

TOWN OF WESTFORD, MASSACHUSETTS

REQUEST FOR BIDS

FOR

**LIQUID BITUMINOUS MATERIALS
TREATED STONE SEAL**

Contract 2013-HWY-006



**Advertisement Date:
March 28, 2013**

**HIGHWAY DEPARTMENT
28 NORTH STREET
WESTFORD, MASSACHUSETTS 01886
978-692-5520**



TOWN OF WESTFORD Highway Department

RICHARD J. BARRETT, JR.
HIGHWAY SUPERINTENDENT

2013 HIGHWAY DEPARTMENT MATERIALS/SERVICES

2013-HWY-006 BID ITEM

LIQUID BITUMINOUS MATERIALS TREATED STONE SEAL

INVITATION TO BID

Town of Westford through the Town Manager's Office, hereinafter called the "Awarding Authority," or "Town" is requesting sealed bids for: Liquid Bituminous Materials Treated Stone Seal work to be performed as necessary under the direction of the Awarding Authority personnel at selected sites throughout the Town of Westford.

Bids will be received by the Westford Highway Department at the Office of the Highway Superintendent, Westford Highway Facility, 28 North Street, Westford, Massachusetts 01886, on or before **Thursday, April 11, 2013 at 11:00 AM**, at which time they will be publicly opened and read aloud.

Each bid shall be submitted in a SEALED ENVELOPE MARKED "**TOWN OF WESTFORD HIGHWAY DEPARTMENT 2013-HWY-006 LIQUID BITUMINOUS MATERIALS TREATED STONE SEAL**". Bidder must use specifications. The sealed bid must include all completed forms provided in the enclosed Bid Form in order to be considered a responsive bid. These forms include: Unit Price Bid Sheet, Statement of Tax Compliance/Non-Collusion, Certificate of Vote, Contractor Certification, OSHA Compliance and References. Awarded bidder will be required to sign the Town's standard contract (sample contract attached as Appendix A).

All bids must be accompanied by a Bid deposit in the amount of 5% of the total bid. This may be cash, certified check or bid bond, payable to the Town of Westford.

Bid specifications may be obtained at the Westford Highway Department, 28 North Street, Westford, MA 01886 or electronically at: www.westfordma.gov/bidlist.

GENERAL PROVISIONS

All proposals are subject to Commonwealth of Massachusetts Department of Labor and Industry Rates, EEOC Regulations, OSHA regulations, and MGL Chapter 30B, Chapter 30 39M, and Chapter 149, Section 44A, where applicable. State Prevailing Wage Rates are attached in Appendix B. MBE and WBE contractors are encouraged to bid.

Quantities shown on bid sheets are approximate only and will be used for comparison of bids and to set amount of bid deposit. All bids shall be held firm from the award date for one full calendar year and may be extended for one or two additional years at the option of the Town of Westford.

At a minimum, all work shall be performed in compliance with MassDOT Standard Specifications for

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Highway Department • Engineering Department
28 North Street, Westford, MA 01886

Tel. (978) 692-5520 • (978) 692-5517 • (978) 692-5537 • Fax (978) 399-2726

Highways and Bridges latest edition.

The Awarding Authority is exempt from sales and federal excise taxes to the extent permitted under law, proponents should not include such taxes in figuring or in reference to any bid.

INSURANCE

The following types of insurance shall be provided by the successful bidder, hereinafter referred to as the Contractor:

- A. General Liability of at least \$1,000,000 Bodily Injury and Property Damage Liability, Combined Single Limit with a \$3,000,000 Annual Aggregate Limit. The Town should be named as an "Additional Insured".
- B. Products and Completed Operations should be maintained for up to 3 years after the completion of the project.
- C. Automobile Liability (applicable for any contractor who has an automobile operating exposure) of at least \$1,000,000 Bodily Injury and Property Damage per accident. The Town should be named as an "Additional Insured".
- D. Workers' Compensation Insurance as required by law.
- E. Property Coverage for materials and supplies being transported by the contractor, as the Town's Property Contract provides coverage for personal property within 1000 feet of the premises.
- F. Umbrella Liability of at least \$2,000,000/ occurrence, \$2,000,000/aggregate. The Town should be named as an Additional Insured.

The Contractor shall indemnify and save harmless the Town, all of its officers, agents and employees from all suits, actions or claims of any character.

All policies shall be so written that the Owner is co-insured with the Contractor for the full amounts stated above. Also, policies shall be so written that the Owner will be notified in writing of cancellation or restrictive amendments at least thirty (30) days prior to the effective date of such cancellation or amendments.

PAYMENT BOND

A payment bond equal to 50% of the contract or equivalent will be required from the successful bidder.

PRE-QUALIFICATION

The Contractor must be pre-qualified and on MassDOT list of approved contractors. All work under this contract must conform to M.G.L c.30. sec.39S OSHA Compliance.

REFERENCES

The Contractor must submit with his bid proposal a list of three (3) municipal jobs, which he has successfully completed, giving the name and the address of these projects so they can be investigated prior to the award of the contract.

RULE FOR AWARD

It is the intention of the Awarding Authority to award each individual bid item included in the Bid Sheets separately. A contract shall only be awarded to the responsive and responsible Contractor with the lowest unit bid price for the corresponding individual bid item solicited. The Awarding Authority reserves the right to waive any informality and in addition to reject any and all bids if deemed to be in the best interest of the Town to do so. Also, the Awarding Authority reserves the right to reject any Bid if it determines that such Bid does not represent the bid of a person competent to perform the Work as specified.

BID FORM
**2013-HWY-006 BID ITEM – LIQUID BITUMINOUS MATERIALS
TREATED STONE SEAL**

Includes the following:

**Unit Price Bid Sheet
Statement of Tax Compliance/Non-Collusion
Certificate of Vote
Contractor Certification
OSHA Compliance
References**

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TREATED STONE SEAL
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UNIT PRICE BID SHEET

	ITEM DESCRIPTION	APPROX. QUANTITY	UNIT PRICE	TOTAL PRICE
1.	Treated Stone Seal applied to Town prepared roadways in accordance w/ the attached specs.	4,000 Sq. Yards	\$ _____	\$ _____
2.	Double Stone Seal applied to Town prepared roadways in accordance w/ the attached specs.	4,000 Sq. Yards	\$ _____	\$ _____
3.	20% Asphalt-Rubber Surface Treatment applied to Town roadways in accordance w/ the attached specs. **	4,000 Sq. Yards	\$ _____	\$ _____
4.	Fiber Reinforced Bituminous Membrane Surface Treatment applied to Town roadways in accordance w/ the attached specs.	4,000 Sq. Yards	\$ _____	\$ _____
5.	Shimming/Leveling	500 Tons	\$ _____	\$ _____

****NO MINIMUM AMOUNT OF WORK IS GUARANTEED****

****At the awarding authority's option, post sweeping of the roadways for Item #3 will be an additional charge of \$ _____ per square yard.****

Estimated Quantities for Bid Purposes Only

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Bidder acknowledges receipt of the following addenda:

No. _____

Dated: _____

All bids shall be held firm from the award date for one full calendar year and may be extended for one or two additional years at the option of the Town of Westford.

All entries shall be made clearly in ink or typewritten.

The unit prices shall include all labor, materials, installation, overhead, profit, insurance, etc., to cover the complete type of work/service called for.

The Contractor understands that all bids for this project are subject to the applicable bidding laws of the Commonwealth of Massachusetts.

The Contractor understands that the OWNER reserves the right to reject any or all bids and to waive any informality in the bidding.

The Contractor agrees that this Bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of Bids.

The undersigned hereby certifies that he/she is familiar with all conditions surrounding the proposed work and hereby proposes to furnish all labor materials, supplies and installation, and to perform the work in accordance with the documents, and at the unit prices stated. The undersigned also certifies that he will comply fully with all applicable laws and regulations.

COMPANY NAME _____

ADDRESS _____

PHONE # _____ **EMERGENCY #** _____ **FAX #** _____

AUTHORIZED SIGNATURE _____

PRINT NAME AND TITLE _____

DATE _____ **FEDERAL TAX ID#** _____

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STATEMENT OF TAX COMPLIANCE/NON-COLLUSION

As required under Chapter 233 and 701 of the Massachusetts Acts and Resolves of 1993, all bidders certify to the following, by signing this page in the space indicated below:

1. The undersigned certifies under the penalties of perjury that his bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this paragraph, the word person shall mean any natural business or legal entity.

2. Pursuant to M.G.L. C62C S49A, I certify under the penalties of perjury that I, to the best of my knowledge and belief, have filed all state tax returns and paid all state taxes required under law.

Social Security Number or Federal Tax Identification Number of

Bidder: _____

Date: _____

Name of Company: _____

Business Address: _____

Authorized Signature: _____

Title: _____

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CERTIFICATE OF VOTE

I, _____, Clerk of
_____, hereby certify that at a meeting of the
Board of Directors of said Corporation duly held on _____, 20____, at which a
quorum was present (date must be earlier than contract)

and voting throughout, the following vote was duly passed and is now in full force and effect:

“VOTED: That _____

(Name of Officer Authorized to Sign for Corporation)

be and hereby is authorized, directed and empowered for, in the name and on behalf of this Corporation to sign, seal with corporate seal, execute, acknowledge and deliver all contracts, bonds, and other obligations of this Corporation, the execution of any such contract, bond or obligation by such _____

(Name of Officer)

to be valid and binding upon this Corporation for all purposes, and that a certificate of the Clerk of this Corporation setting forth this vote shall be delivered to the Town of Westford; and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and certificate of such later vote attested by the Clerk of this Corporation is delivered to the Town of Westford.”

I further certify that _____, is the duly

(Name of Officer)

elected _____ of said Corporation.

(Title)

Signed: _____

(Clerk-Secretary)

Place of Business: _____

Date of Contract: _____

In the event that the Clerk or Secretary is the same person as the Officer authorized to sign the contract or other instrument for the Corporation this certificate must be countersigned by another officer of the Corporation.

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INSTRUCTIONS:

Executive Order 481 applies to all state agencies in the Executive Branch, including all executive offices, boards, commissions, agencies, departments, divisions, councils, bureaus, and offices, now existing and hereafter established. As it is the policy of the Executive Branch to prohibit the use of undocumented workers in connection with the performance of state contracts, all contracts entered into after February 23, 2007 require that contractors, as a condition of receiving Commonwealth funds under any Executive Branch contract, make the following certification:

CONTRACTOR CERTIFICATION:

As evidenced by the signature of the Contractor's Authorized Signatory below, the Contractor certifies under the pains and penalties of perjury that the Contractor shall not knowingly use undocumented workers in connection with the performance of all Executive Branch contracts; that pursuant to federal requirements, the Contractor shall verify the immigration status of all workers assigned to such contracts without engaging in unlawful discrimination; and that the Contractor shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker(s). The Contractor understands and agrees that breach of any of these terms during the period of each contract may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

_____ Date: _____
Contractor Authorizing Signature

Print Name

Title: _____ Telephone: _____

Fax: _____ Email: _____

The Contractor is required to sign this Certification only once and may provide a copy of the signed Certification for any contract executed with an Executive Branch Department. A copy of this signed Certification must be attached to the "record copy" of all contracts with this Contractor that are filed with the contracting Department.

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OSHA Compliance

The undersigned certifies under pains and penalties of perjury that all work pertaining to this bid is in compliance with M.G.L. c.30. sec. 39S as further described below;

Section 39S. (a) As used in this section the word “person” shall mean any natural person, joint venture, partnership corporation or other business or legal entity. Any person submitting a bid for, or signing a contract to work on, the construction, reconstruction, alteration, remodeling or repair of any public work by the Commonwealth, or political subdivision thereof, or by any county, city, town, district, or housing authority, and estimated by the awarding authority to cost more than \$10,000, and any person submitting a bid for, or signing a contract to work on, the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency, estimated to cost more than \$10,000, shall certify on the bid, or contract, under penalties of perjury, as follows:

(1) that he 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 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; 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 United States Occupational Safety and Health Administration that is at least 10 hours in duration.

(b) Any employee found on a worksite subject to this section without documentation of 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.

(c) The attorney general, or his designee, shall have the power to enforce this section including the power to institute and prosecute proceedings in the superior court to restrain the award of contracts and the performance of contracts in all cases where, after investigation of the facts, he has made a finding that the award or performance has resulted in violation, directly or indirectly, of subsection (b), and he shall not be required to pay to the clerk of the court an entry fee in connection with the institution of the proceeding.

(Signature of individual responsible)

(Name of Business)

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REFERENCES

Contact Name	Contact Address	Contact Telephone #	Municipal Project (w/ Date Completed)

SPECIFICATIONS
**2013-HWY-006 BID ITEM – LIQUID BITUMINOUS MATERIALS
TREATED STONE SEAL**

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SPECIFICATIONS
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All work shall be in conformance with the MassDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES LATEST EDITION, THE SUPPLEMENTAL SPECIFICATIONS DATED DECEMBER 11, 2002, 1992 AASHTO SPECIFICATIONS FOR HIGHWAYS AND BRIDGES WITH INTERIMS THROUGH 1994, MHD BRIDGE MANUAL PART I AND PART II, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-89) OR LATER, THE 1977 CONSTRUCTION STANDARDS, THE 2003 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

All workmanship shall be of the highest quality. Any workmanship determined to be below the high standards of the particular craft involved will not be accepted, and will be corrected and/or replaced as required by the Highway Superintendent.

STONE MATERIALS

A sample of stone shall be provided to the Westford Highway Superintendent for approval a minimum of 1 week before work is to be completed.

LIQUID BITUMINOUS MATERIALS

All materials to be delivered to the Town of Westford, Highway Department, 28 North Street, Westford or a location within the Town of Westford as determined by the Highway Superintendent.

Asphalt: Penetration asphalts, cutback asphalts, emulsions, delivered and applied.

The Town of Westford reserves the right to waive any formality and/or to reject any or all bids if deemed to be in the best interest of the Town.

STONE SEAL (TREATED) SPECIFICATIONS (ITEM 1)

1. DESCRIPTION

Work under this contract shall consist of the Contractor furnishing and applying liquid asphalt and treated stone on properly prepared bituminous streets. Bid quantities are approximate only; payments shall be for actual quantities applied to streets. Streets to be stone sealed shall be selected by the Contractor and the Superintendent or his/her Designee.

2. MATERIALS

a. Liquid Asphalt

Liquid asphalt grades shall be: CRS-2 (3% Latex), CMS-2 (3% Latex), RS-2 (3% Latex), HFMS-2 (3% Latex), or MC-3000 conforming to AASHTO specifications M208, M140 or M82.

b. Latex Additive

The latex additive shall be Ultrapave 70 (Anionic) or Ultrapave 1156 (Cationic) or equivalent conforming to the following specifications. It is required that the latex be co-milled at the bulk emulsion facility, to ensure complete and balanced blending. The emulsion manufacturing plant must be open to inspection by the awarding authority.

	<u>Anionic</u>	<u>Cationic</u>
Monomer Rate (Butadiene/Styrene)	(76 +/- 2/24 +/- 2)	(76 +/- 2/24 +/- 2)
Solids, min%	67	59
Solids, min lbs./gal	5.2	4.8
Coagulum (80 mesh screen max)	0.1%	0.1%
pH of Latex	9.5 - 10.5	4.0 - 5.5
Brookfield Visc.(Model) RVT, #3 spindle @ 20RPM)	800 - 2000	5000 max
Mechanical Stability	Excellent	Excellent

c. Treated Stone

Stone shall be crushed quarry stone, free from dust, soft stone or other contaminants, with a minimum of 70% of the stones have a fractured face. All stone shall satisfy a 35% maximum for the L.A. Abrasion Test and a 35% maximum for the Flakiness Index Test. Stone shall be treated prior to application with Liquid Asphalt Material at the rate of 0.2% to 0.5% residual asphalt to ensure uniform treatment of all stones. Proper pre-treatment shall be obtained by a twin shafted Pug mill with a Digital Readout Belt Scale.

