## SOLICITATION FOR:

## EPDM MEMBRANE ROOFING

#14-IFB-002



## WAREHAM, MASSACHUSETTS

## RELEASED:

**AUGUST 20, 2014** 

DUE BY: **SEPTEMBER 9, 2014** @ **11:00** EST

DELIVER TO:
Town of Wareham
Wareham Water Pollution Control Facility
6 Tony's Lane
Wareham, MA 02571

## SECTION 1.0 INSTRUCTIONS TO BIDDER

#### 1.1 General

- When submitting bid, please identify the solicitation title and number clearly on the submitted envelope. All responses must be sealed and delivered to: Town of Wareham Water Pollution Control Facility, 6 Tony's Lane, Wareham, MA 02571
- Bids submitted must be originals.
- The completion of the following forms is necessary for consideration of a potential contract award. When submitting bid documents, please retain the order of documents as originally provided:
  - a. Signed Terms, Conditions and Certifications
  - b. Completed Bid Pricing Page
  - c. Completed Statement of Compliance Form
  - d. Completed Certificate of Authority
  - e. Completed Appendix A Past Performance / References

NOTE: If Vendor is incorporated, an updated "CERTIFICATE OF GOOD STANDING" from the Commonwealth of Massachusetts may be required for the awarded vendor only.

• Please review and return with your sealed bids as sent. Also, insure that all forms are completed and your bid response is submitted as requested.

#### 1.2 General Information & Submissions Instructions

#### 1.2.1 Bid Delivery

Responses must be delivered by **September 9, 2014 @ 11:00 a.m.** to Town of Wareham Water Pollution Control Facility. Two (2) copies of the response should be submitted. Responses must be sealed and marked with the solicitation title and number. All bids must include a forms listed in Section 1.1.

### 1.2.2 Bid Signature

A response 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.

#### 1.2.3 Time for Bid Acceptance

The contract will be awarded within 30 days after the bid opening. The time for award may be extended for up to 30 additional days by mutual agreement between the Town of Wareham and the apparent lowest responsive and responsible bidder (or, for a contract requiring payment, the apparent highest responsive and responsible bidder.)

#### 1.2.4 Bonding Requirements

- 5% Bid Bond
- 50% Payment Bond (Required for Awarded Contractor Only) provided within 10 business days of award notice. Labor and Materials Bond from a surety company qualified to do business under the Laws of the Commonwealth of Massachusetts and satisfactory to the Awarding Authority in the amount stated.

### 1.2.5 Changes & Addenda

If any changes are made to this solicitation, an addendum will be issued. Addenda will be emailed or faxed to all bidders on record as having picked up the solicitation. No changes may be made to the solicitation documents by the Bidders without written authorization and/or an addendum from the Purchasing Department. It is also the responsibility of the vendor to monitor the Town's website for addenda. The web address is: www.wareham.ma.us

#### 1.2.6 Modification or Withdrawal of Bids, Mistakes, and Minor Informalities

Any Bidder may correct, modify, or withdraw a bid by written notice received by the Town of Wareham prior to the time and date set for the bid opening. Bid modifications must be submitted in a sealed envelope clearly labeled "Modification No. \_\_\_\_\_" to the address listed in part one of this section. Each modification must be numbered in sequence, and must reference the original solicitation.

After the bid opening, a Bidder may not change any provision of the bid in a manner prejudicial to the interests of the Town or 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.

#### 1.2.7 Right to Cancel/Reject Bids

The Town of Wareham may cancel this solicitation, or reject in whole or in part any and all bids, if the Town determines that cancellation or rejection serves the best interests of the Town.

#### 1.2.8 Bid Prices to Remain Firm

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

#### 1.2.9 Unbalanced Bids

The Town reserves the right to reject unbalanced, front-loaded and conditional bids.

#### 1.2.10 Unforeseen Office Closure

If, at the time of the scheduled bid opening, the Water Pollution Control Facility is closed due to uncontrolled events such as fire, snow, ice, wind, or building evacuation, the bid

opening will be postponed until **11:00 a.m.** on the next normal business day. Bids will be accepted until that date and time.

#### 1.2.11 Price Submission

All prices must contain the unit rate as requested on the bid price form in this solicitation. All prices are to include delivery, the cost of fuel, the cost of labor and all other charges related to the products or services listed. Prices are to remain fixed for the contract period of performance.

#### 1.2.12 Estimated Quantities

The Town of Wareham has provided estimated quantities for services over the course of the contract period. These estimates are estimates only and not guaranteed.

#### 1.2.13 Brand Name "or Equal"

Any references to any brand name or proprietary product in the specifications shall require the acceptance of an equal or better brand. The Town has the right to make the final determination as to whether an alternate brand is equal to the brand specified.

#### 1.2.14 Warranty

The Bidder warrants that (1) the Supplies sold are merchantable, (2) that they are fit for the purpose for which they are being purchased, (3) that they are absent any latent defects and (4) that they are in conformity with any sample which may have been presented to the Town. The bidder guarantees that upon inspection, any defective or inferior equipment or supplies shall be replaced without additional cost to the Town. The vendor will assume any additional cost accrued by the Town due to the defective or inferior equipment or supplies. The bidder guarantees all equipment or supplies for a period of one (1) year, or as otherwise specified herein.

#### 1.2.15 Cancellation

The Town reserves the right to cancel this contract at any time on any grounds, including the vendor's failure to comply with the Scope of Work (SOW) provided herein.

#### 1.3 Questions About the Solicitation

Questions concerning this solicitation must be submitted in writing to: Guy Campinha, Director, Town of Wareham Water Pollution Control Facility, 6 Tony's Lane, Wareham, MA 02571 **before 11:00 AM on September 3, 2014.** Questions may be delivered, mailed, faxed to 508-291-0155, or e-mailed to <a href="mailed-m

#### 1.4 Pre-bid Site Visit

There will be a **mandatory** site visit for this project held at the site (6 Tony's Lane, Wareham, MA). The pre-bid site visit will be on **September 2, 2014 @ 11:00 a.m.** 

#### 1.5 Rule for Award

A contract will be awarded to the responsive and responsible bidder offering the lowest total cost to complete project.

## SECTION 2.0 GENERAL TERMS, CONDITIONS, CERTIFICATIONS

#### 2.1 Bid Offers

The right is reserved to reject any and all bids or parts of bids and to make an award as may be determined to be in the best interests of the Town of Wareham. Bids with erasures or alterations will be rejected.

#### 2.2 Prices

Must be F.O.B. Delivered Destination-Wareham, MA. No charges will be allowed for packing, crating, freight, handling, or cartage unless specifically stated and included with bid.

#### 2.3 Awards

To a bidder may be cancelled if the bidder shall fail to prosecute the work with promptness and diligence.

#### 2.4. Payment

The Town of Wareham shall make no payment for a supply or service rendered prior to execution of a written Contract. Bills for services, materials, or supplies furnished by bidders under Contract should be submitted before the first day of the in which payment is to be made to insure payment by twentieth day of that month, except where the allowance for a discount differs from the above. Contractor agrees to submit bills and delivery slips to the Town Department in sufficient time for such discounts to be taken advantage of by the Town and, in any event, shall not be less than ten (10) days from the submission to the Department of such bills and delivery slips. Time in connection with a discount offered will be computed from the date of delivery to the Town, as specified on the order or from the date a correct invoice is received by the using agency of the Town, if the latter date is later than the date of delivery.

#### 2.5. Guarantees

The successful bidder shall repair, replace, or make good, without cost to the Town, any defects or faults arising within one (1) year after the date of acceptance of articles furnished hereunder resulting from imperfect or defective work done or materials furnished by the Seller.

#### 2.6 Patents

The Seller shall indemnify and save harmless the Town and all persons acting for or on behalf of it from all suits and claims against them, or any of them, arising from or occasioned by the use of any material, equipment, or apparatus, or any part thereof, which infringes or is alleged to infringe on any patent rights. In case such material, equipment, or apparatus, or any part thereof, in any such suit is held to constitute an infringement, the Seller within a reasonable time, will, at its expense and as the Town may elect, replace such material, equipment, or apparatus, or remove the material, equipment, or apparatus and refund the sums paid.

## 2.7 Legality

The successful bidder shall comply with all applicable United States, Massachusetts, and/or Town of Wareham codes, statutes, ordinances, rules, and regulations.

#### 2.8 Taxes

Purchases made by the Town are exempt from Massachusetts Sales Tax and Federal Excise Taxes. Bid prices must exclude any such taxes. Exemption certificates will be furnished upon request.

