by the Engineer.

- * The subgrade area shall be fine graded and compacted in conformance with Section 170 of the Standard Specifications.
- * Cut surfaces shall be sprayed or painted with a uniform, thin coat of RS-1 asphalt emulsion immediately before placement of bituminous concrete material against the surfaces.
- * Class I Bituminous Concrete – Type I-1 shall be placed and compacted in 2 courses as a wearing surface (minimum 3” depth). Binder (2” minimum) and top (1” minimum) courses shall be installed on the same day allowing for adequate cooling between courses. The top course may be installed the next day if approved by the Engineer and if adequate safety signing/ measures are taken. In any case, the top course must be installed prior to weekends and/or holidays.

Miscellaneous pavement patches will be measured for payment by the ton complete in place. The measured quantity will be paid for at the Contract unit price per ton, which price shall include all labor, materials, equipment, and incidental costs required to complete the Work. Contractor shall install Owner provided risers on gate valve boxes at no additional cost to the Town. Drainage and sewer casting adjustments are paid for under a separate item.

Item No. 20: VELOCITY SPRAY INJECTION POTHOLE REPAIR

Scope of Work:

The work under this item shall consist of furnishing all labor, equipment, materials (asphalt emulsion and aggregate) and incidentals required to perform repairs on distressed bituminous concrete pavement by the Velocity Spray Injection Method.

Equipment:

- a. The distribution unit shall be a 33,000 GVW truck, equipped with a 6 cubic yard aggregate hopper, a 300 gallon asphalt emulsion tank, a 1000 pound anti-track material hopper and a delivery tube, air pressurized, to distribute the items above to the distressed pavement.
- b. Aggregate shall be delivered to the tube by a nylon belt covered positive drive chain conveyor, emulsion shall be delivered by a pressurized system at 140 degrees F, and anti-track material shall be delivered to the tube as required. Each item is delivered to the tube by in-cab remote controls.

Item No. 21: CAPE SEAL w/ Single Stone Seal Surface Treatment

Item No. 22: CAPE SEAL w/ Double Stone Seal Surface Treatment

The work under these items consists of the furnishing, application, and cleanup of “Cape Seal”, furnishing and installing temporary warning signs, and sweeping of roads before and after stone seal application.

“Cape Seal” shall be a combination of Stone Seal Surface Treatment and Microsurfacing completed in two successive operations with the micro surfacing completely covering and encapsulating the stone seal aggregate.

Both processes shall be completed within the same construction season and meeting the Town's desired schedule. The Microsurfacing shall not be applied sooner than seven (7) days after the stone seal is complete in order that the stone seal emulsion can be totally cured. An additional sweep may be required prior to the placement of the Microsurfacing to remove any surplus aggregate.

The first phase of the Cape Seal installation shall be completed in accordance with the Single Stone Seal Surface Treatment (Item No 12 above) or the Double Stone Seal Surface Treatment (Item No. 13 above) specification herein utilizing the CRS-2 emulsion without the 3% latex.

The second phase of the Cape Seal installation shall be completed in accordance with the Microsurfacing (Item No. 6 above) specification herein except that the application shall be a single lift of Type II material applied at not less 25 pounds per square yard (dry aggregate weight), and of sufficient thickness that none of the stone seal aggregate is exposed after curing of the Microsurfacing.

The quantity of Cape Seal to be measured for payment will be the number of square yards of Cape Seal actually completed. The accepted quantity of Cape Seal will be paid for at the Contract unit price per square yard, which shall be full compensation for furnishing, transporting, handling and placing the material specified and furnishing of all labor, tools, equipment, pavement surface cleaning, and incidentals for the satisfactory completion of the work.

Item No.23: TEXTURED SYNTHETIC PAVEMENT

The work under this item shall consist of preparing pavement surface and installation of eight to ten (8 – 10) foot wide Textured Synthetic Pavement at proposed crosswalk locations selected by the Town and in accordance with the following:

Preparation of Asphalt Surface

The section of pavement to be replaced shall be sawcut in neat lines eight to ten feet apart in the direction of the proposed crosswalk. The final surface pavement shall then be cold planed to an approximate depth of 0.75 inches. The Contractor shall immediately remove all residual material resulting from this work. All excavated material shall be disposed of by the Contractor offsite.

Installation of Textured Synthetic Pavement

The Contractor shall be responsible for the preparation, placement and patterning of Textured Synthetic Pavement. This synthetic paving material shall be composed of a hot-applied, resin-based compound formulated with a color stable pigment throughout that can be surface textured to simulate a brick pattern. Said pattern shall be oriented such that the continuous lines of the brick pattern shall be perpendicular to the parallel edges of the proposed crosswalk. The Contractor will be required to overlay in previously prepared recessed pavement surfaces as described above, and as required and approved by the Town.

The Contractor must be a manufacturer authorized applicator, experienced with this specialized system, satisfactory to the Engineer. Contractor shall furnish shop drawings, from manufacturer, to confirm design intent. A manufacturer representative shall be present at all times during the placement and curing of the textured synthetic pavement materials.

Using manufacturer prescribed methods and equipment, the Contractor shall adequately heat and uniformly mix the synthetic material(s) together. Maximum heating temperature of the completed formulation is 440 degrees Fahrenheit.

The Contractor shall then apply the heated, mixed synthetic material to the surface of the hardened, structurally sound, asphalt pavement. The synthetic material shall be spread and leveled to the desired build thickness of 0.75 inches, using manufacturer's specialized ironing tools, heated sufficiently to smooth the surface to a state of readiness for texturing. No material shall be applied when precipitation is present.

The color and surface pattern shall be a red colored brick pattern.

Texturing will begin immediately after leveling has occurred, while the material is still hot enough to allow the mold selected, to adequately penetrate the surface and create the desired pattern or form.

Once the finished surface has cooled completely and has hardened to the manufacturer's specification to support vehicular and pedestrian traffic, the application area may be opened to vehicular and/or pedestrian traffic.

Any residual material resulting from this work shall be removed and disposed of in a proper manner off site. The completed work area shall be left in a neat and clean condition, satisfactory to the Engineer.

The products used in this surfacing system shall meet the material specifications outlined below and conform to the minimum following physical and performance properties: hot-applied resin-based compound developed specifically for use on asphalt or cement concrete, with superior adhesion, flexibility and abrasion resistance characteristics, as well as color stability, chemical resistance and scrub ability.

The Contractor, during the operation of work, to save from harm and injury, any structure, public or private, situated above or below the surface and lying within the scope of the project. If during the execution of the work, the Contractor, through willfulness or carelessness, permits or causes any damage, the cost of satisfactory repair or replacement shall be the financial responsibility of the Contractor.

Synthetic Pavement Material

The material to be used under this item shall be Textured Synthetic Pavement as manufactured by Jarvis Infrastructure Services, Kennesaw, Georgia. The material required shall be Grade 60 (HEAVY TRAFFIC) and shall conform to the relevant physical properties outlined as follows:

Grade 60 (HEAVY TRAFFIC)

Average Temp. Range:	25 - 140 degrees F
Wheel Tracking @ 113 F:	less than 1 mm/ hr
Wheel Tracking @ 140 F:	less than 5 mm/hr
Density:	2.12
Cone Flow Test:	15% maximum

(5 hrs. @ 194 F)	
Plane Test:	5% maximum
(5 hrs. @ 194 F)	
Indent @ 104 F:	50 dmm maximum
Indent @ 122 F:	75 dmm maximum
Ash Content:	90% maximum
Skid Resistance Value:	55 - 70

Equipment Required

Contractor shall possess and be familiar with the specialized machinery necessary to perform the procedures as outlined and contained within this technical specification package, including, but not limited to, appropriate trucks, compressors, miscellaneous asphalt equipment, dispensers, applicators, cutters and/or specialized tools etc.

Compensation

Textured Synthetic Pavement shall be paid for at the Contract unit price per square yard in place, which price shall include all labor, materials, equipment, sawing, cold planning, cleanup, hauling, disposing, and incidental costs required to complete the work.

ITEM 100 CHLORINATED RUBBER PAINT AND BEADS FOR 4" REFLECTORIZED LINE**ITEM 101 CHLORINATED RUBBER PAINT AND BEADS FOR STOP BARS & CROSSWALKS****ITEM 102 CHLORINATED RUBBER PAINT AND BEADS FOR ARROWS & MISCELLANEOUS MARKINGS**

The Work shall include the furnishing and installing of alkyd traffic paint modified with chlorinated rubber and glass beads conforming to Section M7 of the Standard Specifications. The white or yellow reflectorized traffic paint shall comply with Section 860 of the Standard Specifications.

Low VOC Chlorinated Rubber Traffic Paint

The durable, fast drying, Alkyd modified with chlorinated rubber traffic paint shall conform to the current V.O.C. regulations and the following:

Composition	White	Yellow (lead free)
Vehicle % by wt.	40-43	40-43
Pigment % by wt.	57-80	57-60
Total Solids % by wt.	74 min	74 min
Total Solids % by vol.	50 min	50 min
V.O.C. grams/liter	150 max	150 max
Titanium dioxide rutile (type II)	1 lb/gal min	.3 lbs/gal min
Organic yellow pigment (lead free)	n/a	.25 lbs/gal min
Chlorinated rubber	.5 lbs/gal min	.5 lbs/gal min

Detailed Requirements

Wt/Gal	12.5 +/- .2	12.1 +/- .2
Viscosity K.U.	75-85	75-85
Dry Time 15 mils wet film @ 77 F Minutes	10 max	10 max
Dry Opacity @ 15 mils wet	.96 min	.96 min
Reflectance	84 min	50 min
Grind	3 min	3 min
CC Flash Point (F)	(-4 F) min	(-4 F) min

The application rates shall be 1 gallon of paint and 5 pounds of beads per 320 linear feet of 4" wide line.

