

File No. 8425 Microwave Backhaul Installation- Thursday, February 28th, 2019 @ 11:00 AM

INVITATION FOR BID	If, at the time of the scheduled bid opening, City Hall is closed due to uncontrolled events such as fire, snow, ice, wind, or building evacuation, the bid opening will be postponed to the same time on the next normal business day. Bids will be accepted until that date and time.
FILE NO: 8425	
COMMODITY: Microwave Backhaul Installation	
NAME OF BIDDER:	
BIDDER'S FED. ID.	

TO: Elizabeth Unger, Purchasing Agent PH: (617)349-4310 FX: (617)349-4008
795 Massachusetts Avenue, Room 303
Cambridge, MA 02139

The undersigned submits this sealed bid to provide the commodity or services identified above, described in the specifications herein and advertised in the **CAMBRIDGE CHRONICLE** on **Thursday, February 14th, 2019** which is to be opened and publicly read at the Office of the Purchasing Agent, City Hall, 795 Mass. Ave., Room 303, Cambridge, MA at **11:00 a.m. on Thursday, February 28th, 2019**. **Parking is limited at this location. It is strongly recommended that bids are mailed or delivered in advanced of the due date and time. Late proposals will not be accepted. This bid may be downloaded from the City's web site, www.CambridgeMA.gov, Online Services, Purchasing Bid List, Invitation for Bid, File No. 8425.**

The undersigned certifies that this bid is made without collusion with any other person, firm or corporation making any other bid or who otherwise would make a bid. The undersigned agrees to furnish the commodity or services in strict accordance with the bid documents, which consist of this Invitation for Bid and all attachments hereto. **"The submitted bid must be without conditions, exceptions or modifications to the bid document"**.

The envelope containing the bid must be labeled: "This envelope contains a bid for **Microwave Backhaul Installation** to be opened at **11:00 A.M. on Thursday, February 28th, 2019**." The bid and all documents submitted with it are public records. This bid process and the award of the contract are made in conformity with M.G.L. c. 30B, unless otherwise stated. See other side of this form for General Terms and Conditions that shall become part of any Contract awarded through this Invitation for Bid.

This bid includes addenda numbered: _____

SIGNATURE OF BIDDER: _____

TITLE OF SIGNATORY _____

ADDRESS OF BIDDER _____

TELEPHONE NUMBER _____ **FAX NUMBER:** _____

EMAIL ADDRESS _____

Please check one of the following and insert the requested information:

() Corporation, incorporated in the State of: _____

() Partnership. Names of partners: _____

() Individual: _____

Signature of Bidder _____

- LAWS:** **GENERAL TERMS AND CONDITIONS**
All deliveries shall conform in every respect with all applicable laws of the Federal government, Commonwealth of Massachusetts and City of Cambridge.
- EQUAL OPPORTUNITY**
The vendor in the performance of the contract shall not discriminate on the grounds of race, color, religious creed, national origin or ancestry, age, disability, sexual orientation, marital status, military status, source of income, or sex in employment practices or in the selection or retention of subcontractors, and in the procurement of materials or rental of equipment. The City may cancel, terminate or suspend the contract in whole or in part for any violation of this paragraph.
- TAXES:**
Purchases made by the City are exempt from the payment of Federal excise tax and the payment of Commonwealth of Massachusetts sales tax (except for gasoline) and any such taxes must not be included in the bid prices.
- QUANTITIES:**
Unless otherwise stated, the quantities set forth herein are ESTIMATES ONLY. The City reserves the right to purchase the commodity(ies) specified in any amount less than the estimated amount.
- BID PRICES:**
Bid prices shall include transportation and delivery charges fully prepaid to the City of Cambridge destination. Where the unit price and the total price are at variance, the unit price will prevail.
- DELIVERY AND PACKAGING:**
Deliveries must be made in such quantities as called for in the purchase order and in the manufacturer's original packages. All deliveries must be **"inside" delivery with no assistance from City personnel. Tailgate deliveries will not be accepted.** Rejected material will be returned to the vendor at the vendor's expense.
- MODIFICATION OF BIDS:**
Prior to bid opening, a bidder may correct, modify or withdraw its bid by making the request in writing prior to the time and date for the bid opening. All corrections and modifications must be delivered to the Purchasing Department in a sealed envelope indicating that it contains a modification or correction of the original bid submitted for the particular commodity and indicating the time and date of the bid opening.
- REJECTION OF BIDS:**
The City reserves the right to reject any and all bids if it is in best interest of the City to do so.
- AWARD OF CONTRACT:**
Contract(s) will be awarded within forty-five days of the bid opening unless award date is extended by consent of all parties concerned.
- INDEMNITY:**
Unless otherwise provided by law, the Vendor will indemnify and hold harmless the City against any and all liability, loss, damages, costs or expenses for personal injury or damage to real or tangible personal property which the City may sustain, incur or be required to pay, arising out of or in connection with the performance of the Contract by reason of any negligent action/inaction or willful misconduct by the Contractor, its agents, servants or employees
- TERMINATION OF CONTRACT:**
Except as otherwise provided in the Articles of Agreement, the City may terminate the contract upon seven days notice.
- ASSIGNABILITY:**
The Vendor shall not assign, sell, subcontract or otherwise transfer any interest in this contract without the prior written consent of the City.

MATERIAL SAFETY DATA SHEETS: Pursuant to M.G.L. c. 111F, ss. 8, 9, and 10, any vendor who receives a contract resulting from this invitation agrees to submit a Material Safety Data Sheet for each toxic or hazardous substance or mixture containing such substance when deliveries are made. The vendor agrees to comply with all requirements set forth in the pertinent laws above.

Signature of Bidder _____

File No. 8425 Microwave Backhaul Installation- Thursday, February 28th, 2019 @ 11:00 AM

TO: Elizabeth Unger, Purchasing Agent
City Hall, Cambridge, Massachusetts 02139

The undersigned hereby proposes to furnish and deliver Microwave Backhaul Installation to the City of Cambridge, all in accordance with the attached Invitation for Bid specifications.

One contract will be awarded by the City of Cambridge as a result of this Invitation for Bid. The contract will be awarded to the responsive and responsible bidder offering the lowest price. Prices must remain FIRM during the entire contract period.

Prior to bid opening, a bidder may correct, modify, or withdraw its bid by making the request in writing prior to the time and date of the bid opening. All corrections and modifications must be delivered to the Purchasing Department in a sealed envelope with a notation on the envelope indicating that it contains a modification or correction of the original bid submitted for the particular commodity and indicating the date and time of the bid opening.

A sample contract is attached hereto. The bidder must be willing to sign the contract. The City will not accept a bidder's terms & conditions.

Living Wage Requirements

The City of Cambridge has a Living Wage Requirement that establishes minimum hourly rates for all personnel who work inside the City limits. The City of Cambridge's Living Wage as of March 1, 2018 is **\$15.64** per hour. The Living Wage Requirements are attached.

Wage Theft Certification

In Executive Order 2016-1, the City of Cambridge established requirements for City Contract in an effort to prevent wage theft. Prospective vendors must provide certifications or disclosures with their bids/proposals. **Failure to provide the certification or disclosure shall result in rejection of the bid/proposal. Please see the Wage Theft Prevention Certification form attached.**

PLEASE SUBMIT YOUR BID IN DUPLICATE.

Confidentiality and Public Records Law

All bids or other materials submitted by the vendor in response to this Invitation to Bid will be open for inspection by any person and in accordance with the Massachusetts Public Records Law.

Questions

Bidders' questions concerning this Invitation for Bid must be submitted in writing and either emailed to purchasing@cambridgema.gov or delivered to the Office of the Purchasing Agent, Elizabeth Unger, City Hall, 795 Massachusetts Avenue Room 303, Cambridge, MA 02139. **The deadline for questions is no later than Wednesday, February 20th, 2019 by 3:00 PM.** An addendum will be issued posted to the Purchasing website notifying all bidders of the questions and answers.

Please check the website for Addendums before submitting your bid to the City. Bidders will not be notified individually of Addendums.

Confidentiality and Public Record Law

All bids or other materials submitted by the vendor in response to this invitation to Bid will be open for inspection by any person in accordance with the Massachusetts Public Record Law.

Bid Results

The tab sheet and the contract award information will not be mailed to the bidders individually. A tab sheet with the bid results will be posted to the website soon after the bid opening. The tab sheet will include the "contract award" information as soon as it is determined.

Signature of Bidder _____

PROJECT OBJECTIVES AND OVERVIEW

1. Project Objective

The objective of the Microwave Backhaul procurement is to install and build out a high availability microwave backhaul link to interconnect critical voice communications, dispatch centers and mobile data systems within the Metro Boston Homeland Security Region.

2. MBHSR Overview

The Metro Boston Homeland Security Region (MBHSR) is charged with enhancing the region's ability to deter, prevent, respond to, and recover from natural and manmade disasters. It serves as the decision-making body for the Urban Area Security Initiative (UASI) program comprised of nine jurisdictions – Boston, Brookline, Cambridge, Chelsea, Everett, Quincy, Revere, Somerville, and Winthrop. The MBHSR has the need to enhance the effectiveness of critical public safety systems and communications systems.

SCOPE OF WORK:

The contractor will provide microwave backhaul build out that will serve communications interoperability projects and data sharing within the MBHSR region. The 5 hops/paths are as follows:

Path -1:

Tang Hall 550 Memorial Drive (Cambridge) to Mass College of Art 621 Huntington Ave (Boston)

Path -2:

Tang Hall 550 Memorial Drive (Cambridge) to Brookline Town Hall 333 Washington Street (Brookline)

Path -3:

1 Leighton Street (Cambridge) to Healy Building 125 Sixth Street (Cambridge)

Path -4:

700 Huron Ave (Cambridge) to Healy Building 125 Sixth Street (Cambridge)

Path -5:

Tang Hall 550 Memorial Drive (Cambridge) to 222 Berkeley Street (Boston)

The Contractor will work at the programmatic direction of the designated UASI Project Manager and under the administrative and financial direction of the Director of Emergency Communications or designee.

The Contractor shall work to provide the most cost-effective solutions to MBHSR, providing that such a solution meets the reliability and availability criteria of a public safety network system including but not limited to; R56 standard and TIA222 (latest standard) to the extent possible.

Signature of Bidder_____

PROJECT REQUIREMENTS

Specific requirements and services are to be completed include, but are not limited to, the following:

1. Provide the engineering, path study and recommended microwave for our mission of a carrier class microwave for voice communications.
2. Provide project management including overseeing technical or construction services performed by other contractors under separately bid contracts, coordination and support for meetings and communications with stakeholders, state and municipal government agencies and organizations, network asset owners, network operators and other parties that are identified during this engagement, rights and permitting as needed;
3. Equipment procurement necessary for configuration and installation to build the 5 designated paths for microwave backhaul (see attachment A for path list)
4. Monitoring must be compatible with existing Boston Police solution (MNI or equivalent).
5. All on-site contractors will be subject to complete background check through CJIS.

CONTRACTOR EXPERIENCE / QUALIFICATIONS:

Key Qualifications: The selected vendor must:

- a. Must be DCAMM certified in the following categories of work:
 1. General Building Construction
 2. Electrical
 3. Telecommunications Systems
- b. Have a minimum of five (5) year experience and technical expertise in performing contract work comparable in size and complexity, that the work was performed skillfully in a satisfactory manner and on time.

Other Qualifications:

The selected vendor should:

- a. have or quickly achieve an understanding of the complexity of the evolution of the public safety backbone systems and projects with regard to the multiagency/entity interdependencies (i.e. METFON, MBI, Loop A, Open Cape, DCJIS, SIMS);
- b. demonstrate adequate technical and financial resources for performance as required;
- c. demonstrate a satisfactory record of performance in past contracts.
- d. show proven success involving medium to large Public Safety Network projects;
- e. demonstrate experience in fiber optic network development;
- f. demonstrate familiarity with technologies and network components used in the PSNet backbone and various Commonwealth and local government Public Safety Network Infrastructure;
- g. demonstrate success in internal working requirement gathering and analysis;
- h. demonstrate experience in network architectural principles and design;
- i. demonstrate experience in network security requirements and security device operation;
- j. demonstrate an understanding of the critical role of the PSNet backbone in the context of Public Safety Interoperability;

MICROWAVE EQUIPMENT REQUIREMENTS:

1. Technical Specifications and Features

This specification defines the requirements for a licensed band, full duplex, digital microwave radio system with single channel full duplex data capacities from 4 Mbps to

340 Mbps, capable of carrying DS1, DS3, OC-3 and Gigabit Ethernet traffic independently or in combination.

1.1 General

Radio design shall be such that a common rack mounted multiplexer/modem unit can be used with either an indoor rack mounted RF Unit for 6, 7, 8 and 11 GHz bands, or with an antenna mounted RF Unit for 6, 7, 8, 11, 18, 23 and 38 GHz band. The radio shall be “software defined” such that a radio terminal can be reconfigured for different applications, data rates, bandwidths and modulations via software alone, without the need to change or modify the hardware.

1.2 Standards

The following technical references or standards are applicable to the extent specified herein:

ANSI T1.102	DS1, DS3 Interfaces
IEEE 802.3	Ethernet Interfaces
FCC Rules	Part 101, Part 74, Part 15
TR-NWT-001089	Electromagnetic Compatibility and Electrical Safety Generic Criteria for Network Telecommunication Equipment (Telcordia)

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TR-TSY-000191	Alarm Indication Signal Requirements and Objectives (Telcordia)
TR-TSY-000499	Transport Systems Generic Requirements (Telcordia)
TR-TSY-000752	Microwave Digital Radio Systems Criteria (Telcordia)

1.3 Environmental

The radio equipment shall be designed to operate in a continuous duty cycle in the following environmental ranges:

1.3.1. Rack Mounted Mux/modem Unit

- Operating Temperature: -5° to +50°C
- 95% Humidity (non-condensing)
- Altitude: up to 15,000 ft AMSL

1.3.2. Rack Mounted RF Unit

- Operating Temperature: -5° to +50°C
- 95% Humidity (non-condensing)
- Altitude: up to 15,000 ft AMSL

1.3.3. Antenna Mounted RF Unit

- Operating Temperature, Full Performance: -30° to +55°C
- Operating Temperature, Reduced Performance: -50° to +55
- Minimum Start-up Temperature (within 30 minutes): -40°C

1.4 Primary Power

The radio power supply shall be designed to operate from standard -20 to -60 Vdc power systems. The supplier shall state the total power consumption for a non-protected and a protected terminal in watts. Power consumption figures will include both” as quoted” and maximum loaded terminals.