#### 2.9 Bonds

If this Invitation requires bid surety, the surety shall be in the form of bid bond of a <u>MA Licensed</u>. Company, certified check, bank check, money order from a responsible bank, made payable to Town of Wareham and must be filed with the original bid at the Wareham Water Pollution Control Facility. Failure to submit surety will cause the bid to be rejected. The bid surety will be returned to the successful bidder within seven (7) days after the execution of the awarded contract and approval by the Town of the performance bond. In the case of a default, the bid surety shall be forfeited to the Town of Wareham. The successful bidder maybe required to furnish a performance bond in an amount and with a MA licensed Surety satisfactory to the Town. The Contractor will assume all costs for bonds.

#### 2.10 Orders

Verbal Orders are not binding on the Town of Wareham, and any delivery made or work performed without written order or written Contract are at the risk of the Seller or Contractor and may result in an unenforceable claim. The actual needs of the Town Department shall govern the actual amount delivered under Contract to be drawn and entered into between the successful bidder and the Town. Purchase Orders issued by the Town to pay for goods or services shall be made part of Contract.

#### 2.11 Indemnity

Contractor shall agree to Indemnify, Defend, and Hold the Town Harmless from any and all claims arising out of the performance of this contract from the negligence, willful acts or omissions of the contractor, its employees, agents, or any sub-contractors.

#### 2.12. Equality

Where trade names or specific manufacturers are mentioned in the specifications, the Town does not intend to limit competition, but merely to indicate the general type of commodity to be supplied. The Town invites offers on comparable commodities to those named or described in the specification. Naming of any commercial name, trademark or other identifier shall not be construed to exclude any item or manufacturer not

mentioned by name or as limiting competition, but shall establish a standard of equality only. An item shall be considered equal to the item so named or described if: (a) it is at least equal in quality, durability, appearance, strength, and design; (b) it will perform at least equally the function imposed by the general design for the purpose being contracted for or the material being purchased; and (c) it conforms in a substantial way, even with deviations, to the detailed requirements for the item in the specifications. The name and identification of all materials, other than the one named, shall be submitted to the Town in writing for approval, prior to the purchase, use, or fabrication of such items. Subject to the provisions of M.G.L. Ch.30, §.39J, or other applicable statute, approval shall be at the sole discretion of the Town, it shall be in writing to be effective, and the decision of the Town shall be final. The Town may require tests of all materials so submitted to establish quality standards at the vendor's expense. All directions, specifications, and advice by the manufacturer for the proper installation, handling, storage, adjustment, or operation of their equipment shall be complied with and the responsibility for the proper performance shall continue to rest with the vendor. Include a written brochure outlining all features of the product offered whenever possible.

#### 2.13 Minority Business Enterprise Plan

Pursuant to M.G.L. c 7, §40N and M.G.L. c. 7, §61, the Supplier Diversity Office ("SDO") (formerly SOMWBA) and the Division of Capital Asset Management ("DCAM") have set revised participation goals for Minority Business Enterprise ("MBE") and Women Business Enterprise ("WBE") participation for affected state funded building projects and state assisted municipal building projects as defined in the above referenced laws and related Executive Orders, including Executive Orders 524 and 526.

Effective January 1, 2012, and until such time as the goals may be revised, the MBE and WBE participation goals for building construction and design awards and expenditures on new projects advertised on or after the effective date will be a combined MBE/WBE goal as follows:

10.4% combined MBE/WBE participation on construction contract awards; and, 17.9% combined MBE/WBE participation on design contract awards.

Overall annual designations by awarding authorities, as well as MBEIWBE participation on individual projects with a combined MBE/WBE participation goal, must include a reasonable representation of both MBE and WBE firms that meets or exceeds the combined goal. Proposed MBE/WBE participation plans that include solely MBE or solely WBE participation, or do not include a reasonable amount of participation by both MBE and WBE firms to meet the combined goal, will not be considered responsive. Where the prime contractor or designer is an SDO certified MBE or WBE, the prime must bring a reasonable amount of participation by a firm or firms that hold the certification which is not held by the prime contractor or designer on the project. Proposed participation on construction projects or design projects which consists solely of either an MBE or WBE representing 100% of the overall combined goal will not be considered reasonable participation.

The SDO and DCAM will determine whether there is reasonable participation by both MBE and WBE films on individual projects under their respective oversight. Firms submitting MBE/WBE participation plans which do not provide reasonable participation by both MBE/WBE firms shall be provided an opportunity to revise and resubmit their plans within the time frame set by the awarding authority; however no price adjustments shall be permitted as a result of the revised plan. Firms failing to submit an MBE/WBE participation plan deemed reasonable and accepted by the awarding authority shall not be awarded the contract.

Participation by MBE and WBE firms must be documented, tracked and reported on separately as MBE participation and WBE participation by prime vendors, subcontractors and awarding authorities.

#### 2.14 Right to Know Legislation

M.G.L., Ch. 111F and 454 CMR 21.06. All vendors furnishing substances or mixtures which may be classified as toxic or hazardous, pursuant to MGL,Ch.111F, are cautioned to obtain and read the Law and the Regulations referred to above. Copies may be obtained from the State House Bookstore, State House, Room 117, Boston, MA 02133 for a fee.

#### 2.15 Non-Collusion Affidavit

M.G.L., Ch.30, s.39M and/or Ch.30B, s. 10. Any person submitting a bid or proposal for the procurement or disposal of supplies or services to any governmental body shall certify in writing on the bid or proposal, as follows: the undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity, or group of individuals,

#### 2.16 State Taxes Paid

Pursuant to M.G. L. Ch.62C, s.49A, the undersigned certifies that, to the best of their knowledge and belief, they have complied with all the laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting of child support.

#### 2.17 Bid Offers

Bid offers will be reviewed and awards made as soon as is possible. Awards will be made within 30 business days from Bid Opening. Offers must be signed to be valid.

#### 2.18 Unit Price

The case of arithmetical error in any offer involving extension of prices quoted herein, the unit price will govern the final price of quantities offered.

## 2.19 Insurance

Contractor shall purchase and maintain coverage for Workers' Compensation, Comprehensive General Liability, including products, completed operations, and contractual liability; Automobile Liability to protect their employees and others from

bodily injury and damages to property which may arise out of or result from the Contractor's operations under this agreement, whether such operations be the Contractor's, any subcontractor, or anyone directly or indirectly employed by any of them. This insurance shall be in limits specified by Law, or as specified in the specifications. In no case shall the limits be less than \$ 1,000,000 in Bodily Injury and in Property Damages. A certificate of insurance naming the Town of Wareham as Additional Named Insured shall be filed with the Town prior to the commencement of any contract's operations. All policies and certificates shall contain an endorsement requiring at least thirty (30) days written notice, non-renewal or cancellation of coverage to Town of Wareham. Compliance by the Contractor with the insurance requirements shall not relieve the Contractor from liability under the full indemnity provisions contained herein (see 11).

#### 2.20 Independent Contractor

The contractor is neither an agent nor an employee of the Town of Wareham and is not authorized to act in behalf of the Town of Wareham.

#### 2.21 Complete Agreement

The written contract supersedes all prior agreements or understandings between the parties and shall not be changed unless mutually agreed by both parties in writing.

#### 2.22 Assignment / Sub-Contracting

The Contractor shall not assign any interest in a contract nor engage any other entity, company, subcontractor or individual to perform any obligation to the Town without prior written consent of the Town of Wareham.

#### 2.23 Conflict of Interest

The bidder certifies that no official or employee of the Town of Wareham has a financial interest in this offer or in the contract which the bidder offers to execute or in the expected profit to arise there from, unless there has been compliance with the provisions of M.G.L.,Ch.43, s.27 (Interest in Public Contracts by Public Employees) and of provisions of M.G.L.,Ch.268A, s.20 (Conflict of Interest Law) and that this offer is made in good faith without fraud or collusion or connection with any other person submitting an offer to the Town of Wareham .

#### 2.24 Termination

The Town of Wareham shall have the Right to terminate this Agreement, if: (A) the Contractor neglects or fails to perform or observe any of its obligations hereunder and cure is not affected by the Contractor within Fifteen (15) Days next following its receipt of a termination notice issued by the Town of Wareham, or, (B) a judgment or decree is entered against the Contractor approving a petition for arrangement, liquidation, dissolution or similar relief relating to any bankruptcy or insolvency and such judgment or decree remains unvacated for Thirty (30) Days; or Immediately, if Contractor shall file a voluntary petition in bankruptcy or any petition in bankruptcy or any petition or answer seeking any arrangement, liquidation or dissolution relating to bankruptcy, insolvency or other relief of debtors, or shall seek or consent or acquiesce in appointment of any

trustee, receiver or liquidation of Contractor's property; or (C) funds are not appropriated or otherwise made available to support continuation of performance in any Fiscal Year succeeding the first year of this Agreement. Town of Wareham shall pay all reasonable and supportable costs incurred prior to termination which payment shall not exceed the value of any services provided. NOTICE: The Town of Wareham may terminate this Contract or any Purchase Order issued hereunder without cause at anytime, effective upon the termination date stated in the notice of termination. The Contractor shall cease performance upon the stated termination date. If the Contract or any Purchase Order is terminated under this subsection, the Contractor shall be entitled to be paid for supplies and/or services delivered and accepted prior to the notice of termination. In no event shall the Contractor be entitled to be paid for any supplies or services delivered after the effective date of termination.