REQUIRED STONE GRADATION
9.5 mm, 3/8" STONE

<u>SIEVE SIZE</u>	<u>% PASSING</u>
12.5 mm, (1/2")	100
9.5 mm, (3/8")	85 - 100
6.3 mm, (1/4")	10 - 60
4.75 mm, (#4)	0 - 25
2.36 mm, (#8)	0 - 5

Maximum passing 0.075 mm, (#200) sieve shall not exceed 2.0%, wet washed, for all sized aggregates used in surface treatments.

3. **MATERIAL QUANTITIES**

The quantity of asphalt material to be used shall be in the range of 1.6 to 2.3 liters per square meter (0.35 to 0.50 gallons per square yard), or the quantity of MC-3000 to be used shall be in the range of 1.1 to 1.6 liters per square meter, (0.25 to 0.35 gallons per square yard). Cover aggregate shall be spread in the range of 11 to 16 kilograms per square meter, (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 must maintain a laboratory open to the inspection of the awarding authority.

4. **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 equipped with a radar type sensor used to measure ground speed, and feed a Digital Volumetric Accumulator capable of measuring liters applied and distance traveled. It shall be capable of applying asphalt material in accurately measured quantities at any rate between 0.5 to 9.1 liters per square meter, (0.1 to 2.0 gallons per square yard), of roadway surface, at any length of spray bar up to 4.9 meters, (16 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. It shall be equipped with an electronic control for setting asphalt pump discharge rate and on/off switching of spray for nozzles in .3 meter, (one foot), increments which shall be located in the truck cab. 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 1.4 to 5.4 meters (4.5 to 18 feet). The spreader shall be mounted on pneumatic tires and shall apply the treated 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 4.5 metric tons, (5 tons), of treated 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 1.5 meters, (5 feet). Each roller shall have a gross weight of not less than 7.2 metric tons, (8 tons), and contact pressure adjustable from 1,400 to 2,000 kPa, (200 to 300 psi).

d. Trucks

Rear discharge conveyor-fed trucks in sufficient number and size must be used to deliver treated stone to the spreader.

5. **CONSTRUCTION METHODS**

a. Streets to be Treated

The Contractor and the Superintendent shall mutually determine the streets which shall receive treated stone seal treatment. Measurements of streets to be treated shall be made by the Contractor and the Superintendent or his/her Designee, and the Contractor shall prepare a cost estimate for each street prior to beginning work.

b. Surface Preparation

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 the awarding authority and will be completed before the Contractor moves onto the job.

Immediately prior to the application of asphalt materials, Highway Department personnel shall remove small branches and other debris, and use a mechanical street sweeper to clean any loose material from the pavement surface.

c. Weather Limitations

Work will not be done unless the road surface is dry. No work shall be done during rain or foggy periods. No work shall be done if the ambient temperature is below 10°C, (50°F).

WORK UNDER THIS CONTRACT SHALL BE PERFORMED IN THE SUMMER MONTHS, AS AUTHORIZED BY THE SUPERINTENDENT. ALL STREETS SELECTED FOR TREATMENT SHALL BE TREATED ON OR BEFORE SEPTEMBER 1ST.

d. Spreading Asphalt and Treated Stone

Prior to application of asphalt material on any street, sufficient quantities of materials to cover the entire street at the specified rates shall be on the site and ready for application. The awarding authority shall be responsible for providing the Contractor with an aggregate storage area near the job site. The asphalt material shall not be applied more than 90 meters (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 MINUTES BEFORE IT IS COVERED WITH TREATED STONE.

e. Rolling

Initial rolling shall be done immediately following the application of treated stone. Rollers shall be operated at a speed that will not displace aggregate.

f. Traffic Control

Traffic control is the sole responsibility of the awarding authority. Unless otherwise specified, the roadway shall be kept open to traffic at all times, with traffic discontinued on the lane being surface treated. Controlled traffic may be permitted as soon as the final layer is applied and rolled. A recommended maximum speed of 30 km/h, (20 mph), should be maintained for a period of two (2) hours.

g. Surplus Aggregate

Surplus aggregate shall be swept off of the road surfaces by the Highway Department, and shall be the property of the awarding authority. Sweeping will be done after stone seal has properly cured, and care will be taken not to dislodge imbedded aggregate or damage the surface.

6. **PERFORMANCE**

The awarding authority will not award this contract unless the Contractor furnished satisfactory evidence of his/her ability and experience to perform this work, and that he/she has sufficient capital and equipment to enable him/her to prosecute the work successfully and to complete it within the time named in the contract. The Contractor shall not sublet any portion of this contract, and will own all equipment used to complete such contract. It will be the responsibility of each bidder to visit the job site with the Superintendent.

7. **METHOD OF PAYMENT**

Payment for work under this agreement shall be made at the contract unit price per square meter times the number of square meters, measured by the Contractor and the Superintendent or his/her designee, of road surface treated. Price per square meter shall be for complete in place quantities. Upon completion of work, and acceptance by the Superintendent, the Contractor shall submit a payment request to the Superintendent. Payment shall be net thirty (30) days.

8. **GUARANTEE**

Any material or workmanship found to be defective for up to one (1) year from the date of acceptance by the Superintendent shall be replaced by the Contractor at no cost to the awarding authority. Upon notification of defective material or workmanship, the Contractor shall immediately replace such defective areas.

**STONE SEAL (DOUBLE) (ITEM 2)
SPECIFICATIONS**

1. **DESCRIPTION**

Work under this contract shall consist of the Contractor furnishing and applying liquid asphalt and stone on properly prepared bituminous streets. Bid quantities are approximate only; payment shall be for actual quantities applied to streets. Streets to be stone sealed shall be selected by the Contractor and the Superintendent or his/her Designee.

2. **MATERIALS**

a. **Liquid Asphalt**

Liquid asphalt grades shall be: CRS-2 (3% Latex), CMS-2 (3% Latex), RS-2 (3% Latex), HFMS-2 (3% Latex), or MC-3000 conforming to AASHTO specifications M208, M140 or M82.

b. **Latex Additive**

The latex additive shall be Ultrapave 70 (Anionic) or Ultrapave 1156 (Cationic) or equivalent conforming to the following specifications. It is required that the latex be co-milled at the bulk emulsion facility, to ensure complete and balanced blending. The emulsion manufacturing plant must be open to inspection by the awarding authority.

	<u>Anionic</u>	<u>Cationic</u>
Monomer Ratio (Butadiene/Styrene)	(76 +/- 2/24 +/- 2)	(76 +/- 2/24 +/- 2)
Solids, min%	67	59
Solids, min lbs./gal	5.2	4.8
Coagulum (80 mesh screen) max	0.1%	0.1%
pH of Latex	9.5 - 10.5	4.0 - 5.5
Brookfield Visc.(Model) RVT, #3 spindle @ 20RPM)	800 - 2000	5000 max.
Mechanical Stability	Excellent	Excellent

c. Stone

Stone shall be crushed quarry stone, free from dust, soft stone or other contaminants, with a minimum of 70% of the stones have a fractured face. All stone shall satisfy a 35% maximum for the L.A. Abrasion Test and a 35% maximum for the Flakiness Index Test, 9.5 mm (3/8"), stone shall be treated prior to application with a liquid asphalt material at the rate of 0.2% to 0.5% to ensure uniform treatment of all stones. Proper pre-treatment of 9.5 mm, (3.8"), top course shall be obtained by a twin shafted Pug mill with a Digital Readout Belt Scale.

REQUIRED STONE GRADATION
12.5 mm, 1/2" STONE

<u>SIEVE SIZE</u>	<u>% PASSING</u>
15.88 mm, (5/8")	100
12.5 mm, (1/2")	85 - 100
9.5 mm, (3/8")	15 - 45
4.75 mm, (#4)	0 - 10
2.36 mm, (#8)	0 - 2

REQUIRED STONE GRADATION
9.5 mm, 3/8" STONE

<u>SIEVE SIZE</u>	<u>% PASSING</u>
12.5 mm, (1/2")	100
9.5 mm, (3/8")	85 - 100
6.3 mm, (1/4")	10 - 60
4.75 mm, (#4)	0 - 25
2.36 mm, (#8)	0 - 5

Maximum passing 0.075 mm, (#200) sieve shall not exceed 2.0%, wet washed, for all sized aggregates used in surface treatments.

3. **MATERIAL QUANTITIES**

The quantity of asphalt emulsion to be used on the double application shall be in the range of 3.2 to 4.1 liters per square meter, (0.70 to 0.90 gallons per square yard), or the quantity of MC-30000 to be used on the double application shall be in the range of 2.5 to 3.4 liters per square meter, (0.55 to 0.75 gallons per square yard). Cover aggregate shall be spread in the range of 30 to 40 kilograms per square meter, (55 to 75 pounds per square yard). The Contractor will use lab tests to design specific material quantities to met existing field conditions. Variations in material quantities will be made without adjustment to contract unit price. The Contractor must maintain a laboratory open to the inspection of the awarding authority.

4. **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 equipped with a radar type sensor used to measure ground speed, and feed a Digital Volumetric Accumulator capable of measuring liters applied and distance traveled. It shall be capable of applying asphalt material in accurately measured quantities at any rate between 0.5 to 9.1 liters per square meter, (0.1 to 2.0 gallons per square yard), of roadway surface, at any length of spray bar up to 4.9 meters, (16 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. It shall be equipped with an electronic control for setting asphalt pump discharge rate and on/off switching of spray nozzles in .3 meter, (one foot), increments which shall be located in the truck cab. 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 1.4 to 5.4 meters (4.5 to 18 feet). The spreader shall be mounted on pneumatic tires and shall apply the treated 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 4.5 metric tons, (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 1.5 meters, (5 feet). Each roller shall have a gross weight of not less than 7.2 metric tons, (8 tons), and contact pressure adjustable from 1,400 to 2,000 kPa, (200 to 300 psi).

d. Trucks

Rear discharge conveyor-fed trucks in sufficient number and size must be used to deliver stone to the spreader.

5. **CONSTRUCTION METHODS**

a. Streets To Be Treated

The Contractor and the Superintendent shall mutually determine the streets which shall receive treated stone seal treatment. Measurements of streets to be treated shall be made by the Contractor and the Superintendent or his/her Designee, and the Contractor shall prepare a cost estimate for each street prior to beginning work.

b. Surface Preparation

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 the awarding authority and will be completed before the Contractor moves onto the job.

Immediately prior to the application of asphalt materials, the Highway Department personnel shall remove small branches and other debris, and use a mechanical street sweeper to clean any loose material from the pavement surface.

c. Weather Limitations

Work will not be done unless the road surface is dry. No work shall be done during rain or foggy periods. No work shall be done if the ambient temperature is below 10°C, (50°F).

WORK UNDER THIS CONTRACT SHALL BE PERFORMED IN THE SUMMER MONTHS, AS AUTHORIZED BY THE SUPERINTENDENT. ALL STREETS SELECTED FOR TREATMENT SHALL BE TREATED ON OR BEFORE SEPTEMBER 1ST.

d. Spreading Asphalt and Treated Stone

Prior to application of asphalt material on any street, sufficient quantities of materials to cover the entire street at the specified rates shall be on the site and ready for application. The awarding authority shall be responsible for providing the Contractor with an aggregate storage area near the job site. The asphalt material shall not be applied more than 90 meters (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 MINUTES BEFORE IT IS COVERED WITH TREATED STONE.

e. Rolling

Initial rolling shall be done immediately following the application of treated stone. Rollers shall be operated at a speed that will not displace aggregate.

f. Traffic Control

Traffic control is the sole responsibility of the awarding authority. Unless otherwise specified, the roadway shall be kept open to traffic at all times, with traffic discontinued on the lane being surface treated. Controlled traffic may be permitted as soon as the final layer is applied and rolled. A recommended maximum speed of 30 km/h, (20 mph), should be maintained for a period of two (2) hours.

g. Surplus Aggregate

Surplus aggregate shall be swept off of the road surfaces by the Highway Department, and shall be the property of the awarding authority. Sweeping will be done after stone seal has properly cured, and care will be taken not to dislodge imbedded aggregate or damage the surface.

6. **PERFORMANCE**

The awarding authority will not award this contract unless the Contractor furnished satisfactory evidence of his/her ability and experience to perform this work, and that he/she has sufficient capital and equipment to enable him/her to prosecute the work successfully and to complete it within the time named in the contract. The Contractor shall not sublet any portion of this contract, and will own all equipment used to complete such contract. It will be the responsibility of each bidder to visit the job site with the Superintendent.

7. **METHOD OF PAYMENT**

Payment for work under this agreement shall be made at the contract unit price per square meter times the number of square meters, measured by the Contractor and the Superintendent or his/her designee, of road surface treated. Price per square meter shall be for complete in place quantities. Upon completion of work, and acceptance by the Superintendent, the Contractor shall submit a payment request to the Superintendent. Payment shall be net thirty (30) days.

8. **GUARANTEE**

Any material or workmanship found to be defective for up to one (1) year from the date of acceptance by the Superintendent shall be replaced by the Contractor at no cost to the awarding authority. Upon notification of defective material or workmanship, the Contractor shall immediately replace such defective areas.

ASPHALT-RUBBER SURFACE TREATMENT WITH AGGREGATE COVER (ITEM 3)

**STRESS ABSORBING MEMBRANE - SAM
STRESS ABSORBING MEMBRANE INTERLAYER- SAMI 0395
SPECIFICATIONS**

This specification covers requirements for materials, manufacture and application of asphalt-rubber as a stress absorbing membrane (SAM) or a stress absorbing membrane interlayer (SAMI). This specification shall consist of an application of a combined reacted mixture of hot paving grade asphalt and ground rubber followed immediately with a cover material.

1. **BASE MATERIALS**

a. Asphalt Cement

Asphalt cement for the asphalt-rubber mixture shall be PG 58-28 OR PG 64-28 complying

with the requirements of appropriate state or local specifications. The grade selected shall be based on laboratory testing by the asphalt-rubber supplier.

b. Anti-stripping Agent

If required by the job mix formula to produce appropriate water resistance, an anti-stripping agent that is heat stable and approved for use by the awarding authority 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.

c. Rubber

The granulated rubber shall be a vulcanized rubber product from the ambient temperature processing of scrap, pneumatic tires. The granulated rubber shall meet the following gradation: no substitutions will be accepted.