1.4.1. Voltage Transients

The equipment shall not be damaged and shall recover to normal performance following application of the following maximum transient voltages for the duration shown.

NOMINAL MAXIMUM

TRANSIENT VOLTAGE

VOLTAGE 1 MSEC		500 MSEC
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24 VDC	37.5 V p-p	30 V p-p
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48 VDC	75 V p-p	60 V p-p
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1.4.2. Power Connection

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The mux/modem unit shall have primary power input connectors available on both the front and rear panel. Rack mounted RF Unit shall have primary power input connectors separate from the mux/modem unit. In protected terminals, separate primary power connectors shall be provided for the main and standby mux/modem units and for the main and standby rack mounted RF Units.

In split mount terminals the outdoor mounted RF Unit shall receive power from the mux/modem unit via coaxial cable between the mux/modem and RF Unit

1.5 Physical Requirements

Proposed equipment shall support both rack-mount and split mount (with mux/modem unit indoor and RF Unit outdoors) configurations. Rack mounted hardware shall mount in a standard 19-inch EIA rack. Split mount RF units mounted indoors shall not be considered an indoor configuration.

In the rack-mounted configuration it shall be possible to mount up to four 1+1 protected radios in a seven-foot (45 RU) equipment rack. It shall be possible to configure co-located radios with a separate antenna port for each radio terminal or combine the signals from several radios into a single antenna port.

For efficient use of available rack space when retrofitting radios in existing sites it shall be possible to mount the mux/modem unit and the rack mounted RF Unit separately within a rack or in separate racks up to 10 feet apart. For 6, 7, 8 and 11 GHz radios it shall be possible to configure a system with rack-mounted RF on one end of the hop and split mount RF Unit on the other end.

2. **Radio System Requirements**

2.1 Frequency Band

The radio system shall support FCC Part 101 frequency bands of 5.925 – 6.425, 6.525 – 6.875, and 10.700 - 11.7 GHz in both indoor RF Unit and Split Mount configurations.

The radio system shall support FCC Part 74 frequency bands of 6.875 – 7.125 GHz in both indoor RF Unit and Split Mount configurations.

The radio system shall support the United States federal frequency bands (NTIA) of 7.125 – 8.500 GHz in both indoor RF Unit and Split Mount configurations.

The radio system shall support FCC Part 101 frequency bands of 17.700 – 19.700, 21.200 - 23.600 and 38.600 – 40.000 GHZ in the Split Mount configuration.

2.2 Traffic Type and Interface

The radio shall provide options for Ethernet, DS1, DS3 or OC-3 (155 Mb/s) traffic. Each traffic type will remain in its native format; conversion of TDM traffic to IP, or vice versa, is not allowed.

2.3 RF Bandwidth

The radio shall be designed to provide the following transmitted RF bandwidths: 2.5 MHz, 3.75 MHz, 5 MHz, 10 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, and 60 MHz RF transmitted bandwidths as allowed by FCC Part 101 channel plans.

2.4 Forward Error Correction

Radios shall incorporate forward error correction as standard equipment.
The supplier shall state the type of forward error correction algorithm used.

2.5 Residual BER

The radio shall have a residual bit error rate (BER) performance in the absence of thermal, multipath or dispersive fading of 1×10^{-12} or better.

2.6 Capacity Upgrades/Bandwidth Upgrades

Capacity and RF transmitted bandwidth shall be set via software. Physical input/output connectors may be either directly provisioned on the mux/modem unit or provided via modules plugged into the mux/modem unit. If the latter, the plug-in modules must be "hot-pluggable" To reduce upgrade costs, conversion to higher capacities must not involve replacement of high cost units such as modems, power amplifiers, transmitters, control modules, or power supplies. The same mux/modem unit and RF unit shall be used throughout the entire capacity range.

2.7 Terminal Interconnection

At sites with two or more co-located radio terminals, it shall be possible to interconnect terminals such that DS1 and DS3 traffic can pass among the terminals via a single interconnecting cable, eliminating the need to cross connect individual DS1s or DS3s. It shall be possible distribute individual DS1's and DS3's from any of the co-located terminals to any other of the terminals via the interconnecting cable.

2.8 Traffic Grooming

The radio shall feature built in M1-3 multiplexing, DS1 or DS3 routing capability, DS1 drop/insert capability, and DS3 and/or DS1 cross connect capability.

2.9 Loop Protection

To allow radio terminals to operate a loop protected network, an option for loop protection of individual DS1s shall be built into the radio so external 3rd party loop protection switching equipment (i.e., T1 Loop Switch) is not required. Each DS1 channel shall be switched independently of the other channels and DS1 loop switching shall be hitless.
Service channels and engineering order wire shall be loop protected.
Ethernet channels shall be loop protected without the need for an external Ethernet switch. Ethernet loop protection switching time shall be less than 900 milliseconds. It shall be possible for an individual radio link to be a member of multiple overlapping Ethernet loops.

2.10 Modulation

The radio terminal shall be capable of operating with modulations from QPSK to 256 QAM. Modulation will be selected by the terminal based on user software configured payload capacity (Mbps) and software configured RF channel bandwidth (MHz).

2.11 Adaptive Code and Modulation

The radio terminal shall incorporate an Adaptive Code and Modulation (ACM) scheme which allows the radio to dynamically change modulation to maintain a working path during challenging transmission conditions. ACM switching shall be hitless, and the radio shall be able to switch through every modulation from 256 QAM to QPSK. It shall be possible through software to disable ACM.

It shall be possible to set a Do Not Exceed transmit power such that the set power level will not be exceeded even when ACM selects a lower modulation mode which is capable of higher transmitter power.

2.12 Encryption

The radio terminal shall be capable of encrypting Ethernet data using an AES encryption algorithm. Encryption key size shall be selectable among 128, 196 or 256 bit.

2.13 RF Interface

Rack mounted RF Units shall present the following waveguide interface:

6 GHz	CMR-137 or CPR-137 as required
7/8 GHz	UG-51G
11 GHz	UG-39/U or CPR-90 as required

Split mount radio RF Units will normally be mounted directly to the antenna; however, provision will be made to mount the radio separate from the antenna. Radios mounted separately shall present the following waveguide interface:

6GHz	Type N Connector or WR-37 Square Cover Flange
7/8 GHz	WR-112 Square Cover Flange
11 GHz	WR-90 Square Cover Flange
18 GHz	WR-42 Square Cover Flange
23 GHz	WR-42 Square Cover Flange
38 GHz	WR-28 Square Cover Flange

2.14 Antennas

For split mount radios, antennas for direct mounting of the ODU shall be available from multiple manufacturers and shall be available in 1-foot, 2-foot and 4-foot diameters.

2.15 Traffic Interfaces

2.15.1 DS1 Interface

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The DS1 low speed interface shall be DSX-1 (1.544 Mb/s) as per TRTSY-000499 and ANSI T1.102.

Data Rate:	1.544 Mb/s +/- 32 ppm
Data Rate Sink Tolerance:	+/- 130 ppm
Line Code:	Provisional for B8ZS or AMI
Line Impedance:	100 ohms +/- 5%, balanced
Jitter Accommodation:	5.0 UI peak-peak low frequency, 0.1 UI high frequency per TR-TSY-000499 para 7.3.1
Jitter Transfer:	0.1 dB low frequency per TR-TSY-000499 para 7.3
Jitter Generation:	Less than 0.28 UI peak-peak

DS1 Interface will be presented on two CHAMP connectors with all DS1 TX signals on one connector and all DS1 RX signals on the second connector.

Each individual DS1 shall be independently provisionable for B8ZS or AMI line code.

2.15.2 DS3 Interface

The DS3 interface shall be DSX-3 (44.736 Mb/s) as per TR-TSY-000499 and ANSI T1.102.

Data Rate:	44.736 Mb/s +/- 20 ppm
Line Code:	B3ZS
Line Impedance:	75 ohms +/-5%, unbalanced
Jitter Accommodation:	5.0 UI peak-peak low frequency, 0.1 UI high frequency per TR-TSY-000499 para 7.3.1
Jitter Transfer:	0.1 dB low frequency per TR-TSY-000499 para 7.3
Jitter Generation:	Less than 0.28 UI peak-peak

DS3 Interface will be presented on two full-size BNC connectors with DS3 TX signal on one connector and DS3 RX signal on the second connector.

2.15.3 OC-3 Interface

The OC-3 optical interface shall be per ANSI T1.105 and GR-253-CORE. OC-3 Interface shall be presented with LC type connectors and shall be available with either Single Mode or Multimode options.

Data Rate:	155.520 Mb/s +/- 20 ppm
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Line Code:	Binary NRZ
Wavelength	1310 nm
Transmitter Output Power (PTmin)	-15 dBm – Single Mode -19 dBm – Multi Mode
Min Receiver Input Power (PRmin)	-28 dBm – Single Mode -32 dBm – Multi Mode

2.15.4 Ethernet Interface

10/100/1000BaseT Ethernet Interface shall be per IEEE 802.3ab Ethernet interface shall be presented on RJ-45 connectors.

An option shall be available to provide an optical Ethernet interface via a Small Form Pluggable (SFP) interface.

Multiple 10/100/1000BaseT interfaces shall operate as a Layer 2 switch.

Ethernet shall support IEEE 802.1p and 82.1Q for QOS and tag-based VLAN

2.16 Protection Configurations

The radio system shall be available in the following protection configurations:

- Non-protected (1+0)
- Full Hot-standby (1+1)
- Full Hot-standby/space diversity (1+1 SD)
- Non-protected Repeater

1+1 and 1+1 SD radios shall be fully redundant with no unprotected active components. Preference will be given to systems with complete duplication of the primary and standby terminals. It shall be possible to do maintenance, up to and including completely removing the terminal, on either the primary or standby terminal without disconnecting traffic cables or interrupting traffic on the other terminal.

The use of “Y” cables for the user interface to protected radios is not allowed.

Space diversity radios shall feature errorless receiver switching. Repeater configuration shall provide an “East-West” 1+0 repeater in a single radio eliminating the need for two independent radios as repeaters sites.

3. Radio Transmitter Requirements

3.1 Occupied Spectrum

The radio shall meet the FCC’s emissions mask requirements specified in FCC Part 101 for applicable frequencies and bandwidths.

3.2 Frequency Stability

The frequency setting accuracy and stability shall be at least $\pm 0.001\%$ over all specified operating conditions.

3.3 Transmitter RF Output Power

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The supplier shall state the guaranteed operating RF transmitter power output measured at the antenna port for both non-standby and hot-standby configurations. Transmitter power levels shall be guaranteed across the radio's specified temperature range.

Hot-standby protection schemes using transmitter combining to achieve the indicated power levels are not desired but may be considered provided required path availability can be achieved for each transmitter individually with the protection power amplifier disabled or removed.

Higher power outputs that cannot be sustained for indefinite periods shall not be included as part of this requirement.

3.4 Automatic Power Control

The radio system shall have the capability of operation with automatic transmitter power control. A minimum of 10 dB of transmitter power reduction from full normal operating power shall be provided. The supplier shall describe the ATPC feature and its operation including the maximum power reduction, ATPC threshold, and the step increase in transmit power when activated from a low power state. Preference will be given to ATPC implementations that provide an incremental increase in transmit power over a single step method. The ATPC feature shall incorporate an alarm indication that shall be activated if the transmitter remains in the full power mode for greater than 5 minutes. ATPC shall be a standard feature on all radios; however, it should be possible to disable ATPC by software selection.

4. Radio Receiver Requirements

4.1 Dispersive Fade Margin

The supplier shall state the typical dispersive fade margin (DFM) for BER of 10⁻⁶.

4.2 Receiver Thresholds

The supplier shall state the guaranteed receiver 10⁻⁶ BER thresholds for non-standby, hot-standby and hot-standby with space diversity configurations. The threshold shall be measured at the terminal antenna port. Guaranteed threshold levels shall be guaranteed across the radio's entire specified temperature range. In the event of Receiver IF combining for protected or diversity systems, the threshold of a single, non-combined receiver shall be used.

4.3 Receiver Overload

The supplier shall state the maximum received signal level for BER 10⁻⁶ measured at the antenna interface. The maximum RSL for a 10⁻⁶ BER shall not be lower than -20 dBm.

4.4 Interference Susceptibility

The supplier shall provide Threshold-to-Interference (T/I) parameters for the receiver for like modulation for co-channel and adjacent channel interference. The T/I ratio is defined as the ratio of the receiver threshold to the interfering carrier level that results in a degradation of the receiver threshold from 10⁻⁶ to 10⁻⁵ BER.

4.5 Receiver Protection Switching/Combining

The receivers shall employ errorless switching between the primary and protection traffic. Errorless switching is defined as any switching method that does not generate bit errors at the

DS1, DS3 or Ethernet signal due to the switching action itself for manual or fade induced receiver switches.

4.6 AIS Insertion

The radio shall activate and output AIS on the DS1 or DS3 line upon detection of an incoming DS1 or DS3 line failure or in the event of a radio path failure. The AIS format shall be as described in TR-TSY-000191.