## 2.25 Return of property

Upon termination, the Contractor shall immediately return to the Town of Wareham, without limitation, all documents, plans, drawings, tools, equipment, and items of any nature whatsoever supplied to the Contractor by the Town, or items developed by the Contractor in accordance with the terms of a Contract with the Town of Wareham.

#### 2.26 Interpretations of Specifications

Any prospective bidder that requests an interpretation of existing specifications' terms or conditions must do so within five (5) working days before the scheduled bid opening or defined question due date located with the instructions to bidder. All requests shall be in writing to the Water Pollution Control Facility Director.

#### 2.27 Information

The submission of a bid offer authorizes the Town to contact any and all parties referenced by the bidder in regard to financial and operational information. The Town shall have the right to request verification of any information or qualifications submitted as part of any offer to the Town.

#### 2.28 Price Reduction

It is understood and agreed that should any price reductions occur between the opening of the bid offers and the completion of the delivery of goods or services that the benefit of all such reductions will be extended to Town.

#### 2.29 Governing Law

The offer and any Contract which may ensue shall be governed by the Laws of the Commonwealth of Massachusetts.

#### 2.30 Enforceability

In the event that any provision of this offer or Contract is found to be legally unenforceable, such legal unenforceability shall not prevent enforcement of any other provisions of a Contract.

## 2.31 Samples

Any qualified bidder may be required to submit samples of the goods offered at the request of the Purchasing Agent. Evaluation for acceptability will be a determining factor in the selection process.

#### 2.32 Discrimination

It is understood and agreed that it shall be a material breach of Contract resulting from this bid offer for the Contractor to engage in any practice which shall violate any provision of M.G.L., Ch.151B, relative to discrimination in hiring, discharge, or, terms or conditions of employment.

(THIS AREA IS LEFT BLANK INTENTIONALLY)

## **CERTIFICATIONS**

Statements below shall be submitted with each Bid or Proposal and shall be duly dated and signed with an **original signature** and all other information, or, the Bid or Proposal will be rejected.

In witness whereof, the undersigned certifies, under the pains and penalties of perjury that:

- 1. **STATE TAXES PAID:** Pursuant to M.G.L. Chapter 62C, s. 49A, the undersigned certifies that, to the best of my knowledge and belief, have complied with all the laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting of child support.
- 2. CERTIFICATE OF NON-COLLUSION: M.G.L. C. 30, s. 39M and/or C. 30B, s.10: Any person submitting a bid or proposal for the procurement or disposal of supplies or services to any governmental body shall certify in writing, on the bid or proposal, as follows: The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity, or group of individuals.
- **3. PUBLIC CONTRACTS DEBARMENT:** M.G.L. C. 550, Acts of 1991: The undersigned certifies that the said "person" is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provisions of C. 29, s. 29F, or any other applicable debarment provision of any other Chapter of the General Laws, or any Rule or Regulation promulgated thereunder. Additionally, the undersigned is not presently debarred by any Agency of the Federal Government.

#### 4. HEALTH & SAFETY ON PUBLIC CONSTRUCTION PROJECTS OVER \$10,000.00:

Chapter 306 of the Acts of 2004: The undersigned certifies that the firm is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the U.S. OSHA that is at least 10 hours in duration at the time that the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the U.S. OSHA that is at least 10 hours in duration.

#### 5. COMPLIANCE:

The undersigned is in compliance with all of the provisions, and shall remain in full compliance with the provisions for the life of any Contract resulting from this solicitation. That the bidder is qualified to perform any such Contract and possesses, or shall obtain, all requisite licenses and/or permits to complete performance; shall maintain all unemployment, workers' compensation, professional and personal liability insurance policies sufficient to cover its performance under any such Contract; and shall comply with relevant prevailing wage rates and employment laws. To the best of its knowledge and belief has paid all local taxes, tax titles, utilities, motor vehicle excise taxes, water and wastewater bills in MA as required by Law.

Print Name
Circle: Corporation Partnership Individual
Authorized Signature
Print Name
Title of Person Signing Bid or Proposal
Date
Company Federal ID # or Social Security #
State of Incorporation

<u>Approval of a Contract, or other Agreement, will not be granted unless this form is signed and fully complete.</u>

## SECTION 3.0 INVOICING REQUIREMENTS

#### 3.1 General

Each invoice shall be mailed to the designated billing office at the following address after completion of order:

Town of Wareham
Water Pollution Control Facility
6 Tony's Lane
Wareham, MA 02571

To ensure a proper invoice, the invoice must include the following information and/or attached documentation:

Name of the business concern, invoice number and invoice date;

- 1) Contract number, or authorization for delivery of property of performance of services;
- 2) Description, price, and quantity and services actually delivered or rendered;
- 3) Shipping and payment terms;
- 4) Name (where practicable), title, phone number, and complete mailing address of responsible official to whom payment is to be sent; and
- 5) Other substantiating documentation or information as required by the contract.

## SECTION 4.0 SCOPE OF WORK (SOW)

#### PART 4.1 GENERAL

#### 4.1.1 Related Documents

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section. The final award of this bid will be contingent upon availability of sufficient funds. The Town reserves the right to award part or all of this contract pending availability of funds.

#### 4.1.2 Site Description

The property location is 6 Tony's Lane, Wareham, MA. The structure known as the **Operations Building** and is easily accessible via pavement driveway.

#### 4.1.3 SUMMARY

- A. Section Includes: Work of this Section consists of installing all materials furnished under this section, including all equipment, labor, services and incidental items required to complete work as shown on Drawings and specified in this Section.
  - 1. Fully adhered Roofing System incorporates 81 in. wide white, 60-mil thick EPDM membrane to achieve minimum 20 year warranty.
  - 2. Polyisocyanurate insulation mechanically fastened or secured with adhesive, as Suited to substrate, and membrane fully adhered to insulation with manufacturer's recommended bonding adhesive.
  - Roof Coping/Edge Metal/Gravel Stops
  - Nailing strips/roof edge blocking
  - 5. Expansion joints in connection with roofing (as required)
  - 6. Metal and membrane Flashing and Counter flashing in connection with roofing
  - 7. Reinstalled lightning arrestor System

#### 4.1.4 ASBESTOS ABATEMENT AND RELATED WORK

#### **PART 1 - GENERAL**

#### 1.01 CONTRACT REFERENCES:

- A. Drawings and General Provisions of Contract, including General and Supplemental Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all drawings and all other sections of the specifications for requirements therein affecting the work of this Section.

#### 1.02 DESCRIPTION OF WORK

- A. The work of this Section includes removal and proper disposal of asbestos-containing roofing materials (ACM) from the Operations Building at the Wareham Water Pollution Control Facility, 6 Tony's Lane, Wareham, Massachusetts.
- B. Pre-Abatement activities, including attendance at a pre-construction meeting, site inspection, notifications, permits, submittals, work area preparations, health and safety plan and standard operating procedures are included in this Section.
- C. Abatement activities including work area preparation, removal and disposal of ACM, recordkeeping, site security, inspection and monitoring are included in this Section.

#### 1.03 WORK TO BE PERFORMED

A. The Contractor shall remove and dispose of all asbestos-containing asphaltic roofing material including all layers of built up roofing, roof flashing cements and sealants and all mudded roof drain fitting insulation that will be disturbed by work of this Contract. Furnish all labor, materials, facilities, equipment, services, disposal, employee training and testing, permits, and agreements necessary to perform the work required for removal of ACM in accordance with these specifications, EPA, OSHA and DOT regulations, NIOSH recommendations, Massachusetts DEP and DLS requirements, Town of Wareham, any other applicable federal, state, and local government regulations and guidelines. Whenever there is a conflict among regulations, the

- strictest provisions shall prevail. The Owner's Representative must approve deviations from this specification in writing.
- B. All existing built-up roofing material and associated flashing cements, tar, and sealants shall be properly removed and disposed as ACM. Approximately 5,600 square feet of asphaltic roofing materials are present on the roof.
- C. All drain pipe and fitting insulation that will be disturbed by planned roof drain replacement work shall be removed by a Massachusetts DLS licensed asbestos removal contractor using glovebag methods within a negative pressure temporary work area enclosure. Include removal of six (6) linear feet of insulation from each roof drain. Exposed ends on adjacent insulation to remain shall be covered with rewettable fiberglass repair cloth and sealed with two coats of lag coat or bridging encapsulant.
- D. Installation of all temporary lighting, water, electrical connections, etc., as required for asbestos abatement. Coordinate temporary electrical and plumbing connections with the General Contractor.
  - Wareham Water Pollution Control Facility Operations Building Reroofing 6 Tony's Lane, Wareham, Massachusetts
- E. Provide all temporary connections, electrical cords, hoses, etc., as required for abatement and air sampling needs.
- F. Filing of all notifications and permits as required for the work to be performed. All cost associated with required notifications and permits shall be paid for by the Contractor and included in bid price.
- G. Work area preparation as specified by these specifications and all applicable regulations.
- H. Provide staging, rigging, and fall protection, etc., in accordance with applicable regulatory requirements and as required by site conditions to allow safe access to all areas as necessary to complete the work.
- I. Provide worker training, respiratory protection and medical examination.
- J. Submit copies of completed Waste Shipment Records to the Owner within 30 days of asbestos-containing waste leaving the site.
- K. Packing, labeling, transporting and disposal of ACM in an approved landfill. All debris produced as a result of the Contractor's work shall be sealed in appropriate leak tight containers sufficient to prevent leakage due to cuts, puncture, tears, etc.