<u>SIEVE SIZE</u>	<u>% PASSING</u>
2.00 mm, (#10)	100
1.18 mm, (#16)	90 - 100
0.60 mm, (#30)	25 - 75
0.18 mm, (#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 3mm (1/8"). The rubber shall be accepted by certification from the rubber supplier.

d. Aggregate

The aggregate shall conform to the requirement of appropriate state or local specifications for crushed stone. Crushed gravel stone will 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 preheated to a temperature between 93°C and 149°C, (200°F and 300°F) and be pre-coated with 0.4% - 0.8% (by weight of aggregate) of AC-10 or AC-20 asphalt cement prior to application. It is recommended that the gradation of the aggregate meet the following limits:

<u>SIEVE SIZE</u>	<u>% PASSING-Normal Size</u>	
	<u>9.5 mm, (3/8")</u>	<u>12.5 MM, (1/2")</u>
15.8 mm, (5/8")	100%	100%
12.5 mm, (1/2")	100%	85 – 100%
9.5 mm, (3/8")	85 – 100%	15 - 45%
4.75 mm, (#4)	0 – 25%	0 – 15%
2.36 mm, (#8)	0 – 5%	0 – 5%
0.30 mm, (#50)	0 – 2%	0 – 2%
0.075 mm, (#200)	0 – 2%	0 – 2%

e. Materials Testing

A minimum of 60 days prior to construction the contractor (if asphalt-rubber supplier is acting as a sub-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 will be performed.

2. **ASPHALT-RUBBER MIXING AND REACTION**

a. Mixing and Reaction

The percent of rubber shall be 20% +/- 3% 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 and based on laboratory testing.

The temperature of the asphalt shall be between 177°C and 218°C (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 163°C, (325°F), during the reaction period.

b. 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 191°C, (375°F). An additional quantity of granulated rubber additive not exceeding 3% by volume of the hot asphalt-rubber mixture may be added after re-heating.

c. 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.

3. **EQUIPMENT**

a. Mechanical Blender

A mechanical blender for proper proportioning and thorough mixing of the asphalt-cement and granulated rubber is required. This unit shall be equipped with: an asphalt totaling meter (liters or gallons); a flow rate meter (liters per minute or gallons per minute); a positive displacement auger to feed the rubber properly to mixing chamber at the specified rate; and a static motionless mixer. Blender will have a separate rate; and a static motionless mixer. Blender will have a separate asphalt cement feed pump and finished product pump to maximized production. Blender shall be capable of providing 100% proportional mix at any given time during the blending cycle and documentation from the manufacturer, supporting this, shall be submitted to the awarding authority if requested.

b. Distributor Truck

On projects exceeding 31.8 metric tons, (35 tons), of liquid asphalt rubber, at least two pressure-type bituminous distributor trucks in good condition will be required. The distributor shall be equipped with an internal heating device capable of heating the material evenly up to 218°C, (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 – 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 meter with a tolerance of plus or minus 0.2 liters per square meter, (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.

c. 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 should be available to ensure continuous operation of the distributor and chip spreader.

d. 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 1.4 to 5.4 meters, (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 4.5 metric tons, (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.

e. Pneumatic-Tired Roller

Two (2) self-propelled, multiple wheel, pneumatic-tired rollers shall be used and shall weigh between 6.5 and 10.9 metric tons, (7 and 12 tons), each roller shall have a total compacting width of at least 1.4 meters, (56 inches), have a minimum tire pressure of 414 kPa, (60 psi), and be equipped with a watering system.

f. Steel-Wheel Roller

One (1) self-propelled, 2-axle (tandem) steel-wheel roller shall be used and shall weigh between 7.3 and 10.9 metric tons, (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.

4. **CONSTRUCTION PROCEDURES**

a. Preparation

Potholes, other areas of pavement failure, and major depressions in the existing pavement surface shall be repaired by the owner with asphalt concrete. A leveling course shall be placed on planed, milled or existing surface by the awarding authority, if required.

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

b. 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 10°C, (50°F), and rising. No water shall be present on the road surface.

c. Application

The asphalt-rubber mixture shall be applied at a temperature of 170°C to 215°C, (338°F to 419°F), at a rate of 2.5 – 2.9 liters per square meter (0.55 – 0.65 gallons per square yard). Exact rate to be determined by the aggregate gradation, traffic volume and pavement condition.

Longitudinal 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 10.2 to 15.2 centimeters, (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.

d. 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 pre-coated aggregate shall be spread uniformly by a self-propelled spreader at a rate of spread directed by the awarding authority, generally between 16.3 and 21.7 kilograms per square meter, (30 to 40 pounds per square yard). Any deficient areas shall be covered with additional material.

e. Rolling

A minimum of three (3) rollers shall be used for aggregate compaction into the hot asphalt-rubber. Two of the 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 coverage's by the pneumatic tired rollers to embed the aggregate particles firmly in 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 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.

f. 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. This will be done at a time and in a manner, which will not displace any embedded aggregate or damage the asphalt-rubber. Pre and post sweeping is the responsibility of the Highway Department unless bid as a separate bid item.

g. Traffic Control

Traffic control is the sole responsibility of the awarding authority. Unless otherwise specified, the roadway shall be kept open to traffic at all times, with traffic discontinued on the lane being surface treated. Controlled traffic may be permitted as soon as the final layer is applied and rolled. A recommended maximum speed of 30 km/h, (20 mph), should be maintained for a period of two (2) hours.

5. **METHOD OF MEASUREMENT AND BASIS OF PAYMENT**

a. SAM OR SAMI

Stress Absorbing Membrane or Stress Absorbing Membrane Interlayer will be measured by the square meter/square yard and shall be the actual number of square meter/square yards applied. Price per square meter/square yard shall be full compensation for all labor, materials and equipment required to complete the work in accordance with these specifications.

b. Other Work

Measurement of and payment for other work such as patching, leveling, sweeping and crack sealing shall be bid as separate item(s).

6. **PERFORMANCE**

The awarding authority will not award this contract unless the Contractor furnished satisfactory evidence of his/her ability and experience to perform this work, and that he/she has sufficient capital and equipment to enable him/her to prosecute the work successfully and to complete it within the time named in the contract. The Contractor shall not sublet any portion of this contract, and will own all equipment used to complete such contract. It will be the responsibility of each bidder to visit the job site with the Superintendent.

7. **METHOD OF PAYMENT**

Payment for work under this agreement shall be made at the contract unit price per square meters/yards times the number of square meters/yards, measured by the Contractor and the Superintendent or his/her designee, of road surface treated. Price per square meter/yard shall be for complete in place quantities. Upon completion of work, and acceptance by the Superintendent, the Contractor shall submit a payment request to the Superintendent. Payment shall be net thirty (30) days.

8. **GUARANTEE**

Any material or workmanship found to be defective for up to one (1) year from the date of acceptance by the Superintendent shall be replaced by the Contractor at no cost to the Town of Westford. Upon notification of defective material or workmanship, the Contractor shall immediately replace such defective areas.

**FIBER REINFORCED BITUMINOUS MEMBRANE SURFACE TREATMENT (ITEM 4)
SPECIFICATIONS**

1. **DESCRIPTION**

The work shall consist in the construction of a fiber reinforced bituminous membrane surface treatment know as “**FiberMat-Type A**” as a Stress Absorbing Membrane, SAM and as “**FiberMat – Type B**” when used as a Stress Absorbing Membrane Interlayer, SAMI. This is accomplished by using a specific applicator, which can be mounted on an asphalt distributor modified for applying the surface treatment of bituminous binder reinforced with glass fibers. The applicator comprises an open bottomed spray bar housing fan or blower for producing a down draft in the housing, and at least one spray bar mounted on the housing and adapted to extend transversely in the direction of movement of the asphalt distributor on which the unit can be mounted. A number of nozzles spaced longitudinally along the spray bar for spraying bituminous material, means of controlling the nozzles, and a number of sources for dispensing the cut glass fibers through the open bottomed housing to the surface of the bituminous material previously sprayed shall also be included.

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

When applied within the pavement structure the fiber reinforced bituminous membrane surface treatment acts as a SAMI for the treatment of reflective cracking prior to the construction or placement of subsequent layers.

2. **MATERIALS**

a. **Bituminous Materials**

The emulsified asphalt shall be CRS-2 (3% Latex Rubber Solids by weight of asphalt cement) in accordance with AASHTO M 208 Table 1.

The emulsified asphalt latex additive shall be Butonol NX 1138 or equivalent conforming to the following specifications:

Monomer Ratio (Butadiene/Styrene)	(76 +/- 2/24 +/- 2)
Solids, min%	63
pH of Latex	4.1 – 4.5
Brookfield Viscosity	250 -2000
Density, pounds per gallon	7.8 +/- 0.2

b. Aggregate

Aggregate shall consist of 100% crushed ledge having durable particles. The percent wear of aggregate shall not exceed 35% as determined by AASHTO T-96. All aggregate shall be thoroughly washed and stockpiled for a minimum of 5 working days before use. The aggregate shall be treated prior to application with Liquid Asphalt Material MC 30 or MC 70 at the rate of 0.2% to 0.5% residual asphalt to ensure uniform treatment of all aggregate. Proper pre-treatment shall be obtained by a twin shafted Pugmill with a Digital Readout Belt scale. When tested in accordance with AASHTO T-27 and AASHTO T11, the aggregate shall meet one of the following gradations:

GRADATION FOR 3/8" COVER AGGREGATE

<u>SIEVE SIZE</u>	<u>% PASSING</u>
1/2 inch	100
3/8 inch	85 – 100
No. 4	0 – 30
No. 8	0 – 6
No. 200	0 – 2

GRADATION FOR 1/2" COVER AGGREGATE

<u>SIEVE SIZE</u>	<u>% PASSING</u>
3/4 inch	100
1/2 inch	90 – 100
3/8 inch	40 – 70
No. 4	0 – 15
No. 8	0 – 5

c. Fiber

The glass fiber is E Class from an approved source determined by the license holder. The glass fiber spools are supplied internally wound, in coils or cheeses. Typically the spools are cut in-place into nominally 60mm, (2.38") lengths which are distributed uniformly across and between the two parallel applications of modified asphalt emulsion. Glass fiber spread rates are up to 120 g/sqm, (4 oz.), with additional asphalt emulsion rates of spread, depending on the site requirements.

3. **CONSTRUCTION DETAILS**

A. **Fiber Reinforced Bituminous Membrane Surface Treatment**

1. Weather and Season Limitations.

The fiber reinforced bituminous membrane surface treatment may be applied on a dry or damp surface, but should not be laid where there is standing water or on a wet surface. Application should only be undertaken when the surface temperature is at least 10°C, (50°F), and rising, subject to site inspection. Greater initial traffic speed control may be required in certain circumstances, for example when the surface temperature is low.

The fiber reinforced bituminous membrane surface treatment shall be placed during the period of May 1st to the third Saturday in September. Application outside of these times is permissible only with the approval of the contractor and Superintendent.

B. Equipment

The following equipment shall be required:

1. 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 equipped with a radar type sensor used to measure ground speed, and feed a Digital Volumetric Accumulator capable of measuring liters applied and distance traveled. It shall be capable of applying asphalt material in accurately measured quantities at any rate between 0.5 to 9.1 liters per square meter, (0.1 to 2.0 gallons per square yard), of roadway surface, at any length of spray bar up to 4.9 meters, (16 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. It shall be equipped with an electronic control for setting asphalt pump discharge rate and on/off switching of spray for nozzles in 0.30 meter, (one foot), increments which shall be located in the truck cab. 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.

2. 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 1.4 to 5.4 meters, (4.5 to 18 feet). The spreader shall be mounted on pneumatic tires and shall apply the treated 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 4.5 metric tons, (5 tons), of treated 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.

3. Rollers

At least two 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 or not less than 1.5 meters, (5 feet). Each roller shall have a gross weight of not less than 7.2 metric tons, (8 tons), and contact pressure adjustable from 1400 to 2000 kPa, (200 to 300 psi).

4. Trucks

Rear discharge conveyor-fed trucks in sufficient number and size must be used to deliver treated stone to the spreader.

5. Self-propelled Rotary Power Broom

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

C. Determination of the Quantities of Materials to be Applied

In conjunction with the Engineer the Contractor will decide upon the appropriate rates of asphalt emulsion and fiber for and during the job. Typical rates of application for the asphalt emulsion range from 1.8-2.7L/m² (0.3 – 0.6 Gal/SY) and fiber application rates from 30 – 120g/me (approx. 1.4 oz/sy).

For SAM applications the aggregate shall be of the 3/8", 1/2" maximum size and be added at rates as per conventional chip sealing operations – typically (20 – 30 lb/sy).

For SAMI applications only the 3.8" maximum size aggregate is used at typically (15 – 30 lb/sy) to blind in the surface if it is to be overlaid within a few weeks. Otherwise higher aggregate application rates are employed and approved with the Superintendent.

D. Preparation of Surface

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

E. Application of the fiber reinforced bituminous membrane surface treatment

Fibers and bituminous materials shall be applied by means of pressure distributor in a uniform, continuous spread over the section to be treated and within the temperature range, sandwiching the in-place chopped fibers between the two layers of asphalt emulsion. The quantities of fibers and bituminous materials shall be decided between the Superintendent and Contractor dependant on the job site. The distributor shall be moving forward at the proper application speed at the time the spray bar and fiber chopper bars are opened. If any skipped areas or deficiencies occur, the operation shall be immediately stopped. Junctions of spreads shall be carefully made to assure a smooth riding surface and the deficient areas corrected in a manner approved by the Superintendent. Overlaps of the membrane shall be made up to 6".

The fiber reinforced bituminous membrane surface treatment shall not be applied more than 50 meters, (150 ft), in advance of the self-propelled chip spreader. Under no circumstances shall operations proceed in such a manner that the fiber reinforced bituminous membrane surface treatment will be allowed to chill, set-up, dry or otherwise impair retention of the cover aggregate. Traffic will not be allowed to run on the unprotected fiber reinforced bituminous membrane surface treatment. The distributor, when not spreading, shall be parked so that the spray bar or mechanism will not drip on the surface of the traveled way.

F. Application of the Cover Aggregate

Immediately following the application of the fiber reinforced bituminous membrane surface treatment, cover aggregate shall be spread at the rate agreed between the Superintendent and Contractor. Spreading shall be accomplished in such a manner that the tires of the aggregate spreader at no time contact the uncovered and newly applied fiber reinforced bituminous membrane surface treatment. Immediately after the cover aggregate is spread, any deficient areas shall be covered by additional material. Pneumatic tire rolling shall begin immediately. The initial pass shall be completed within 5 minutes of the application of the fiber reinforced bituminous membrane surface treatment and shall be continued until three complete passes are obtained with 30 minutes of the application of the fiber reinforced bituminous membrane surface treatment. Pneumatic tire rollers shall come to a complete stop prior to a change in direction. For overlaps the first pass of aggregate and the space uncovered shall be up to 6". Upon the return pass the aggregate coverage shall be complete and over by up to 6" to insure full coverage of the membrane.

4. **METHOD OF MEASUREMENT**

Fiber reinforced bituminous membrane surface treatment will be measured by the number of square yards of compacted material in place making no deductions for minor untreated areas such as catch basins and manholes.

5. **BASIS OF PAYMENT**

The unit price bid per square yard per day, plus the addition of any items the awarding authority requires the contractor to furnish.

Traffic Control

Traffic control is the sole responsibility of the awarding authority. Unless otherwise specified, the roadway shall be kept open to traffic at all times, with traffic discontinued on the lane being surface treated. Controlled traffic may be permitted as soon as the final layer is applied and rolled. A recommended maximum speed of 30 km/h, (20 mph), should be maintained for a period of two (2) hours.

6. **PERFORMANCE**

The awarding authority will not award this contract unless the Contractor furnished satisfactory evidence of his/her ability and experience to perform this work, and that he/she has sufficient capital and equipment to enable him/her to prosecute the work successfully and to complete it within the time named in the contract. The Contractor shall not sublet any portion of this contract, and will own all equipment used to complete such contract. It will be the responsibility of each bidder to visit the job site with the Superintendent.