4.7 Ethernet Link Loss Forwarding

Ethernet ports will include the ability to optionally set Link Loss Forwarding such that loss of the microwave path will disable all front panel Ethernet ports to signal down-stream equipment that the path is not available. It shall also be possible to set Link Loss Forwarding such that loss of the microwave path will only disable the Ethernet switch port leading to the RF Path but allow other ports to remain active. The intent is to allow co-located devices which communicate locally through the radio modem/mux unit to maintain contact while preventing the buffers leading to the RF path from overflowing.

Link Loss Forwarding will be enabled or disabled via software.

4.8 Loss of Ethernet Input Forwarding

Ethernet ports shall be configurable such that Port 1 at the near end connects exclusively to Port 1 at the far end, and Port 2 to Port 2, etc. Under such a configuration it shall be possible to set Loss of Ethernet Input Forwarding such that a loss of Ethernet signal into a port of the near radio will disable corresponding port on the far end radio, while other ports will remain active.

5. Radio Ancillary Items

5.1 Orderwire Capability

The radio system shall include integral voice orderwire that shall terminate the audio channel with a standard telephone set. The orderwire shall have its own dedicated bandwidth in the overall radio bit stream and shall not consume user payload. In the event the voice orderwire is not used the dedicated orderwire channel shall be available as an RS-422 asynchronous data channel.

5.2 Service Channel Capability

The radio system shall provide two RS-232 digital service channels.

5.3 External Alarm Input

The radio shall incorporate at least six inputs for external alarms. External alarm input will be activated (put into the alarm state) by pulling the alarm input to ground. An active external alarm will show on the radio terminal's alarm list and result in an SNMP trap being issued by the radio terminal.

5.4 External Alarm Output

The radio shall incorporate at least 4 form-C dry relay contacts for signaling alarm conditions in the radio terminal. The alarm outputs shall be mappable such that any alarm or combination of alarms generated within the radio terminal can be used to toggle one of the relays.

In protected radios the default mapping will be to indicate Major and Minor alarms from the Primary and Major and Minor alarms from the Standby terminals.

6. Terminal Configuration, Control, Monitoring & Diagnostics

6.1 Local Display and Control

By local we mean at one of the terminal sites with direct physical access to the terminal. The radio shall have visual indicators for Power On, Major Alarm, Minor Alarm, and in the case of protected or diversity radios, on-line status.

Local radio setup, control and monitoring will be done with a laptop computer.

The radio shall provide access via both a serial interface and an Ethernet (10/100 BaseT or 10/100/1000 BaseT) interface. The radio shall support both a text based Craft Terminal Interface (CTI) which can be accessed using standard terminal emulation software such as Hyperlink, and software based Graphic User Interface (GUI) which must be provided by the vendor free of charge. The GUI must run on both Windows based and Apple laptop computers.

6.1.1. Logon Authentication

Access to terminals on the network shall require a logon name and password to be stored in the radio terminal. Authorization levels shall include “Guest”, a read only authorization, and “Administrator”, a full configuration and control authorization.

6.1.2. RADIUS Logon Authentications

RADIUS remote password authentication shall be supported in which a network RADIUS server maintains a listing of passwords and authorizations for each radio and each individual who may access radios in the network. Attempts to logon to any radio in the network will be authorized by RADIUS before logon is permitted. The implementation must allow for at least two separate RADIUS servers on the network.

6.1.3. Configuration

The configuration capability shall include at least the following:

- Set radio terminal Identification and IP addresses
- Set radio frequency
- Set transmitter output power in 1 dB increments
- Select Automatic Transmit Power Control (ATPC) on/off and select set point
- Select Adaptive Code and Modulation (ACM) on/off
- Set RF channel bandwidth
- Set radio aggregate data rate

- Provision individual inputs (DS1/DS3) and select line code (AMI/B8ZS) on a per DS1 basis.
- Set Ethernet LAN and VLAN functions and ingress rate.
- Set M1-3 functions and DS1/DS3 routing through the radio hop
- Configure alarm output relays (configurable for which alarm or combination of alarms each relay represents)
- Set terminal internal clock for time stamping
- Ability to save an inventory of terminal components, including part and serial numbers.

6.1.4. Control

The control capability shall include at least the following:

- Select on-line and off-line terminal in protected or diversity systems
- Transmitter mute

6.1.5. Monitor

The Monitor capability shall include at least the following:

- Current alarm status
- On-line/off-line status
- Alarm History
- Time Stamped alarm and event log
- Transmitter output power
- Received Signal Level
- Aggregate BER
- G.826 Statistics

6.1.6. Non-Volatile Memory

The radio terminal shall contain a non-volatile memory section in the mux/modem unit in which all configuration parameters are stored. This memory section will be easily removable from the MUX/MODEM unit such that it can be installed into a replacement MUX/MODEM unit to replicate all MUX/MODEM functions.

6.2 Remote Display and Control

It shall be possible, with local access to any terminal within contiguous network to log onto any other terminal in the network and perform all of the functions available for Local Display and Control.

6.3 Network Management

The radio terminal shall incorporate an SNMP network management agent which can be used with any commercially available SNMP network management system. The terminal shall support SNMP v1, v2 and v3.

SNMP management traffic shall be carried in an out-of-band channel, separate from user payload. It shall be possible, however, to insert the SNMP traffic into the user payload channel. The SNMP Management Information Base (MIB) shall be provided at no cost by the vendor.

6.4 Performance History

A history of radio performance (including RSLs, transmitter power output, alarm status, G.826 stats) shall be stored for a period of at least six months in the radio itself.

Performance measurements shall take place at a user definable time period, with a minimum sample taken at one second increments. This feature will support automatic uploads to a central server via TFTP.

6.5 “Paperless” Chart Recorder

The GUI shall provide a method of displaying analog values (such as RSL) and alarm status retrieved from the radio terminal’s performance history in a graphical format.

6.6 Mobile Network Monitoring

A facility allowing network monitoring from mobile devices (smart phone, tablet computers, etc.) shall be provided. Monitoring to include overall network health, identifying specific radio hops within the network which are not operating properly, and basic operational characteristics such as RSL, Errored Seconds, etc. Mobile Network Monitoring shall be “read only”.

7. **Electromagnetic Compatibility**

The radio equipment shall be designed to operate in a communications equipment environment installed in or near the vicinity of other types of equipment which may include other digital radio equipment, fiber optic terminal equipment, FDM analog microwave, VHF\UHF base stations, transfer trip and power line carrier equipment and telephone signaling equipment

8. **Maintenance**

8.1 1+1 Protected Radios

In 1+1 protected terminals, normal maintenance actions that include replacements of failed or faulty redundant traffic processing units on the off-line portion of the radio shall not impair operation of the on-line portion of the radio.

It shall be possible to remove defective components without unplugging or disconnecting user input cables.

8.2 Diagnostics & Troubleshooting

The radio terminal will have built in features for the following diagnostic testing:

- Remote and local loopback functions for DS1, DS3, OC-3 and aggregate data rates

- Aggregate Bit Error Rate monitoring
- Built-in DS1 PRBS Bit Error Rate Tester which can be activated on any individual DS1
- RF Mute
- Software selection of on-line/off-line status in 1+1 radio terminals.
- QAM Constellation Viewer
- RF signal SNR (Signal to Noise Ratio) display
- FEC (Forward Error Correction) stress indication

9. Factory Testing

The radio equipment shall be configured and tested by the manufacturer on a per hop basis prior to delivery in accordance with the supplier's standard, commercial test procedures and methods. The testing shall be adequate to ensure proper operation and performance of the radio equipment in accordance with these requirements. The provider shall provide facilities for in factor acceptance testing.

10. Service Life

The radio equipment shall be designed for a service life of at least 7 years.

11. Warranty

The radio equipment warranty period shall be a minimum of 2 years. Options for longer warranty shall be available.

QUALITY REQUIREMENTS

A "NO" response, a failure to respond, or a failure to meet any of the following Quality Requirements will result in a rejection of your bid. Circle "YES" or "NO" to the following Quality Requirements.

1. Bidder has been in the business of designing and installing Public Safety Grade Microwave for a minimum of 15 years.

YES NO

2. Bidder has familiarity with installing public safety carrier class Microwave in dense urban settings such as Greater Boston.

YES NO

3. Prime for warranty is located within 50 miles of Boston.

YES NO

4. Bidder holds appropriate Certifications for Microwave Pathway Design and Installation **and** bidder has submitted proof of valid, current certification(s) with this bid.

YES NO

5. Bidder lists three references directly related to the bidder's asserted design and installation of Public Safety Carrier Class Microwave experience.

YES NO

BID SUBMISSION REQUIREMENTS

Failure to submit documents may result in the determination that your bid is non-responsive unless the City deems such failure to be a minor informality. The following documents must be submitted with your proposal:

1. Copies of appropriate Certifications for Microwave Pathway Design and Installation must be submitted to the City of Cambridge for review.

2. Bidder must submit a minimum of 3 references for design and installation of public safety carrier class Microwave. Bidder must list at least three (3) references (including name and contact information) that support the vendor's ability to perform design and installation of public safety carrier class Microwave. References must be for successful projects completed within the past five years. Failure of a reference to follow up with the City on any inquiry will result in the disqualification of that reference. The City reserves the right to use itself as a reference and to perform further due diligence in determining the responsibility of the bidder.

List references on following page.

Signature of Bidder_____

File No. 8425 Microwave Backhaul Installation- Thursday, February 28th, 2019 @ 11:00 AM

Bidder must submit a minimum of 3 references for design and installation of public safety carrier class Microwave below.

Reference One: _____

Contact: _____

Address _____

Phone _____ EMAIL _____

Reference Two: _____

Contact: _____

Address _____

Phone _____ EMAIL _____

Reference Three: _____

Contact: _____

Address _____

Phone _____ EMAIL _____

Signature of Bidder _____

PRICE PROPOSAL

Line	Units	Description	Unit Price	Sub Total
Path-1		Tang Hall 550 Memorial Drive (Cambridge) to Mass College of Art 621 Huntington Ave (Boston)		
1.01		Program Management and Coordination		
1.02		Mobilization		
1.03		Tang Hall - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
1.04		Mass College of Art - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
1.05		Link alignment support		
1.06		Material Management and Delivery, Inventory, Receiving, Disposal		
1.07		Meetings, Vendor Support, Solutions Engineering, Network Configuration, Debugging, System Cut-over, Labeling, ATP Execution and Testing		
1.08		Lodging and Mileage/Parking		
1.09		Project Supplies and Material		

Subtotal \$ _____

Path-2		Tang Hall 550 Memorial Drive (Cambridge) to Brookline Town Hall 333 Washington Street (Brookline)		
2.01		Program Management and Coordination		
2.02		Mobilization		
2.03		Tang Hall - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
2.04		Brookline Town Hall - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
2.05		Link alignment support		
2.06		Material Management and Delivery, Inventory, Receiving, Disposal		

Signature of Bidder _____

2.07		Meetings, Vendor Support, Solutions Engineering, Network Configuration, Debugging, System Cut-over, Labeling, ATP Execution and Testing		
2.08		Lodging and Mileage/Parking		
2.09		Project Supplies and Material		

Subtotal \$ _____

**Path-3 1 Leighton Street (Cambridge) to Healy Building
125 Sixth Street (Cambridge)**

3.01		Program Management and Coordination		
3.02		Mobilization		
3.03		1 Leighton Street - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
3.04		Healy Building - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
3.05		Link alignment support		
3.06		Material Management and Delivery, Inventory, Receiving, Disposal		
3.07		Meetings, Vendor Support, Solutions Engineering, Network Configuration, Debugging, System Cut-over, Labeling, ATP Execution and Testing		
3.08		Lodging and Mileage/Parking		
3.09		Project Supplies and Material		

Subtotal \$ _____

**Path-4 700 Huron Ave (Cambridge) to Healy Building
125 Sixth Street (Cambridge)**

4.01		Program Management and Coordination		
4.02		Mobilization		
4.03		700 Huron - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
4.04		Healy Building - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
4.05		Link alignment support		
4.06		Material Management and Delivery, Inventory, Receiving, Disposal		

Signature of Bidder _____

4.07		Meetings, Vendor Support, Solutions Engineering, Network Configuration, Debugging, System Cut-over, Labeling, ATP Execution and Testing		
4.08		Lodging and Mileage/Parking		
4.09		Project Supplies and Material		

Subtotal \$ _____

Path-5 Tang Hall 550 Memorial Drive (Cambridge) to 222 Berkeley Street (Boston)

5.01		Program Management and Coordination		
5.02		Mobilization		
5.03		Tang Hall - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
5.04		222 Berkeley Street - Installation of indoor microwave equipment and DC plant into MNI supplied rack, cabling to end points and power up. Connection to RF surge protector that will be installed by others.		
5.05		Link alignment support		
5.06		Material Management and Delivery, Inventory, Receiving, Disposal		
5.07		Meetings, Vendor Support, Solutions Engineering, Network Configuration, Debugging, System Cut-over, Labeling, ATP Execution and Testing		
5.08		Lodging and Mileage/Parking		
5.09		Project Supplies and Material		

Subtotal \$ _____

Total bid price: _____

Total bid price in words: _____

Bidder Name: _____

Signature of Bidder _____

**Americans with Disabilities Act (42 U.S.C. 12131)
Section 504 of the Rehabilitation Act of 1973
Tax Compliance/Anti-Collusion Statement
Debarment Statement**

The Americans with Disabilities Act (the "Act") applies to all employers of fifteen or more employees. All vendors that are subject to the Act must comply with its provisions. In further compliance with the Act, all Contractors who enter into contracts with the City are prohibited from discrimination against the City's employees, regardless of the size of the Contractor.

The Act protects against discrimination on the basis of "disability", which is defined as a physical or mental impairment that substantially limits at least one "major life activity"; discrimination against a person having a history or record of such impairment; and discrimination against an individual regarded - even if inaccurately - as having such an impairment. The Act also expressly prohibits discrimination that is based on an individual's relationship or association with a disabled person.