Application Conditions

Temperature: 50°F (10°C) minimum, 110°F (43°C) maximum (air, surface, and material) and at least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Equipment

The Contractor shall supply 1 long line spray truck, manufactured with stainless steel components to properly apply alkyd traffic paint modified with chlorinated rubber, capable of applying solid lines in a sharp and true manner. The unit must have a minimum paint tank capacity of 400 gallons and a minimum bead truck capacity of 2,000 pounds. The long line spray truck must be capable of producing

an acceptable 4" wide single or double line at the application rate of 5 pounds of beads and 320 lineal feet per one gallon of paint while traveling at a minimum of 7 miles per hour.

The Contractor shall supply 1 cone truck (rack body with hydraulic tail gate) with 300 cones.

The above units shall include protective devices and warning signs for the painting operation. Each unit shall be radio controlled with a portable unit available for the Highway Division lead truck.

The Contractor shall supply 2 operating personnel for the spray truck and 3 cone setters/retriever personnel for the traffic cone setting truck.

The Contractor will place traffic cones on all freshly painted lines to reduce tracking.

Contractor Responsibilities

The Contractor shall complete the painting as indicated herein, subject to weather conditions, such as wet or extremely cold pavement. The Contractor shall have backup equipment available to him in the event of a breakdown.

The Contractor shall have a supervisor or foreman available to direct operations. The supervisor or foreman will report to the Highway Division Superintendent or his designee, any problem, as well as, give daily progress reports.

The Contractor must show by past performance that he is capable of performing a Contract of this magnitude.

On new road surfaces, the Contractor shall pre-mark the centerlines and fog lines, as needed, at no additional cost to the Town.

Measurement and Payment

The measured quantity for 4" Reflectorized Line and 12" Stop Bars and Crosswalks will be paid at the Contract Unit Price per Linear Foot, which price shall include all labor, equipment, materials and incidental costs required to complete the Work. The measured quantity for Arrows and Miscellaneous Markings will be paid at the Contract Unit Price per Square Foot, which price shall include all labor, equipment, materials and incidental costs required to complete the Work.

ITEM 103 THERMOPLASTIC PAINT FOR 4" REFLECTORIZED LINES

ITEM 104 THERMOPLASTIC PAINT FOR STOP BARS & CROSSWALKS

ITEM 105 THERMOPLASTIC PAINT FOR ARROWS & MISCELLANEOUS MARKINGS

The Work under these items shall conform to the relevant provisions of Section 860 of the Standard Specifications and the following:

Material used and method of installation shall conform with the relevant provisions of Subsection M7, M7.01.03, M7.01.04, M7.01.18, and 860 of the Standard Specifications. All dimensions and spacing shall be as directed by the Engineer.

The Contractor shall install all pavement markings at locations as directed by the Engineer. **On new road surfaces, the Contractor shall pre-mark the centerlines and fog lines, as needed, at no additional cost to the Town.**

Measurement and Payment

The measured quantity for 4" Reflectorized Line and 12" Stop Bars and Crosswalks will be paid at the Contract Unit Price per Linear Foot, which price shall include all labor, equipment, materials and incidental costs required to complete the Work. The measured quantity for Arrows and Miscellaneous Markings will be paid at the Contract Unit Price per Square Foot, which price shall include all labor, equipment, materials and incidental costs required to complete the Work.

ITEM 106 EPOXY PAINT FOR 4" REFLECTORIZED LINES

Work under these items cover white and yellow epoxy reflectorized pavement marking material that is sprayed onto the pavement. Immediately following this, a surface application of glass beads is applied. The work, materials, and methods of installation under these items shall conform to the relevant provisions of Sections 860 and subsection M7 of the Standard Specifications. and the following:

The epoxy marking material shall be two-component (Part A and Part B), 100% solids type system formulated and designed to provide a simple volumetric mixing ratio (e.g. two volumes of Part A to one volume of Part B).

Part A of both white and yellow shall conform to the following requirements:
Percent by weight:

WHITE Pigment - 18 Minimum, Titanium Dioxide (ASTM D476, Type II) Epoxy Resin - 75 to 82

YELLOW Pigment - 18 Minimum, Titanium Dioxide (ASTM D476, Type II) 5 Minimum, Organic Yellow, Epoxy Resin – 73 to 77

The entire pigment composition shall consist of either titanium dioxide or titanium dioxide and organic yellow. No extender pigments are permitted. Yellow pigment shall be lead-free.

The work of these items shall only be performed when atmospheric and surface temperatures are 40°F higher

On new road surfaces, the Contractor shall pre-mark the centerlines and fog lines, as needed, at no additional cost to the Town.

All dimensions and spacing shall be as directed by the Engineer.

The measured quantity for Epoxy Paint for 4" Reflectorized Lines will be paid at the Contract Unit Price per Linear Foot, which price shall include all labor, materials and incidental costs required to complete the work.

ITEM 107 PAVEMENT MARKING REMOVAL

The Work under this section shall conform to the relevant provisions of Section 850.67 of the Standard Specifications and the following. Existing pavement markings shall be removed to the fullest extent possible by an approved method. Pavement removal methods shall not cause damage to the pavement or cause drastic change in texture, which could be construed as delineation at night, and shall be

approved by the Town. It is not permissible to paint over existing markings with black paint in lieu of removal. Approved methods include but are not limited to:

1. High pressure air.
2. High pressure water (cold weather use not permitted).
3. Sand blasting.
4. Mechanical devices such as grinders, sanders, scrapers, scarifiers, and wire brushes.

Painting over a pavement marking by use of asphaltic liquids or paints will not be permitted. Conflicting pavement markings shall be removed before any change in the traffic pattern.

Material deposited on the pavement as a result of removing markings shall be removed as the work progresses. Accumulations of sand or other material, which might interfere with drainage or could constitute a hazard to traffic, will not be permitted.

Any damage to the pavement or surfacing caused by pavement marking removal shall be satisfactorily repaired at no additional cost to the Town.

Where the removal operation is being performed near a lane occupied by traffic, a vacuum attachment operating concurrently with the removal operation must be in use. All residues shall be removed immediately from the surface being treated.

The measured quantity will be paid for at the Contract Unit Price per Square Foot which price shall include all labor, equipment, vacuuming, sweeping, hauling, disposing, and incidental costs required to complete the Work.

ITEM 108 DRAINAGE PIPE CLEANING

The Work under this item consists of the cleaning of existing drainage pipes. Work under this item shall be performed under the direction and to the satisfaction of the Highway Division Superintendent or his designee.

Drainage pipe cleaning will be paid for at the Contract Unit Price per Day (8 working hours exclusive of travel time) broken down as follows:

* Drainage pipe cleaning performed between 0 and 4 hours will be paid for at half the Contract Unit Price per Day.

* Drainage pipe cleaning performed for a period greater than 4 hours will be paid for at a proportion of the full Contract Unit Price per Day.

The Contract Unit Price per Day shall include all labor, equipment, transportation and incidental costs required to complete the Work. The Work under this item does not include the removal and legal disposal of hazardous material.

ITEM 109 DRAINAGE STRUCTURE CLEANING BY CLAMSHELL (WITH DISPOSAL)

The Work under this item consists of the cleaning of existing drainage structures. The Work also includes the complete removal and legal disposal of the debris. Work under this item shall be

performed under the direction and to the satisfaction of the Highway Division Superintendent or his designee.

Drainage structures shall be cleaned along their entire circumference. Debris shall be substantially (95%) removed from the structure walls and bottoms. The proposed equipment shall be submitted for approval by the Town Engineer or his designee.

The contractor shall be responsible for stockpile area management including confinement of debris, erosion control, loading, and removal of the debris. The contractor shall provide documentation of proper disposal to the town as a condition of payment. The contractor shall be responsible for any testing costs required for legal disposal of the catch basin cleanings. It is the responsibility of the Contractor to contact each Town and determine if a staging and stockpile area is available on town property or if the contractor will have to make alternative arrangements for a legal stockpile area.

The Contract Unit Price per Each shall include all labor, materials, equipment, transportation and incidental costs required to complete the Work. The Work under this item does not include the removal and legal disposal of hazardous material.

ITEM 110 DRAINAGE STRUCTURE CLEANING BY CLAMSHELL (W/O DISPOSAL)

The Work under this item consists of the cleaning of existing drainage structures. Work under this item shall be performed under the direction and to the satisfaction of the Highway Division Superintendent or his designee.

Drainage structures shall be cleaned along their entire circumference. Debris shall be substantially (95%) removed from the structure walls and bottoms. The proposed equipment shall be submitted for approval by the Town Engineer or his designee.

The town shall provide the contractor an area to dump the catch basin cleanings. The town will manage the stockpile area and legally dispose of the debris.

The Contract Unit Price per Each shall include all labor, materials, equipment, transportation and incidental costs required to complete the Work. The Work under this item does not include the removal and legal disposal of hazardous material.