#### 1.04 INSURANCE REQUIREMENTS

A. The Contractor shall purchase and maintain insurance coverage listed with respect to the operations and completed operations of this Project. All policies shall be written on an occurrence basis, by companies authorized to write the type of insurance in Massachusetts. Contractor shall submit a certificate of insurance acceptable to the Owner. Certificates shall show the Owner as an additional insured.

#### 1.05 WASTE REMOVAL

- A. Coordinate waste removal from roof and site with General Contractor and Owner.
- B. All waste shall be wetted and covered and lowered from roof by hand, crane, or lift.
- C. No dropping or throwing of asbestos waste will be permitted.
- D. Only dust-tight waste chutes will be permitted.
- E. All waste shall be removed from the roof on a daily basis.

#### 1.06 AUTHORITY TO STOP WORK

- A. If the Owner or the Asbestos Consultant presents a written Stop Asbestos Removal Order, the Contractor shall immediately stop all asbestos removal and adequately wet any exposed ACM. The Contractor shall not resume any asbestos removal activity until authorized to do so by the Owner or the Asbestos Consultant. A stop asbestos removal order may be issued at any time the Owner or the Asbestos Consultant determines abatement conditions/activities are not within specification requirements. Work stoppage will continue until conditions have been corrected to the satisfaction of the Owner or the Asbestos Consultant. The Contractor shall pay standby time and costs for corrective actions.
- B. Stop work orders may be issued for, but may not be limited to the following:
  - 1. Asbestos fiber leakage from contained work area.
  - 2. If the Contractor disregards the authority of the Asbestos Consultant.
  - 3. If the Contractor disregards laws or regulations of any public body having jurisdiction.
  - 4. If the Contractor's work presents a risk to the general public.
- C. The absence of a stop work order by the Owner or the Asbestos Consultant shall not in any way be construed as an approval or acceptance of the Contractor's work.

#### 1.07 RELATED SECTIONS

A. Carefully examine the Contract Documents for requirements that affect the work of this section.

#### 1.08 DEFINITIONS

- A. All terms not defined herein shall have the meaning given in the applicable publications and regulations.
- B. Abatement: Procedures to control the release of asbestos fibers from asbestos containing materials; includes removal, encapsulation, and enclosure of ACM.
- C. ACM: Asbestos-containing material and asbestos-contaminated material.
- D. Adequately Wet: Sufficiently mixed or penetrated with liquid to prevent the release of particulate. If visible emissions are observed coming from the ACM, then that material has not been adequately wetted.
- E. Air Intake: Any opening through which air is admitted to an air-handling system in a building.
- F. Air Locks: Airlocks are mechanisms on doors and curtains that control airflow patterns in the doorways.
- G. Amended Water: Water to which a surfactant has been added.
- H. Asbestos: Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated or altered.
- I. Asbestos-containing material (ACM): Any material containing one percent or more asbestos of any type or mixture.
- J. Asbestos-contaminated material: Material that has been determined to be contaminated by asbestos by analytical testing or due to it's proximity to damaged ACM.
- K. Asbestos Consultant: The consultant employed by the Owner to conduct asbestos project monitoring services during asbestos removal activities.
- L. Authorized Visitors: Any visitor authorized by the Owner or any representative of a regulatory agency or other agency having jurisdiction over the project.

- M. Clean Room: An uncontaminated room that is a part of the worker decontamination unit and in which worker's street cloths and protective equipment can be stored.
- N. Competent Person: In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f); in addition, for Class I and II work who is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor.
- O. Decontamination Area/Unit: An enclosed area adjacent to and connected to the regulated area and consisting of an equipment room, shower room, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.
- P. Employee Exposure: The exposure to airborne asbestos that would occur if the employee were not wearing respiratory protection equipment.
- Q. HEPA Filter: High-Efficiency Particulate Air (HEPA). An air filter capable of trapping and retaining at least 99.97 percent of all monodispersed particles sized 0.3 micrometer in diameter.
- R. HEPA Vacuum: Vacuum equipment with HEPA filter system for filtering the exhaust air from the
- S. Negative Initial Exposure Assessment: A demonstration by the employer that complies with the criteria in 29 CFR 1926.1101 (f)(2)(iii), that employee exposure during an operation is expected to be consistently below the PEL's.
- T. Owner: Town of Wareham Water Pollution Control, 6 Tony's Lane, Wareham, Massachusetts.
- U. Owner's Representative: RJ Farah Engineering, Inc.
- V. Regulated Area: An established area where airborne concentration of asbestos fibers exceeds or can reasonably be expected to exceed the permissible exposure limit.
- W. Removal: All herein-specified procedures necessary to remove asbestos-containing materials from the designated areas and to dispose of these materials at an acceptable site.
- X. Waste Generator: Any owner or operator whose act or process produces asbestos-containing waste material.
- Y. Waste Shipment Record: The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

#### 1.09 CODES, REGULATIONS, AND STANDARDS

## A. General Applicability

- 1. All work under this contract shall be done in strict accordance with all applicable Federal, State, and local regulations, standards and codes governing asbestos abatement, and any other trade work done in conjunction with the abatement. All applicable codes, regulations and standards are adopted into this specification and will have the same force and effect as this specification.
- The most recent edition of any relevant regulation, standard, document or code shall be in effect. Where conflict among the requirements or with these specifications exists, the most stringent requirement(s) shall be utilized.
- 3. Copies of all standards, regulations, codes and other applicable documents, including this specification shall be available at the worksite.

- **B**. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State and Local regulations related to all aspects of the abatement project. The Contractor is responsible for providing and maintaining training, accreditation, medical exams, medical records, and personal protective equipment as required by applicable Federal, State and Local regulations. The Contractor shall hold the Owner and Owner's Representative harmless for any failure to comply with any applicable work, packaging, transporting, disposal, safety, health, or environmental requirement on the part of the Contractor, Contractor's employees, or subcontractors of the Contractor.
- C. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in text by basic designation only. The publications listed below are not intended to be all inclusive of each regulation prevailing over the work.
  - Environmental Protection Agency (EPA):
     Regulations for Asbestos (Code of Federal Regulations Title 40, Part 61).
     A Guide to Respiratory Protection for the Asbestos Abatement Industry.
  - Occupational Safety and Health Administration (OSHA): Asbestos Construction Standard 29 CFR Part 1926.1101 Asbestos General Industry Standard 29 CFR 1910.1001 Respiratory Protection, 29 CFR 1910.134 Construction Industry Standards, 29 CFR 1926
  - 3. U.S. Department of Transportation 49 CFR 100 - 185, Transportation
  - 4. National Institute for Occupational Safety and Health (NIOSH): "Respiratory Protection A Guide for the Employee."
  - 5. American National Standards Institute (ANSI):

Z86.1-1973 - Commodity Specification for AirZ9.2 - HEPA Filter Specifications.Z88.2-1980-Respiratory Protective Equipment

Massachusetts Department of Labor Standards:
 The Removal, Containment or Encapsulation of Asbestos (453 CMR 6), including all clarifications, policy statements, etc.

Massachusetts Department of Environmental Protection:
 310 CMR 7.00, 7.09, 7.15 (including amendments effective 6/20/2014)
 Amendments to Regulations 310 CMR 7.00, 7.09, 7.15 to Control Airborne Asbestos
 Emissions for the Control of Air Pollution.