The Contractor shall not discriminate against any qualified employee or job applicant with a disability and will make the activities, programs and services covered by any contract awarded through this procurement readily accessible to and usable by individuals with disabilities. To be qualified for a job, or to avail oneself of the Contractor's services, the individual with the disability must meet the essential eligibility requirements for receipt of the Contractor's services or participation in the Contractor's programs or activities with or without: 1) reasonable modifications to the Contractor's rules, policies and practices; 2) removal of architectural, communication, or transportation barriers; or, 3) provisions of auxiliary aids and services.

By submitting its contract, the Contractor certifies to the City of Cambridge that it understands and will comply with all applicable provisions of the Act, including compliance with applicable provisions of Section 504 of the Rehabilitation Act of 1973, if the Contractor is receiving federal funds.

The undersigned certifies under penalties of perjury that this contract has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals

As required by M.G.L. c. 62C, §49A, the undersigned certifies under the penalties of perjury that the Contractor has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

The undersigned certifies that it is not currently subject to any State or Federal debarment order.

Date: _____

(Print Name of person signing bid)

(Signature & Title)

This form must be submitted with your bid

Signature of Bidder _____

WAGE THEFT PREVENTION CERTIFICATION

In Executive Order 2016-1, the City of Cambridge established requirements for City contracts in an effort to prevent wage theft. Prospective vendors must provide the following certifications or disclosures with their bids/proposals. Failure to provide the following shall result in rejection of the bid/proposal.

Instructions for this form:

A prospective vendor must check box 1 or box 2, as applicable, as well as boxes 3-5, and must sign this Form, certifying compliance with the requirements set out in this Form. This Form must be included with the bid or proposal, and for multi-year contracts must be completed annually on the contract anniversary and filed with the Purchasing Agent.

The undersigned certifies under the pains and penalties of perjury that the vendor is in compliance with the provisions of Executive Order 2016-1 as currently in effect.

All vendors must certify that [check either box 1 or box 2, as applicable]:

1. Neither this firm nor any prospective subcontractor has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal submission.

OR

2. This firm, or a prospective subcontractor of this firm, has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal submission and such documentation is included in the bid/proposal submission.

In addition, all vendors must certify each of the following:

3. Any federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* imposed on this firm or on any prospective subcontractor while any bid/proposal to the City is pending and, if awarded a contract, during the term of the contract, will be reported to the Purchasing Agent or other City department within five (5) days of receiving notice.

Signature of Bidder _____

4. Vendors awarded a contract that have disclosed a federal or state criminal or civil judgment, administrative citation, final administrative determination, or order resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal, while the bid/proposal was pending, or during the term of the contract shall, upon request, furnish their monthly certified payrolls for their City contract to the Purchasing Agent for all employees working on such contract and are required to obtain a wage bond or other suitable insurance in an amount equal to the aggregate of one year's gross wages for all employees. Vendors subject to a state or federal debarment for violation of the above laws or prohibited from contracting with the Commonwealth are prohibited from contracting with the City, and upon a finding or order of debarment or prohibition, the City may terminate the contract.

5. Notice provided by the City, informing employees of the protections of Executive Order 2016-1 and applicable local, state, and federal law will be posted by this firm in conspicuous places.

Attested hereto under the pains and penalties of perjury:

(Typed or printed name of person signing
quotation, bid or proposal)

Signature

(Name of Business)

Pursuant to Executive Order 2016-1, vendors who have been awarded a contract with the City of Cambridge must post the Massachusetts Wage and Hour Laws notice informing employees of the protections of G.L. c. 149, G.L. c. 151, and 21 U.S.C. 201 *et seq.* in conspicuous places. This notice can be found at <http://www.mass.gov/ago/docs/workplace/wage/wagehourposter.pdf>

Signature of Bidder _____

CORI COMPLIANCE FORM

Persons and businesses supplying goods and/or services to the City of Cambridge (“Vendors”), who are required by law to perform CORI checks, are further required by Section 2.112.060 of the Cambridge Municipal Code to employ fair policies, practices and standards relating to the screening and identification of persons with criminal backgrounds through the CORI system. Such Vendors, when entering into contracts with the City of Cambridge, must affirm that their policies, practices and standards regarding CORI information are consistent with the policies, practices and standards employed by the City of Cambridge as set forth in the City of Cambridge CORI Policy (“CORI Policy”) attached hereto.

CERTIFICATION

The undersigned certifies under penalties of perjury that the Vendor employs CORI related policies, practices and standards that are consistent with the provisions of the attached CORI Policy. **All Vendors must check one of the three lines below.**

1. _____ CORI checks are not performed on any Applicants.
2. _____ CORI checks are performed on some or all Applicants. The Vendor, by affixing a signature below, affirms under penalties of perjury that its CORI policies, practices and standards are consistent with the policies, practices and standards set forth in the attached CORI Policy.
3. _____ CORI checks are performed on some or all Applicants. The Vendor’s CORI policies, practices and standards are not consistent with the attached CORI Policy. Please explain on a separate sheet of paper.

(Typed or printed name of person signing quotation, bid or proposal)

Signature

(Name of Business)

NOTE:

The City Manager, in his sole discretion may grant a waiver to any Vendor on a contract by contract basis.

Instructions for Completing CORI Compliance Form:

A Vendor should not check Line 1 unless it performs NO CORI checks on ANY applicant. A Vendor who checks Line 2 certifies that the Vendor’s CORI policy conforms to the policies, practices and standards set forth in the City’s CORI Policy. A Vendor with a CORI policy that does NOT conform to the City’s CORI Policy must check Line 3 and explain the reasons for its nonconformance in writing. Vendors who check Line 3 will not be permitted to enter into contracts with the City, absent a waiver by the City Manager.

This form must be submitted with your bid.

Signature of Bidder _____

City of Cambridge CORI Policy

1. Where Criminal Offender Record Information (CORI) checks are part of a general background check for employment or volunteer work, the following practices and procedures will generally be followed.
2. CORI checks will only be conducted as authorized by Criminal History Systems Board (CHSB). All applicants will be notified that a CORI check will be conducted. If requested, the applicant will be provided with a copy of the CORI policy.
3. An informed review of a criminal record requires adequate training. Accordingly, all personnel authorized to review CORI in the decision-making process will be thoroughly familiar with the educational materials made available by the CHSB.
4. Prior to initiating a CORI check, the City will review the qualifications of the applicant to determine if the applicant is otherwise qualified for the relevant position. The City will not conduct a CORI check on an applicant that is not otherwise qualified for the relevant position.
5. Unless otherwise provided by law, a criminal record will not automatically disqualify an applicant. Rather, determination of suitability based on CORI checks will be made consistent with this policy and any applicable law or regulations.
6. If a criminal record is received from CHSB, the authorized individual will closely compare the record provided by CHSB with the information on the CORI request form and any other identifying information provided by the applicant, to ensure the record relates to the applicant.
7. If, in receiving a CORI report, the City receives information it is not authorized to receive (e.g. cases with dispositions such as not guilty or dismissal, in circumstances where the City is only authorized to receive convictions or case-pending information), the City will inform the applicant and provide the applicant with a copy of the report and a copy of CHSB's *Information Concerning the Process in Correcting a Criminal Record* so that the applicant may pursue correction with the CHSB.
8. If the City of Cambridge is planning to make an adverse decision based on the results of the CORI check, the applicant will be notified immediately. The applicant shall be provided with a copy of the criminal record and the City's CORI policy, advised of the part(s) of the record that make the individual unsuitable for the position and given an opportunity to dispute the accuracy and relevance of the CORI record.
9. Applicants challenging the accuracy of the criminal record shall be provided a copy of CHSB's *Information Concerning the Process in Correcting a Criminal Record*. If the CORI record provided does not exactly match the identification information provided by the applicant, the City of Cambridge will make a determination based on a comparison of the CORI record and documents provided by the applicant. The City of Cambridge may contact CHSB and request a detailed search consistent with CHSB policy.
10. If the City of Cambridge reasonably believes the record belongs to the applicant and is accurate, then the determination of suitability for the position will be made. Unless otherwise provided by law, factors considered in determining suitability may include, but not be limited to the following:
 - (a) Relevance of the crime to the position sought;
 - (b) The nature of the work to be performed;
 - (c) Time since the conviction;
 - (d) Age of the candidate at the time of offense;
 - (e) Seriousness and specific circumstances of the offense;

- (f) The number of offenses;
 - (g) Whether the applicant has pending charges;
 - (h) Any relevant evidence of rehabilitation or lack thereof;
 - (i) Any other relevant information, including information submitted by the candidate or requested by the City.
11. The Personnel Department will assist affected departments in assessing the suitability of candidates in accordance with paragraph 10 a through i above, to ensure consistency, fairness, and protection of employment opportunities and the public interest.
 12. The City of Cambridge will notify the applicant of the decision and the basis of the decision in a timely manner.
 13. CORI information shall not be disseminated or shared with any unauthorized employees or other, but shall be maintained in confidence consistent with the obligations of law.

Revised May 5, 2007

ORDINANCE NUMBER 1312

Final Publication Number 3155. First Publication in the Chronicle on December 13, 2007.

City of Cambridge

In the Year Two Thousand and Eight

AN ORDINANCE

In amendment to the Ordinance entitled “Municipal Code of the City of Cambridge”

Be it ordained that Cambridge Municipal Code Chapter 2.112 is hereby amended by adding a new Section 2.112.060 entitled “CORI Screening by Vendors of the City of Cambridge” as follows:

Adding after Section 2.112.050 the following new sections:

SECTION 2.112.060

CORI SCREENING BY VENDORS OF THE CITY OF CAMBRIDGE

Sections:

- 2.112.061 Purpose**
- 2.112.062 Definitions**
- 2.112.063 CORI-Related Standards of the City of Cambridge**
- 2.112.064 Waiver**
- 2.112.065 Applicability**

2.112.061 Purpose

These sections are intended to ensure that the persons and businesses supplying goods and/or services to the City of Cambridge deploy fair policies relating to the screening and identification of persons with criminal backgrounds through the CORI system.

2.112.062 Definitions

Unless specifically indicated otherwise, these definitions shall apply and control.

Awarding Authority means the City of Cambridge Purchasing Agent or designee.

Vendor means any vendor, contractor, or supplier of goods and/or services to the City of Cambridge.

2.112.063 CORI-Related Standards of the City of Cambridge

The City of Cambridge employs CORI-related policies, practices and standards that are fair to all persons involved and seeks to do business with vendors that have substantially similar policies, practices and standards. The City of Cambridge will do business only with vendors who, when required by law to perform CORI checks, employ CORI-related policies, practices, and standards that are consistent with policies, practices and standards employed by the City of Cambridge. The awarding authority shall consider any vendor’s deviation from policies, practices and standards employed by the City of Cambridge as grounds for rejection, rescission, revocation, or any other termination of the contract.

2.112.064 Waiver

Signature of Bidder_____

The City Manager may grant a waiver to anyone who or which has submitted a request for waiver if it is objectively reasonable; and the City Manager, or a delegate, shall report promptly in writing to the City Council all action taken with respect to every request for a waiver and the reasons for the decision.

2.112.065 Applicability

If any provision of these sections imposes greater restrictions or obligations than those imposed by any other general law, special law, regulation, rule, ordinance, order, or policy then the provisions of these sections shall control.

In City Council January 28, 2008.

Passed to be ordained by a ye and nay vote:-

Yeas 9; Nays 0; Absent 0.

Attest:- D. Margaret Drury, City Clerk.

A true copy;

ATTEST:-

D. Margaret Drury
City Clerk

Chapter 2.121

LIVING WAGE ORDINANCE

Sections:

2.121.010	Title and Purpose
2.121.020	Definitions
2.121.030	Living Wage
2.121.040	Waivers and Exceptions
2.121.050	Notification Requirements
2.121.060	Duties of covered Employers
2.121.070	Community Advisory Board
2.121.080	Enforcement
2.121.090	Severability
2.121.100	Effective Date

2.121.010 Title and Purpose.

This Chapter shall be known as the "Cambridge Living Wage Ordinance". The purpose of this ordinance is to assure that employees of the City of Cambridge and employees of City contractors, subcontractors and beneficiaries of tax abatements, loans, grants, subsidies and other assistance provided by the City earn an hourly wage that is needed to support a family of four.

2.121.020 Definitions.

For the purposes of this ordinance, the term:

(a) "Applicable Department" means the Personnel Department for employees of the City of Cambridge, the Purchasing Department, with the advice and assistance of the appropriate department which receives the services, for Covered Employers who contract or subcontract with the City of Cambridge, the School Department for employees, contractors and subcontractors of the School Department, and the City Manager's Office for any other Person who is a Beneficiary of assistance other than a contract or subcontract.

(b) "Assistance" means:

(1) any grant, loan, tax incentive, bond financing, subsidy, or other form of assistance valued at least \$10,000 that an employer receives by or through the authority or approval of the City of Cambridge, including, but not limited to, c. 121A tax abatements, industrial development bonds, Community Development Block Grant (CDBG) loans and grants, Enterprise Zone designations awarded after the effective date of this Chapter, and the lease of city owned land or buildings below market value; and

(2) any service contract, as defined herein, of at least \$10,000 with the City of Cambridge that is made with an employer to provide services pursuant to G.L.c. 30B or other public procurement laws, awarded, renegotiated or renewed after the effective date of this Chapter.

(3) any service subcontract, as defined herein, of at least \$10,000.

(c) "Beneficiary" means:

(1) any person who is a recipient of Assistance;

(2) any company or person that is a tenant or sub-tenant, leaseholder or sub-leaseholder of a recipient of Assistance, provided that said company or person employs at least 25 persons and occupies property or uses equipment or property that is improved or developed as a result of Assistance, after the effective date of this Chapter; and

Signature of Bidder_____

(d) "Covered Employer" means the City of Cambridge or a Beneficiary of Assistance.