ITEM 111 DRAINAGE STRUCTURE CLEANING BY VACUUM TRUCK (WITH DISPOSAL)

The Work under this item consists of the cleaning of existing drainage structures. The Work also includes the complete removal and legal disposal of the debris. Work under this item shall be performed under the direction and to the satisfaction of the Highway Division Superintendent or his designee.

Drainage structures shall be cleaned along their entire circumference. Debris shall be substantially (95%) removed from the structure walls and bottoms. The proposed equipment shall be submitted for approval by the Highway Division Superintendent.

The contractor shall be responsible for stockpile area management including confinement of debris, erosion control, loading, and removal of the debris. The contractor shall provide documentation of

proper disposal to the town as a condition of payment. The contractor shall be responsible for any testing costs required for legal disposal of the catch basin cleanings. It is the responsibility of the Contractor to contact each Town and determine if a staging and stockpile area is available on town property or if the contractor will have to make alternative arrangements for a legal stockpile area.

The Contract Unit Price per Each shall include all labor, materials, equipment, transportation and incidental costs required to complete the Work. The Work under this item does not include the removal and legal disposal of hazardous material.

ITEM 112 DRAINAGE STRUCTURE CLEANING BY VACUUM TRUCK (W/O DISPOSAL)

The Work under this item consists of the cleaning of existing drainage structures. The Work also includes the complete removal and legal disposal of the debris. Work under this item shall be performed under the direction and to the satisfaction of the Highway Division Superintendent or his designee.

Drainage structures shall be cleaned along their entire circumference. Debris shall be substantially (95%) removed from the structure walls and bottoms. The proposed equipment shall be submitted for approval by the Highway Division Superintendent.

The town shall provide the contractor an area to dump the catch basin cleanings. The town will manage the stockpile area and legally dispose of the debris.

The Contract Unit Price per Each shall include all labor, materials, equipment, transportation and incidental costs required to complete the Work. The Work under this item does not include the removal and legal disposal of hazardous material.

ITEM 113 DRAINAGE STRUCTURE ADJUSTED

The Work under this item shall consist of the adjustment of utility castings for overlays and minor reconstruction where said adjustment is no greater than 6 inches (rise or fall) from existing line and grade and shall conform to the relevant provisions of Sections 201, 202, and 220 of the Standard Specifications and the following:

The Contractor shall maintain the drainage (or sewer) system in the project areas or drainage facilities outside the project area affected by the work performed by the Contractor to provide continual drainage of the travel ways and construction areas. All drainage (or sewer) castings required to be raised to accommodate pavement overlays shall be paid for under this item.

When in the judgment of the Engineer, the masonry below the casting shows deterioration and directs the contractor to remodel, the pay item shall be by the vertical foot and the cost per vertical foot as measured from the bottom of the existing casting, shall be paid as described in Item 108 Drainage Structure Rebuilt.

Clay brick conforming to Subsection M4.05.2 of the Standard Specifications shall be used to make grade adjustments of structure frames.

Any castings damaged due to the Contractor's operations shall be replaced with similar H-20 North American made cast iron castings at no cost to the Town.

A structure adjusted more than once by the Contractor, due to his plan of operation, will be paid for only once regardless of how many adjustments are made to the structure.

The Contract Unit Price per Each shall include all labor, materials, equipment, transportation and incidental costs required to complete the Work. No separate payment will be made for the maintenance of the existing drainage (or sewer) system, but all costs in connection therewith shall be included in the unit prices bid for the various Contract items.

ITEM 114 DRAINAGE STRUCTURE REBUILT

This item applies to the complete rebuilding of an existing structure and includes new masonry construction, backfilling around structures and other incidental work and shall conform to the relevant provisions of Sections 201 and 220 of the Standard Specifications and the following:

The Work shall consist of rebuilding, removing, replacing and adjusting the masonry units and adjusting the castings of existing structures. The casting and deteriorated masonry shall be removed in a neat manner until a clean sound base is obtained upon which concrete blocks and clay bricks may be set to rebuild the structure.

Sand borrow shall be furnished by each Town for backfill where required when excavated material is unsuitable.

Method of measurement shall be measured by the average height in vertical feet and tenths of feet from the bottom row of rebuilt masonry to the bottom of casting.

The cost of removing and replacing the casting, excavation, backfilling around structures and other incidental work shall be included in the unit price for this Item.

The Contract Unit Price per Vertical Foot shall include all labor, materials, equipment, transportation and incidental costs required to complete the Work.

ITEM 115 STEEL BEAM (WEATHERING) HIGHWAY GUARDRAIL (SINGLE FACED/WOOD POSTS)

The Work shall include the furnishing and installation of 12 gauge corrosion resistant (weathering) steel beam rails conforming to AASHTO M180 and wood posts (6" x 8" x 6") and offset blocks (6" x 6") conforming to relevant provisions of Sections 600 and M8.07.0 of the Standard Specifications and to the Construction Standards. Posts shall be set at 6 feet 3 inches on center. Standard reflectors (MHD Item 833.5 Demountable Reflectorized Delineator - Guardrail) shall be furnished and installed on every other panel at no additional cost to the Town.

The contractor shall be guaranteed a minimum of 100 linear feet/day

The measured quantity will be paid for at the Contract Unit Price per Linear Foot, which price shall include all labor, materials (including reflectors), equipment, and incidental costs required to complete the Work. If requested by a Town, the Contractor shall negotiate a fair additional for end treatments.

ITEM 115A STEEL BEAM (WEATHERING) HIGHWAY GUARDRAIL (SINGLE FACED/STEEL POSTS)

The Work shall include the furnishing and installation of 12 gauge corrosion resistant (weathering) steel beam rails conforming to AASHTO M180 and steel posts conforming to relevant provisions of Sections 600 and M8.07.0 of the Standard Specifications and to the Construction Standards. Posts shall be set at 6 feet 3 inches on center. Standard reflectors (MHD Item 833.5 Demountable Reflectorized Delineator - Guardrail) shall be furnished and installed on every other panel at no additional cost to the Town.

The contractor shall be guaranteed a minimum of 100 linear feet/day

The measured quantity will be paid for at the Contract Unit Price per Linear Foot, which price shall include all labor, materials (including reflectors), equipment, and incidental costs required to complete the Work. If requested by a Town, the Contractor shall negotiate a fair additional for end treatments.

ITEM 116 STEEL BEAM (WEATHERING) HIGHWAY GUARDRAIL (SINGLE FACED/WOOD POSTS)(INCLUDING REMOVAL AND STACKING OF EXISTING GUARDRAIL)

The Work shall include everything outlined above in the immediately preceding item plus the removal and stacking of existing guardrail of various types. If requested by a Town, the Contractor shall negotiate a fair additional cost for end treatments.

The contractor shall be guaranteed a minimum of 100 linear feet/day.

The measured quantity will be paid for at the Contract Unit Price per Linear Foot, which price shall include all labor, materials (including reflectors), equipment, and incidental costs required to complete the Work. If requested by a Town, the Contractor shall negotiate a fair additional for end treatments.

ITEM 117 STEEL BEAM (WEATHERING) HIGHWAY GUADRAIL-TERMINAL END

The Work shall include the furnishing and installation of a steel beam (weathering steel) terminal end in conjunction with Items 115 & 116 which shall consist of curved guard rail section, wood posts, offset blocks, and "boxing glove" end, conforming to AASHTO M180 and wood posts (6" x 8" x 6') and offset blocks (6" x 6") conforming to relevant provisions of Sections 601 and M8.07.0 of the Standard Specifications and to the Construction Standards. Posts shall be set at 6 feet 3 inches on center.

The measured quantity will be paid for at the Contract Unit Price per Each, which price shall include all labor, materials (including reflectors), equipment, and incidental costs required to complete the Work and shall include 13 ft long +/-curved guard rail section, wood posts, boxing glove end and Standard reflector (MHD Item 833.5 Demountable Reflectorized Delineator - Guardrail)

ITEM 117A STEEL BEAM (WEATHERING) HIGHWAY GUADRAIL-TERMINAL END

The Work shall include the furnishing and installation of a steel beam (weathering steel) terminal end in conjunction with Items 115 & 116 which shall consist of curved guard rail section, steel posts, and "boxing glove" end, conforming to AASHTO M180 and steel posts conforming to relevant provisions of

the Standard Specifications and to the Construction Standards. Posts shall be set at 6 feet 3 inches on center.

The measured quantity will be paid for at the Contract Unit Price per Each, which price shall include all labor, materials (including reflectors), equipment, and incidental costs required to complete the Work and shall include 13 ft long +/-curved guard rail section, steel posts, boxing glove end and Standard reflector (MHD Item 833.5 Demountable Reflectorized Delineator - Guardrail)

ITEM 118 STEEL BEAM HIGHWAY GUARDRAIL (SINGLE FACED/WOOD POSTS)

The Work shall include the furnishing and installation of steel beam guard rail and posts conforming to the Standard Specification subsection M 8.07.0. Posts shall be set at 6 feet 3 inches on center. Standard reflectors (MHD Item 833.5 Demountable Reflectorized Delineator - Guardrail) shall be furnished and installed on every other panel at no additional cost to the Town.

Each site shall be a guaranteed minimum of 100 linear feet.

The measured quantity will be paid for at the Contract Unit Price per Linear Foot, which price shall include all labor, materials, equipment, and incidental costs required to complete the Work. If requested by a Town, the Contractor shall negotiate a fair additional cost for removal/disposal of existing guardrail and/or end treatments.