7. **METHOD OF PAYMENT**

Payment for work under this agreement shall be made at the contract unit price per square meters/yards times the number of square meters/yards, measured by the Contractor and the Superintendent or his/her designee, of road surface treated. Price per square meter/yard shall be for complete in place quantities. Upon completion of work, and acceptance by the Superintendent, the Contractor shall submit a payment request to the Superintendent. Payment shall be net thirty (30) days.

8. **GUARANTEE**

Any material or workmanship found to be defective for up to one (1) year from the date of acceptance by the Superintendent shall be replaced by the Contractor at no cost to the Town of Westford. Upon notification of defective material or workmanship, the Contractor shall immediately replace such defective areas.

APPENDIX A

**TOWN OF WESTFORD
SAMPLE STANDARD CONTRACT**

**SAMPLE
STANDARD GENERAL CONTRACT
FOR GOODS**

Agreement effective the _____ day of _____ 20__ by and between the Town of Westford, 55 Main Street, Westford, MA 01886, a duly existing municipal corporation in the Commonwealth of Massachusetts, through its duly elected Board of Selectmen or its Town Manager as signed below, with no personal liability to themselves hereinafter referred to as the "Town" and (name & address) _____

_____ hereinafter referred to as the "Contractor".

RECITALS

WHEREAS the Contractor will furnish the Town with goods and;

WHEREAS the Town desires to obtain such from Contractor in a timely manner and;

WHEREAS it was one of the conditions of the award of this contract that a formal agreement should be executed, by the Contractor and Town, evidencing the terms of the award.

NOW THEREFORE in consideration of the mutual covenants contained the parties agree as follows:

ARTICLE I: Contractor shall furnish Town with: _____

_____ subject to and in compliance with all conditions, covenants, stipulations, terms and provisions contained in the specifications, instructions to bidders and related documents, which if attached hereto are shown as lettered Exhibit(s) _____ and which are incorporated herein by reference, for the sum equal to the aggregate purchase price of that described above to be furnished by Contractor at the prices and rates specified in the proposal, which if also attached hereto is shown as Exhibit _____ and which is incorporated herein by reference.

ARTICLE II: Contractor shall commence the performance of this contract within _____ days of receiving written notice to proceed and shall have completed the work on or before _____ days after notice was received.

ARTICLE III: Contractor covenants and agrees to faithfully perform all of its obligations under this agreement and the incorporated documents hereto. Said performance shall be in a professional and workmanlike manner and in accordance with the standard of care and conduct that is generally acceptable in the business or profession.

ARTICLE IV: In addition to any other warranties or guarantees in any documents incorporated herein by reference, Contractor warrants that what is being provided, described above in Article I, as the subject matter of this contract, is fit for the use or purpose intended. Contractor further certifies the suitability, professionalism and capability of all individuals employed to furnish any services specified in Article I above.

ARTICLE V: The contractor shall purchase and maintain such insurance as will protect it and the Town from claims which arise out of or result from the Contractor's operations under the contract, whether such operations be by itself or by any subcontractor or anyone directly or indirectly employed by any of them. The insurance required shall be with a company authorized to do business in the Commonwealth of Massachusetts and satisfactory to the Town, and shall be written for limits of the liability satisfactory to the Town, and shall include insurance in the following amounts:

LIABILITY - Limits to be Determined
UMBRELLA - Limits to be Determined
WORKER'S COMPENSATION - per statutory requirements
AUTO LIABILITY - Limits to be Determined

Certificates of Insurance acceptable to the Town, naming the Town as an additional insurer, shall be submitted to the Town simultaneously with the execution of the Contract.

ARTICLE VI: The Town has waived the cost of the building permits if required for this project. All permits must still be obtained by the appropriate Contractors as normally required.

ARTICLE VII: This project is Tax Exempt. The tax exemption number will be furnished to the General Contractor by the Owner after award of the contract.

ARTICLE VIII: Termination/Right to Stop Work. The Town may terminate this contract if (a) any material misrepresentation is made by the contractor; (b) any failure by the Contractor to perform any of its obligations under this contract, including but not limited to, the following: (i) failure to commence performance of this contract at time specified due to a reason or circumstance within the Contractor's reasonable control; (ii) failure to perform this contract with sufficient personnel and equipment or with sufficient material to ensure the completion of this contract within the specified time due to a reason or circumstance within the Contractor's reasonable control; (iii) failure to perform this contract in a manner reasonably satisfactory to the Town; (iv) failure to promptly re-perform, within reasonable time, the services that were rejected by the Town as erroneous or unsatisfactory; (v) discontinuance of the services for reasons not beyond the Contractor's reasonable control; (vi) failure to comply with a material term of this contract; and, (vii) any other acts specifically and expressly stated in this contract as constituting a basis for termination of this contract.

The Town may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work for such a period of time as it may determine to be appropriate for the convenience of the Town. The Town may terminate this Contract at any time, with or without cause, upon thirty (30) days written notice to the other party, sent by certified mail, to the usual place of business of the other party.

ARTICLE IX: Damages - From any sums due to the Contractor for performance of this contract, the Town may keep for its own the whole or any part of the amount for expenses, losses and damages incurred by the Town as a consequence of the need to hire a third party to perform the work required by this contract, including the cost of labor and equipment as a result of any event of default, failure, omission or mistake of the Contractor in performing the work as provided in this Contract.

It is further agreed by the Contractor that, in the event the Town is sued in a court of law or equity, or demand is made upon the Town for payment of any damages arising out of any errors or omissions on behalf of the Contractor, or the Contractor's performance or non-performance of this Contract, then the Contractor, without reservation, shall indemnify and hold harmless the Town against any and all claims arising out of the Contractor's performance or non-performance of the Agreement.

ARTICLE X: Confidentiality: The Contractor shall treat as confidential any personal or confidential information obtained from the Town during the negotiation of, or pursuant to, this Agreement and shall not divulge such information to any person (except to such Contractor's own employees or consultants who need to know the same) without the Town's prior written consent provided that this clause shall not extend to information which is already public or becomes so at a future date (otherwise than as a result of a breach of this clause) . The Contractor shall ensure that its employees and consultants are aware of and comply with this clause.

ARTICLE XI: Governing Ordinances and Laws - This contract is made subject to all the laws of the Commonwealth and the By-laws of the Town and if any such clause thereof does not conform to such Laws or Bylaws, such clause shall be void (the remainder of this Contract shall not be affected) and such Laws or By-laws shall be operative in lieu thereof.

ARTICLE XII: Equal Opportunity: The Contractor, in the performance of all work under this contract, will not discriminate on the grounds of race, color, sex, age, religious creed, disability, national origin or ancestry, sexual orientation, marital status, family status, military status, or source of income in the employment practices or in the selection or retention of subcontractors, and in the procurement of materials and rental of equipment. The Town may cancel, terminate or suspend the contract in whole or in part for any violation of this Article.

ARTICLE XIII. Assignability: The Contractor shall not assign, sell, subcontract or transfer any interest in this contract without prior written consent of the Town.

ARTICLE XIV. Notice: Any notice to be given by either party to the other shall be deemed duly given if mailed, via certified mail, return receipt requested, as follows:

In the case of the Town to:

Jodi Ross, Town Manager, 55 Main Street, Westford, MA 01886

In the case of the Contractor to:

ARTICLE XV. Amendments: This contract represents the entire agreement between the parties and the terms of this contract may not be altered or amended except by writing by the parties with the same formalities as this agreement.

ARTICLE XVI. Severability: If any provision of this Agreement or any portion of such provision shall be held invalid or illegal, then the remainder of this Agreement or the remainder of such provision shall not be affected thereby.

ARTICLE XVII. Interpretation of Specifications and Contract Requirements: A decision of interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work by the Contractor, shall be made promptly and, in any event, no later than thirty days after the written submission for decision by the Town, but if such decision requires extended investigation and study, the Town shall, within thirty days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty day period and the date by which the decision will be made.

ARTICLE XVIII. Indemnification: The Contractor hereby assumes the entire responsibility and liability for any and all injuries to, or death of, all persons, including the Contractor's employees, and for any and all damage to property caused by, resulting from, or arising out of, any act, omission or neglect on the part of the Contractor or anyone directly or indirectly employed by the Contractor.

ARTICLE XIX: The Town agrees to faithfully pay the Contractor, when due and payable, and under the terms of all such incorporated documents and instruments to this agreement, all such contracted sums.

ARTICLE XX: COMPLIANCE – M.G.L. Chapter 62C, §49A

Prior to the issuance of the Contract, _____ shall attest under the penalties of perjury that it is in compliance with all the laws of the Commonwealth of Massachusetts relating to taxes. This statement is required in accordance with Massachusetts General Law c.62C, Section 49A.

Pursuant to M.G.L. c.62C, § 49A, I certify under the penalties of perjury that I, to the best of my best knowledge and belief, have filed all state tax returns and paid all state taxes, reported all employees and contractors, and withheld and remitted child support, as required by law.

(NAME OF COMPANY)

Social Security Number or Federal
Identification Number

By _____
Corporation Officer or Authorized

IN WITNESS WHEREOF, the parties hereto have set their hand and seals to this Agreement on the _____ day of _____, 20____.

Availability of Funds:

Town of Westford by its
Board of Selectmen or Town Administrator
Date if Board vote (if any) _____

Town Accountant

Contractor:

Signature

Print

Title

Corporate Seal

APPENDIX B

STATE PREVAILING WAGE RATES



DEVAL L. PATRICK
Governor
TIMOTHY P. MURRAY
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

JOANNE F. GOLDSTEIN
Secretary
HEATHER E. ROWE
Director

Awarding Authority: Town of Westford Highway Department
Contract Number: **City/Town:** WESTFORD
Description of Work: Town-wide Highway Construction Works; Various construction work to the town roadway infrastructure
Job Location: Town-wide

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- 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.
- Awarding authorities must request an updated wage schedule from the Department of Labor Standards (“DLS”) if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule.
- 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. Once a contractor has been selected by the awarding authority, the wage schedule shall be made a part of the contract for that project. The wage schedule must be posted in a conspicuous place at the work site during 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 regardless of whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- All apprentices must be registered with the Massachusetts Division of Apprenticeship Training (DAT) in order to be paid at the lower apprentice rates. All apprentices must keep his/her apprentice identification card on his/her person during all work hours. If a worker is not registered with DAT, he/she must be paid the "total rate" listed on the wage schedule regardless of experience or skills.
- 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. Awarding authorities are required to request these updates no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F “rental of equipment” contracts.
- Every contractor or subcontractor which performs construction work on the project is required to submit weekly payroll reports directly to the awarding authority 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. A sample of a payroll reporting form may be obtained at <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.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
- 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.

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>	12/01/2012	\$30.45	\$8.91	\$8.00	\$0.00	\$47.36
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2012	\$30.52	\$8.91	\$8.00	\$0.00	\$47.43
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2012	\$30.64	\$9.07	\$8.00	\$0.00	\$47.71
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2012	\$82.32	\$9.80	\$17.67	\$0.00	\$109.79
	08/01/2013	\$85.47	\$9.80	\$17.67	\$0.00	\$112.94
	08/01/2014	\$88.62	\$9.80	\$17.67	\$0.00	\$116.09
	08/01/2015	\$91.77	\$9.80	\$17.67	\$0.00	\$119.24
AIR TRACK OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2012	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	06/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	12/01/2013	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	06/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	12/01/2014	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	06/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	12/01/2015	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	06/01/2016	\$33.85	\$7.10	\$11.55	\$0.00	\$52.50
	12/01/2016	\$34.60	\$7.10	\$11.55	\$0.00	\$53.25
For apprentice rates see "Apprentice- LABORER"						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>ASBESTOS WORKERS LOCAL 6 (BOSTON)</i>	12/01/2012	\$29.08	\$10.40	\$5.95	\$0.00	\$45.43
	06/01/2013	\$29.88	\$10.40	\$5.95	\$0.00	\$46.23
	12/01/2013	\$30.68	\$10.40	\$5.95	\$0.00	\$47.03
	06/01/2014	\$31.58	\$10.40	\$5.95	\$0.00	\$47.93
	12/01/2014	\$32.48	\$10.40	\$5.95	\$0.00	\$48.83
	06/01/2015	\$33.43	\$10.40	\$5.95	\$0.00	\$49.78
	12/01/2015	\$34.38	\$10.40	\$5.95	\$0.00	\$50.73
ASPHALT RAKER <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 2</i>	12/01/2012	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	06/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	12/01/2013	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	06/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	12/01/2014	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	06/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	12/01/2015	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	06/01/2016	\$33.85	\$7.10	\$11.55	\$0.00	\$52.50
For apprentice rates see "Apprentice- LABORER"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2010	\$37.70	\$6.97	\$11.18	\$0.00	\$55.85

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2010

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$24.51	\$6.97	\$11.18	\$0.00	\$42.66
2	65	\$24.51	\$6.97	\$11.18	\$0.00	\$42.66
3	70	\$26.39	\$6.97	\$11.18	\$0.00	\$44.54
4	75	\$28.28	\$6.97	\$11.18	\$0.00	\$46.43
5	80	\$30.16	\$6.97	\$11.18	\$0.00	\$48.31
6	85	\$32.05	\$6.97	\$11.18	\$0.00	\$50.20
7	90	\$33.93	\$6.97	\$11.18	\$0.00	\$52.08
8	95	\$35.82	\$6.97	\$11.18	\$0.00	\$53.97

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) <i>BRICKLAYERS LOCAL 3 (LOWELL)</i>	03/01/2013	\$45.31	\$10.18	\$17.23	\$0.00	\$72.72
	09/01/2013	\$46.21	\$10.18	\$17.30	\$0.00	\$73.69
	03/01/2014	\$46.77	\$10.18	\$17.30	\$0.00	\$74.25
	09/01/2014	\$47.67	\$10.18	\$17.37	\$0.00	\$75.22
	03/01/2015	\$48.23	\$10.18	\$17.37	\$0.00	\$75.78
	09/01/2015	\$49.13	\$10.18	\$17.44	\$0.00	\$76.75
	03/01/2016	\$49.70	\$10.18	\$17.44	\$0.00	\$77.32
	09/01/2016	\$50.60	\$10.18	\$17.52	\$0.00	\$78.30
	03/01/2017	\$51.17	\$10.18	\$17.52	\$0.00	\$78.87

Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Lowell

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.66	\$10.18	\$17.23	\$0.00	\$50.07
2	60	\$27.19	\$10.18	\$17.23	\$0.00	\$54.60
3	70	\$31.72	\$10.18	\$17.23	\$0.00	\$59.13
4	80	\$36.25	\$10.18	\$17.23	\$0.00	\$63.66
5	90	\$40.78	\$10.18	\$17.23	\$0.00	\$68.19

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.11	\$10.18	\$17.30	\$0.00	\$50.59
2	60	\$27.73	\$10.18	\$17.30	\$0.00	\$55.21
3	70	\$32.35	\$10.18	\$17.30	\$0.00	\$59.83
4	80	\$36.97	\$10.18	\$17.30	\$0.00	\$64.45
5	90	\$41.59	\$10.18	\$17.30	\$0.00	\$69.07

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$33.45	\$7.10	\$12.60	\$0.00	\$53.15
	06/01/2013	\$34.20	\$7.10	\$12.60	\$0.00	\$53.90
	12/01/2013	\$34.95	\$7.10	\$12.60	\$0.00	\$54.65
	06/01/2014	\$35.70	\$7.10	\$12.60	\$0.00	\$55.40
	12/01/2014	\$36.45	\$7.10	\$12.60	\$0.00	\$56.15
	06/01/2015	\$37.20	\$7.10	\$12.60	\$0.00	\$56.90
	12/01/2015	\$37.95	\$7.10	\$12.60	\$0.00	\$57.65
	06/01/2016	\$38.70	\$7.10	\$12.60	\$0.00	\$58.40
	12/01/2016	\$39.70	\$7.10	\$12.60	\$0.00	\$59.40