(e) "Covered Employee" means:

(1) a person employed by the City of Cambridge except for persons in those positions listed in Section 2.121.040(j) of this ordinance; and

(2) a person employed by a Covered Employer, or a person employed by an independent contractor doing business with a Covered Employer, who would directly expend any of his or her time on the activities funded by the contract or the activities for which the Beneficiary received the Assistance, except for persons in those positions listed in Section 2.121.040(j) of this ordinance..

(f) "Living Wage" has the meaning stated in Section 2.121.030.

(g) "Person" means one or more of the following or their agents, employees, servants, representatives, and legal representatives: individuals, corporations, partnerships, joint ventures, associations, labor organizations, educational institutions, mutual companies, joint-stock companies, trusts, unincorporated organizations, trustees, trustees in bankruptcy, receivers, fiduciaries, and all other entities recognized at law by the Commonwealth of Massachusetts.

(h) "Service Contract" means a contract let to a contractor by the City of Cambridge for the furnishing of services, to or for the City, except contracts where services are incidental to the delivery of products, equipment or commodities. A contract for the purchase or lease of goods, products, equipment, supplies or other property is not a "service contract" for the purposes of this definition.

(i) "Service Subcontract" means a subcontract primarily for the furnishing of services, to or for a recipient of Assistance, except where services are incidental to the delivery of products, equipment or commodities. A contract for the purchase or lease of goods, products, equipment, supplies or other property is not a "service subcontract" for the purposes of this definition.

2.121.030 Living Wage.

(a) Applicability. Covered Employers shall pay no less than the Living Wage to their employees.

(b) Amount of wage. The Living Wage shall be calculated on an hourly basis and shall be no less than \$10.00, subject to adjustment as provided herein. The Living Wage shall be upwardly adjusted each year no later than March first in proportion to the increase at the immediately preceding December 31 over the year earlier level of the Annual Average Consumer Price Index for All Urban Consumers (CPI -U) Boston-Lawrence-Salem, MA - NH, as published by the Bureau of Labor Statistics, United States Department of Labor applied to \$10.00.

(c) No reduction in collective bargaining wage rates. Nothing in this Chapter shall be read to require or authorize any beneficiary to reduce wages set by a collective bargaining agreement.

(d) Cuts in non-wage benefits prohibited. No Beneficiary will fund wage increases required by this Chapter, or otherwise respond to the provisions of this Chapter, by reducing the health, insurance, pension, vacation, or other non-wage benefits of any of its employees.

2.121.040 Waivers and Exceptions.

(a) Waivers. A Covered Employer may request that the City Manager grant a partial or whole waiver to the requirements of this Chapter.

(b) General Waivers. Waivers may be granted where application of this Chapter to a particular form of Assistance is found by the City Solicitor to violate a specific state or federal statutory, regulatory or constitutional provision or provisions, and the City Manager approves the waiver on that basis.

Signature of Bidder_____

(c) Hardship Waivers for certain not-for-profit employers. An employer, who has a contract with the City of Cambridge which is not subject to the provisions of G.L. c. 30B, may apply to the City Manager for a specific waiver where payment of the Living Wage by a not-for-profit Covered Employer would cause a substantial hardship to the Covered Employer.

(d) Chapter 30B contract waivers. Prior to issuing an invitation for bids for a procurement contract subject to the provisions of G.L. c. 30B, any Applicable Department may apply to the City Manager for a waiver of the application of the Living Wage to the contract where payment of the Living Wage by a Covered Employer would make it inordinately expensive for the City to contract for the services or would result in a significant loss of services, because the contracted work cannot be segregated from the other work of the Covered Employer.

(e) General Waiver Request Contents. All General Waiver requests shall include the following:

- (1) The nature of the Assistance to which this Chapter applies;
- (2) The specific or official name of the Assistance and Assistance program, the statutory or regulatory authority for the granting of the Assistance, and a copy of that authority;
- (3) The conflicting statutory, regulatory, or constitutional provision or provisions that makes compliance with this Chapter unlawful, and a copy of each such provision; and
- (4) A factual explication and legal analysis of how compliance with this Chapter would violate the cited provision or provisions, and the legal consequences that would attach if the violation were to occur.

(f) Hardship Waiver Request Contents. All Hardship Waiver requests shall include the following:

- (1) The nature of the Assistance to which this Chapter applies;
- (2) A detailed explanation of why payment of the Living Wage would cause a substantial hardship to the Covered Employer; and
- (3) A statement of proposed wages below the Living Wage.

(g) Chapter 30B Contract Waiver Request Contents. A Chapter 30B contract waiver request shall include the following:

- (1) The nature of the Assistance to which this Chapter applies;
- (2) A detailed explanation of why the contracted work cannot be segregated from the other work of the bidding Covered Employers thereby making the cost of the contract with the payment of the Living Wage inordinately expensive or would result in a significant loss of services;

(h) Community Advisory Board review and recommendation regarding waiver requests. The Community Advisory Board, as described in Section 2.121.070 of this ordinance, shall consider waiver requests along with their supporting documentation and analysis, and may hold a public hearing to consider the views of the public before making a recommendation to the City Manager regarding the waiver request. For a hardship waiver, the Community Advisory Board shall offer an opportunity to be heard to employees of the Covered Employer. After reviewing the recommendation of the Community Advisory Board, the City Manager may approve and grant or deny all or part of a request. The City Manager may in his or her discretion grant a temporary hardship waiver pending the hearing before the Community Advisory Board. For Chapter 30B contract waivers, the Community Advisory Board shall make its recommendation to the City Manager no more than thirty days after it is notified of the request for a Chapter 30B contract waiver.

(i) Terms of exceptions. If an employer is subject to this Chapter as a result of its receipt of more than one kind of Assistance covered by this Chapter, and if the City Manager grants a waiver with respect to one form of Assistance, the City Manager need not find that this Chapter is inapplicable to the employer with respect to another form of Assistance received by the employer.

(j) Exceptions. The following positions will be excepted from the requirement of the payment of the Living Wage upon certification in an affidavit in a form approved by the Applicable Department and signed by a principal officer of the Covered Employer that the positions are as follows:

(1) youth hired pursuant to a city, state, or federally funded program which employs youth as defined by city, state, or federal guidelines, during the summer, or as part of a school to work program, or in other related seasonal or part-time program;

(2) work-study or cooperative educational programs;

(3) trainees who are given a stipend or wage as part of a job training program that provides the trainees with additional services, which may include, but are not limited to, room and board, case management, or job readiness services.

(4) persons working in a recognized supported employment program that provides workers with additional services, which may include, but are not limited to, room and board, case management, counseling, or job coaching;

(5) positions where housing is provided by the employer;

(6) employees who are exempt from federal or state minimum wage requirements; and

(7) individuals employed by the City of Cambridge where the employment of such individuals is intended primarily to provide a benefit or subsidy to such individuals, although the City is compensating them for work performed.

2.121.050 Notification Requirements.

All Applicable Departments shall provide in writing an explanation of the requirements of this ordinance in all requests for bids for service contracts and to all persons applying for Assistance as defined by this ordinance. All persons who have signed a service contract with the City of Cambridge or a contract for Assistance shall forward a copy of such requirements to any person submitting a bid for a subcontract on the Assistance contract.

2.121.060 Duties of Covered Employers.

(a) Notification Requirements. Covered employers shall provide each Covered employee with a fact sheet about this ordinance and shall post a notice about the ordinance in a conspicuous location visible to all employees. The fact sheet and poster shall be provided to the Covered Employer by the Applicable Department and shall include:

(1) notice of the Living Wage amount;

(2) a summary of the provisions of this ordinance;

(3) a description of the enforcement provisions of the ordinance;

(4) the name, address, and phone number of a person designated by the Applicable Department to whom complaints of noncompliance with this ordinance should be directed.

(b) Contract for Assistance. At the time of signing a contract for assistance with the City of Cambridge or with a Beneficiary, the contract must include the following:

(1) the name of the program or project under which the contract or subcontract is being awarded;

(2) a local contact name, address, and phone number for the Beneficiary;

(3) a written commitment by the Beneficiary to pay all Covered Employees not less than the Living Wage as subject to adjustment under this ordinance and to comply with the provisions of this ordinance;

(4) a list of Covered Employees under the contract with the employees' job titles;

(5) a list of all subcontracts either awarded or that will be awarded to Beneficiaries with funds from the Assistance. Upon signing any subcontracts, the Covered Employer shall forward a copy of the subcontract to the Applicable Department.

(c) Maintenance of payroll records. Each Covered Employer shall maintain payrolls for all Covered Employees and basic records relating thereto and shall preserve them for a period of three years. The records shall contain the name and address of each employee, the job title and classification, the number of hours worked each day, the gross wages, deductions made, actual wages paid, and copies of social security wage and withholding reports, and evidence of payment thereof and such other data as may be required by the Applicable Department from time to time.

(d) Applicable Department duties. The Applicable Department shall cause investigations to be made as may be necessary to determine whether there has been compliance with this Ordinance. The Applicable Department shall report the findings of all such investigations to the Community Advisory Board.

(e) Covered Employer to cooperate. The Covered Employer shall submit payroll records on request to the Applicable Department. The Covered Employer shall permit City representatives to observe work being performed upon the work site, to interview employees and to examine the books and records relating to the payrolls being investigated to determine payment of wages.

(f) City Assistance Reports. Each Applicable Department shall file a City Assistance Report with the City Manager and the Community Advisory Board by July 31 of each year. The report shall include, for each Assistance package or contract approved during the preceding fiscal year:

- (1) the name of the Applicable Department (awarding agency), the name of the specific program under which the Assistance was awarded, and the origin of funds for Assistance;
- (2) a description of the purpose or project for which the Assistance was awarded;
- (3) the name, address, and phone number of a local contact person for the Covered Employer;
- (4) the total cost to the City of Assistance provided to each Beneficiary, including both face-value of Assistance, as well as revenue not collected as a result of the Assistance.

2.121.070 Community Advisory Board.

(a) Purpose. The purpose of the Community Advisory Board shall be to review the effectiveness of this Ordinance at creating and retaining Living Wage jobs, to make recommendations to the City Manager regarding the granting of Waivers to Covered Employers, to review the implementation and enforcement of this ordinance, and to make recommendations from time to time in connection therewith.

(b) Composition. The Community Advisory Board shall be composed of nine members and shall include representatives of labor unions, community organizations and the business community. All members will be appointed by the City Manager. Members of the Board shall serve a three-year term. Whenever a vacancy shall occur the City Manager shall appoint a replacement within thirty days of said vacancy.

(c) Meetings. The Community Advisory Board shall meet quarterly and in special session as required. All meetings of the Board shall be open to the public and will allow for public testimony on the uses of the City Assistance generally, and on specific instances of Assistance or proposed Assistance as received or sought by individual enterprises.

(d) Conflict of Interest. No member of the Community Advisory Board shall participate in any proceeding concerning a Beneficiary, a Covered Employer or a Covered Employee, or applicant for waiver or exemption, if the member or any member of his or her immediate family has a direct or indirect financial interest in the outcome of said proceeding.

2.121.080 Enforcement.

(a) Enforcement powers. In order to enforce this Chapter, the Applicable Department may, with the approval and assistance of the City Solicitor, issue subpoenas, compel the attendance and testimony of witnesses and production of books, papers, records, and documents relating to payroll records necessary for hearing, investigations, and proceedings. In case of failure to comply with a subpoena, the City may apply to a court of appropriate jurisdiction for an order requiring the attendance and testimony of witnesses and the productions of books, papers, records, and documents. Said court, in the case of a refusal to comply with any such subpoena, after notice to the person subpoenaed, and upon finding that the attendance or testimony of such witnesses or the production of such books, papers, records, and documents, as the case may be, is relevant or necessary for such hearings, investigation, or proceedings, may issue an order requiring the attendance or testimony of such witnesses or the production of such documents and any violation of the court's order may be punishable by the court as contempt thereof.

(b) Complaint procedures. An employee who believes that he or she is a Covered Employee or an applicant for a position to be filled by a Covered Employee who believes that his or her employer is not complying with requirements of this Chapter applicable to the employer may file a complaint with the Applicable Department or with the Community Advisory Board. Complaints of alleged violations may also be filed by concerned citizens or by the City Council. Complaints of alleged violations may be made at any time, but in no event more than three years after the last date of alleged violation, and shall be investigated promptly by the Applicable Department. Statements written or oral, made by an employee, shall be treated as confidential and shall not be disclosed to the Covered Employer without the consent of the employee.

(c) Investigations and hearings. The Applicable Department shall investigate the complaint, and may, in conjunction with the City Solicitor, and in accordance with the powers herein granted, require the production by the employer of such evidence as required to determine compliance. Prior to ordering any penalty the applicable Department shall give notice to the employer and conduct a hearing. If at any time during these proceedings, the employer voluntarily makes restitution of the wages not paid to the employee making the complaint and to any similarly situated employees, by paying all back wages owed plus interest at the average prior year Massachusetts passbook savings bank rate, or otherwise remedies the violation alleged if the violation involves matters other than wages, then the Applicable Department shall thereafter dismiss the complaint against the employer.

(d) Remedies. In the event that the Applicable Department, after notice and hearing, determines that any Covered Employer has failed to pay the Living Wage rate or has otherwise violated the provisions of this Chapter, the Applicable Department may order any or all of the following penalties and relief:

(1) Fines up to the amount of \$300 for each Covered Employee for each day that the Covered Employer is in violation of this Ordinance, except if the violation was not knowing and willful, then the total fine shall not exceed the amount of back wages plus interest owed;

(2) Suspension of ongoing contract and subcontract payments;

(3) Ineligibility for future City Assistance for up to three years beginning when all penalties and restitution have been paid in full. In addition, all Covered Employers having any principal officers who were principal officers of a barred beneficiary shall be ineligible under this section; and

(4) Any other action deemed appropriate and within the discretion and authority of the city.