ITEM 119 STEEL-BACKED TIMBER GUARDRAIL

The Work under this Item shall conform to Sections 106, 601, 617, 710 and 716 of the U.S. Department of Transportation Federal Highway Administration Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-85), all subsequent errata and addenda, to the applicable provisions of the Standard Specifications and the following:

Materials

Timber Rail: The timber shall conform to AASHTO M 168. Fabricate the 6 by 10 inch timber rail from dry, well seasoned, and dressed rough sawn Douglas Fir, Southern Pine, or other species having a stress grade of at least 1,500 psi.

Treat the timber rail and wood elements with CCA, ACZA, or ACA preservative treatment conforming to AWWA C14 except the minimum retention shall be 0.60 lbs/ft.

Steel: Fabricate the steel backing elements from 0.375 inch structural steel conforming to AASHTO M 222 M. Fastener hardware shall conform to AASHTO M 164, Type 3.

Wood Posts: The 10" by 12" inch guardrail posts shall conform to materials for timber rail as specified above.

Guardrail Hardware: Hardware shall conform to the AASHTO – AGC – ARTBA "A Guide to Standardized Highway Barrier Hardware," 1995 Edition.

Construction Methods

The Steel-Backed Timber Guardrail shall be Type A, and the Turn-down Terminal Section shall be Type FAT – 30 or Type FAT –20 as directed by each Town.

Posts shall be placed plumb, in hand or mechanically dug holes, then backfilled with approved gravel material placed in 6 inch layers and thoroughly compacted.

Where it is possible to maintain 2-feet minimum between the back of the guardrail post and the top of a slope 2:1 or steeper, the post length may be reduced to 7 feet.

Retreat field cuts of posts and rails, where required, with two coats of preservative treatment. Field cuts shall not be in contact with the ground.

Field cut steel rails and field drill holes in the steel splice plates at joints only where required to correspond to field cut wood rails at joints. Do not modify hole and slot dimensions. Do not use torch to cut holes, slots, plates or rails.

A wooden guardrail post that has a through check, shake or end split in the same plane as, or a plane parallel to the bolt hole and extending from the top of the post to within 3 inches of the bolt hole will be rejected.

Distance between wooden posts shall be 10 feet on center. Standard reflectors (MHD Item 833.5 Demountable ReflectORIZED Delineator - Guardrail) shall be provided and installed every 50' on average at no additional cost to the Town.

Construct terminal sections at the locations as directed by each Town. Terminal sections consist of posts, railing, hardware, and anchorage assembly necessary to construct the turn-down terminals.

Each site shall be a guaranteed minimum of 100 linear feet.

Measurement and Payment

Steel-Backed Timber Highway Guardrail (including reflectors and turn-down terminals) will be measured by the Linear Foot along the face of rail element, including terminal sections. The quantity for Steel-Backed Timber Highway Guardrail will be paid for at the Contract Unit Price bid per Linear Foot, which price shall be full compensation for all materials, tools, equipment and labor incidental to and necessary for the completion of the work in place to the satisfaction of each Town. If requested by a Town, the Contractor shall negotiate a fair additional cost for removal/disposal of existing guardrail and/or end treatments.

ITEM 120 WOODEN GUARDRAIL

The Work shall include the furnishing and installation of wooden guardrail and posts conforming to Section M8.07.0, paragraph B.2 Wood Posts and paragraph D, Bolts, Nuts and Washers of the Standard Specifications; and, the following specifications.

All posts shall be sawed off square prior to setting. Posts shall be set plumb and to line and grade. Post spacing shall be 4'-0" on center. Single wood rails shall be erected as to form a smooth, continuous rail conforming to the required line and grade. Wood rail elements shall butt firmly against each other and

joints shall occur in the direct center of the post. All bolts shall be drawn tight. Ends shall be angled downward at approximately a 30 degree angle with a 1 foot tall post unless otherwise directed by the Engineer. The end of the angled rail shall be cut to butt firmly against the horizontal rail. Rails shall be 4" x 10" x 16' pressure treated Southern Yellow Pine. Standard reflectors (MHD Item 833.5 Demountable ReflectORIZED Delineator - Guardrail) shall be provided and installed every 50' on average at no additional cost to the Town.

Each site shall be a guaranteed minimum of 100 linear feet.

The measured quantity will be paid for at the Contract Unit Price per Linear Foot, which price shall include all labor, materials (including reflectors), equipment, and incidental costs required to complete the Work. If requested by a Town, the Contractor shall negotiate a fair additional cost for removal/disposal of existing guardrail and/or end treatments.

ITEM 121 GRANITE CURB TYPE VB – STRAIGHT

ITEM 122 GRANITE CURB TYPE VA4 – STRAIGHT

Work under these items shall conform to the relevant provision of Section 501 of the Standard Specifications and the following:

All curbing shall be set on a bed of dry compacted gravel base. The spaces between the curb and the walls of the trench (**both front and back sides of the curb**) shall be filled with 4,000 PSI concrete to the depth directed, and shall then have a 2-inch base of Hot Mix Asphalt placed upon it. This shall ensure proper adhesion of the overlays to the existing surface.

The Contractor shall be responsible for saw cutting the existing pavement edge as directed by the Town, for excavating the area needed for the curbing and concrete installation, and for hauling and disposing of the excavated material.

The Contractor shall be responsible for meeting all current Federal and State architectural accessibility requirements. This includes but is not limited to: slopes; grades; and construction materials.

If requested by the Contractor, an additional cost per Linear Foot for transition and curved granite curbing equal to the demonstrated incremental item cost per Linear Foot can be negotiated. The incremental cost must be substantiated by invoiced costs or other means satisfactory to the Town.

The measured quantity will be paid for at the Contract Unit Price per Linear Foot and any additional cost demonstrated for transition and curved curbing, shall include all labor, materials, equipment, saw cutting, excavating, hauling, disposing, and incidental costs required to complete the Work.

ITEM 123 PAVE SHIELD PAVEMENT SEALING (1,500 SQUARE YARDS OR GREATER)

ITEM 124 PAVE SHIELD PAVEMENT SEALING (UNDER 1,500 SQUARE YARDS)

The Work shall consist of providing and installing two coats of an Engineered resin emulsion seal coat slurry (PaveShield by Neyra Industries, Inc.) over aged and new hot mix asphalt concrete pavements, and shall conform to the relevant provisions of the Standard Specifications and the following:

Testing Methods and Practices

ASTM C 136 Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM D 244 Standard Test Method for Emulsified Asphalts
ASTM D 2939 Method for Testing Emulsified Bitumens used as Protective Coatings
ASTM D 3910 Practices for Design, Testing, and Construction of Slurry Seal
AASHTO T-04481 - Method for Testing the Solubility of Bituminous Materials in Organic Solvents

Materials

Sealer (Pavement Coating): PaveShield manufactured by Neyra Industries, Inc., Cincinnati, Ohio; or approved equivalent. An engineered resin emulsion specifically formulated to extend pavement life. Physical Composition: Sealer shall meet the following requirements when tested in accordance with ASTM D2939:

Requirements	Max.	Min.
Non-Volatiles %	-	47
Water %	53	-
Ash of Non-Volatiles %	40	30
Specific Gravity	-	1.1

Drying Time: When tested according to ASTM D2939, sealer shall be “set to touch” in 1 hour, and exhibit “final set” in less than 8 hours.

Non-Flammability: The cured coating shall show no tendency to flash or ignite.

Adhesion & Resistance to Water: The cured coating shall exhibit no penetration, blistering, loss of adhesion, nor tendency to re-emulsify after immersion for 24 hours.

Oil Spot Primer: Neyra Petrobond manufactured by Neyra Industries, Inc., Cincinnati, Ohio; or approved equivalent. Water based acrylic oil spot primer compatible with pavement coating.

Sand: As recommended in printed data sheets by sealer manufacturer. Washed, dry silica sand free of dust, trash, clay, organic materials or other contaminants.

Gradation: To have an American Foundry Society grain fineness number that is no less than fifty (50) and no more than seventy (70), when tested in accordance with ASTM C 136.

Mixing Water: Potable and free from harmful soluble salts. Temperature of the water shall be a minimum fifty degrees (50) F.

Submittals

Contractor shall submit to the Owner: the trade name and manufacturer of the sealer and oil spot primer; and, the sealer and oil spot manufacturer’s printed Product Data Sheets and Technical Specifications.

At its discretion, Owner may require submittal of references, list of similar sites where the same products have been installed by Contractor, and other information needed by the Owner to complete its evaluation (see Instructions to Bidders contained herein).

Equipment

Use equipment that keeps the mixture homogeneous at all times and is capable of applying required coating weights evenly over entire width of application mechanism to provide a uniformly coated surface.

Construction Procedures

Site Examination(s): Contractor shall inspect new and existing paving surfaces for condition and defects that will adversely affect quality of work, and which cannot be put into an acceptable condition through normal preparatory work as specified herein. Contractor shall notify the Owner in writing of the specific defects found. Owner shall not be required to fix said defects unless Owner wishes to continue with the project and have the Contractor complete the sealing work. Contractor shall not be required to place the sealer over the noted defects without the defects being repaired by the Owner.

Preparation: Owner shall be responsible for: repairing any paving defects (if he chooses to continue with the work); for pre-sweeping the areas to be sealed; for providing and installing barriers needed to protect the work; and, for providing and paying for police services, if needed. Contractor shall be responsible for: final cleaning (e.g., removal of fines, if needed) of the areas to be sealed; for cleaning oil spots and treating with oil spot primer; and, for protecting adjacent curbs, walks, fences, and other items from receiving primer and coating.