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$32.30	\$7.10	\$12.60	\$0.00	\$52.00
	06/01/2013	\$33.05	\$7.10	\$12.60	\$0.00	\$52.75
	12/01/2013	\$33.80	\$7.10	\$12.60	\$0.00	\$53.50
	06/01/2014	\$34.55	\$7.10	\$12.60	\$0.00	\$54.25
	12/01/2014	\$35.30	\$7.10	\$12.60	\$0.00	\$55.00
	06/01/2015	\$36.05	\$7.10	\$12.60	\$0.00	\$55.75
	12/01/2015	\$36.80	\$7.10	\$12.60	\$0.00	\$56.50
	06/01/2016	\$37.55	\$7.10	\$12.60	\$0.00	\$57.25
	12/01/2016	\$38.55	\$7.10	\$12.60	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$32.30	\$7.10	\$12.60	\$0.00	\$52.00
	06/01/2013	\$33.05	\$7.10	\$12.60	\$0.00	\$52.75
	12/01/2013	\$33.80	\$7.10	\$12.60	\$0.00	\$53.50
	06/01/2014	\$34.55	\$7.10	\$12.60	\$0.00	\$54.25
	12/01/2014	\$35.30	\$7.10	\$12.60	\$0.00	\$55.00
	06/01/2015	\$36.05	\$7.10	\$12.60	\$0.00	\$55.75
	12/01/2015	\$36.80	\$7.10	\$12.60	\$0.00	\$56.50
	06/01/2016	\$37.55	\$7.10	\$12.60	\$0.00	\$57.25
	12/01/2016	\$38.55	\$7.10	\$12.60	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	03/01/2013	\$33.92	\$9.80	\$15.61	\$0.00	\$59.33
	09/01/2013	\$34.53	\$9.80	\$15.61	\$0.00	\$59.94
	03/01/2014	\$35.13	\$9.80	\$15.61	\$0.00	\$60.54
	09/01/2014	\$35.90	\$9.80	\$15.61	\$0.00	\$61.31
	03/01/2015	\$36.67	\$9.80	\$15.61	\$0.00	\$62.08

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.96	\$9.80	\$1.57	\$0.00	\$28.33
2	60	\$20.35	\$9.80	\$1.57	\$0.00	\$31.72
3	70	\$23.74	\$9.80	\$10.90	\$0.00	\$44.44
4	75	\$25.44	\$9.80	\$10.90	\$0.00	\$46.14
5	80	\$27.14	\$9.80	\$12.47	\$0.00	\$49.41
6	80	\$27.14	\$9.80	\$12.47	\$0.00	\$49.41
7	90	\$30.53	\$9.80	\$14.04	\$0.00	\$54.37
8	90	\$30.53	\$9.80	\$14.04	\$0.00	\$54.37

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.27	\$9.80	\$1.57	\$0.00	\$28.64
2	60	\$20.72	\$9.80	\$1.57	\$0.00	\$32.09
3	70	\$24.17	\$9.80	\$10.90	\$0.00	\$44.87
4	75	\$25.90	\$9.80	\$10.90	\$0.00	\$46.60
5	80	\$27.62	\$9.80	\$12.47	\$0.00	\$49.89
6	80	\$27.62	\$9.80	\$12.47	\$0.00	\$49.89
7	90	\$31.08	\$9.80	\$14.04	\$0.00	\$54.92
8	90	\$31.08	\$9.80	\$14.04	\$0.00	\$54.92

Notes:

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	03/01/2013	\$38.08	\$10.50	\$18.61	\$1.30	\$68.49
BRICKLAYERS LOCAL 3 (LOWELL)	09/01/2013	\$38.45	\$10.50	\$18.61	\$1.30	\$68.86
	03/01/2014	\$38.67	\$10.50	\$18.61	\$1.30	\$69.08
	09/01/2014	\$39.03	\$10.50	\$18.61	\$1.30	\$69.44
	03/01/2015	\$39.25	\$10.50	\$18.61	\$1.30	\$69.66
	09/01/2015	\$40.16	\$10.50	\$18.61	\$1.30	\$70.57
	03/01/2016	\$39.83	\$10.50	\$18.61	\$1.30	\$70.24
	09/01/2016	\$40.20	\$10.50	\$18.61	\$1.30	\$70.61
	03/01/2017	\$40.42	\$10.50	\$18.61	\$1.30	\$70.83

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CEMENT MASONRY/PLASTERING - Lowell

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.04	\$10.50	\$12.11	\$1.30	\$42.95
2	60	\$22.85	\$10.50	\$13.61	\$1.30	\$48.26
3	65	\$24.75	\$10.50	\$14.61	\$1.30	\$51.16
4	70	\$26.66	\$10.50	\$15.61	\$1.30	\$54.07
5	75	\$28.56	\$10.50	\$16.61	\$1.30	\$56.97
6	80	\$30.46	\$10.50	\$17.61	\$1.30	\$59.87
7	90	\$34.27	\$10.50	\$18.61	\$1.30	\$64.68

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.23	\$10.50	\$12.11	\$1.30	\$43.14
2	60	\$23.07	\$10.50	\$13.61	\$1.30	\$48.48
3	65	\$24.99	\$10.50	\$14.61	\$1.30	\$51.40
4	70	\$26.92	\$10.50	\$15.61	\$1.30	\$54.33
5	75	\$28.84	\$10.50	\$16.61	\$1.30	\$57.25
6	80	\$30.76	\$10.50	\$17.61	\$1.30	\$60.17
7	90	\$34.61	\$10.50	\$18.61	\$1.30	\$65.02

Notes:

Steps are 6000 hours

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR LABORERS - ZONE 2	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75

For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4	12/01/2012	\$41.09	\$10.00	\$13.02	\$0.00	\$64.11
	06/01/2013	\$41.87	\$10.00	\$13.02	\$0.00	\$64.89
	12/01/2013	\$42.65	\$10.00	\$13.02	\$0.00	\$65.67

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2012	\$28.17	\$10.00	\$13.02	\$0.00	\$51.19
	06/01/2013	\$28.72	\$10.00	\$13.02	\$0.00	\$51.74
	12/01/2013	\$29.27	\$10.00	\$13.02	\$0.00	\$52.29

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) PAINTERS LOCAL 35 - ZONE 2	01/01/2013	\$45.01	\$7.80	\$15.60	\$0.00	\$68.41
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.51	\$7.80	\$0.00	\$0.00	\$30.31
2	55	\$24.76	\$7.80	\$3.52	\$0.00	\$36.08
3	60	\$27.01	\$7.80	\$3.84	\$0.00	\$38.65
4	65	\$29.26	\$7.80	\$4.16	\$0.00	\$41.22
5	70	\$31.51	\$7.80	\$13.68	\$0.00	\$52.99
6	75	\$33.76	\$7.80	\$14.00	\$0.00	\$55.56
7	80	\$36.01	\$7.80	\$14.32	\$0.00	\$58.13
8	90	\$40.51	\$7.80	\$14.96	\$0.00	\$63.27

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN LABORERS - ZONE 2	12/01/2011	\$31.80	\$7.10	\$12.45	\$0.00	\$51.35
For apprentice rates see "Apprentice- LABORER"						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 2	12/01/2011	\$32.80	\$7.10	\$12.45	\$0.00	\$52.35
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS LABORERS - ZONE 2	12/01/2011	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 2	12/01/2011	\$32.80	\$7.10	\$12.45	\$0.00	\$52.35
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 2	12/01/2011	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER LABORERS - ZONE 2	12/01/2011	\$31.80	\$7.10	\$12.45	\$0.00	\$51.35
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2012	\$54.88	\$9.80	\$17.67	\$0.00	\$82.35
	08/01/2013	\$56.98	\$9.80	\$17.67	\$0.00	\$84.45
	08/01/2014	\$59.08	\$9.80	\$17.67	\$0.00	\$86.55
	08/01/2015	\$61.18	\$9.80	\$17.67	\$0.00	\$88.65
DIVER TENDER PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2012	\$54.88	\$9.80	\$17.67	\$0.00	\$82.35
	08/01/2013	\$56.98	\$9.80	\$17.67	\$0.00	\$84.45
	08/01/2014	\$59.08	\$9.80	\$17.67	\$0.00	\$86.55
	08/01/2015	\$61.18	\$9.80	\$17.67	\$0.00	\$88.65

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2012	\$58.80	\$9.80	\$17.67	\$0.00	\$86.27
	08/01/2013	\$61.05	\$9.80	\$17.67	\$0.00	\$88.52
	08/01/2014	\$63.30	\$9.80	\$17.67	\$0.00	\$90.77
	08/01/2015	\$65.55	\$9.80	\$17.67	\$0.00	\$93.02
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2012	\$82.32	\$9.80	\$17.67	\$0.00	\$109.79
	08/01/2013	\$85.47	\$9.80	\$17.67	\$0.00	\$112.94
	08/01/2014	\$88.62	\$9.80	\$17.67	\$0.00	\$116.09
	08/01/2015	\$91.77	\$9.80	\$17.67	\$0.00	\$119.24
DRAWBRIDGE OPERATOR (Construction) <i>ELECTRICIANS LOCAL 103</i>	03/01/2013	\$43.52	\$13.00	\$14.16	\$0.00	\$70.68
	09/01/2013	\$44.20	\$13.00	\$14.18	\$0.00	\$71.38
	03/01/2014	\$44.92	\$13.00	\$14.20	\$0.00	\$72.12
	09/01/2014	\$45.60	\$13.00	\$14.22	\$0.00	\$72.82
	03/01/2015	\$46.32	\$13.00	\$14.24	\$0.00	\$73.56
	09/01/2015	\$47.27	\$13.00	\$14.27	\$0.00	\$74.54
	03/01/2016	\$48.23	\$13.00	\$14.30	\$0.00	\$75.53
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2013	\$43.52	\$13.00	\$14.16	\$0.00	\$70.68
	09/01/2013	\$44.20	\$13.00	\$14.18	\$0.00	\$71.38
	03/01/2014	\$44.92	\$13.00	\$14.20	\$0.00	\$72.12
	09/01/2014	\$45.60	\$13.00	\$14.22	\$0.00	\$72.82
	03/01/2015	\$46.32	\$13.00	\$14.24	\$0.00	\$73.56
	09/01/2015	\$47.27	\$13.00	\$14.27	\$0.00	\$74.54
	03/01/2016	\$48.23	\$13.00	\$14.30	\$0.00	\$75.53

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELECTRICIAN - Local 103

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.41	\$13.00	\$0.52	\$0.00	\$30.93
2	40	\$17.41	\$13.00	\$0.52	\$0.00	\$30.93
3	45	\$19.58	\$13.00	\$10.53	\$0.00	\$43.11
4	45	\$19.58	\$13.00	\$10.53	\$0.00	\$43.11
5	50	\$21.76	\$13.00	\$10.85	\$0.00	\$45.61
6	55	\$23.94	\$13.00	\$11.19	\$0.00	\$48.13
7	60	\$26.11	\$13.00	\$11.51	\$0.00	\$50.62
8	65	\$28.29	\$13.00	\$11.85	\$0.00	\$53.14
9	70	\$30.46	\$13.00	\$12.17	\$0.00	\$55.63
10	75	\$32.64	\$13.00	\$12.51	\$0.00	\$58.15

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.68	\$13.00	\$0.53	\$0.00	\$31.21
2	40	\$17.68	\$13.00	\$0.53	\$0.00	\$31.21
3	45	\$19.89	\$13.00	\$10.54	\$0.00	\$43.43
4	45	\$19.89	\$13.00	\$10.54	\$0.00	\$43.43
5	50	\$22.10	\$13.00	\$10.86	\$0.00	\$45.96
6	55	\$24.31	\$13.00	\$11.20	\$0.00	\$48.51
7	60	\$26.52	\$13.00	\$11.53	\$0.00	\$51.05
8	65	\$28.73	\$13.00	\$11.86	\$0.00	\$53.59
9	70	\$30.94	\$13.00	\$12.19	\$0.00	\$56.13
10	75	\$33.15	\$13.00	\$12.53	\$0.00	\$58.68

Notes :
 App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2012	\$52.45	\$8.78	\$6.96	\$0.00	\$68.19
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELEVATOR CONSTRUCTOR - Local 4

Effective Date - 01/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.23	\$8.78	\$0.00	\$0.00	\$35.01
2	55	\$28.85	\$8.78	\$6.96	\$0.00	\$44.59
3	65	\$34.09	\$8.78	\$6.96	\$0.00	\$49.83
4	70	\$36.72	\$8.78	\$6.96	\$0.00	\$52.46
5	80	\$41.96	\$8.78	\$6.96	\$0.00	\$57.70

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>	01/01/2012	\$38.59	\$8.78	\$6.96	\$0.00	\$54.33
FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75
For apprentice rates see "Apprentice- LABORER"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2012	\$38.26	\$10.00	\$12.65	\$0.00	\$60.91
	05/01/2013	\$38.87	\$10.00	\$12.65	\$0.00	\$61.52
	11/01/2013	\$39.63	\$10.00	\$12.65	\$0.00	\$62.28
	05/01/2014	\$40.40	\$10.00	\$12.65	\$0.00	\$63.05
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2012	\$39.66	\$10.00	\$12.65	\$0.00	\$62.31
	05/01/2013	\$40.28	\$10.00	\$12.65	\$0.00	\$62.93
	11/01/2013	\$41.05	\$10.00	\$12.65	\$0.00	\$63.70
	05/01/2014	\$41.82	\$10.00	\$12.65	\$0.00	\$64.47
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2012	\$21.18	\$10.00	\$12.65	\$0.00	\$43.83
	05/01/2013	\$21.54	\$10.00	\$12.65	\$0.00	\$44.19
	11/01/2013	\$22.00	\$10.00	\$12.65	\$0.00	\$44.65
	05/01/2014	\$22.45	\$10.00	\$12.65	\$0.00	\$45.10
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	03/01/2013	\$43.52	\$13.00	\$14.16	\$0.00	\$70.68
	09/01/2013	\$44.20	\$13.00	\$14.18	\$0.00	\$71.38
	03/01/2014	\$44.92	\$13.00	\$14.20	\$0.00	\$72.12
	09/01/2014	\$45.60	\$13.00	\$14.22	\$0.00	\$72.82
	03/01/2015	\$46.32	\$13.00	\$14.24	\$0.00	\$73.56
	09/01/2015	\$47.27	\$13.00	\$14.27	\$0.00	\$74.54
	03/01/2016	\$48.23	\$13.00	\$14.30	\$0.00	\$75.53
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS</i> <i>LOCAL 103</i>	03/01/2013	\$32.64	\$13.00	\$12.51	\$0.00	\$58.15
	09/01/2013	\$33.15	\$13.00	\$12.52	\$0.00	\$58.67
	03/01/2014	\$33.69	\$13.00	\$12.54	\$0.00	\$59.23
	09/01/2014	\$34.20	\$13.00	\$12.56	\$0.00	\$59.76
	03/01/2015	\$34.74	\$13.00	\$12.57	\$0.00	\$60.31
	09/01/2015	\$35.45	\$13.00	\$12.59	\$0.00	\$61.04
	03/01/2016	\$36.17	\$13.00	\$12.62	\$0.00	\$61.79
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$33.61	\$10.00	\$13.02	\$0.00	\$56.63
	06/01/2013	\$34.26	\$10.00	\$13.02	\$0.00	\$57.28
	12/01/2013	\$34.92	\$10.00	\$13.02	\$0.00	\$57.94
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER <i>LABORERS - ZONE 2</i>	12/01/2012	\$20.50	\$7.10	\$11.55	\$0.00	\$39.15
	06/01/2013	\$20.50	\$7.10	\$11.55	\$0.00	\$39.15
	12/01/2013	\$20.50	\$7.10	\$11.55	\$0.00	\$39.15
	06/01/2014	\$20.50	\$7.10	\$11.55	\$0.00	\$39.15
	12/01/2014	\$20.50	\$7.10	\$11.55	\$0.00	\$39.15
	06/01/2015	\$20.50	\$7.10	\$11.55	\$0.00	\$39.15
	12/01/2015	\$20.50	\$7.10	\$11.55	\$0.00	\$39.15
	06/01/2016	\$20.50	\$7.10	\$11.55	\$0.00	\$39.15
12/01/2016	\$20.50	\$7.10	\$11.55	\$0.00	\$39.15	
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	03/01/2013	\$38.61	\$9.80	\$16.71	\$0.00	\$65.12
	09/01/2013	\$38.61	\$9.80	\$16.71	\$0.00	\$65.12
	03/01/2014	\$38.61	\$9.80	\$16.71	\$0.00	\$65.12