Remedies in this section shall also apply to the party or parties aiding and abetting in any violation of this chapter.

(e) Private right of action. Any Covered Employee, or any person who was formerly employed by a Beneficiary, may bring an action to enforce the provisions of this Chapter to recover back pay and benefits, attorneys fees and costs, by filing suit against a Beneficiary in any court of competent jurisdiction.

(f) Remedies herein non-exclusive. No remedy set forth in this Chapter is intended to be exclusive or a prerequisite for asserting a claim for relief to enforce the right granted under this Chapter in a court of law. This Chapter shall not be construed to limit an employee's right to bring a common law cause of action for wrongful termination.

(g) Retaliation and discrimination barred. A Covered Employer shall not discharge, reduce the compensation or otherwise retaliate against any employee for making a complaint to the City, otherwise asserting his or her rights under this Chapter, participating in any of its proceedings or using any civil remedies to enforce his or her rights under the Chapter. The City shall investigate allegations of retaliation or discrimination and shall, if found to be true, after notice and a hearing, order appropriate relief as set out in paragraphs (c) and (d) herein

2.121.090 Severability.

In the event any provision of this ordinance shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provisions hereof.

2.121.100 Effective Date.

Signature of Bidder_____

This law shall be effective sixty (60) after final passage. The Living Wage Ordinance (2.121) provides, at 1.121.030(b) that the wage shall be upwardly adjusted each year no later than March 1st in proportion to the increase in the Annual Average Consumer Price Index for the prior calendar year for All Urban Consumers (CPI-U) in the Boston area, as published by the federal Bureau of Labor Statistics.

For calendar year 1999, the CPI-U increased by 2.5%. Therefore the new living wage, as of March 1, 2000 is \$10.25.

For calendar year 2000, the CPI-U increased by 4.3%. Therefore the new living wage, as of March 1, 2001 is \$ 10.68.

For calendar year 2001, the CPI-U increased by 4.3%. Therefore the new living wage, as of March 1, 2002 is \$11.11.

For calendar year 2002, the CPI-U increased by 2.6% . Therefore the new living wage, as of March 1, 2003 is \$11.37.

The City Council has voted to amend the section of the Living Wage Ordinance (1.121.030 (b) that provides the method for calculating cost of living increases each year. As a result of this change, the living wage as of March 30, 2003 is \$11.44.

For calendar year 2003, the CPI-U increased by 3.76%. Therefore the new living wage, as of March 1, 2004 is \$11.87.

For calendar year 2004, the CPI-U increased by 2.7%. Therefore the new living wage, as of March 1, 2005 is \$12.19.

For calendar year 2005, the CPI-U increased by 3.3%. Therefore the new living wage, as of March 1, 2006 is \$12.59.

For calendar year 2006 the CPI-U increased by 3.1 %. Therefore the new living wage, as of March 1, 2007 is \$12.98.

For calendar year 2007 the CPI-U increased by 1.9 %. Therefore the new living wage, as of March 1, 2008 is \$13.23.

For calendar year 2008 the CPI-U increased by 3.5 %. Therefore the new living wage, as of March 1, 2009 is \$13.69.

For calendar year 2009 the CPI-U decreased by .67 %. Therefore the new living wage, as of March 1, 2010 will remain at \$13.69.

For calendar year 2010 the CPI-U increased by 1.57%. Therefore the new living wage, as of March 1, 2011 is \$13.90.

For calendar year 2011 the CPI-U increased by 2.71%. Therefore the new living wage, as of March 1, 2012 is \$14.28.

For calendar year 2012 the CPI-U increased by 1.58%. Therefore the new living wage, as of March 1, 2013 is \$14.51.

For calendar year 2013 the CPI-U increased by 1.37%. Therefore the new living wage, as of March 1, 2014 is \$14.71.

For calendar year 2014 the CPI-U increased by 1.61% Therefore the new living wage, as of March 1, 2015 is \$14.95.

File No. 8425 Microwave Backhaul Installation- Thursday, February 28th, 2019 @ 11:00 AM

For calendar year 2015 the CPI-U increased by .06%, Therefore the living wage, as of March 1, 2016 is \$15.04.

For calendar year 2016 the CPI-U increased by 1.47% Therefore the new living wage, as of March 1, 2017 is \$15.26.

For calendar year 2018 the CPI-U increased by 2.51% Therefore the new living wage, as of March 1, 2018 is \$15.64.

Signature of Bidder_____

**City of Cambridge
Articles of Agreement
SAMPLE SAMPLE SAMPLE SAMPLE**

**Commodity:
File Number:**

This agreement is made and entered into this _____, by and between the **City Of Cambridge** ("the CITY"), a municipal corporation organized and existing under the laws of the Commonwealth of Massachusetts, and _____, existing under the laws of the State of _____ ("the Contractor").

**Address:
Telephone, Fax, E-mail:**

Article I. Definition. "This Contract" as used herein shall mean these Articles of Agreement and "the bid documents," which include, but are not limited to, the instructions to bidders, the Contractor's bid or proposal, the specifications, the general conditions, the requirements, the applicable addenda, and all documents and forms submitted with the Contractor's bid or proposal that were accepted by the City.

Article II. Duration. The Contractor shall commence the performance of this contract for the period beginning on _____ and ending on _____.

Article III. Terms. The Contractor agrees to provide the services all in accordance with the bid documents of (bid opening date) or (proposal if appropriate).

Contract Value:

Article IV. Payment. The City agrees to pay to Contractor the sum set forth in the Contractor's bid or proposal. **Contractor shall invoice department to which it provided the service, not the Purchasing Department.**

Article V. Termination. The following shall constitute events of default under this Contract requiring immediate termination: a) any material misrepresentation 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 the time specified in this Contract 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 City, (iv) failure to promptly re-perform within reasonable time the services that were rejected by the City 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, including, but not limited to, the provision of insurance and nondiscrimination, and (vii) any other acts specifically and expressly stated in this Contract as constituting a basis for termination of this Contract.

Except as otherwise provided in the Articles of Agreement, the City may terminate the contract upon seven days notice.

Article VI. Damages. From any sums due to the Contractor for services, the City may keep for its own the whole or any part of the amount for expenses, losses and damages as directed by the Purchasing Agent, incurred by the City as a consequence of procuring services as a result of any failure, omission or mistake of the Contractor in providing services as provided in this Contract.

Article VII. Conflict. In the event there is a conflict between these Articles and the bid documents, the bid documents shall supersede these articles.

Signature of Bidder _____

SAMPLE

Article VIII. Governing laws and ordinances. This Contract is made subject to all the laws of the Commonwealth and the Ordinances of the City and if any such clause thereof does not conform to such laws or ordinances, such clause shall be void (the remainder of the Contract shall not be affected) and the laws or ordinances shall be operative in lieu thereof.

Article IX. Performance Security. Upon execution of this Contract by the Contractor, the Contractor shall furnish to the City security for the faithful performance of this Contract in the amount of 0% of the value of the bid in the form of a performance bond issued by a surety satisfactory to the city or in the form of a certified check.

Article X. 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 city may cancel, terminate or suspend the contract in whole or in part for any violation of this article.

Article XI. Assignability. the Contractor shall not assign, sell, subcontract or transfer any interest in this contract without prior written consent of the city.

In witness whereof the parties have hereto and to three other identical instruments set their hands the day and year first above written.

Approved as to Form:

The Contractor:

Nancy E. Glowa
City Solicitor

Signature and Title

City Manager

Elizabeth Unger
Purchasing Agent

Signature of Bidder_____



**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**

CHARLES D. BAKER
Governor

ROSALIN ACOSTA
Secretary

KARYN E. POLITO
Lt. Governor

WILLIAM D MCKINNEY
Director

Awarding Authority: City of Cambridge

Contract Number:

City/Town: CAMBRIDGE

Description of Work: Microwave Backhaul Installation

Job Location: Various Locations

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.
- An Awarding Authority 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. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- All apprentices working on the project are required to be registered with the Massachusetts Department of Labor Standards, Division of Apprentice Standards (DLS/DAS). Apprentice must keep his/her apprentice identification card on his/her person during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DLS/DAS regardless of whether or not they are registered with any other federal, state, local, or private agency must be paid the journeyworker's rate for the trade.**
- 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. For multi-year CM AT RISK projects, awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. 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 and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee’s name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. 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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2018	\$34.35	\$11.91	\$12.70	\$0.00	\$58.96
	06/01/2019	\$35.35	\$11.91	\$12.70	\$0.00	\$59.96
	08/01/2019	\$35.35	\$12.41	\$12.70	\$0.00	\$60.46
	12/01/2019	\$35.35	\$12.41	\$13.72	\$0.00	\$61.48
	06/01/2020	\$36.25	\$12.41	\$13.72	\$0.00	\$62.38
	08/01/2020	\$36.25	\$12.91	\$13.72	\$0.00	\$62.88
	12/01/2020	\$36.25	\$12.91	\$14.82	\$0.00	\$63.98
	06/01/2021	\$37.05	\$12.91	\$14.82	\$0.00	\$64.78
	08/01/2021	\$37.05	\$13.41	\$14.82	\$0.00	\$65.28
	12/01/2021	\$37.05	\$13.41	\$16.01	\$0.00	\$66.47
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2018	\$34.42	\$11.91	\$12.70	\$0.00	\$59.03
	06/01/2019	\$35.42	\$11.91	\$12.70	\$0.00	\$60.03
	08/01/2019	\$35.42	\$12.41	\$12.70	\$0.00	\$60.53
	12/01/2019	\$35.42	\$12.41	\$13.72	\$0.00	\$61.55
	06/01/2020	\$36.32	\$12.41	\$13.72	\$0.00	\$62.45
	08/01/2020	\$36.32	\$12.91	\$13.72	\$0.00	\$62.95
	12/01/2020	\$36.32	\$12.91	\$14.82	\$0.00	\$64.05
	06/01/2021	\$37.12	\$12.91	\$14.82	\$0.00	\$64.85
	08/01/2021	\$37.12	\$13.41	\$14.82	\$0.00	\$65.35
	12/01/2021	\$37.12	\$13.41	\$16.01	\$0.00	\$66.54
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2018	\$34.54	\$11.91	\$12.70	\$0.00	\$59.15
	06/01/2019	\$35.54	\$11.91	\$12.70	\$0.00	\$60.15
	08/01/2019	\$35.54	\$12.41	\$12.70	\$0.00	\$60.65
	12/01/2019	\$35.54	\$12.41	\$13.72	\$0.00	\$61.67
	06/01/2020	\$36.44	\$12.41	\$13.72	\$0.00	\$62.57
	08/01/2020	\$36.44	\$12.91	\$13.72	\$0.00	\$63.07
	12/01/2020	\$36.44	\$12.91	\$14.82	\$0.00	\$64.17
	06/01/2021	\$37.24	\$12.91	\$14.82	\$0.00	\$64.97
	08/01/2021	\$37.24	\$13.41	\$14.82	\$0.00	\$65.47
	12/01/2021	\$37.24	\$13.41	\$16.01	\$0.00	\$66.66
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$97.80	\$9.90	\$21.15	\$0.00	\$128.85
	08/01/2019	\$102.78	\$9.90	\$21.15	\$0.00	\$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2018	\$39.40	\$7.85	\$15.35	\$0.00	\$62.60
	06/01/2019	\$40.40	\$7.85	\$15.35	\$0.00	\$63.60
	12/01/2019	\$41.40	\$7.85	\$15.35	\$0.00	\$64.60
	06/01/2020	\$42.39	\$7.85	\$15.35	\$0.00	\$65.59
	12/01/2020	\$43.37	\$7.85	\$15.35	\$0.00	\$66.57
	06/01/2021	\$44.39	\$7.85	\$15.35	\$0.00	\$67.59
	12/01/2021	\$45.40	\$7.85	\$15.35	\$0.00	\$68.60
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2018	\$37.90	\$11.50	\$7.10	\$0.00	\$56.50
	06/01/2019	\$38.90	\$11.50	\$7.10	\$0.00	\$57.50
	12/01/2019	\$39.90	\$11.50	\$7.10	\$0.00	\$58.50
	06/01/2020	\$40.90	\$11.50	\$7.10	\$0.00	\$59.50
	12/01/2020	\$41.90	\$11.50	\$7.10	\$0.00	\$60.50
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.58	\$11.50	\$15.60	\$0.00	\$74.68
	06/01/2019	\$48.68	\$11.50	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.83	\$11.50	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.93	\$11.50	\$15.60	\$0.00	\$78.03
	12/01/2020	\$52.08	\$11.50	\$15.60	\$0.00	\$79.18
	06/01/2021	\$53.18	\$11.50	\$15.60	\$0.00	\$80.28
	12/01/2021	\$54.33	\$11.50	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.58	\$11.50	\$15.60	\$0.00	\$74.68
	06/01/2019	\$48.68	\$11.50	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.83	\$11.50	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.93	\$11.50	\$15.60	\$0.00	\$78.03
	12/01/2020	\$52.08	\$11.50	\$15.60	\$0.00	\$79.18
	06/01/2021	\$53.18	\$11.50	\$15.60	\$0.00	\$80.28
	12/01/2021	\$54.33	\$11.50	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	12/01/2018	\$39.40	\$7.85	\$15.35	\$0.00	\$62.60
	06/01/2019	\$40.40	\$7.85	\$15.35	\$0.00	\$63.60
	12/01/2019	\$41.40	\$7.85	\$15.35	\$0.00	\$64.60
	06/01/2020	\$42.39	\$7.85	\$15.35	\$0.00	\$65.59
	12/01/2020	\$43.37	\$7.85	\$15.35	\$0.00	\$66.57
	06/01/2021	\$44.39	\$7.85	\$15.35	\$0.00	\$67.59
	12/01/2021	\$45.40	\$7.85	\$15.35	\$0.00	\$68.60
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BOILER MAKER	01/01/2019	\$44.71	\$7.07	\$17.72	\$0.00	\$69.50
<i>BOILERMAKERS LOCAL 29</i>	01/01/2020	\$46.10	\$7.07	\$17.98	\$0.00	\$71.15