#### 1.10 PERSONNEL QUALIFICATIONS

- A. All personnel of the Contractor or any approved subcontractors involved with asbestos abatement work shall meet the following minimum qualifications:
  - 1. Medical examination within the past year in accordance with OSHA 29 CFR 1926.1101 with a physician's written opinion that the worker has no condition that would preclude him/her from working with asbestos or wearing a respirator.
  - 2. Current certification by the MA DLS as an asbestos supervisor or asbestos worker, or
  - 3. Current training for Class II roofing removal work as specified by 29 CFR 1926.1101 (asphaltic roofing removal only)

- B. The Contractor shall employ a Competent Person to oversee all aspects of ACM removal. The Competent Person shall meet all requirements of 29 CFR 1926.1101 (o) and assure that all requirements for regulated areas at 29 CFR 1926.1101 (e) are met.
- C. There shall be a sufficient number of trained and qualified workers, foremen and superintendents to accomplish the work within the required schedule. No untrained nor fully qualified and pre-approved person shall be employed to speed up completion of the abatement work.

#### 1.11 SITE SECURITY

A. Regulated area access is to be restricted to authorized trained/accredited and protected personnel. The Contractor's Competent Person shall control site security during abatement operations in order to isolate work in progress and protect adjacent personnel.

#### 1.12 EMERGENCY PRECAUTIONS

A. A site specific Emergency Action Plan shall be submitted by the Contractor prior to the preconstruction meeting and shall be approved by the Owner. The Plan shall meet the requirements of 29 CFR 1926.35.

#### 1.13 RESPIRATORY SYSTEMS

- A. The Contractor shall develop and implement a Respiratory Protection Program (RPP) which complies with the January 8, 1998 OSHA requirements, 29 CFR 1926.1101 and 29 CFR 1910.132 and 134. All respirators used must be NIOSH approved for asbestos abatement activities.
- B. Minimum respiratory protection required shall conform to current OSHA and Massachusetts DLS regulations including 29 CFR 1926.1101 and 453 CMR 6.00.

#### 1.14 PROTECTIVE CLOTHING

- A. Prior to beginning any abatement activity, all personnel shall be trained in accordance with OSHA 29 CFR 1926.1101 (k)(9). Training must include, at a minimum, the elements listed at 29 CFR 1926.1101 (k)(9)(viii). Training shall have been conducted by an EPA approved trainer meeting the requirements of EPA 40 CFR 763 Appendix C (AHERA MAP). Initial training certificates and current refresher and accreditation proof must be submitted for each person working at the site.
- B. Medical examinations meeting the requirements of 29 CFR 1926.1101 (m) shall be provided for all personnel working in the regulated area, regardless of exposure levels. The physician's written opinion as required by 29 CFR 1926.1101 (m)(4) shall be provided for each person and shall include in the opinion the person has been evaluated for working in a heat stress environment while wearing personal protective equipment and is able to perform the work.
- C. Provide boots, booties, hard hats, goggles, clothing, respirators and any other personal protective equipment as determined by conducting the hazard assessment required by OSHA at 29 CFR 1910.132 (d). The Competent Person shall ensure the integrity of personal protective equipment worn for the duration of the project.
- D. Provide Fall Protection and Protective Systems for all work performed at a height of 6-feet or more above a lower level.

- E. The Competent Person shall ensure that each time workers enter the regulated area, they observe and follow all required procedures and wear appropriate personal protective equipment.
- F. All personnel in the regulated area shall not be allowed to eat, drink, smoke, chew tobacco or gum, apply cosmetics, or in any way interfere with the fit of their respirator.

#### 1.15 DECONTAMINATION FACILITIES

A. An equipment room or area shall be established at each regulated work area for the decontamination of workers and equipment contaminated with asbestos. The equipment room or area shall be of sufficient size to accommodate cleaning of equipment and removing personal protective equipment. Work clothing shall be cleaned with a HEPA filtered vacuum prior to removal. All equipment and surfaces of containers filled with ACM must be cleaned prior to removal from the equipment room or area. Employees shall enter and exit the regulated area through the equipment room or area.

#### 1.16 CONTAINMENT BARRIERS

- A. Physical barriers shall be employed to restrict access to the regulated work area.
- B. Roof level HVAC and compressor units, DWV stacks, ventilator units, and the brick chimney and the façade vent associated with the ceiling-mounted HVAC unit located in the garage area shall be isolated by installation of sheet plastic barriers at least 6-mil in thickness and the ventilation system shall be shut down during all roofing removal activities.
- C. Coordinate schedule for shutdown and sealing of rooftop HVAC unit servicing the pollution control laboratory area to allow Owner sufficient time to install temporary air conditioning units.

#### 1.17 DISPOSAL ACTIVITIES

- A. The Contractor shall comply with current DOT, EPA, OSHA and MA DEP waste handling, transportation, and disposal regulations for the work site and for each waste disposal landfill.
- B. Disposal of ACM roofing material shall be in a landfill permitted by the DEP to accept solid waste and, in accordance with the Solid Waste Management Facility Regulations, 310 CMR 19.061, "Special Waste" or an out of state facility permitted to accept non-friable roofing materials.
- C. Disposal of mudded insulation from roof drain fittings and pipe shall be in a landfill authorized to accept ACM, operated in accordance with regulatory requirements of 40 CFR 61 (NESHAP) and applicable state and local regulations.

#### 1.18 SUBMITTALS

- A. Submittals shall be in accordance with Contract Documents.
- B. The following submittals shall be submitted to the Owner's Representative at the Preconstruction meeting. Submittals shall be submitted to and approved in writing by the Owner's Representative prior to the Contractor receiving approval to begin work.
  - Certificates of training and documentation of medical examination including a physician's determination that the employee is able to wear a respirator and documentation of current successful respirator fit test (29 CFR 1926.1101 Appendix C) of all personnel assigned to the project, including Competent Person.
  - 2. Certification of compliance with OSHA requirements including but not limited to medical surveillance, record keeping and personal monitoring.

- 3. Respiratory Protection Program. Include site specific exposure assessment for respirator selection.
- 4. A written project schedule. The schedule shall be date specific and include all phases of the project.
- 5. Emergency Action Plan.
- 6. Proposed waste disposal site and waste transporter. Include name, address, telephone number and operating permits, etc.
- 7. Material safety data sheets (MSDS) for all materials and products to be used by the Contractor on this project.

#### **B.** During Construction

1. Personal air sampling results.

#### C. Post Construction Submittals

- 1. Disposal receipts signed by the landfill operator demonstrating that the ACM removed from the project has been packaged removed and disposed of properly.
- 2. Provide the owner with copies of on-site job logs, notifications, permits, accident reports, personal air monitoring results, waivers of lien.

#### **PART 2 - MATERIALS AND EQUIPMENT**

#### 2.01 MATERIALS

- A. Deliver all materials in original packages, containers or bundles bearing the name of the manufacturer.
  - B. Damaged, deteriorating, contaminated or previously used products or equipment shall not be used on this project, and shall be removed from the worksite and disposed of properly.
  - C. Polyethylene sheeting shall be at least 6-mil thickness, shall be fire retardant and shall meet all applicable Standards for temporary construction barriers.
  - D. All lumber shall be fire rated.
  - E. Duct tape or other waterproof tape, furring strips, spray glue, staples, nails, screws, or other materials shall be available to secure polyethylene sheeting.
  - F. Disposable bags and/or drums shall be of 6-mil polyethylene, on which labels are directly printed, as required by EPA and DOT regulations.
  - G. Asbestos warning signs that are posted at all approaches and/or entrances to work areas shall conform to OSHA 29 CFR 1926.1101.
  - H. All fire extinguishers required for the project shall be ABC class type, properly pressurized and in good working condition.
  - I. Adequately stocked first aid kits shall be on-site.
  - J. Surfactant (wetting agent) shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in a proportion of 1 fluid ounce to 5 gallons of water or as specified by manufacturer. An "equivalent surfactant" shall be understood to mean a material with a surface tension of 29 dynes/cm as tested in its properly mixed concentration, using ASTM method D1331-56- ("Surface and Interfacial Tension of Solutions of Surface Active Agents")

#### 2.02 TOOLS AND EQUIPMENT

- A. Scaffolding: Scaffolding, as required to accomplish the specified work, shall meet all applicable safety regulations.
- B. Transportation Equipment: Transportation equipment, as required, shall be suitable for loading, temporary storage, transport, and unloading of contaminated waste without exposure to persons or property. The equipment shall be secured at all times and access restricted to unauthorized personnel.
- C. Vacuum Equipment: All vacuum equipment utilized in the work area shall utilize HEPA filtration systems, 99.97% efficient to 0.3 microns particulate size. Deliver all vacuums to the site with clean waste containers and new HEPA filters installed. Vacuum wands, brushes, hoses, and other accessories shall be delivered to the site new or if previously used shall be delivered to the site in airtight disposal bags.
- D. The Contractor shall provide approved respirators and protective clothing to all Contractor personnel, to representatives of the Owner, and to representatives of the State or other governmental entity who may inspect the jobsite.