Sealing: Contractor shall apply coating (sealer) when pavement temperature is at least fifty (50) degrees F. and air temperature is fifty (50) degrees F. and rising, and shall apply coating during dry weather and when rain is not anticipated within eight (8) hours after application is completed. Because of the public nature of the work sites, Contractor understands and agrees that he may not be allowed to close off an entire area (e.g., a golf course or Town Hall parking lot) all at once and may be required to complete sealing of an area over two work cycles.

Contractor shall add water to the coating mix as required for application, quantity not to exceed twenty five (25) percent of engineered resin emulsion; and, shall add three (3) to five (5) pounds of sand per gallon to the engineered resin emulsion, and mix with power equipment to a homogeneous coating. Contractor shall apply all coats uniformly at a rate of 0.14 - 0.17 gallons per square yard using mixed and diluted material. Each coat shall be allowed to cure sufficiently to take traffic without scuffing. Final coat shall be allowed to cure a minimum of twenty four (24) hours under good drying conditions before allowing traffic.

For new paved areas, Contractor shall allow new asphalt to cure at least thirty (30) days before applying pavement coating. There shall be no difference in payment if the existing surface is new asphalt or aged asphalt.

Contractor shall remove primer and coating from surfaces other than those requiring primer and coating.

Materials:

The aggregate shall be 1/4" or 3/8" durable crushed rock, consisting of the angular fragments obtained by breaking and crushing solid or shattered natural rock, and free from a detrimental quantity of thin, flat, elongated or other objectionable pieces. The crushed stone shall have a maximum percentage of wear as determined by the Los Angeles Abrasion Test (AASHTO-T-96) and shall be uniformly blended meeting Section M2.01.6 of the Standard Specifications. Crushed gravel will not be permitted.

The asphalt emulsion shall be a Cationic Asphalt Emulsion CRS-2 or CMS-2.

Properties:

Viscosity, Saybolt Furol @ 122 degrees F (50 degrees C),s	300
Sieve Test, %	.02
Residue by distillation, %	67
Test on residue from distillation test:	
Penetration, 77 degrees F (25 degrees C) 100g, 5 s	140
Ductility, 77 degrees F (25 degrees C), 5 cm/min, cm	60
Solubility in 61richloroethylene, %	99

SP-27

The anti-track material shall be Black Beauty, as manufactured by the Reed Minerals Slag Products, a division of HARCO Corp. in Highland, Indiana or an approved equal.

Measurement and Payment

The measured quantity will be paid for at the Contract Unit Price per Square Yard, which price shall include all labor, materials, equipment, and incidental costs required to satisfactorily complete the work (including oil spot cleaning and priming).

ITEM 125 MODIFIED ASPHALT-FIBER CRACKFILLER

The Work under this item shall include the preparation of cracks in existing bituminous concrete pavement which may be overlain with new bituminous concrete or stone seal, and the filling of the prepared cracks with a modified asphalt-fiber compound. Work shall be completed on bituminous concrete in an "as is" condition (e.g. Towns will not sweep areas beforehand).

The crack filling material shall be a modified asphalt-fiber compound designed especially for improving strength and performance of the parent asphalt sealant. The asphalt binder shall consist of a blend of neat asphalt binder and chemically modified crumb rubber (CMCR) that meets the following specifications:

PG 64-28 or PG 70-28 after modification.

Viscosity of not more than 3PaS at 300 degrees F.

Modification at a minimum shall consist of 5% CMCR and the maximum particle size for the CMCR shall be 80 mesh (#80 sieve).

The performance grade of the neat asphalt binder shall not exceed a PG 58-XX.

The asphalt supplier shall provide testing for the neat asphalt binder and modified asphalt binder in accordance with AASHTO M320.

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

Length* 0.25in.+0.02
Elongation at Break; ASTM D2256-90 38%
Melting Point; ASTM D3418-82 >475 degrees F (246 degrees C)
Crimps/Inc; ASTM D3937-90 None
Cross Section Round
Denier; ASTM D1577-90 4.5 Nominal dpf
Tensile Strength; ASTM D2256-90 >70,000 psi
Diameter 0.0085 in. **
Specific Gravity; ASTM D792-91 1.32 to 1.40

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

** Subject to Normal Variations

Modified asphalt-fiber compound shall be mixed at a rate of 8% fiber weight to weight of asphalt cement.

Only cracks larger than 1/4-inch in width, as determined by the Engineer, shall be sealed. Overbanding shall not exceed 4" in width after placement. **Expansion of the overband by traffic or weather will result in a deduction in the total gallons applied equal to the ratio of the expansion to the overband.** (As an example, a 1" expansion of a 4" overband will result in a 25% deduction in the total gallons of crackfiller applied.)

The air compressor shall be portable and capable of furnishing not less than 100 cubic feet of air per minute at a pressure of not less than 90 pounds per square inch at the nozzle. The compressor shall be equipped with traps that will maintain the compressed air free of oil and water. Manually operated, gas powered air-broom or self-propelled sweeper designed especially for use in cleaning roadway pavements shall be used to remove debris, dirt, and dust from the cracks.

The melting kettle required to melt the joint sealing compound shall be an indirect fired type double-walled boiler. The space between the inner and outer walls shall be filled with a suitable heat transfer oil or substitute having a flash point of not less than 600 degrees Fahrenheit. The kettle must be equipped with a satisfactory means of agitating the joint sealer at all times by continuous stirring with mechanically operated paddles and/or by a continuous circulating gear pump attached to the heating unit. The kettle must be equipped with a thermostatic control calibrated between 200 degrees F and 550 degrees F and must be capable of pumping an 8% fiber content blend.

The equipment used in the performance of the required Work shall be subject to the approval of the Engineer and shall be maintained in a satisfactory working condition at all times.

All cracks shall be thoroughly cleaned (including vegetation) by blowing with compressed air or other approved method just prior to the placement of the joint sealing material. All cracks shall be sterilized by use of a propane air torch generating 2,000 degrees F. and 3,000 foot/second velocity to eliminate all

vegetation, dirt, moisture and seeds. All debris removed from the cracks shall be removed from the pavement surface immediately by means of a power sweeper, hand or air broom. No crackfiller material shall be placed in wet cracks or where snow, ice, or frost are present, nor when the air temperature is below 32 degrees F.

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

Fibers and CMCR shall be added in the presence of the Engineer and shall be added only once for each individual batch mixed in order to insure a consistent concentration of fibers in the compound. Adding fibers and other materials "on-the-fly" will not be allowed.

Sealant shall be delivered to the pavement cracks through a high pressure hose line and applicator shoe. A boiler slag aggregate shall be broadcast over the cracks to prevent sealant from being picked up. Modified asphalt-fiber crack filler will be measured for payment by the actual number of gallons of filler applied to the pavement. Modified asphalt-fiber crack filler will be paid for at the Contract Unit Price per Gallon, which price shall include all labor, material, equipment and incidental costs required to complete the Work.

ITEM 126 RUBBER CRACK FILLER

Crack sealant material shall be asphalt-vulcanized rubber material conforming to the following requirements:

1. The asphalt shall have a maximum penetration of 150 when tested in accordance with the procedure specified by the applicable AASHTO specification.
2. The granulated curb rubber (100% vulcanized) shall meet the following requirements:

PASSING SIEVE PERCENT

No. 8, 100
 No. 10, 98 – 100
 No. 40, 0 – 100

The specific gravity of the granulated curb rubber shall be 1.15 ± 0.02 and shall be free of fabric, wire or other contaminated materials, except that up to four percent of calcium carbonate may be included to prevent particles from sticking together. Rubber materials shall be packaged in boxes of approximately 60-lb. weight, with a polyethylene liner. The boxes shall be placed on pallets and covered with a weather resistant covering. Equipment used by the Contractor shall be specifically manufactured for this purpose.

PREPARATION

1. Prior to application of hot asphalt-rubber sealant, joints and cracks shall be cleaned to remove dust, dirt, moisture and foreign material or old sealant.

2. Asphalt-rubber sealant material shall be unboxed and placed in joint and crack sealing machine for heating and mixing. The asphalt-rubber shall be heated to a minimum temperature of 300°F. The material shall be held in the mixing tank at application temperature until very little separation of the rubber and asphalt occurs when a bead of sealant material is placed on the pavement. Sealant material may be added to the mix as long as the minimum temperature of 300°F is maintained.

APPLICATION

1. Cracks shall be sealed from the bottom up. Sealant material shall be applied so it is flush with the surface.
2. Traffic shall not be allowed on the material until it has cured or until it has been sanded to prevent tracking.

PAYMENT

Rubber crack filler will be measured for payment by the actual number of gallons of filler applied to the pavement. Rubber crack filler will be paid for at the Contract Unit Price per Gallon, which price shall include all labor, material, equipment and incidental costs required to complete the Work.

ITEM 200 HOT MIX ASPHALT PAVEMENT (LOADED ON TOWN TRUCKS)

Bituminous Concrete (Hot Mix Asphalt) shall be manufactured in conformance with the material, composition, mixing, testing and plant requirements of Standard Specification Section M3. Top course mix, binder course mix and dense mix shall be furnished, as required, and loaded on Town trucks.