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.06	\$7.07	\$11.52	\$0.00	\$47.65
2	65	\$29.06	\$7.07	\$11.52	\$0.00	\$47.65
3	70	\$31.30	\$7.07	\$12.40	\$0.00	\$50.77
4	75	\$33.53	\$7.07	\$13.30	\$0.00	\$53.90
5	80	\$35.77	\$7.07	\$14.18	\$0.00	\$57.02
6	85	\$38.00	\$7.07	\$15.07	\$0.00	\$60.14
7	90	\$40.24	\$7.07	\$15.95	\$0.00	\$63.26
8	95	\$42.47	\$7.07	\$16.84	\$0.00	\$66.38

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
2	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
3	70	\$32.27	\$7.07	\$12.59	\$0.00	\$51.93
4	75	\$34.58	\$7.07	\$13.49	\$0.00	\$55.14
5	80	\$36.88	\$7.07	\$14.38	\$0.00	\$58.33
6	85	\$39.19	\$7.07	\$15.29	\$0.00	\$61.55
7	90	\$41.49	\$7.07	\$16.18	\$0.00	\$64.74
8	95	\$43.80	\$7.07	\$17.09	\$0.00	\$67.96

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	02/01/2019	\$53.55	\$10.75	\$20.66	\$0.00	\$84.96
<i>BRICKLAYERS LOCAL 3 (BOSTON)</i>	08/01/2019	\$54.90	\$10.75	\$20.80	\$0.00	\$86.45
	02/01/2020	\$55.54	\$10.75	\$20.80	\$0.00	\$87.09
	08/01/2020	\$56.89	\$10.75	\$20.95	\$0.00	\$88.59
	02/01/2021	\$57.53	\$10.75	\$20.95	\$0.00	\$89.23
	08/01/2021	\$58.93	\$10.75	\$21.11	\$0.00	\$90.79
	02/01/2022	\$59.52	\$10.75	\$21.11	\$0.00	\$91.38

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.78	\$10.75	\$20.66	\$0.00	\$58.19
2	60	\$32.13	\$10.75	\$20.66	\$0.00	\$63.54
3	70	\$37.49	\$10.75	\$20.66	\$0.00	\$68.90
4	80	\$42.84	\$10.75	\$20.66	\$0.00	\$74.25
5	90	\$48.20	\$10.75	\$20.66	\$0.00	\$79.61

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.45	\$10.75	\$20.80	\$0.00	\$59.00
2	60	\$32.94	\$10.75	\$20.80	\$0.00	\$64.49
3	70	\$38.43	\$10.75	\$20.80	\$0.00	\$69.98
4	80	\$43.92	\$10.75	\$20.80	\$0.00	\$75.47
5	90	\$49.41	\$10.75	\$20.80	\$0.00	\$80.96

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
<i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN	12/01/2018	\$39.75	\$7.85	\$15.55	\$0.00	\$63.15
<i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2019	\$40.75	\$7.85	\$15.55	\$0.00	\$64.15
	12/01/2019	\$41.75	\$7.85	\$15.55	\$0.00	\$65.15
	06/01/2020	\$42.74	\$7.85	\$15.55	\$0.00	\$66.14
	12/01/2020	\$43.72	\$7.85	\$15.55	\$0.00	\$67.12
	06/01/2021	\$44.74	\$7.85	\$15.55	\$0.00	\$68.14
	12/01/2021	\$45.75	\$7.85	\$15.55	\$0.00	\$69.15

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER	12/01/2018	\$38.60	\$7.85	\$15.55	\$0.00	\$62.00
<i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2019	\$39.60	\$7.85	\$15.55	\$0.00	\$63.00
	12/01/2019	\$40.60	\$7.85	\$15.55	\$0.00	\$64.00
	06/01/2020	\$41.59	\$7.85	\$15.55	\$0.00	\$64.99
	12/01/2020	\$42.57	\$7.85	\$15.55	\$0.00	\$65.97
	06/01/2021	\$43.59	\$7.85	\$15.55	\$0.00	\$66.99
	12/01/2021	\$44.60	\$7.85	\$15.55	\$0.00	\$68.00

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2018	\$38.60	\$7.85	\$15.55	\$0.00	\$62.00
	06/01/2019	\$39.60	\$7.85	\$15.55	\$0.00	\$63.00
	12/01/2019	\$40.60	\$7.85	\$15.55	\$0.00	\$64.00
	06/01/2020	\$41.59	\$7.85	\$15.55	\$0.00	\$64.99
	12/01/2020	\$42.57	\$7.85	\$15.55	\$0.00	\$65.97
	06/01/2021	\$43.59	\$7.85	\$15.55	\$0.00	\$66.99
	12/01/2021	\$44.60	\$7.85	\$15.55	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 1 (Metro Boston)</i>	09/01/2018	\$48.69	\$9.90	\$17.50	\$0.00	\$76.09
	03/01/2019	\$49.84	\$9.90	\$17.50	\$0.00	\$77.24

Apprentice - CARPENTER - Zone 1 Metro Boston

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.35	\$9.90	\$1.73	\$0.00	\$35.98
2	60	\$29.21	\$9.90	\$1.73	\$0.00	\$40.84
3	70	\$34.08	\$9.90	\$12.31	\$0.00	\$56.29
4	75	\$36.52	\$9.90	\$12.31	\$0.00	\$58.73
5	80	\$38.95	\$9.90	\$14.04	\$0.00	\$62.89
6	80	\$38.95	\$9.90	\$14.04	\$0.00	\$62.89
7	90	\$43.82	\$9.90	\$15.77	\$0.00	\$69.49
8	90	\$43.82	\$9.90	\$15.77	\$0.00	\$69.49

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.92	\$9.90	\$1.73	\$0.00	\$36.55
2	60	\$29.90	\$9.90	\$1.73	\$0.00	\$41.53
3	70	\$34.89	\$9.90	\$12.31	\$0.00	\$57.10
4	75	\$37.38	\$9.90	\$12.31	\$0.00	\$59.59
5	80	\$39.87	\$9.90	\$14.04	\$0.00	\$63.81
6	80	\$39.87	\$9.90	\$14.04	\$0.00	\$63.81
7	90	\$44.86	\$9.90	\$15.77	\$0.00	\$70.53
8	90	\$44.86	\$9.90	\$15.77	\$0.00	\$70.53

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$33.54/ 3&4 \$40.08/ 5&6 \$58.02/ 7&8 \$64.62

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CARPENTER WOOD FRAME	10/01/2018	\$32.01	\$7.07	\$7.86	\$0.00	\$46.94
<i>CARPENTERS -ZONE 1 (Wood Frame)</i>	04/01/2019	\$32.49	\$7.07	\$7.86	\$0.00	\$47.42
	10/01/2019	\$32.97	\$7.07	\$7.86	\$0.00	\$47.90

All Aspects of New Wood Frame Work - As of 9/1/09 Carpentry work on wood-frame WEATHERIZATION projects shall be paid the WOOD FRAME CARPENTER rate.

Apprentice - CARPENTER (Wood Frame) - Zone 1

Effective Date - 10/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.21	\$7.07	\$0.00	\$0.00	\$26.28
2	60	\$19.21	\$7.07	\$0.00	\$0.00	\$26.28
3	65	\$20.81	\$7.07	\$7.86	\$0.00	\$35.74
4	70	\$22.41	\$7.07	\$7.86	\$0.00	\$37.34
5	75	\$24.01	\$7.07	\$7.86	\$0.00	\$38.94
6	80	\$25.61	\$7.07	\$7.86	\$0.00	\$40.54
7	85	\$27.21	\$7.07	\$7.86	\$0.00	\$42.14
8	90	\$28.81	\$7.07	\$7.86	\$0.00	\$43.74

Effective Date - 04/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.49	\$7.07	\$0.00	\$0.00	\$26.56
2	60	\$19.49	\$7.07	\$0.00	\$0.00	\$26.56
3	65	\$21.12	\$7.07	\$7.86	\$0.00	\$36.05
4	70	\$22.74	\$7.07	\$7.86	\$0.00	\$37.67
5	75	\$24.37	\$7.07	\$7.86	\$0.00	\$39.30
6	80	\$25.99	\$7.07	\$7.86	\$0.00	\$40.92
7	85	\$27.62	\$7.07	\$7.86	\$0.00	\$42.55
8	90	\$29.24	\$7.07	\$7.86	\$0.00	\$44.17

Notes:
 % Indentured After 10/1/17; 45/45/55/55/70/70/80/80
 Step 1&2 \$21.47/ 3&4 \$29.43/ 5&6 \$37.34/ 7&8 \$40.54

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	01/01/2019	\$47.50	\$12.50	\$22.41	\$0.30	\$82.71
<i>BRICKLAYERS LOCAL 3 (BOSTON)</i>	07/01/2019	\$48.24	\$12.50	\$22.41	\$0.30	\$83.45
	01/01/2020	\$49.64	\$12.50	\$22.41	\$0.30	\$84.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (Boston)

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.75	\$12.50	\$15.41	\$0.00	\$51.66
2	60	\$28.50	\$12.50	\$17.41	\$0.30	\$58.71
3	65	\$30.88	\$12.50	\$18.41	\$0.30	\$62.09
4	70	\$33.25	\$12.50	\$19.41	\$0.30	\$65.46
5	75	\$35.63	\$12.50	\$20.41	\$0.30	\$68.84
6	80	\$38.00	\$12.50	\$21.41	\$0.30	\$72.21
7	90	\$42.75	\$12.50	\$22.41	\$0.30	\$77.96

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.12	\$12.50	\$15.41	\$0.00	\$52.03
2	60	\$28.94	\$12.50	\$17.41	\$0.30	\$59.15
3	65	\$31.36	\$12.50	\$18.41	\$0.30	\$62.57
4	70	\$33.77	\$12.50	\$19.41	\$0.30	\$65.98
5	75	\$36.18	\$12.50	\$20.41	\$0.30	\$69.39
6	80	\$38.59	\$12.50	\$21.41	\$0.30	\$72.80
7	90	\$43.42	\$12.50	\$22.41	\$0.30	\$78.63

Notes:

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

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
LABORERS - ZONE 1	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	12/01/2018	\$48.58	\$11.50	\$15.60	\$0.00	\$75.68
OPERATING ENGINEERS LOCAL 4	06/01/2019	\$49.68	\$11.50	\$15.60	\$0.00	\$76.78
	12/01/2019	\$50.83	\$11.50	\$15.60	\$0.00	\$77.93
	06/01/2020	\$51.93	\$11.50	\$15.60	\$0.00	\$79.03
	12/01/2020	\$53.08	\$11.50	\$15.60	\$0.00	\$80.18
	06/01/2021	\$54.18	\$11.50	\$15.60	\$0.00	\$81.28
	12/01/2021	\$55.33	\$11.50	\$15.60	\$0.00	\$82.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$32.03	\$11.50	\$15.60	\$0.00	\$59.13
	06/01/2019	\$32.78	\$11.50	\$15.60	\$0.00	\$59.88
	12/01/2019	\$33.57	\$11.50	\$15.60	\$0.00	\$60.67
	06/01/2020	\$34.32	\$11.50	\$15.60	\$0.00	\$61.42
	12/01/2020	\$35.10	\$11.50	\$15.60	\$0.00	\$62.20
	06/01/2021	\$35.85	\$11.50	\$15.60	\$0.00	\$62.95
	12/01/2021	\$36.64	\$11.50	\$15.60	\$0.00	\$63.74

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 1</i>	01/01/2019	\$50.36	\$8.15	\$20.85	\$0.00	\$79.36
	07/01/2019	\$51.46	\$8.15	\$20.85	\$0.00	\$80.46
	01/01/2020	\$52.56	\$8.15	\$20.85	\$0.00	\$81.56
	07/01/2020	\$53.66	\$8.15	\$20.85	\$0.00	\$82.66
	01/01/2021	\$54.76	\$8.15	\$20.85	\$0.00	\$83.76

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.18	\$8.15	\$0.00	\$0.00	\$33.33
2	55	\$27.70	\$8.15	\$5.64	\$0.00	\$41.49
3	60	\$30.22	\$8.15	\$6.15	\$0.00	\$44.52
4	65	\$32.73	\$8.15	\$6.66	\$0.00	\$47.54
5	70	\$35.25	\$8.15	\$17.78	\$0.00	\$61.18
6	75	\$37.77	\$8.15	\$18.29	\$0.00	\$64.21
7	80	\$40.29	\$8.15	\$18.80	\$0.00	\$67.24
8	90	\$45.32	\$8.15	\$19.83	\$0.00	\$73.30

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.73	\$8.15	\$0.00	\$0.00	\$33.88
2	55	\$28.30	\$8.15	\$5.64	\$0.00	\$42.09
3	60	\$30.88	\$8.15	\$6.15	\$0.00	\$45.18
4	65	\$33.45	\$8.15	\$6.66	\$0.00	\$48.26
5	70	\$36.02	\$8.15	\$17.78	\$0.00	\$61.95
6	75	\$38.60	\$8.15	\$18.29	\$0.00	\$65.04
7	80	\$41.17	\$8.15	\$18.80	\$0.00	\$68.12
8	90	\$46.31	\$8.15	\$19.83	\$0.00	\$74.29