#### E. Protective clothing requirements include:

- 1. One-time use, disposable, full-body coveralls made of Tyvek fabric or approved equal.
- 2. Hard Hats
- 3. Eye protection
- 4. Gloves
- Respiratory protective equipment in accordance with OSHA 29 CFR 1926.1101 and 29 CFR 1910.134. Respirators shall be NIOSH/MSHA approved for protection against asbestos exposure.
- F. The Contractor shall have sufficient equipment to mix and spray wetting agent and encapsulants.
- G. The Contractor shall have a sufficient quantity of scaffolding, ladders, platforms, hand tools, and materials to conduct the abatement project in an efficient and workmanlike manner. All equipment shall be used according to OSHA Safety and Health Standards for the Construction Industry (29 CFR Part 1926).
- H. All electrical cord and connections within all work areas shall be protected with ground-fault circuit interrupters (GFCI). Temporary electrical power panels and transformers as required for all equipment including all air sampling equipment.

#### **PART 3 - EXECUTION**

#### 3.01 COORDINATION AND SCHEDULING

- A. The Contractor shall coordinate all work with the Owner's representative.
- B. The Contractor shall submit to the Owner, prior to contract performance, a schedule of work.

#### 3.02 WORK AREA PREPARATION

A. Prior to any asbestos related work in an area, establish a regulated work area for the removal of asbestos-containing roofing material. The entire roof area shall be designated as a regulated

- asbestos removal work area. Isolate the regulated work area to anybody other than trained personnel and authorized visitors.
- B. The Contractor shall erect signs around the perimeter of the regulated area in accordance with EPA, OSHA and this specification and provide 24 hour security against unauthorized entry during the abatement process. Maintain a log of all people entering and exiting the workplace.
- C. Physical barriers shall be installed at all potential entrances prior to the start of abatement activities.
- D. Provide all necessary connections for temporary utilities in the workplace during abatement work. Temporary electrical power shall be in accordance with OSHA Electrical Code of Wet Environment.
- E. Perform all work required for identification and de-energizing all building systems located within to the work area. All electrical components to remain energized shall be identified by color coding and tagging or other suitable means. The Contractor shall ensure that all workers are made aware of and instructed as to the danger of all remaining energized components.
- F. Isolate all roof level heating, ventilation air intake sources, by installation of 6-mil thickness polyethylene barriers secured with duct tape.
- G. Isolate façade ventilation air intake sources, by installation of 6-mil thickness polyethylene barriers secured with duct tape.
- H. The Contractor shall ensure proper fall protection training and protective systems are used during each phase of the work. Provisions shall be used to protect workers from falling equipment, materials, and debris.
- I. Install the personnel decontamination unit, material load-out units, and all required clean rooms. Establish emergency exits from the work area.

#### 3.03 ASBESTOS-CONTAINING ASPHALTIC ROOFING REMOVAL

- A. Removal of all ACM roofing material shall be performed in compliance with the requirements of 310 CMR 7.15 (10) and OSHA 29 CFR 1926.1101.
- B. Perform work area preparations in accordance with Section 3.02.
- C. ACM roofing material shall be removed in an intact state to the extent feasible. All removed ACM roofing material shall be placed in an impermeable waste bag, or wrapped in plastic sheeting. All bagged or wrapped ACM roofing shall be transported to the ground in a closed container.
- D. Dust and airborne fiber release shall be minimized by the use of wet methods and HEPA vacuuming during removal of roofing materials. All roofing materials shall be wetted prior to removal and continuously wetted until placed into container for disposal. The Contractor shall prevent visible dust emissions during demolition activities.
- E. Cutting methods used to remove asbestos containing roofing materials shall minimize the release of fibers and prevent any visible dust emissions. Rotary cutting blades are prohibited unless equipped with HEPA filtered exhausts. The roofing materials shall be removed in an intact state to the extent feasible.
- F. All residual flashing cements located on equipment blocking, vents, pipes, cables, brick chimney shall be removed using manual scrapping and wet methods.
- G. The Contractor shall prevent visible dust emissions during removal activities. Removal of asbestos containing roofing materials shall not be performed during periods of strong wind conditions that cause dust and/or debris to be blown from the roof.
- H. Roofing material disposal containers shall be covered while on site and during transport to the landfill site.

I. Following bulk removal of the asbestos containing roofing material, final clean the roof to a level of no visible dust or debris. All cleaning shall utilize wet methods and HEPA vacuuming. Dry sweeping is prohibited.

#### 3.04 MONITORING, TESTING AND INSPECTION

- A. The Contractor is responsible for personnel monitoring for airborne asbestos fibers in compliance with OSHA regulations. The Owner's Industrial Hygienist may, at his or her discretion, also conduct personnel monitoring on Contractor personnel and area air monitoring at locations inside and outside of the work area.
- B. Provide cooperation and support to the Owner's Industrial Hygiene Consultant throughout the abatement process.
- C. Contractor is responsible for meeting OSHA requirements for his personnel, including but not limited to, monitoring requirements, safety compliance training and record keeping. Personal monitoring results from the previous day shall be posted each day, and copies of the results forwarded to the Owner's Industrial Hygiene Consultant.

#### 3.05 FINAL INSPECTION AND TESTING

- A. After thorough cleaning, the Owner's Industrial Hygiene Consultant shall conduct a final visual inspection to determine that all roofing and insulation materials have been removed and HEPA vacuumed to a level of no visible dust or debris.
- B. Dust samples may be taken to be analyzed by polarized light microscopy (PLM) or TEM at the option of the Owner's Industrial Hygiene Consultant to confirm the results of the visual inspection. If the results of the final testing determine that asbestos is present then wet cleaning and/or HEPA vacuuming shall be repeated until the required decontamination levels have been achieved.

## 3.06 RESTORATION AND REPAIRS

A. Repair and restore space in accordance with the final inspection punchlist specified herein.

#### 3.07 RESPONSIBILITY FOR DAMAGES

A. Any damages to the building and grounds that has been the result of actions by the Contractor personnel shall be repaired to their original condition without any additional cost to the Owner.

#### 3.08 GENERAL APPLICABILITY OF CODES, REGULATIONS, LAWS AND STANDARDS

A. Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, laws and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith.

#### 4.1.5 Performance Requirements

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit passage of water; and resist specified uplift pressures, thermally-induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.
- C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.
- D. FM Approvals Listing:
  - 1. Provide membrane roofing, base flashings, and component materials that comply with requirements in FM Approvals 4450 and FM Approvals 4470 as part of membrane roofing system, and that are listed in FM Approvals "RoofNav" for Class 1 on noncombustible construction, as applicable.
  - 2. Identify materials with FM Approvals' markings.
- E. Energy Performance: Provide roofing system that is listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for roof products.

#### 4.1.6 Submittals

- A. Product Data: For each type of product indicated
- B. Shop Drawings for Roofing System:
  - 1. Submit Shop Drawings to the architect for review in accordance with the requirements of the Contract Documents.
  - 2. Provide shop drawings for fabrication, installation and erection of all parts of the work. Provide plans, elevations and details of anchorages, connections accessory items and the following:
    - a. Base flashing and membrane terminations
    - b. Tapered insulation, including slopes
    - c. Insulation fastening patterns
  - 3. Show dimensions locations and methods for installation of all membrane sheet roofing, insulation boards, tapered crickets, and all membrane and metal flashing installations.
  - 4. Provide large scale (1-1/2" = 1 ft.) and 3" = 1 ft.) details at all flashings, penetrations, terminations and perimeters.
  - 5. Clearing note the work to be provided by other trades.

#### 4.1.7 Quality Assurance

A. Qualifications:

- 1. Installer: Firm approved, authorized or licensed by roofing system manufacturer to install manufacturer's product and eligible to receive manufacturer's warranty.
- 2. Manufacturer: Firm having FMG approval for membrane roofing system identical to that used for this Project.
- B. Source Limitations: Obtain components for membrane roofing system from same manufacturer as membrane roofing or approved by membrane roofing manufacturer.

## 4.1.8 Delivery, Storage and Handling

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type date of manufacturer, and directions for storing and mixing with other components.

#### B. Storage:

- 1. Store liquid materials in their original undamaged containers in clean, dry, protected location and within temperature range required by roofing system manufacturer.
- 2. Protect stored liquid material from direct sunlight.
- 3. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- 4. Roof insulation:
  - a. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources.
  - b. Store in dry location.
  - c. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

## 4.1.9 Project Conditions

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

## 4.1.10 Warranty

- A. Special Warranty:
  - Manufacturer's standard form, without monetary limitation, in which
    manufacturer agrees to repair or replace components of membrane roofing
    system that fail in materials or workmanship within specified warranty period.
  - 2. Failure includes roof leaks.
  - Special warranty includes roofing membrane, base flashings, roofing accessories, roof insulation, fasteners, cover boards, substrate board, and other membrane roofing system components.
- B. Warranty Period: 20 years NDL. Total System Warranty.