ITEM 201 SAND BORROW**ITEM 202 LOAM BORROW**

Sand and Loam Borrow materials shall conform to the following Standard Specification subsections:

Sand Borrow - for Winter Maintenance - M 1.04.0 Type a (Washed)

Loam Borrow - M 1.05.0

Sand shall be washed and screened through a one quarter inch (1/4") screen. The sand must be coarse and free from clay, silty loam and other undesirable materials. Deliveries of sand shall be made during the vendor's normal business hours, Monday through Friday. A Town may require, at its discretion, that emergency deliveries must be made during other periods to include Saturdays, Sundays, Holidays and non-business hours Monday through Friday at no extra cost to the Town. The vendor shall complete normal and emergency deliveries within a 12 hour period after receiving a request for delivery (maximum delivery 1,000 tons per 12 hours).

Loam borrow shall be screened to removed all stones and other material larger than 1 inch.

ITEM 203 1-1/2" CRUSHED STONE (DOUBLE WASHED)**ITEM 204 3/4" CRUSHED STONE (DOUBLE WASHED)****ITEM 205 3/8" PEASTONE (DOUBLE WASHED)****ITEM 206 3/4" DENSE GRADES CRUSHED STONE**

Aggregate materials shall conform to the following Standard Specification subsections:

Crushed Stone - M 2.01.1 through 2.01.6 (double washed)

Dense Graded Crushed Stone - M 2.01.7 (3/4")

A requirement for all grades of crushed stone (except dense graded) shall be that not more than 0.3% of unsatisfactory material shall pass a No.4 sieve.

ITEM 207 RECYCLED ASPHALT

The recycled asphalt material shall meet the following gradation requirements:

Sieve Designation	Percentage By Weight Passing Through
3"	100
1-1/2"	70 - 100
3/4"	50 - 85
#4	30 - 60
#50	8 - 24

#200

0 - 10

The stone and sand material shall consist of inert material that is hard, angular, and durable, and free from cement concrete, brick, reinforcing steel, glass, wood, building rubble, loam and clay and other deleterious materials. Native round stone and materials that break up when alternately frozen and thawed or wetted and dried shall not be used. The material shall be "T-base" as manufactured by Aggregate Industries, Inc. or approved equivalent.

Each stockpile shall be tested (at no additional cost to the Town) for sieve analysis and California Bearing Ratio (CBR) by an independent, qualified Massachusetts laboratory. The certified results shall be equal to or

greater than that of gravel borrow (M1.03.0 type b), and the certifications shall be supplied to each Town. The processed material shall be stockpiled in such a manner as to minimize segregation of particle sizes. All recycled pavement material shall come from approved stockpiles.

The material shall be subject to review and approval by a Town prior to delivery.

ITEM 208 4'x4' PRECAST LEACH GALLEY

ITEM 209 1,000 GALLON PRECAST SOLID CATCH BASIN

ITEM 210 1,000 GALLON PRECAST LEACH BASIN

ITEM 211 4' DIAMETER PRECAST CATCH BASIN W/OFFSET TOP

All precast structures shall be capable of withstanding H-20 loading with a minimum concrete strength of 4,000 psi @ 28 days. Steel reinforcement shall be Grade 60 meeting ASTM-A-615 requirements.

The 1,000 Gallon Precast Solid Catch Basin shall have a solid bottom or include a 6' diameter Basin Pad meeting the same requirements as the structures. The cost of the Base Pad shall be included with the cost of the structure.

The 4' Diameter Precast Catch Basin w/Offset Top shall have separate top with an offset opening. The structure shall have a 4 foot deep sump below the outlet pipe.

The Town shall specify the hole diameter and hole location(s) at the time of order.

The manufacturer shall deliver the structure to the Town DPW or at the installation location as specified by the Town.

Payment for the precast drainage structures shall be by the Contract Unit Price per Each delivered.

ITEM 212 PRECAST GUTTER INLET EACH

ITEM 213 8" FRAME AND COVER EACH

ITEM 214 8" FRAME AND GRATE MUNICIPAL STANDARD EACH

ITEM 215 12" HOOD EACH

ITEM 216 12" REINFORCED CONCRETE PIPE (CLASS IV) EACH

ITEM 217 12" CORRUGATED PLASTIC (POLYETH.) PIPE EACH

All precast structures shall be capable of withstanding H-20 loading with a minimum concrete strength of 4,000 psi @ 28 days. Steel reinforcement shall be Grade 60 meeting ASTM-A-61 5 requirements. Gutter Inlets shall Acme-Shorey Model GI or similar with minimum outside dimensions of 30" by 30" and capable of withstanding an HS-20 load.

The word "DRAIN" shall be prominently cast in the top of all drain manhole covers. Frame and Covers shall be East Jordan Iron Works Massachusetts Standards Manhole Frame and Cover Type B or similar 8" frame and cover matching MassDOT Constructions Details E 202.7.0.

Frame and Grates shall be East Jordan Iron Works LF248-4-40 or similar 8" frame and grate matching MassDOT Construction Details E 201.6.0

Reinforced Concrete Pipe shall conform to MassDOT Section M5.02.1 and the AASHTO M170 for Standard Strength Reinforced Concrete Culvert Pipe for class III Pipe, Wall B. Pipes shall be of the bell and spigot type and capable of supporting an HS-20 live load. A preformed flexible plastic sealing compound of Butyl Mastic Rope Sealer " 1" size, "EZ Stick" as manufactured by Concrete Products supply or an approved equal shall be provided for sealing watertight joints.

Corrugated Plastic (Polyethylene) Pipe shall conform to MassDOT Section M5.03.10. Pipe shall be smooth interior wall and corrugated exterior wall, and be water-tight. Pipe shall be minimum 12- inch diameter. Ends shall be bell-and-spigot and comply with the requirements for test methods, dimensions and markings found in AASHTO Designations M252 and M294. Pipe shall support an HS-20 live load with a maximum deflection of 5% of the minimum pipe diameter. Pipe and fittings shall be made from virgin polyethylene compounds which conform to the applicable current edition of the AASHTO Material Specifications for cell classification as defined and described in ASTM D3350. Nominal sizes of 12- to 60- inch shall be either AASHTO Type 'S' or Type 'D'

Catch basin hoods shall protrude no more than 12 inches beyond the end of pipe into the structure. Acceptable hoods are Ground Water Rescue Inc. Eliminator, Best Management Practices Inc. Snout® or equal lightweight hood.

ITEM 218 RIPRAP

Material shall conform to the provisions of Section M2.02.2 of the latest Massachusetts Department of Transportation Standard Specifications and the following:

Stone for dumped riprap shall be hard, durable, angular in shape, resistant to weathering and shall meet the gradation requirement specified below. Rounded stones, boulders, sandstone or similar soft stone or relatively thin slabs will not be acceptable.

MAXIMUM PERCENT OF TOTAL WEIGHT

SIZE OF STONE	SMALLER THAN GIVEN SIZE
400 lb.	100
300 lb.	80
200 lb.	50
*25 lb.	10

*No more than 5% by weight shall pass a 2 in. sieve.

Each stone shall weigh not less-than 50 pounds and at least 75% of the volume shall consist of stones weighing not less than 500 pounds each. The remainder of the stones shall be so graded that when placed with the larger stones the entire mass will be compact.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item A2 RIP RAP shall be paid at the price per TON, which shall be the full payment of all labor, materials, equipment, tools and other incidentals necessary for the delivery of the material to the Eastham DPW Yard, based on truck weight slips.

CONTRACT SIGNATURES

In Witness whereof, the parties to these present have hereunto set their hands and seals, Barnstable County, who incurs no personal liability by reason of the execution hereof or anything herein contained, on the day and year hereinbefore first written and who hereby certifies under penalties of perjury that all the applicable provisions of General Laws, Chapter 149 Section 44J, have been complied with.

The undersigned further certifies under penalties of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under provisions of section twenty-nine F of Chapter twenty-nine. or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

BARNSTABLE COUNTY

BY DocuSigned by:
Ronald Bergstrom 3/14/2024
08D209278259458...
Ronald Bergstrom, Chair Date

FIRM NAME Rafferty Fine Grading, Inc.

BY DocuSigned by:
Rhonda Rafferty 3/4/2024
0478FCF758CF449...
Rhonda Rafferty, President Date

APPENDIX - A

MOST COMMONLY USED STANDARD FORMS

Schedule for Participation by MBE/WBE

Change Order

Statement of Compliance

Certified Payroll

BARNSTABLE COUNTY

Project: _____ Title: _____

Project Location: _____

SCHEDULE FOR PARTICIPATION BY WOMEN/MINORITY BUSINESS ENTERPRISE

A. General Contractor must submit to the Office within (5) five working days of the award of Bids.

BIDDER CERTIFICATION:

- A. Bidder agrees to expend at least the amount of the contract set forth below if awarded, for W/MBE. For the purposes of this commitment, the designation means a business that has been certified by SDO as such. The Bidder must indicate the W/MBE it intends to utilize in this document as follows: (Attach sheet if additional space is required.)

	<u>Company Name &Address</u>	<u>W/MBE</u>	<u>Nature of Participation</u>	<u>If Supplier W/MBE%</u>	<u>Dollar Value of Participation</u>
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____
Total Dollar Value of WBE Commitment:				\$	_____
Total Dollar Value of MBE Commitment:				\$	_____
Total Dollar Amount				\$	_____

The undersigned hereby certifies that he or she read the terms of this condition and is authorized to bind the Bidder to the commitment herein set forth.