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - FLOORCOVERER - Local 2168 Zone I

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.31	\$9.80	\$1.79	\$0.00	\$30.90
2	55	\$21.24	\$9.80	\$1.79	\$0.00	\$32.83
3	60	\$23.17	\$9.80	\$11.34	\$0.00	\$44.31
4	65	\$25.10	\$9.80	\$11.34	\$0.00	\$46.24
5	70	\$27.03	\$9.80	\$13.13	\$0.00	\$49.96
6	75	\$28.96	\$9.80	\$13.13	\$0.00	\$51.89
7	80	\$30.89	\$9.80	\$14.92	\$0.00	\$55.61
8	85	\$32.82	\$9.80	\$14.92	\$0.00	\$57.54

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.31	\$9.80	\$1.79	\$0.00	\$30.90
2	55	\$21.24	\$9.80	\$1.79	\$0.00	\$32.83
3	60	\$23.17	\$9.80	\$11.34	\$0.00	\$44.31
4	65	\$25.10	\$9.80	\$11.34	\$0.00	\$46.24
5	70	\$27.03	\$9.80	\$13.13	\$0.00	\$49.96
6	75	\$28.96	\$9.80	\$13.13	\$0.00	\$51.89
7	80	\$30.89	\$9.80	\$14.92	\$0.00	\$55.61
8	85	\$32.82	\$9.80	\$14.92	\$0.00	\$57.54

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$28.17	\$10.00	\$13.02	\$0.00	\$51.19
	06/01/2013	\$28.72	\$10.00	\$13.02	\$0.00	\$51.74
	12/01/2013	\$29.27	\$10.00	\$13.02	\$0.00	\$52.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 2)</i>	01/01/2013	\$35.51	\$7.80	\$14.60	\$0.00	\$57.91

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - GLAZIER - Local 35 Zone 2

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.76	\$7.80	\$0.00	\$0.00	\$25.56
2	55	\$19.53	\$7.80	\$3.25	\$0.00	\$30.58
3	60	\$21.31	\$7.80	\$3.54	\$0.00	\$32.65
4	65	\$23.08	\$7.80	\$3.84	\$0.00	\$34.72
5	70	\$24.86	\$7.80	\$12.83	\$0.00	\$45.49
6	75	\$26.63	\$7.80	\$13.13	\$0.00	\$47.56
7	80	\$28.41	\$7.80	\$13.42	\$0.00	\$49.63
8	90	\$31.96	\$7.80	\$14.01	\$0.00	\$53.77

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
OPERATING ENGINEERS LOCAL 4	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.05	\$10.00	\$0.00	\$0.00	\$32.05
2	60	\$24.05	\$10.00	\$13.02	\$0.00	\$47.07
3	65	\$26.06	\$10.00	\$13.02	\$0.00	\$49.08
4	70	\$28.06	\$10.00	\$13.02	\$0.00	\$51.08
5	75	\$30.07	\$10.00	\$13.02	\$0.00	\$53.09
6	80	\$32.07	\$10.00	\$13.02	\$0.00	\$55.09
7	85	\$34.08	\$10.00	\$13.02	\$0.00	\$57.10
8	90	\$36.08	\$10.00	\$13.02	\$0.00	\$59.10

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.48	\$10.00	\$0.00	\$0.00	\$32.48
2	60	\$24.52	\$10.00	\$13.02	\$0.00	\$47.54
3	65	\$26.57	\$10.00	\$13.02	\$0.00	\$49.59
4	70	\$28.61	\$10.00	\$13.02	\$0.00	\$51.63
5	75	\$30.65	\$10.00	\$13.02	\$0.00	\$53.67
6	80	\$32.70	\$10.00	\$13.02	\$0.00	\$55.72
7	85	\$34.74	\$10.00	\$13.02	\$0.00	\$57.76
8	90	\$36.78	\$10.00	\$13.02	\$0.00	\$59.80

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 - A	02/01/2013	\$42.32	\$9.82	\$18.24	\$2.11	\$72.49
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For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 103	03/01/2013	\$43.52	\$13.00	\$14.16	\$0.00	\$70.68
	09/01/2013	\$44.20	\$13.00	\$14.18	\$0.00	\$71.38
	03/01/2014	\$44.92	\$13.00	\$14.20	\$0.00	\$72.12
	09/01/2014	\$45.60	\$13.00	\$14.22	\$0.00	\$72.82
	03/01/2015	\$46.32	\$13.00	\$14.24	\$0.00	\$73.56
	09/01/2015	\$47.27	\$13.00	\$14.27	\$0.00	\$74.54
	03/01/2016	\$48.23	\$13.00	\$14.30	\$0.00	\$75.53

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 - A	02/01/2013	\$42.32	\$9.82	\$18.24	\$2.11	\$72.49
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For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING -WATER) PIPEFITTERS LOCAL 537	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
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For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

HVAC MECHANIC PIPEFITTERS LOCAL 537	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS LABORERS - ZONE 2	12/01/2012	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	06/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	12/01/2013	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	06/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	12/01/2014	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	06/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	12/01/2015	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	06/01/2016	\$33.85	\$7.10	\$11.55	\$0.00	\$52.50
	12/01/2016	\$34.60	\$7.10	\$11.55	\$0.00	\$53.25

For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) ASBESTOS WORKERS LOCAL 6 (BOSTON)	09/01/2012	\$41.46	\$10.65	\$11.50	\$0.00	\$63.61
	09/01/2013	\$43.06	\$10.65	\$11.50	\$0.00	\$65.21
	09/01/2014	\$45.06	\$10.65	\$11.50	\$0.00	\$67.21

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston

Effective Date - 09/01/2012						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.73	\$10.65	\$8.60	\$0.00	\$39.98
2	60	\$24.88	\$10.65	\$9.18	\$0.00	\$44.71
3	70	\$29.02	\$10.65	\$9.76	\$0.00	\$49.43
4	80	\$33.17	\$10.65	\$10.34	\$0.00	\$54.16

Effective Date - 09/01/2013						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.53	\$10.65	\$8.60	\$0.00	\$40.78
2	60	\$25.84	\$10.65	\$9.18	\$0.00	\$45.67
3	70	\$30.14	\$10.65	\$9.76	\$0.00	\$50.55
4	80	\$34.45	\$10.65	\$10.34	\$0.00	\$55.44

Notes:
Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER IRONWORKERS LOCAL 7 (LAWRENCE AREA)	03/16/2013	\$35.82	\$7.70	\$18.35	\$0.00	\$61.87
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - IRONWORKER - Local 7 Lawrence

Effective Date - 03/16/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.49	\$7.70	\$18.35	\$0.00	\$47.54
2	70	\$25.07	\$7.70	\$18.35	\$0.00	\$51.12
3	75	\$26.87	\$7.70	\$18.35	\$0.00	\$52.92
4	80	\$28.66	\$7.70	\$18.35	\$0.00	\$54.71
5	85	\$30.45	\$7.70	\$18.35	\$0.00	\$56.50
6	90	\$32.24	\$7.70	\$18.35	\$0.00	\$58.29

Notes:
Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 2	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS - ZONE 2	12/01/2012	\$29.60	\$7.10	\$11.55	\$0.00	\$48.25
	06/01/2013	\$30.10	\$7.10	\$11.55	\$0.00	\$48.75
	12/01/2013	\$30.60	\$7.10	\$11.55	\$0.00	\$49.25
	06/01/2014	\$31.10	\$7.10	\$11.55	\$0.00	\$49.75
	12/01/2014	\$31.60	\$7.10	\$11.55	\$0.00	\$50.25
	06/01/2015	\$32.10	\$7.10	\$11.55	\$0.00	\$50.75
	12/01/2015	\$32.60	\$7.10	\$11.55	\$0.00	\$51.25
	06/01/2016	\$33.10	\$7.10	\$11.55	\$0.00	\$51.75
	12/01/2016	\$33.85	\$7.10	\$11.55	\$0.00	\$52.50

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 2

Effective Date - 12/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$17.76	\$7.10	\$11.55	\$0.00	\$36.41
2	70	\$20.72	\$7.10	\$11.55	\$0.00	\$39.37
3	80	\$23.68	\$7.10	\$11.55	\$0.00	\$42.33
4	90	\$26.64	\$7.10	\$11.55	\$0.00	\$45.29

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$18.06	\$7.10	\$11.55	\$0.00	\$36.71
2	70	\$21.07	\$7.10	\$11.55	\$0.00	\$39.72
3	80	\$24.08	\$7.10	\$11.55	\$0.00	\$42.73
4	90	\$27.09	\$7.10	\$11.55	\$0.00	\$45.74

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER LABORERS - ZONE 2	12/01/2012	\$29.60	\$7.10	\$11.55	\$0.00	\$48.25
	06/01/2013	\$30.10	\$7.10	\$11.55	\$0.00	\$48.75
	12/01/2013	\$30.60	\$7.10	\$11.55	\$0.00	\$49.25
	06/01/2014	\$31.10	\$7.10	\$11.55	\$0.00	\$49.75
	12/01/2014	\$31.60	\$7.10	\$11.55	\$0.00	\$50.25
	06/01/2015	\$32.10	\$7.10	\$11.55	\$0.00	\$50.75
	12/01/2015	\$32.60	\$7.10	\$11.55	\$0.00	\$51.25
	06/01/2016	\$33.10	\$7.10	\$11.55	\$0.00	\$51.75
	12/01/2016	\$33.85	\$7.10	\$11.55	\$0.00	\$52.50

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER LABORERS - ZONE 2	12/01/2012	\$29.60	\$7.10	\$11.55	\$0.00	\$48.25
	06/01/2013	\$30.10	\$7.10	\$11.55	\$0.00	\$48.75
	12/01/2013	\$30.60	\$7.10	\$11.55	\$0.00	\$49.25
	06/01/2014	\$31.10	\$7.10	\$11.55	\$0.00	\$49.75
	12/01/2014	\$31.60	\$7.10	\$11.55	\$0.00	\$50.25
	06/01/2015	\$32.10	\$7.10	\$11.55	\$0.00	\$50.75
	12/01/2015	\$32.60	\$7.10	\$11.55	\$0.00	\$51.25
	06/01/2016	\$33.10	\$7.10	\$11.55	\$0.00	\$51.75
	12/01/2016	\$33.85	\$7.10	\$11.55	\$0.00	\$52.50

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS - ZONE 2	12/01/2011	\$29.35	\$7.10	\$11.55	\$0.00	\$48.00
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For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: MASON TENDER <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75
For apprentice rates see "Apprentice- LABORER"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.60	\$7.10	\$11.55	\$0.00	\$48.25
	06/01/2013	\$30.10	\$7.10	\$11.55	\$0.00	\$48.75
	12/01/2013	\$30.60	\$7.10	\$11.55	\$0.00	\$49.25
	06/01/2014	\$31.10	\$7.10	\$11.55	\$0.00	\$49.75
	12/01/2014	\$31.60	\$7.10	\$11.55	\$0.00	\$50.25
	06/01/2015	\$32.10	\$7.10	\$11.55	\$0.00	\$50.75
	12/01/2015	\$32.60	\$7.10	\$11.55	\$0.00	\$51.25
	06/01/2016	\$33.10	\$7.10	\$11.55	\$0.00	\$51.75
	12/01/2016	\$33.85	\$7.10	\$11.55	\$0.00	\$52.50
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.60	\$7.10	\$11.55	\$0.00	\$48.25
	06/01/2013	\$30.10	\$7.10	\$11.55	\$0.00	\$48.75
	12/01/2013	\$30.60	\$7.10	\$11.55	\$0.00	\$49.25
	06/01/2014	\$31.10	\$7.10	\$11.55	\$0.00	\$49.75
	12/01/2014	\$31.60	\$7.10	\$11.55	\$0.00	\$50.25
	06/01/2015	\$32.10	\$7.10	\$11.55	\$0.00	\$50.75
	12/01/2015	\$32.60	\$7.10	\$11.55	\$0.00	\$51.25
	06/01/2016	\$33.10	\$7.10	\$11.55	\$0.00	\$51.75
	12/01/2016	\$33.85	\$7.10	\$11.55	\$0.00	\$52.50
This classification applies to the wholesale removal of standing trees including all associated trimming of branches and limbs, and applies to the removal of branches at locations not on or around utility lines. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2013	\$36.20	\$10.18	\$16.51	\$0.00	\$62.89
	08/01/2013	\$36.91	\$10.18	\$16.58	\$0.00	\$63.67
	02/01/2014	\$37.36	\$10.18	\$16.58	\$0.00	\$64.12
	08/01/2014	\$38.07	\$10.18	\$16.65	\$0.00	\$64.90
	02/01/2015	\$38.52	\$10.18	\$16.65	\$0.00	\$65.35
	08/01/2015	\$39.23	\$10.18	\$16.72	\$0.00	\$66.13
	02/01/2016	\$39.68	\$10.18	\$16.72	\$0.00	\$66.58
	08/01/2016	\$40.38	\$10.18	\$16.80	\$0.00	\$67.36
	02/01/2017	\$40.84	\$10.18	\$16.80	\$0.00	\$67.82

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

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.10	\$10.18	\$16.51	\$0.00	\$44.79
2	60	\$21.72	\$10.18	\$16.51	\$0.00	\$48.41
3	70	\$25.34	\$10.18	\$16.51	\$0.00	\$52.03
4	80	\$28.96	\$10.18	\$16.51	\$0.00	\$55.65
5	90	\$32.58	\$10.18	\$16.51	\$0.00	\$59.27

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.46	\$10.18	\$16.58	\$0.00	\$45.22
2	60	\$22.15	\$10.18	\$16.58	\$0.00	\$48.91
3	70	\$25.84	\$10.18	\$16.58	\$0.00	\$52.60
4	80	\$29.53	\$10.18	\$16.58	\$0.00	\$56.29
5	90	\$33.22	\$10.18	\$16.58	\$0.00	\$59.98