C. This warranty shall not deprive Owner of other rights Owner may have under other provisions of Contract Documents and will be in addition to, and run concurrent with, other warranties made by Contractor under requirements of Contract Documents.

#### PART 4.2 2 PRODUCTS

#### 4.2.1 Acceptable Manufacturers

A. Roofing System: Carlisle SynTec Incorporated, or approved equal by John Manville, or Firestone.

#### 4.2.2 Materials

#### A. EPDM Roofing Membrane:

1. Elastomeric Membrane: Class A EPDM elastomeric sheet meeting ASTM D3253, .060 inches thick, 40 feet in width by longest practical lengths.

#### B. Membrane Installation Accessories:

- Provide reinforced flashing, bonding adhesive, cut edge sealant, water cut-off
  mastic, sealant membrane cleaner, one-part pourable sealer, premolded inside
  and outside corners, pipe flashings, and sealant pockets. Bonding adhesive,
  splicing cement, water cut-off mastic, lap sealant, night sealant, pipe sealant, and
  prefabricated accessories shall be as furnished by membrane manufacturer and
  shall be compatible with membrane system and with materials to which
  membrane, flashing and roofing are bonded.
- 2. Provide insulation fasteners (min. 16 per 48 in. x 96 in. board), edgings (manufacturers standard membrane covered metal edging), water-based bonding adhesive, walkway rolls, premolded pipe flashings, cured flashings, pressure-sensitive inside/outside corners, pipe flashings, pourable sealer pockets, and termination bars, as required for complete system.
- Nailing strips and roof edge blocking shall be pressure treated wood and galvanized members furnished by membrane manufacturer, including noncorroding fasteners.
- 4. Gravel Stops: Aluminum gravel stops of size and configuration shown. Color to as selected by the Architect from manufacturer's full range of color selections. Build roof edge systems into elastomeric roofing in accordance with membrane manufacturer requirements.

## C. Vapor Barrier:

- 1. Self-adhering HDPE membrane with surface conditioner, liquid mastic or tape for penetrations.
- 2. Water Absorption: ASTM D570, max. 0.1 percent.
- 4. Permeance: ASTM E96, Section 12 Water Method, 0.05 Perms.
- 5. Thickness: 1/16 in. nominal.

#### D. Roof Insulation:

- 1. General: Provide preformed roof insulation boards that comply with manufacturer's requirements and referenced standards, selected from manufacturer's standard sizes and of thickness indicated, fastened with min. 16 fasteners per 48 in. x 96 in. board.
- 2. Polyisocyanurate Board Insulation:
  - a. ASTM C1289, min. 25 psi.
  - b. Sustainability: HCFC-FREE, min. 5 percent recycled content.
- 3. Tapered Insulation: Provide factory-tapered insulation boards fabricated to ¼ in. per 12 in. slope, unless otherwise indicated.
- 4. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain.
- 5. Fabricate to slopes indicated.

#### E. Insulation Accessories:

- 1. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- 2. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting FMG 4470 corrosion-resistance provisions, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.
- 3. Cold Fluid-Applied Adhesive: Manufacturer's standard cold fluid-applied adhesive formulated to adhere roof insulation to substrate.
- 4. Cover Board: ASTM C1177, glass-mat, water-resistant gypsum substrate, ¼ in. thick.

#### F. Wood Nailers:

- 1. Pressure-preservative-and fire-retardant-treated (wolmanized- or osmose-treated) #2 Quality or better wood lumber nailers for installation at perimeter of entire roof and around other roof projections and penetrations; with max. 19 percent moisture content by weight on dry weight basis.
- 2. Do not use creosote-or asphalt-treated wood.
- 3. Conform to FMG Loss Prevention Data Sheet 1-49.
- 4. Thickness: Match insulation thickness to achieve smooth transition.
- G. Plywood: Min. ½ in. thick, smooth-surfaced Exterior Grade Fir plywood with Exterior Grade glue, max. 19 percent moisture content by weight on dry weight basis.

#### H. Cover Board:

- 1. Cover (substrate) Board: ASTM C1177, glass-mat, water-resistant gypsum substrate, Type X ½ in. thick.
- 2. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting FMG 4470 corrosion-resistance provisions, designed for fastening substrate panel to roof deck.

#### LIGHT PROTECTION SYSTEM

1. Quality Assurance

- a. Installer Qualifications: Engage an experienced installer to install lightning protection system. Upon request, submit evidence of such qualifications to the Designer.
- b. Electrical Component Standard: Provide work complying with applicable requirements of State Electrical Code.
- c. NFPA and UL Compliance: Comply with requirements of NFPA Standard 78, and UL Standard 96 as applicable to lightning protection systems for building projects.
- d. LPI Compliance: Comply with requirements of Lightning Protection Institute (LPI) Standards 175, 176 and 177, pertaining to lightning protection system material components, installation and quality assurance procedures.
- e. UL Compliance: Comply with UL Standards 96 and 96A.
- f. ANSI Compliance: Comply with applicable requirements of ANSI Standard C2.

## 2. Sequencing and Scheduling

- a. Coordinate reinstallation of lightning protection system with reroofing and other building systems and components, including electrical wiring, supporting structures and building materials, and metal components requiring interface with lightning protection systems.
- 3. Lightning Protection System Components
  - a. Reinstall all lightning protection system materials and components so that they comply with manufacturer's standard design, in accordance with published product information. Provide all components required for a complete system that meets LPI-175, UL 96A or NFPA 78 standards.

#### PART 4.3 EXECUTION

## 4.3.1 Examination

- A. With installer present, examine substrates, areas, and conditions for compliance with following requirements and other conditions affecting performance of roofing system.
  - 1. Verify that roof openings and penetrations are in place, set, and braced and that roof drains are securely clamped in place.
  - 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  - 3. Endure dry, clean and smooth substrate has been prepared to receive adhered roof system.
  - 4. Inspect substrate for defects, such as excessive surface roughness, contamination, structural inadequacy, or any other condition adversely affecting quality of roofing installation.
  - 5. Ensure substrate is clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil, and grease; do not proceed with roofing installation until all defects have been corrected.

#### 4.3.2 Installation

#### A. Vapor Retarder:

- Lay directly on and adhere to substrate board attached to deck, with all side and end joints of vapor retarder sealed in accordance with manufacturer's instructions.
- 2. Seal all penetrations and terminations through vapor retarder.

#### B. Wood Nailers:

- 1. Install continuous wood nailers at perimeter of entire roof and around rood projections and penetrations.
- 2. Anchor to resist min. 300 lbs. per lineal ft. force in any direction.
- 3. Provide individual nailer lengths min. 36 in. long.
- 4. Space nailer fasteners 12 in. o.c. or 16 in. o.c. to match structural framing.
- 5. Stagger fasteners 1/3 nailer width and install within 5 in. of each end.
- 6. Install 2 fasteners at ends of nailer lengths.
- 7. Comply with specified requirements and Factory Mutual Loss Prevention Data Sheet 1-49.
- 8. Provide thickness to match substrate or insulation height to allow smooth transition.

#### C. Insulation:

- 1. Install according to insulation manufacturer's instructions.
- 2. Neatly cut to fit around penetrations and projections.
- 3. Install tapered insulation in accordance with insulation manufacturer's shop drawings.
- 4. Install tapered insulation around drains creating drain sump.
- 5. Do not install more insulation board that can be covered with roofing membrane by end of day or onset of inclement weather.
- 6. Use min. 2 layers of insulation when total insulation thickness exceeds 2.5 in.
- 7. Stagger joints min. 12 in. between layers.

#### D. Adhered Roofing Membrane:

#### 1. General:

a. Inspect surface of insulation or substrate before installing roofing membrane to ensure substrate is clean, dry, free from debris, and smooth with no surface roughness or contamination.

## 2. Roofing Membrane Adhesive:

- a. Over properly installed and prepared absorbent substrate, pour adhesive from pail and spread using notched squeegee at rate according to roofing manufacture's requirements; do not place any adhesive on back of roofing membrane.
- b. Do not allow formation of film on adhesive surface to occur
- c. Unroll membrane carefully into wet adhesive with edges overlapped 3 in.
- d. Press membrane firmly into adhesive layer with water-filled, foam-covered lawn roller by frequently rolling in two directions.

#### E. Flashing:

## 1. General:

- a. Install all flashing concurrently with roof membrane as job progresses; do not allow any temporary flashing without prior written approval of Owner's Representative and roofing membrane manufacturer.
- b. If any water is allowed to enter under newly-completed roofing, remove and replace affected area at no additional cost to Owner.
- c. Adhere flashing to compatible, dry, smooth and solvent-resistant surfaces.
- d. Use caution to ensure adhesive fumes are not drawn into building.
- e. Extend all flashings min. 8 in. above roofing level, unless otherwise accepted in writing by Owner's Representative.
- f. Adhere all flashing membranes consistently to substrates.
- g. Cut all interior and exterior corners and miters and hot-air weld into place; do not allow any bitumen in contact with membrane.
- h. Mechanically-fasten all flashing membranes fastened along counterflashed top edge with stop bar at 6 in. to 8 in. o.c.