Date _____

Name of Firm _____

Authorized Signature _____

Business Address _____

LETTER OF INTENT
(THIS FORM MAY BE PHOTOCOPIED)

Women/Minority Business Enterprise Participation
(To be Complete by W/MBE and Submitted by the General Bidder.)

Project: _____ Title: _____

Project Location: _____

Check one:

_____ MBE _____ WBE

TO: _____
Name of General Bidder/filed Sub-bidder

1. My company intends to perform work in connection with the above project as:

_____ an individual

_____ a partnership

_____ a corporation

_____ a joint venture with _____

_____ other (explain) _____

2. My company has been certified by SDO and it has not changed its women/minority ownership, control, or management without notifying SDO within thirty (30) days of such a change.

3. My company understands that if your company is awarded the contract, your company intends to enter into an agreement with my company to perform the activity described below for the prices indicated. My firm also understands that your firm, as General Bidder, will make substitution only as allowed by the County Contract.

W/MBE PARTICIPATION

Item Number (if Applicable)	Description of Activity (with notation such as "Labor Only")	Quantity	Unit Price	Dollar Amount
--------------------------------	---	----------	---------------	------------------

\$ _____
Total Amount

W/MBE Authorized Agent

W/MBE Company Name

DATE

W/MBE Address

W/MBE Telephone No.

NOTE: To be submitted by the General contractor, to the Office within (5) FIVE WORKING DAYS of the opening Bid Award.

INSTRUCTIONS REGARDING CHANGE ORDERS AND CONTRACT MODIFICATIONS

NO CHANGES (ADDITIONS, SUBSTITUTIONS OR ELIMINATION'S) IN THE PLANS, SPECIFICATIONS OR CONTRACT SHALL BE COMMENCED UNTIL RECEIPT BY THE CONTRACTOR OF: A. AN APPROVED CHANGE ORDER FORM 5, OR B. A WRITTEN AUTHORIZATION TO PROCEED SIGNED BY THE COUNTY'S AUTHORIZED OFFICIAL.

All requests for changes increasing the contract price must be submitted on the Change order Form, prior to the final acceptance of the contract. The Contractor waives all rights against the County if the contractor fails to comply with this requirement. The Awarding Authority shall be under no obligation to process a request for change after final acceptance of the project.

The term "request for change" is used throughout these procedures and applies to every request to revise the contract requirements.

The request for change must be made in writing, and in accordance with the provisions of this contract, the General Laws, rules, regulations and other procedures of the Office.

1.02 GENERAL PURPOSE

The purpose of these procedures is to properly authorize necessary changes, provide satisfactory documentation supporting the nature and cost of each change, and allow the change order work to be accomplished in a timely and efficient manner.

It is the intent of this contract and the applicable statutory provisions that whenever possible the parties should agree upon an equitable adjustment in the contract price before commencement of the pertinent work.

All parties shall negotiate in a professional manner and agree upon the particulars associated with the change in the work thereby implementing an approved change in the contract.

It is the responsibility of the contractor to clearly substantiate the costs associated with all changes. If the contractor refuses to provide the project manager with cost estimates for a proposed change in the work, the County may unilaterally determine the reasonable cost for that change, and the contractor must proceed with the work based upon the County's established cost.

SECTION 2 - SUBMISSION AND DISPOSITION OF UMD FORM 5

2.01 AUTHORIZED REQUESTORS (Originators of "Request for Change")

1. General Contractor, including Sub-Contractor
2. Designer
3. County

2.02 THE REQUESTOR SHALL:

- a. Initially discuss the proposed change with all interested parties.
- b. Complete the Change Order Form

2.03 THE CONTRACTOR SHALL:

- a. If also the requester, the contractor shall initially comply with 2.02 above

Appendix A

- c. Submit a cost breakdown with the requested change. Breakdowns of all filed subcontractors shall be separated from the contractor's breakdown and both are required to be on properly identifiable letterhead stationery, and signed showing: A. quantities and costs utilizing unit pricing, or, B. the classification and hours of labor, fringe benefits and the complete breakdown showing unit cost of material and equipment.
- d. If additional time is requested, furnish an explanation with the breakdown. Extensions of time shall not be granted on a retroactive basis because of changes.
- e. Each change must be all inclusive as to all costs and all time extensions.
- f. The General Contractor shall review all cost breakdowns being submitted by their suppliers and subcontractors and check them to insure the information being submitted is accurate and mathematically correct.

SECTION 3. - AUTHORITY TO APPROVE REQUESTS FOR CHANGE

3.01 The County Commissioner's

SECTION 4. - MISCELLANEOUS DIRECTIONS FOR COMPUTING COSTS FOR CHANGES IN WORK

- 4.01 Shipping, storage and handling costs of materials and equipment involved in a change in work may be included in the costs for change, if itemized and accompanied by copies of paid invoices.
- 4.02 The allowance for overhead provided in Article VI 2 (3) shall be considered to include all hand and power tools normally required in the performance of the base bid work, the cost of the contractor's superintendent, the contractor's administration costs, and the contractor's estimating costs.
- 4.03 Major items of equipment, specialized tools, and ordinary materials and equipment used or consumed on the change order work, whether rented or owned by the contractor, may be included in the cost of the change provided current rental rates and material costs, supported by paid invoices, are submitted as backup to the change when itemized.
- 4.04 Contractors shall meet the following guidelines when submitting cost breakdowns for labor:
 - a. Designate name of trade, number of hours times the base journeyman rate. Foreman rate should only be used and pro-rated as provided for in the labor agreements.
 - b. Show hourly benefit amounts such as health, welfare, and pensions separately.
 - c. When overtime work is involved, insurance charges are based on single time. Benefits likewise, are based on single time.
 - d. Whenever a subcontractor is involved a complete and separate breakdown must be submitted by the subcontractor for their portion of work. Non filed subs should not include overhead and profit on their breakdown.
 - e. All breakdowns should be legible, submitted on letterhead and signed by an authorized representative of the Contractor This applies to all subcontractors and General Contractors.

SECTION 5. - PROCEDURE FOR WRITTEN AUTHORIZATION TO PROCEED

- 5.01 An alternative method for effecting a change is by "written authorization to proceed" issued by the Office in advance of a formal change order. This method is to be used when there would otherwise be a delay in the prosecution of the work or a change is necessary to eliminate a hazard to life or property.

Appendix A

Every effort, however, should be made by all concerned to anticipate changes, so that they may be initially approved by the formal change order process.

In the case of an extreme emergency involving an immediate hazard to life or property, the resident engineer may assume full authority on behalf of the County by issuing the necessary instructions to correct the situation but shall immediately thereafter contact the Project Manager.

5.02 This procedure authorizes work only, and no payment can be made until the work is completed and a formal change order is approved.

5.03 THE CONTRACTOR SHALL:

Submit in writing to the County a proposed price for performing the work on a predetermined lump sum, unit price, or time and material basis.

BARNSTABLE COUNTY CHANGE ORDER

CHANGE ORDER #: _____ DATE: _____

CONTRACT #: _____ PROJECT #: _____

CONTRACT TITLE: _____

CONTRACTOR’S NAME: _____

CONTRACTOR’S ADDRESS: _____

Original Amount of this Contract: _____

Amount of this Change Order: _____
(decrease) (increase)

REVISED CONTRACT AMOUNT: _____

An (increase) (decrease) (no change) of _____ days in the contract is hereby authorized

The work to be completed under this change order is as follows:

The work to be covered by this order shall be performed under the same terms and conditions as included in the original contract.

By: _____ Date: _____
Contractor

Title: _____

Barnstable County

By: _____ Date: _____

By: _____ Date: _____

WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form is available from the Department of Labor Standards (DLS) at www.mass.gov/dols/pw and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

On a weekly basis, every contractor and subcontractor is required to submit a certified copy of their weekly payroll records to the awarding authority; this includes the payroll forms and the Statement of Compliance form. The certified payroll records must be submitted either by regular mail or by e-mail to the awarding authority. Once collected, the awarding authority is required to preserve those records for three years from the date of completion of the project.

Each such contractor and subcontractor shall furnish weekly **and** within 15 days after completion of its portion of the work, to the awarding authority directly by first-class mail or e-mail, a statement, executed by the contractor, subcontractor or by any authorized officer thereof who supervised the payment of wages, this form, accompanied by their payroll:

STATEMENT OF COMPLIANCE

_____, 20_____

I, _____, _____
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

_____ on the _____
(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature _____

Title _____

MASSACHUSETTS WEEKLY CERTIFIED PAYROLL REPORT FORM

Company's Name:		Address:				Phone No.:				Payroll No.:										
Employer's Signature:		Title:				Contract No:		Tax Payer ID Number		Work Week Ending:										
Awarding Authority's Name:		Public Works Project Name:				Public Works Project Location:				Min. Wage Rate Sheet Number										
General / Prime Contractor's Name:		Subcontractor's Name:						"Employer" Hourly Fringe Benefit Contributions												
Employee Name & Complete Address	Work Classification:	Employee is OSHA 10 certified (?)	Appr. Rate (%)	Hours Worked							Project Hours (A) All Other Hours	Hourly Base Wage (B)	Health & Welfare Insurance (C)	ERISA Pension Plan (D)	Supp. Unemp. (E)	Total Hourly Prev. Wage (F)	(B+C+D+E)	(A x F)	Check No. (H)	
				Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.							Total Gross Wages			

Are all apprentice employees identified above currently registered with the MA DLS's Division of Apprentice Standards?