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS, TILELAYERS & TERRAZZO MECH <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2013	\$47.45	\$10.18	\$17.83	\$0.00	\$75.46
	08/01/2013	\$48.35	\$10.18	\$17.90	\$0.00	\$76.43
	02/01/2014	\$48.91	\$10.18	\$17.90	\$0.00	\$76.99
	08/01/2014	\$49.81	\$10.18	\$17.97	\$0.00	\$77.96
	02/01/2015	\$50.37	\$10.18	\$17.97	\$0.00	\$78.52
	08/01/2015	\$51.27	\$10.18	\$18.04	\$0.00	\$79.49
	02/01/2016	\$51.84	\$10.18	\$18.04	\$0.00	\$80.06
	08/01/2016	\$52.74	\$10.18	\$18.12	\$0.00	\$81.04
	02/01/2017	\$53.31	\$10.18	\$18.12	\$0.00	\$81.61

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.73	\$10.18	\$17.83	\$0.00	\$51.74
2	60	\$28.47	\$10.18	\$17.83	\$0.00	\$56.48
3	70	\$33.22	\$10.18	\$17.83	\$0.00	\$61.23
4	80	\$37.96	\$10.18	\$17.83	\$0.00	\$65.97
5	90	\$42.71	\$10.18	\$17.83	\$0.00	\$70.72

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.18	\$10.18	\$17.90	\$0.00	\$52.26
2	60	\$29.01	\$10.18	\$17.90	\$0.00	\$57.09
3	70	\$33.85	\$10.18	\$17.90	\$0.00	\$61.93
4	80	\$38.68	\$10.18	\$17.90	\$0.00	\$66.76
5	90	\$43.52	\$10.18	\$17.90	\$0.00	\$71.60

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MILLWRIGHT (Zone 2) <i>MILLWRIGHTS LOCAL 1121 - Zone 2</i>	04/01/2011	\$31.71	\$8.67	\$15.61	\$0.00	\$55.99

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MILLWRIGHT - Local 1121 Zone 2

Effective Date - 04/01/2011

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.86	\$8.67	\$11.64	\$0.00	\$36.17
2	55	\$17.44	\$8.67	\$11.64	\$0.00	\$37.75
3	60	\$19.03	\$8.67	\$13.23	\$0.00	\$40.93
4	65	\$20.61	\$8.67	\$13.23	\$0.00	\$42.51
5	70	\$22.20	\$8.67	\$14.02	\$0.00	\$44.89
6	75	\$23.78	\$8.67	\$14.02	\$0.00	\$46.47
7	80	\$25.37	\$8.67	\$14.82	\$0.00	\$48.86
8	85	\$26.95	\$8.67	\$14.82	\$0.00	\$50.44

Notes:

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$21.28	\$10.00	\$13.02	\$0.00	\$44.30
	06/01/2013	\$21.70	\$10.00	\$13.02	\$0.00	\$44.72
	12/01/2013	\$22.12	\$10.00	\$13.02	\$0.00	\$45.14

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$24.62	\$10.00	\$13.02	\$0.00	\$47.64
	06/01/2013	\$25.10	\$10.00	\$13.02	\$0.00	\$48.12
	12/01/2013	\$25.59	\$10.00	\$13.02	\$0.00	\$48.61

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2013	\$45.01	\$7.80	\$15.60	\$0.00	\$68.41
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.99	\$7.80	\$0.00	\$0.00	\$24.79
2	55	\$18.68	\$7.80	\$3.52	\$0.00	\$30.00
3	60	\$20.38	\$7.80	\$3.84	\$0.00	\$32.02
4	65	\$22.08	\$7.80	\$4.16	\$0.00	\$34.04
5	70	\$23.78	\$7.80	\$13.68	\$0.00	\$45.26
6	75	\$25.48	\$7.80	\$14.00	\$0.00	\$47.28
7	80	\$27.18	\$7.80	\$14.32	\$0.00	\$49.30
8	90	\$30.57	\$7.80	\$14.96	\$0.00	\$53.33

Notes:

Apprentice to Journeyworker Ratio:1:1

PAINTER (TRAFFIC MARKINGS) LABORERS - ZONE 2	12/01/2012	\$29.60	\$7.10	\$11.55	\$0.00	\$48.25
	06/01/2013	\$30.10	\$7.10	\$11.55	\$0.00	\$48.75
	12/01/2013	\$30.60	\$7.10	\$11.55	\$0.00	\$49.25
	06/01/2014	\$31.10	\$7.10	\$11.55	\$0.00	\$49.75
	12/01/2014	\$31.60	\$7.10	\$11.55	\$0.00	\$50.25
	06/01/2015	\$32.10	\$7.10	\$11.55	\$0.00	\$50.75
	12/01/2015	\$32.60	\$7.10	\$11.55	\$0.00	\$51.25
	06/01/2016	\$33.10	\$7.10	\$11.55	\$0.00	\$51.75
	12/01/2016	\$33.85	\$7.10	\$11.55	\$0.00	\$52.50

For Apprentice rates see "Apprentice- LABORER"

PAINTER / TAPER (BRUSH, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2	01/01/2013	\$34.51	\$7.80	\$15.60	\$0.00	\$57.91
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.26	\$7.80	\$0.00	\$0.00	\$25.06
2	55	\$18.98	\$7.80	\$3.52	\$0.00	\$30.30
3	60	\$20.71	\$7.80	\$3.84	\$0.00	\$32.35
4	65	\$22.43	\$7.80	\$4.16	\$0.00	\$34.39
5	70	\$24.16	\$7.80	\$13.68	\$0.00	\$45.64
6	75	\$25.88	\$7.80	\$14.00	\$0.00	\$47.68
7	80	\$27.61	\$7.80	\$14.32	\$0.00	\$49.73
8	90	\$31.06	\$7.80	\$14.96	\$0.00	\$53.82

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT) PAINTERS LOCAL 35 - ZONE 2	01/01/2013	\$32.57	\$7.80	\$15.60	\$0.00	\$55.97
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Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.29	\$7.80	\$0.00	\$0.00	\$24.09
2	55	\$17.91	\$7.80	\$3.52	\$0.00	\$29.23
3	60	\$19.54	\$7.80	\$3.84	\$0.00	\$31.18
4	65	\$21.17	\$7.80	\$4.16	\$0.00	\$33.13
5	70	\$22.80	\$7.80	\$13.68	\$0.00	\$44.28
6	75	\$24.43	\$7.80	\$14.00	\$0.00	\$46.23
7	80	\$26.06	\$7.80	\$14.32	\$0.00	\$48.18
8	90	\$29.31	\$7.80	\$14.96	\$0.00	\$52.07

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/01/2012	\$30.28	\$9.07	\$8.00	\$0.00	\$47.35
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2012	\$39.20	\$9.80	\$17.67	\$0.00	\$66.67
	08/01/2013	\$40.70	\$9.80	\$17.67	\$0.00	\$68.17
	08/01/2014	\$42.20	\$9.80	\$17.67	\$0.00	\$69.67
	08/01/2015	\$43.70	\$9.80	\$17.67	\$0.00	\$71.17

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2012	\$39.20	\$9.80	\$17.67	\$0.00	\$66.67
	08/01/2013	\$40.70	\$9.80	\$17.67	\$0.00	\$68.17
	08/01/2014	\$42.20	\$9.80	\$17.67	\$0.00	\$69.67
	08/01/2015	\$43.70	\$9.80	\$17.67	\$0.00	\$71.17

Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.60	\$9.80	\$17.67	\$0.00	\$47.07
2	60	\$23.52	\$9.80	\$17.67	\$0.00	\$50.99
3	70	\$27.44	\$9.80	\$17.67	\$0.00	\$54.91
4	75	\$29.40	\$9.80	\$17.67	\$0.00	\$56.87
5	80	\$31.36	\$9.80	\$17.67	\$0.00	\$58.83
6	80	\$31.36	\$9.80	\$17.67	\$0.00	\$58.83
7	90	\$35.28	\$9.80	\$17.67	\$0.00	\$62.75
8	90	\$35.28	\$9.80	\$17.67	\$0.00	\$62.75

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.35	\$9.80	\$17.67	\$0.00	\$47.82
2	60	\$24.42	\$9.80	\$17.67	\$0.00	\$51.89
3	70	\$28.49	\$9.80	\$17.67	\$0.00	\$55.96
4	75	\$30.53	\$9.80	\$17.67	\$0.00	\$58.00
5	80	\$32.56	\$9.80	\$17.67	\$0.00	\$60.03
6	80	\$32.56	\$9.80	\$17.67	\$0.00	\$60.03
7	90	\$36.63	\$9.80	\$17.67	\$0.00	\$64.10
8	90	\$36.63	\$9.80	\$17.67	\$0.00	\$64.10

Notes:

Apprentice to Journeyworker Ratio:1:3

PIPEFITTER & STEAMFITTER <i>PIPEFITTERS LOCAL 537</i>	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PIPEFITTER - Local 537

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.74	\$8.75	\$6.50	\$0.00	\$34.99
2	45	\$22.20	\$8.75	\$14.39	\$0.00	\$45.34
3	60	\$29.60	\$8.75	\$14.39	\$0.00	\$52.74
4	70	\$34.54	\$8.75	\$14.39	\$0.00	\$57.68
5	80	\$39.47	\$8.75	\$14.39	\$0.00	\$62.61

Notes:

** 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.
Refrig/AC Mechanic **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)

Apprentice to Journeyworker Ratio:**

PIPELAYER LABORERS - ZONE 2	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75

For apprentice rates see "Apprentice- LABORER"

PLUMBERS & GASFITTERS PLUMBERS & GASFITTERS LOCAL 12	03/01/2013	\$49.31	\$9.32	\$13.29	\$0.00	\$71.92
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Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.26	\$9.32	\$4.97	\$0.00	\$31.55
2	40	\$19.72	\$9.32	\$5.61	\$0.00	\$34.65
3	55	\$27.12	\$9.32	\$7.53	\$0.00	\$43.97
4	65	\$32.05	\$9.32	\$8.81	\$0.00	\$50.18
5	75	\$36.98	\$9.32	\$10.09	\$0.00	\$56.39

Notes:

** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
Step4 with lic\$53.29 Step5 with lic\$59.49

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.) PIPEFITTERS LOCAL 537	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
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For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PNEUMATIC DRILL/TOOL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER <i>LABORERS - ZONE 2</i>	12/01/2012	\$30.60	\$7.10	\$11.55	\$0.00	\$49.25
	06/01/2013	\$31.10	\$7.10	\$11.55	\$0.00	\$49.75
	12/01/2013	\$31.60	\$7.10	\$11.55	\$0.00	\$50.25
	06/01/2014	\$32.10	\$7.10	\$11.55	\$0.00	\$50.75
	12/01/2014	\$32.60	\$7.10	\$11.55	\$0.00	\$51.25
	06/01/2015	\$33.10	\$7.10	\$11.55	\$0.00	\$51.75
	12/01/2015	\$33.60	\$7.10	\$11.55	\$0.00	\$52.25
	06/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75
	12/01/2016	\$34.85	\$7.10	\$11.55	\$0.00	\$53.50
For apprentice rates see "Apprentice- LABORER"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$28.17	\$10.00	\$13.02	\$0.00	\$51.19
	06/01/2013	\$28.72	\$10.00	\$13.02	\$0.00	\$51.74
	12/01/2013	\$29.27	\$10.00	\$13.02	\$0.00	\$52.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 49</i>	05/01/2010	\$22.88	\$6.97	\$3.94	\$0.00	\$33.79
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RESIDENTIAL WOOD FRAME (All Other Work) <i>CARPENTERS -ZONE 2 (Residential Wood)</i>	04/01/2011	\$24.24	\$8.67	\$15.51	\$0.00	\$48.42
RESIDENTIAL WOOD FRAME CARPENTER ** ** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement. <i>CARPENTERS -ZONE 2 (Residential Wood)</i> As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.	05/01/2011	\$24.24	\$6.34	\$6.23	\$0.00	\$36.81

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofing) <i>ROOFERS LOCAL 33</i>	02/01/2013	\$37.41	\$10.50	\$10.70	\$0.00	\$58.61

Apprentice - ROOFER - Local 33

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.71	\$10.50	\$3.38	\$0.00	\$32.59
2	60	\$22.45	\$10.50	\$10.70	\$0.00	\$43.65
3	65	\$24.32	\$10.50	\$10.70	\$0.00	\$45.52
4	75	\$28.06	\$10.50	\$10.70	\$0.00	\$49.26
5	85	\$31.80	\$10.50	\$10.70	\$0.00	\$53.00

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.

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE <i>ROOFERS LOCAL 33</i>	02/01/2013	\$37.66	\$10.50	\$10.70	\$0.00	\$58.86
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2013	\$42.32	\$9.82	\$18.24	\$2.11	\$72.49

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SHEET METAL WORKER - Local 17-A

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.93	\$9.82	\$4.00	\$0.00	\$30.75
2	40	\$16.93	\$9.82	\$4.00	\$0.00	\$30.75
3	45	\$19.04	\$9.82	\$8.00	\$1.11	\$37.97
4	45	\$19.04	\$9.82	\$8.00	\$1.11	\$37.97
5	50	\$21.16	\$9.82	\$8.75	\$1.19	\$40.92
6	50	\$21.16	\$9.82	\$9.00	\$1.20	\$41.18
7	60	\$25.39	\$9.82	\$10.24	\$1.36	\$46.81
8	65	\$27.51	\$9.82	\$10.99	\$1.45	\$49.77
9	75	\$31.74	\$9.82	\$12.49	\$1.62	\$55.67
10	85	\$35.97	\$9.82	\$13.49	\$1.78	\$61.06

Notes:
Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SIGN ERECTOR	06/01/2012	\$25.37	\$6.82	\$6.85	\$0.00	\$39.04
PAINTERS LOCAL 35 - ZONE 2	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SIGN ERECTOR - Local 35 Zone 2

Effective Date - 06/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.69	\$6.82	\$0.00	\$0.00	\$19.51
2	55	\$13.95	\$6.82	\$2.35	\$0.00	\$23.12
3	60	\$15.22	\$6.82	\$2.35	\$0.00	\$24.39
4	65	\$16.49	\$6.82	\$2.35	\$0.00	\$25.66
5	70	\$17.76	\$6.82	\$6.85	\$0.00	\$31.43
6	75	\$19.03	\$6.82	\$6.85	\$0.00	\$32.70
7	80	\$20.30	\$6.82	\$6.85	\$0.00	\$33.97
8	85	\$21.56	\$6.82	\$6.85	\$0.00	\$35.23
9	90	\$22.83	\$6.82	\$6.85	\$0.00	\$36.50

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.91	\$7.07	\$0.00	\$0.00	\$19.98
2	55	\$14.20	\$7.07	\$2.45	\$0.00	\$23.72
3	60	\$15.49	\$7.07	\$2.45	\$0.00	\$25.01
4	65	\$16.78	\$7.07	\$2.45	\$0.00	\$26.30
5	70	\$18.07	\$7.07	\$7.05	\$0.00	\$32.19
6	75	\$19.36	\$7.07	\$7.05	\$0.00	\$33.48
7	80	\$20.65	\$7.07	\$7.05	\$0.00	\$34.77
8	85	\$21.94	\$7.07	\$7.05	\$0.00	\$36.06
9	90	\$23.23	\$7.07	\$7.05	\$0.00	\$37.35

Notes:
Steps are 4 mos.