#### G. Metal:

- 1. Ensure metal details, fabrication practices, and installation methods conform to applicable requirements of following:
  - a. Factory Mutual Loss Prevention Data Sheet 1-49/
  - b. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA).
  - c. Metal, other than that provided by roofing membrane manufacturer is not covered under membrane roofing warranty.
- 2. Complete all metal work in conjunction with roofing and flashings for watertight condition at end of each day.
- 3. Install to provide adequate resistance to bending to allow for normal thermal expansion and contraction.

#### 4.3.3 COMPLETION

- A. Prior to demobilization from site, arrange review of work by Owner's Representative and installer.
- B. Note all defects and non-compliance with Specifications or manufacturer's recommendations in Punch List and arrange for items to be corrected immediately by installer to satisfaction of Owner's Representative before demobilization.

## 4.3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Engage qualified testing agency to perform tests and inspections.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- C. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.

D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

#### 4.3.5 TEMPORARY CUT-OFF

- A. Install all flashing concurrently with roof membrane in order to maintain watertight condition as work progresses.
- B. Construct all temporary waterstops to provide 100 percent watertight seal, with stagger of insulation joints made even by installing partial panels of insulation.
- C. Carry roofing membrane to waterstop and seal waterstop to substrate so water will not be allowed to travel under permanent roofing.
- D. Seal Edge of Roofing Membrane:
  - 1. Seal edge in continuous heavy application of sealant.
  - Cut out contaminated membrane when work resumes, including removal of all sealant, contaminated membrane, insulation fillers, and similar materials placed with temporary cut-off.
  - 3. Do not allow any of these materials to be used in permanent work.
- E. If inclement weather occurs while temporary waterstop is in place, provide labor necessary to monitor situation to maintain watertight condition.
- F. If any water is allowed to enter under permanent roofing, remove affected area and replace at no additional cost to Owner.

#### 4.3.6 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period.
- B. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing nature and extent in written report, with copies to Architect and Owner.
- C. Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates, and repair and reinstall membrane roofing system to condition free of damage and deterioration at Substantial Completion and according to warranty requirements.

#### 4.4.1 Permits

All applicable permits and compliance with regulations are the responsibility of the Contractor. The Contractor is responsible for securing all permits and providing copies to the Water Pollution Control Facility Director before commencement of work.

#### 4.4.2 Site Condition During Work

The construction site will be kept neat and secured each day. Equipment security is the responsibility of the Contractor. Equipment may be stored at the site, but may not obstruct any roads or paths. The site will be free of trash and be kept in an orderly fashion.

#### 4.4.3 Best Management Practices

The Contractor shall employ best management practices for construction sites to reduce erosion and maintain a clean and safe site.

#### 4.4.4 Health and Safety

The Contractor will be responsible for ensuring the health and safety of employees and subcontractors. Work will be conducted in a safe and responsible manner and in compliance with all applicable health and safety laws and regulations.

#### 4.4.5 Hazardous Materials

The contractor will be responsible for disposal of any and all hazardous materials in accordance with federal, state and local regulations and ordinances.

#### 4.4.6 Contract Completion

The contract will be considered complete when:

- The site is clean of all debris
- All paperwork indicating disposal of materials has been turned in to the Project Manager.
- All permits have been signed off as complete by the managing authorities
- All items on punchlist have been completed
- All invoices have been submitted

## 4.5 Period of Performance

The contract period shall be for a period ninety (90) days however substantial completion is anticipated to take no more than 60 days from notice to proceed.

## SECTION 5.0 PRICING

The undersigned proposes to supply and deliver the materials and services specified below in full accordance with the Contract Documents supplied by the Town of Wareham entitled:

# REROOFING OF THE WAREHAM WATER POLLUTION CONTROL FACILITY

The Bidder proposes to furnish and deliver the services specified at the following prices. Pricing is firm fixed price (FFP)

CLIN	Description	Qty	Unit	Unit	Total Amount
001	Removal and disposal of existing roofing system including stone, membranes, insulation, mastics and related material down to existing deck in accordance with specifications shown on a plan prepared by RJ Farah Engineering dated January 27, 2014 entitled "The Reroofing of: Wareham Water Pollution Control Facility" on Sheet No. A1.0 "Plans"			Price	
002	Removal and proper disposal of asbestos-containing roofing materials (ACM) from the Operations Building				
003	Reroof with EPDM Membrane Roofing in accordance with specifications contained therein in the IFB and shown on a plan prepared by RJ Farah Engineering dated January 27, 2014 entitled "The Reroofing of: Wareham Water Pollution Control Facility" on Sheet No. A1.1 "Details"  Firm Fixed Price (FFP)  FOB: Destination				

NAME OF COMPANY/ INDIVIDUAL:					
ADDRESS:					
CITY/STATE/ZIP: _					
TELEPHONE/FAX/EMAIL:					
SIGNATURE OF AUTHORIZED INDIVIDUAL:					
ACKNOWLEDGEMENT OF ADDENDUMS:					
Addendum #1	#2	#3	#4		

## SECTION 6.0 FORMS

## **6.1 Required Submissions**

- **6.1.1** Certificate of Authority
- **6.1.2** Statement of Compliance
- **6.1.3** Insurance Certificate (Post Award)

## APPENDIX A PAST PERFORMANCE / REFERENCE SHEET

The Town requires that the Contractor demonstrate experience providing similar services in **size**, **scope and completely** for a minimum of three (3) projects. Three (3) references shall be provided for past performance.

Please use the below format for all references submitted and provide as much detail as possible in the Summary section.

## Past Performance/Reference Title:

Period of Performance	
Contract \$ Value	
Technical &	
Contractual POC	
Names & Titles	
Telephone numbers	
Email address	
Detailed summary of	
services provided	

## APPENDIX B SITE PHOTOS

APPENDIX C
PREVAILING WAGES

#### **AGREEMENT**

THIS AGREEMENT, made this _	day of	2014,
by and between the party of the first pa		
acting herein through its Town Authority	y and the party of the	
second part,		doing business as *(an
individual) (a partnership) (a joint ventu	ıre) (a corporation) located ir	n the
(City/ Town) of	County, and State of	
hereinafter called "CONTRACTOR."		
WITNESSETH: That for and in comentioned, to be made and performed OWNER to commence and complete the , hereinafter called Dollars (\$) and all extring the Bid Documents; and at his (its or materials, supplies, machinery equipments accessories and services necessary to complans , as prepared by the Owner.	by the OWNER, the CONTRAC e project described as followed ed the Project, for the sum of a work in connection therewi their) own proper cost and ex ent, tools, superintendence, la complete the said project in acc	ith, under the terms as stated xpense to furnish all the abor, insurance, and other cordance with the conditions
CONTRACTOR hereby agrees to o to be specified in written "Notice to Pro		ontract on or before a date
The CONTRACTOR further agree	s to fully complete the projec	ct within consecutive
calendar days of the date of the notice	to proceed, but in no event la	ater than
The CONTRACTOR further agree each consecutive calendar day thereaft Section of GENERAL CONDITIONS.		
The CONTRACTOR agrees not to	discriminate against or exclu	

The CONTRACTOR agrees not to discriminate against or exclude any person from participation herein on grounds of race, religion, color, sex, age or national origin; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, religion, color, sex, age, handicapped status, or national origin.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in GENERAL CONDITIONS, and to make payments on account thereof as provided in the GENERAL CONDITIONS.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in two (2) counterparts, each of which shall be deemed an original, in the year and day first above.

## AGREED:

Town of Wareham, Massachusetts
Derek D. Sullivan,
Town Administrator
Approved As to Form:
Town Counsel
Certified as to the Availability of Funds:
Town Accountant
Purchasing Agent

## CERTIFICATE OF VOTE

(to be filed if Contractor is a Corporation)

Ι,	, hereb	y certify that I am the duly q	ualified and
	of the Corporation)	, ,	
acting Secreta	ry of (Name of Corporation)	_ and I further certify that a	a meeting of the Directors
of said Compa	ny, duly called and held on _	(Date of Meeting)	at which all Directors were present
and voting, the	e following vote was unanimo	usly passed:	
VOTED:	To authorize and emp	ower	
Anyone acting Corporation.	singly, to execute Forms of C	General Bid, Contracts or Boi	nds on behalf of the
I further certif respect.	y that the above vote is still i	n effect and has not been ch	anged or modified in any
	Ву:		
	(Se	cretary of Corporation)	
A True Copy:			
Attest:			
	(Notary Public)		
My Commission	n Expires:		
	(Date)		