YES

☐

NO

☐

For all apprentices performing work during the reporting period, attach a copy of the apprentice identification card issued by the Massachusetts Department of Labor Standards / Division of Apprentice Standards.

No apprentices are identified above

☐

NOTE: Pursuant to MGL c. 149, s. 27B, every contractor and subcontractor is required to submit a **true and accurate** copy of their certified weekly payroll records to the awarding authority by first-class mail or e-mail. In addition, each weekly payroll must be accompanied by a statement of compliance signed by the employer. Failure to comply may result in the commencement of a criminal action or the issuance of a civil citation.

Barnstable County

Regional Government of Cape Cod Purchasing Department

Jennifer L.V. Frates, Chief Procurement Officer



Addendum NO. 1
December 19, 2023

To all Bidders on the Project titled:

Bid # 8032
Roadway Construction Items and Materials
Barnstable County

Reference Contract Documents (drawings and specifications) dated December 20, 2023

The attention of bidders submitting proposals for the above subject project is called to the following addendum to the specifications and drawings. The items set forth herein, whether of omission, addition, substitution, or clarifications are all to be included in and form a part of the proposal submitted.

CLARIFICATION:

MassDOT prequalification of contractors with the class of work as, (CLASS OF WORK), for the project with an estimated value of \$(TOTAL PROJECT VALUE) will be required per the table below:

Town	Class of Work	Total Project Value
Bourne	Pavement Surfacing (Item 1)	\$977,900
Bourne	Pavement Surfacing (Item 2)	\$350,000
Bourne	Pavement Surfacing (Item 3)	\$510,000
Bourne	Pavement Milling and Cold Planning (Item 7)	\$159,000
Bourne	Pavement Milling and Cold Planning (Item 8)	\$250,000
Bourne	Pavement Surfacing (Item 18)	\$980,000
Bourne	Pavement Markings (Items 100-105)	\$168,000
Bourne	Crack Sealing (Item 125)	\$113,220
Bourne	Crack Sealing (Item 126)	\$202,500
Dennis	Pavement Surfacing (Item 1)	\$890,000
Dennis	Pavement Surfacing (Item 2)	\$205,000
Dennis	Pavement Surfacing (Item 3)	\$225,000
Dennis	Pavement Surfacing (Item 4)	\$777,000
Dennis	Pavement Surfacing (Item 11)	\$646,800
Dennis	Pavement Surfacing (Item 12)	\$526,800
Dennis	Pavement Markings (Item 103)	\$88,000
Dennis	Pavement Markings (Item 106)	\$258,000

Dennis	Highway Sidewalk & Curbing (Item 121)	\$97,500
Dennis	Crack Sealing (Item 125)	\$243,800
Falmouth	Pavement Surfacing (Item 1)	\$1,648,000
Falmouth	Pavement Surfacing (Item 10)	\$764,400
Falmouth	Pavement Surfacing (Item 11)	\$323,400
Falmouth	Pavement Surfacing (Item 13)	\$720,000
Falmouth	Pavement Markings (Item 100-107A)	\$442,900
Orleans	Pavement Surfacing (Item 1)	\$437,060
Orleans	Pavement Surfacing (Item 11)	\$297,385
Orleans	Pavement Surfacing (Item 12)	\$119,844
Orleans	Pavement Surfacing (Item 18)	\$1,129,500
Sandwich	Pavement Surfacing (Item 1)	\$600,000
Sandwich	Pavement Surfacing (Item 4)	\$360,000
Sandwich	Pavement Surfacing (Item 11)	\$600,000
Sandwich	Pavement Surfacing (Item 12)	\$700,000
Sandwich	Catch Basin Cleaning or Drainage (Item 109)	\$200,000
Sandwich	Catch Basin Cleaning or Drainage (Item 110)	\$120,000
Sandwich	Catch Basin Cleaning or Drainage (Item 111)	\$300,000
Sandwich	Catch Basin Cleaning or Drainage (Item 112)	\$200,000
Sandwich	Drainage (Item 113)	\$140,000
Sandwich	Crack Sealing (Item 125)	\$154,000
Sandwich	Pavement Surfacing (Item 200)	\$180,000
Wellfleet	Pavement Surfacing (Item 1)	\$720,000
Wellfleet	Guard Rail & Fencing (Item 115)	\$240,000
Yarmouth	Pavement Surfacing (Item 1)	\$115,000
Yarmouth	Pavement Surfacing (Item 11)	\$161,700
Yarmouth	Pavement Surfacing (Item 12)	\$1,580,400
Yarmouth	Pavement Markings (Item 100-107)	\$196,760
Yarmouth	Guard Rail & Fencing (Item 115)	\$324,000
Yarmouth	Guard Rail & Fencing (Item 120)	\$154,000

Please note that these items are also referenced in the Bid Sheet as MassDOT prequal. In order to bid on those items Contractors are advised that they must have either the approved MassDOT prequal or approved waiver filed through MassDOT at the time of the bid opening. For any Prequal inquiries or waiver requests, contractors are to contact MassDOT directly at: prequal.r109@dot.state.ma.us

All other portions of the Bid Documents remain unchanged. NOTE: THE BID SUBMISSION DEADLINE DATE HAS NOT CHANGED.

Please be reminded to acknowledge this Addendum on the bid forms.

--- End of Addendum No. 1 ---

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Barnstable County

Regional Government of Cape Cod
Purchasing Department

Jennifer L.V. Frates, Chief Procurement Officer



Addendum NO. 2

January 4, 2024

****CORRECTED****

To all Bidders on the Project titled:

Bid # 8032

Road Construction Items and Materials

Barnstable County

Reference Contract Documents (drawings and specifications) dated December 20, 2023

The attention of bidders submitting proposals for the above subject project is called to the following addendum to the specifications and drawings. The items set forth herein, whether of omission, addition, substitution, or clarifications are all to be included in and form a part of the proposal submitted.

CHANGES:

Under the Special Provisions, Pricing Adjustments section, the MassDOT website has released the pricing for the month of December 2023 as follows:

Base Bid Price Liquid Asphalt (Ton): \$637.50

Base Bid Price Diesel (Gallon): \$3.148

Base Bid Price Gasoline (Gallon): \$2.467

All other portions of the Bid Documents remain unchanged. NOTE: THE BID SUBMISSION DEADLINE DATE HAS NOT CHANGED.

Please be reminded to acknowledge this Addendum on the bid forms.

--- End of Addendum No. 2 ---

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Addendum NO. 3
January 8, 2024

To all Bidders on the Project titled:

Bid # 8032
Road Construction Items & Materials
Barnstable County

Reference Contract Documents (drawings and specifications) dated December 20, 2023

The attention of bidders submitting proposals for the above subject project is called to the following addendum to the specifications and drawings. The items set forth herein, whether of omission, addition, substitution, or clarifications are all to be included in and form a part of the proposal submitted.

QUESTIONS:

- 1. Are we required to have W/MBE participation, if we are only supplying aggregate materials for this bid? Appendix - A - Most Commonly Used Standard Forms - Schedule for Participation by Women/Minority Business Enterprise states, A. General Contractor must submit to the Office within (5) working days of the award of Bids. Says nothing about Suppliers?**

W/MBE participation and goals will be based on the types of projects, funding and the Town's local requirements and will vary. Towns should communicate with their contractors what the requirements are, if any, during the term of the contract.

All other portions of the Bid Documents remain unchanged. NOTE: THE BID SUBMISSION DEADLINE DATE HAS NOT CHANGED.

Please be reminded to acknowledge this Addendum on the bid forms.

--- End of Addendum No. 3 ---

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Jennifer L.V. Frates, Chief Procurement Officer



Addendum NO. 4

January 12, 2024

To all Bidders on the Project titled:

Bid # 8032

Road Construction Items & Materials

Barnstable County

Reference Contract Documents (drawings and specifications) dated December 20, 2023

The attention of bidders submitting proposals for the above subject project is called to the following addendum to the specifications and drawings. The items set forth herein, whether of omission, addition, substitution, or clarifications are all to be included in and form a part of the proposal submitted.

CHANGES:

1. A column was added for contractors to include the distance for item 200 only. **ALL BIDDERS MUST DOWNLOAD THE REVISED BID FORM TO INCLUDE IN THEIR SUBMITTAL.**

QUESTIONS:

1. On page 2, paragraph B, of the general bid form in the specifications it states, "... during the contract period of April 1, 2024 to March 31, 2025 with one, one year option to renew." Would the County consider adding a percent price increase for year 2 extension to help contractors submit most competitive pricing for each year.

For this bid, we are seeking fixed pricing for both years. Although the County is currently focused on this approach, there is potential to consider this option in the future bidding cycle.

2. Per page 2 paragraph 1, We recognize these are "estimated quantities" only by please confirm the towns intend to use these during the 2-year contract period.

In the County's yearly consultation with stakeholders regarding this bid, the Towns provide a comprehensive list of items and quantities, accompanied by a good-faith estimate of their anticipated needs throughout the contract period. While these quantities are estimated for the purpose of bidding, it's important to note that they are not guaranteed.

All other portions of the Bid Documents remain unchanged. NOTE: THE BID SUBMISSION DEADLINE DATE HAS NOT CHANGED.

Please be reminded to acknowledge this Addendum on the bid forms.

--- End of Addendum No. 4 ---