Apprentice to Journeyworker Ratio:1:1

SPECIALIZED EARTH MOVING EQUIP < 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2012	\$30.74	\$8.91	\$8.00	\$0.00	\$47.65
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2012	\$31.03	\$8.91	\$8.00	\$0.00	\$47.94
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section A)</i>	03/01/2013	\$52.58	\$8.42	\$12.60	\$0.00	\$73.60

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SPRINKLER FITTER - Local 550

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$18.40	\$8.42	\$8.00	\$0.00	\$34.82
2	40	\$21.03	\$8.42	\$8.00	\$0.00	\$37.45
3	45	\$23.66	\$8.42	\$8.00	\$0.00	\$40.08
4	50	\$26.29	\$8.42	\$8.00	\$0.00	\$42.71
5	55	\$28.92	\$8.42	\$8.00	\$0.00	\$45.34
6	60	\$31.55	\$8.42	\$8.00	\$0.00	\$47.97
7	65	\$34.18	\$8.42	\$8.00	\$0.00	\$50.60
8	70	\$36.81	\$8.42	\$8.00	\$0.00	\$53.23
9	75	\$39.44	\$8.42	\$8.00	\$0.00	\$55.86
10	80	\$42.06	\$8.42	\$8.00	\$0.00	\$58.48

Notes:
Steps are 850 hours

Apprentice to Journeyworker Ratio:1:1

STEAM BOILER OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2013	\$32.64	\$13.00	\$12.51	\$0.00	\$58.15
	09/01/2013	\$33.15	\$13.00	\$12.52	\$0.00	\$58.67
	03/01/2014	\$33.69	\$13.00	\$12.54	\$0.00	\$59.23
	09/01/2014	\$34.20	\$13.00	\$12.56	\$0.00	\$59.76
	03/01/2015	\$34.74	\$13.00	\$12.57	\$0.00	\$60.31
	09/01/2015	\$35.45	\$13.00	\$12.59	\$0.00	\$61.04
	03/01/2016	\$36.17	\$13.00	\$12.62	\$0.00	\$61.79

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.06	\$13.00	\$0.39	\$0.00	\$26.45
2	40	\$13.06	\$13.00	\$0.39	\$0.00	\$26.45
3	45	\$14.69	\$13.00	\$10.77	\$0.00	\$38.46
4	45	\$14.69	\$13.00	\$10.77	\$0.00	\$38.46
5	50	\$16.32	\$13.00	\$11.02	\$0.00	\$40.34
6	55	\$17.95	\$13.00	\$11.27	\$0.00	\$42.22
7	60	\$19.58	\$13.00	\$11.52	\$0.00	\$44.10
8	65	\$21.22	\$13.00	\$11.77	\$0.00	\$45.99
9	70	\$22.85	\$13.00	\$12.02	\$0.00	\$47.87
10	75	\$24.48	\$13.00	\$12.26	\$0.00	\$49.74

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.26	\$13.00	\$0.40	\$0.00	\$26.66
2	40	\$13.26	\$13.00	\$0.40	\$0.00	\$26.66
3	45	\$14.92	\$13.00	\$9.79	\$0.00	\$37.71
4	45	\$14.92	\$13.00	\$9.79	\$0.00	\$37.71
5	50	\$16.58	\$13.00	\$10.04	\$0.00	\$39.62
6	55	\$18.23	\$13.00	\$10.29	\$0.00	\$41.52
7	60	\$19.89	\$13.00	\$10.54	\$0.00	\$43.43
8	65	\$21.55	\$13.00	\$10.79	\$0.00	\$45.34
9	70	\$23.21	\$13.00	\$11.04	\$0.00	\$47.25
10	75	\$24.86	\$13.00	\$11.29	\$0.00	\$49.15

Notes:

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS	02/01/2013	\$46.35	\$10.18	\$17.83	\$0.00	\$74.36
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2013	\$47.25	\$10.18	\$17.90	\$0.00	\$75.33
	02/01/2014	\$47.81	\$10.18	\$17.90	\$0.00	\$75.89
	08/01/2014	\$48.71	\$10.18	\$17.97	\$0.00	\$76.86
	02/01/2015	\$49.27	\$10.18	\$17.97	\$0.00	\$77.42
	08/01/2015	\$50.17	\$10.18	\$18.04	\$0.00	\$78.39
	02/01/2016	\$50.74	\$10.18	\$18.04	\$0.00	\$78.96
	08/01/2016	\$51.64	\$10.18	\$18.12	\$0.00	\$79.94
	02/01/2017	\$52.21	\$10.18	\$18.12	\$0.00	\$80.51

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.18	\$10.18	\$17.83	\$0.00	\$51.19
2	60	\$27.81	\$10.18	\$17.83	\$0.00	\$55.82
3	70	\$32.45	\$10.18	\$17.83	\$0.00	\$60.46
4	80	\$37.08	\$10.18	\$17.83	\$0.00	\$65.09
5	90	\$41.72	\$10.18	\$17.83	\$0.00	\$69.73

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.63	\$10.18	\$17.90	\$0.00	\$51.71
2	60	\$28.35	\$10.18	\$17.90	\$0.00	\$56.43
3	70	\$33.08	\$10.18	\$17.90	\$0.00	\$61.16
4	80	\$37.80	\$10.18	\$17.90	\$0.00	\$65.88
5	90	\$42.53	\$10.18	\$17.90	\$0.00	\$70.61

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$37.30	\$7.10	\$12.60	\$0.00	\$57.00
	06/01/2013	\$34.45	\$7.10	\$12.60	\$0.00	\$54.15
	12/01/2013	\$35.20	\$7.10	\$12.60	\$0.00	\$54.90
	06/01/2014	\$35.95	\$7.10	\$12.60	\$0.00	\$55.65
	12/01/2014	\$36.70	\$7.10	\$12.60	\$0.00	\$56.40
	06/01/2015	\$37.45	\$7.10	\$12.60	\$0.00	\$57.15
	12/01/2015	\$38.20	\$7.10	\$12.60	\$0.00	\$57.90
	06/01/2016	\$38.95	\$7.10	\$12.60	\$0.00	\$58.65
	12/01/2016	\$39.95	\$7.10	\$12.60	\$0.00	\$59.65

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$32.42	\$7.10	\$12.60	\$0.00	\$52.12
	06/01/2013	\$33.17	\$7.10	\$12.60	\$0.00	\$52.87
	12/01/2013	\$33.92	\$7.10	\$12.60	\$0.00	\$53.62
	06/01/2014	\$34.67	\$7.10	\$12.60	\$0.00	\$54.37
	12/01/2014	\$35.42	\$7.10	\$12.60	\$0.00	\$55.12
	06/01/2015	\$36.17	\$7.10	\$12.60	\$0.00	\$55.87
	12/01/2015	\$36.92	\$7.10	\$12.60	\$0.00	\$56.62
	06/01/2016	\$37.67	\$7.10	\$12.60	\$0.00	\$57.37
	12/01/2016	\$38.67	\$7.10	\$12.60	\$0.00	\$58.37

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$32.30	\$7.10	\$12.60	\$0.00	\$52.00
	06/01/2013	\$33.05	\$7.10	\$12.60	\$0.00	\$52.75
	12/01/2013	\$33.80	\$7.10	\$12.60	\$0.00	\$53.50
	06/01/2014	\$34.55	\$7.10	\$12.60	\$0.00	\$54.25
	12/01/2014	\$35.30	\$7.10	\$12.60	\$0.00	\$55.00
	06/01/2015	\$36.05	\$7.10	\$12.60	\$0.00	\$55.75
	12/01/2015	\$36.80	\$7.10	\$12.60	\$0.00	\$56.50
	06/01/2016	\$37.55	\$7.10	\$12.60	\$0.00	\$57.25
	12/01/2016	\$38.55	\$7.10	\$12.60	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2012	\$31.32	\$8.91	\$8.00	\$0.00	\$48.23
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2012	\$44.58	\$7.10	\$13.00	\$0.00	\$64.68
	06/01/2013	\$45.33	\$7.10	\$13.00	\$0.00	\$65.43
	12/01/2013	\$46.08	\$7.10	\$13.00	\$0.00	\$66.18
	06/01/2014	\$46.83	\$7.10	\$13.00	\$0.00	\$66.93
	12/01/2014	\$47.58	\$7.10	\$13.00	\$0.00	\$67.68
	06/01/2015	\$48.33	\$7.10	\$13.00	\$0.00	\$68.43
	12/01/2015	\$49.08	\$7.10	\$13.00	\$0.00	\$69.18
	06/01/2016	\$49.83	\$7.10	\$13.00	\$0.00	\$69.93
	12/01/2016	\$50.83	\$7.10	\$13.00	\$0.00	\$70.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2012	\$46.58	\$7.10	\$13.00	\$0.00	\$66.68
	06/01/2013	\$47.33	\$7.10	\$13.00	\$0.00	\$67.43
	12/01/2013	\$48.08	\$7.10	\$13.00	\$0.00	\$68.18
	06/01/2014	\$48.83	\$7.10	\$13.00	\$0.00	\$68.93
	12/01/2014	\$49.58	\$7.10	\$13.00	\$0.00	\$69.68
	06/01/2015	\$50.33	\$7.10	\$13.00	\$0.00	\$70.43
	12/01/2015	\$51.08	\$7.10	\$13.00	\$0.00	\$71.18
	06/01/2016	\$51.83	\$7.10	\$13.00	\$0.00	\$71.93
	12/01/2016	\$52.83	\$7.10	\$13.00	\$0.00	\$72.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2012	\$36.65	\$7.10	\$13.00	\$0.00	\$56.75
	06/01/2013	\$37.40	\$7.10	\$13.00	\$0.00	\$57.50
	12/01/2013	\$38.15	\$7.10	\$13.00	\$0.00	\$58.25
	06/01/2014	\$38.90	\$7.10	\$13.00	\$0.00	\$59.00
	12/01/2014	\$39.65	\$7.10	\$13.00	\$0.00	\$59.75
	06/01/2015	\$40.40	\$7.10	\$13.00	\$0.00	\$60.50
	12/01/2015	\$41.15	\$7.10	\$13.00	\$0.00	\$61.25
	06/01/2016	\$41.90	\$7.10	\$13.00	\$0.00	\$62.00
	12/01/2016	\$42.90	\$7.10	\$13.00	\$0.00	\$63.00
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>	12/01/2012	\$38.65	\$7.10	\$13.00	\$0.00	\$58.75
	06/01/2013	\$39.40	\$7.10	\$13.00	\$0.00	\$59.50
	12/01/2013	\$40.15	\$7.10	\$13.00	\$0.00	\$60.25
	06/01/2014	\$40.90	\$7.10	\$13.00	\$0.00	\$61.00
	12/01/2014	\$41.65	\$7.10	\$13.00	\$0.00	\$61.75
	06/01/2015	\$42.40	\$7.10	\$13.00	\$0.00	\$62.50
	12/01/2015	\$43.15	\$7.10	\$13.00	\$0.00	\$63.25
	06/01/2016	\$43.90	\$7.10	\$13.00	\$0.00	\$64.00
	12/01/2016	\$44.90	\$7.10	\$13.00	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2012	\$30.74	\$8.91	\$8.00	\$0.00	\$47.65
WAGON DRILL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2012	\$29.85	\$7.10	\$11.55	\$0.00	\$48.50
	06/01/2013	\$30.35	\$7.10	\$11.55	\$0.00	\$49.00
	12/01/2013	\$30.85	\$7.10	\$11.55	\$0.00	\$49.50
	06/01/2014	\$31.35	\$7.10	\$11.55	\$0.00	\$50.00
	12/01/2014	\$31.85	\$7.10	\$11.55	\$0.00	\$50.50
	06/01/2015	\$32.35	\$7.10	\$11.55	\$0.00	\$51.00
	12/01/2015	\$32.85	\$7.10	\$11.55	\$0.00	\$51.50
	06/01/2016	\$33.35	\$7.10	\$11.55	\$0.00	\$52.00
	12/01/2016	\$34.10	\$7.10	\$11.55	\$0.00	\$52.75
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & GASFITTERS LOCAL 12</i>	03/01/2013	\$49.31	\$9.32	\$13.29	\$0.00	\$71.92
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - East						
CABLE TECHNICIAN (Power Zone) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$25.18	\$8.20	\$4.17	\$0.00	\$37.55
	09/01/2013	\$25.66	\$8.70	\$4.48	\$0.00	\$38.84
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$35.67	\$8.20	\$4.98	\$0.00	\$48.85
	09/01/2013	\$36.55	\$8.70	\$6.58	\$0.00	\$51.83
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$29.38	\$8.20	\$5.68	\$0.00	\$43.26
	09/01/2013	\$29.94	\$8.70	\$6.05	\$0.00	\$44.69
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$23.08	\$8.20	\$3.94	\$0.00	\$35.22
	09/01/2013	\$23.52	\$8.70	\$5.24	\$0.00	\$37.46
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$35.67	\$8.20	\$8.98	\$0.00	\$52.85
	09/01/2013	\$36.35	\$8.70	\$9.43	\$0.00	\$54.48
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$31.48	\$8.20	\$6.19	\$0.00	\$45.87
	09/01/2013	\$32.08	\$8.70	\$6.59	\$0.00	\$47.37
For apprentice rates see "Apprentice- LINEMAN"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$23.08	\$8.20	\$3.42	\$0.00	\$34.70
	09/01/2013	\$23.52	\$8.70	\$3.72	\$0.00	\$35.94
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$18.89	\$8.20	\$2.61	\$0.00	\$29.70
	09/01/2013	\$19.25	\$8.70	\$2.85	\$0.00	\$30.80
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$41.97	\$8.20	\$11.26	\$0.00	\$61.43
	09/01/2013	\$42.77	\$8.70	\$11.78	\$0.00	\$63.25

Apprentice - LINEMAN (Outside Electrical) - East Local 104

Effective Date - 03/03/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.18	\$8.20	\$3.92	\$0.00	\$37.30
2	65	\$27.28	\$8.20	\$4.36	\$0.00	\$39.84
3	70	\$29.38	\$8.20	\$5.06	\$0.00	\$42.64
4	75	\$31.48	\$8.20	\$5.76	\$0.00	\$45.44
5	80	\$33.58	\$8.20	\$6.46	\$0.00	\$48.24
6	85	\$35.67	\$8.20	\$7.17	\$0.00	\$51.04
7	90	\$37.77	\$8.20	\$8.36	\$0.00	\$54.33

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.66	\$8.70	\$4.24	\$0.00	\$38.60
2	65	\$27.80	\$8.70	\$4.71	\$0.00	\$41.21
3	70	\$29.94	\$8.70	\$5.43	\$0.00	\$44.07
4	75	\$32.08	\$8.70	\$6.16	\$0.00	\$46.94
5	80	\$34.22	\$8.70	\$6.88	\$0.00	\$49.80
6	85	\$36.35	\$8.70	\$7.62	\$0.00	\$52.67
7	90	\$38.49	\$8.70	\$8.83	\$0.00	\$56.02

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$26.33	\$4.18	\$2.79	\$0.00	\$33.30
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$24.78	\$4.18	\$2.74	\$0.00	\$31.70
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$24.78	\$4.18	\$2.74	\$0.00	\$31.70
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/01/2009	\$16.59	\$2.42	\$0.00	\$0.00	\$19.01
This classification applies only to the trimming of branches on and around utility lines.						
TREE TRIMMER GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/01/2009	\$14.64	\$2.42	\$0.00	\$0.00	\$17.06
This classification applies only to the trimming of branches on and around utility lines.						

Additional Apprentices 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) unless otherwise specified.

* Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof.

** 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.