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.80	\$7.85	\$15.35	\$0.00	\$62.00
	06/01/2019	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	12/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: BACKHOE/LOADER/HAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2018	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	06/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
	12/01/2019	\$41.80	\$7.85	\$15.35	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS <i>LABORERS - ZONE 1</i>	12/01/2018	\$39.55	\$7.85	\$15.35	\$0.00	\$62.75
	06/01/2019	\$40.55	\$7.85	\$15.35	\$0.00	\$63.75
	12/01/2019	\$41.55	\$7.85	\$15.35	\$0.00	\$64.75
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 1</i>	12/01/2018	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	06/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
	12/01/2019	\$41.80	\$7.85	\$15.35	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2018	\$39.55	\$7.85	\$15.35	\$0.00	\$62.75
	06/01/2019	\$40.55	\$7.85	\$15.35	\$0.00	\$63.75
	12/01/2019	\$41.55	\$7.85	\$15.35	\$0.00	\$64.75
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.80	\$7.85	\$15.35	\$0.00	\$62.00
	06/01/2019	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	12/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$65.20	\$9.90	\$21.15	\$0.00	\$96.25
	08/01/2019	\$68.52	\$9.90	\$21.15	\$0.00	\$99.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$46.57	\$9.90	\$21.15	\$0.00	\$77.62
	08/01/2019	\$48.94	\$9.90	\$21.15	\$0.00	\$79.99
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$69.86	\$9.90	\$21.15	\$0.00	\$100.91
	08/01/2019	\$73.41	\$9.90	\$21.15	\$0.00	\$104.46
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$97.80	\$9.90	\$21.15	\$0.00	\$128.85
	08/01/2019	\$102.78	\$9.90	\$21.15	\$0.00	\$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) <i>ELECTRICIANS LOCAL 103</i>	09/01/2018	\$50.62	\$13.00	\$18.37	\$0.00	\$81.99
	03/01/2019	\$51.10	\$13.00	\$18.88	\$0.00	\$82.98
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2018	\$50.62	\$13.00	\$18.37	\$0.00	\$81.99
	03/01/2019	\$51.10	\$13.00	\$18.88	\$0.00	\$82.98

Apprentice - ELECTRICIAN - Local 103

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$20.25	\$13.00	\$0.61	\$0.00	\$33.86
2	40	\$20.25	\$13.00	\$0.61	\$0.00	\$33.86
3	45	\$22.78	\$13.00	\$13.97	\$0.00	\$49.75
4	45	\$22.78	\$13.00	\$13.97	\$0.00	\$49.75
5	50	\$25.31	\$13.00	\$14.38	\$0.00	\$52.69
6	55	\$27.84	\$13.00	\$14.78	\$0.00	\$55.62
7	60	\$30.37	\$13.00	\$15.17	\$0.00	\$58.54
8	65	\$32.90	\$13.00	\$15.58	\$0.00	\$61.48
9	70	\$35.43	\$13.00	\$15.97	\$0.00	\$64.40
10	75	\$37.97	\$13.00	\$16.37	\$0.00	\$67.34

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$20.44	\$13.00	\$0.61	\$0.00	\$34.05
2	40	\$20.44	\$13.00	\$0.61	\$0.00	\$34.05
3	45	\$23.00	\$13.00	\$14.34	\$0.00	\$50.34
4	45	\$23.00	\$13.00	\$14.34	\$0.00	\$50.34
5	50	\$25.55	\$13.00	\$14.76	\$0.00	\$53.31
6	55	\$28.11	\$13.00	\$15.17	\$0.00	\$56.28
7	60	\$30.66	\$13.00	\$15.58	\$0.00	\$59.24
8	65	\$33.22	\$13.00	\$16.00	\$0.00	\$62.22
9	70	\$35.77	\$13.00	\$16.40	\$0.00	\$65.17
10	75	\$38.33	\$13.00	\$16.82	\$0.00	\$68.15

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

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR	01/01/2019	\$59.47	\$15.58	\$17.51	\$0.00	\$92.56
ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2020	\$61.42	\$15.73	\$18.41	\$0.00	\$95.56
	01/01/2021	\$63.47	\$15.88	\$19.31	\$0.00	\$98.66
	01/01/2022	\$65.62	\$16.03	\$20.21	\$0.00	\$101.86

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELEVATOR CONSTRUCTOR - Local 4

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$29.74	\$15.58	\$0.00	\$0.00	\$45.32
2	55	\$32.71	\$15.58	\$17.51	\$0.00	\$65.80
3	65	\$38.66	\$15.58	\$17.51	\$0.00	\$71.75
4	70	\$41.63	\$15.58	\$17.51	\$0.00	\$74.72
5	80	\$47.58	\$15.58	\$17.51	\$0.00	\$80.67

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.71	\$15.73	\$0.00	\$0.00	\$46.44
2	55	\$33.78	\$15.73	\$18.41	\$0.00	\$67.92
3	65	\$39.92	\$15.73	\$18.41	\$0.00	\$74.06
4	70	\$42.99	\$15.73	\$18.41	\$0.00	\$77.13
5	80	\$49.14	\$15.73	\$18.41	\$0.00	\$83.28

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>	01/01/2019	\$41.63	\$15.58	\$17.51	\$0.00	\$74.72
	01/01/2020	\$42.99	\$15.73	\$18.41	\$0.00	\$77.13
	01/01/2021	\$44.43	\$15.88	\$19.31	\$0.00	\$79.62
	01/01/2022	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17

For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2018	\$43.19	\$11.00	\$15.50	\$0.00	\$69.69
	05/01/2019	\$44.33	\$11.00	\$15.50	\$0.00	\$70.83
	11/01/2019	\$45.33	\$11.00	\$15.50	\$0.00	\$71.83
	05/01/2020	\$46.48	\$11.00	\$15.50	\$0.00	\$72.98
	11/01/2020	\$47.48	\$11.00	\$15.50	\$0.00	\$73.98
	05/01/2021	\$48.68	\$11.00	\$15.50	\$0.00	\$75.18
	11/01/2021	\$49.63	\$11.00	\$15.50	\$0.00	\$76.13
	05/01/2022	\$50.78	\$11.00	\$15.50	\$0.00	\$77.28

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2018	\$44.67	\$11.00	\$15.50	\$0.00	\$71.17
	05/01/2019	\$45.82	\$11.00	\$15.50	\$0.00	\$72.32
	11/01/2019	\$46.83	\$11.00	\$15.50	\$0.00	\$73.33
	05/01/2020	\$47.98	\$11.00	\$15.50	\$0.00	\$74.48
	11/01/2020	\$48.99	\$11.00	\$15.50	\$0.00	\$75.49
	05/01/2021	\$50.15	\$11.00	\$15.50	\$0.00	\$76.65
	11/01/2021	\$51.16	\$11.00	\$15.50	\$0.00	\$77.66
	05/01/2022	\$52.32	\$11.00	\$15.50	\$0.00	\$78.82
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2018	\$22.45	\$11.00	\$15.50	\$0.00	\$48.95
	05/01/2019	\$23.13	\$11.00	\$15.50	\$0.00	\$49.63
	11/01/2019	\$23.72	\$11.00	\$15.50	\$0.00	\$50.22
	05/01/2020	\$24.39	\$11.00	\$15.50	\$0.00	\$50.89
	11/01/2020	\$24.98	\$11.00	\$15.50	\$0.00	\$51.48
	05/01/2021	\$25.66	\$11.00	\$15.50	\$0.00	\$52.16
	11/01/2021	\$26.26	\$11.00	\$15.50	\$0.00	\$52.76
	05/01/2022	\$26.93	\$11.00	\$15.50	\$0.00	\$53.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	09/01/2018	\$50.62	\$13.00	\$18.37	\$0.00	\$81.99
	03/01/2019	\$51.10	\$13.00	\$18.88	\$0.00	\$82.98
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS</i> <i>LOCAL 103</i>	09/01/2018	\$37.97	\$13.00	\$16.35	\$0.00	\$67.32
	03/01/2019	\$38.33	\$13.00	\$16.82	\$0.00	\$68.15
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$39.13	\$11.50	\$15.60	\$0.00	\$66.23
	06/01/2019	\$40.04	\$11.50	\$15.60	\$0.00	\$67.14
	12/01/2019	\$40.99	\$11.50	\$15.60	\$0.00	\$68.09
	06/01/2020	\$41.90	\$11.50	\$15.60	\$0.00	\$69.00
	12/01/2020	\$42.85	\$11.50	\$15.60	\$0.00	\$69.95
	06/01/2021	\$43.76	\$11.50	\$15.60	\$0.00	\$70.86
	12/01/2021	\$44.71	\$11.50	\$15.60	\$0.00	\$71.81
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER <i>LABORERS - ZONE 1</i>	12/01/2018	\$22.50	\$7.85	\$15.35	\$0.00	\$45.70
	06/01/2019	\$22.50	\$7.85	\$15.35	\$0.00	\$45.70
	12/01/2019	\$23.50	\$7.85	\$15.35	\$0.00	\$46.70
	06/01/2020	\$23.50	\$7.85	\$15.35	\$0.00	\$46.70
	12/01/2020	\$24.50	\$7.85	\$15.35	\$0.00	\$47.70
	06/01/2021	\$24.50	\$7.85	\$15.35	\$0.00	\$47.70
	12/01/2021	\$24.50	\$7.85	\$15.35	\$0.00	\$47.70
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	03/01/2016	\$42.13	\$9.80	\$17.62	\$0.00	\$69.55

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - FLOORCOVERER - Local 2168 Zone I

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.07	\$9.80	\$1.79	\$0.00	\$32.66
2	55	\$23.17	\$9.80	\$1.79	\$0.00	\$34.76
3	60	\$25.28	\$9.80	\$12.25	\$0.00	\$47.33
4	65	\$27.38	\$9.80	\$12.25	\$0.00	\$49.43
5	70	\$29.49	\$9.80	\$14.04	\$0.00	\$53.33
6	75	\$31.60	\$9.80	\$14.04	\$0.00	\$55.44
7	80	\$33.70	\$9.80	\$15.83	\$0.00	\$59.33
8	85	\$35.81	\$9.80	\$15.83	\$0.00	\$61.44

Notes: Steps are 750 hrs.
 % After 09/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)
 Step 1&2 \$30.55/ 3&4 \$36.49/ 5&6 \$53.33/ 7&8 \$59.33

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.58	\$11.50	\$15.60	\$0.00	\$74.68
	06/01/2019	\$48.68	\$11.50	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.83	\$11.50	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.93	\$11.50	\$15.60	\$0.00	\$78.03
	12/01/2020	\$52.08	\$11.50	\$15.60	\$0.00	\$79.18
	06/01/2021	\$53.18	\$11.50	\$15.60	\$0.00	\$80.28
	12/01/2021	\$54.33	\$11.50	\$15.60	\$0.00	\$81.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$32.03	\$11.50	\$15.60	\$0.00	\$59.13
	06/01/2019	\$32.78	\$11.50	\$15.60	\$0.00	\$59.88
	12/01/2019	\$33.57	\$11.50	\$15.60	\$0.00	\$60.67
	06/01/2020	\$34.32	\$11.50	\$15.60	\$0.00	\$61.42
	12/01/2020	\$35.10	\$11.50	\$15.60	\$0.00	\$62.20
	06/01/2021	\$35.85	\$11.50	\$15.60	\$0.00	\$62.95
	12/01/2021	\$36.64	\$11.50	\$15.60	\$0.00	\$63.74

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 1)</i>	01/01/2019	\$45.65	\$8.15	\$20.85	\$0.00	\$74.65
	07/01/2019	\$46.75	\$8.15	\$20.85	\$0.00	\$75.75
	01/01/2020	\$47.85	\$8.15	\$20.85	\$0.00	\$76.85
	07/01/2020	\$48.95	\$8.15	\$20.85	\$0.00	\$77.95
	01/01/2021	\$50.05	\$8.15	\$20.85	\$0.00	\$79.05

Apprentice - GLAZIER - Local 35 Zone 1

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.83	\$8.15	\$0.00	\$0.00	\$30.98
2	55	\$25.11	\$8.15	\$5.64	\$0.00	\$38.90
3	60	\$27.39	\$8.15	\$6.15	\$0.00	\$41.69
4	65	\$29.67	\$8.15	\$6.66	\$0.00	\$44.48
5	70	\$31.96	\$8.15	\$17.78	\$0.00	\$57.89
6	75	\$34.24	\$8.15	\$18.29	\$0.00	\$60.68
7	80	\$36.52	\$8.15	\$18.80	\$0.00	\$63.47
8	90	\$41.09	\$8.15	\$19.83	\$0.00	\$69.07

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$8.15	\$0.00	\$0.00	\$31.53
2	55	\$25.71	\$8.15	\$5.64	\$0.00	\$39.50
3	60	\$28.05	\$8.15	\$6.15	\$0.00	\$42.35
4	65	\$30.39	\$8.15	\$6.66	\$0.00	\$45.20
5	70	\$32.73	\$8.15	\$17.78	\$0.00	\$58.66
6	75	\$35.06	\$8.15	\$18.29	\$0.00	\$61.50
7	80	\$37.40	\$8.15	\$18.80	\$0.00	\$64.35
8	90	\$42.08	\$8.15	\$19.83	\$0.00	\$70.06

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS	12/01/2018	\$47.58	\$11.50	\$15.60	\$0.00	\$74.68
OPERATING ENGINEERS LOCAL 4	06/01/2019	\$48.68	\$11.50	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.83	\$11.50	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.93	\$11.50	\$15.60	\$0.00	\$78.03
	12/01/2020	\$52.08	\$11.50	\$15.60	\$0.00	\$79.18
	06/01/2021	\$53.18	\$11.50	\$15.60	\$0.00	\$80.28
	12/01/2021	\$54.33	\$11.50	\$15.60	\$0.00	\$81.43

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$26.17	\$11.50	\$0.00	\$0.00	\$37.67
2	60	\$28.55	\$11.50	\$15.60	\$0.00	\$55.65
3	65	\$30.93	\$11.50	\$15.60	\$0.00	\$58.03
4	70	\$33.31	\$11.50	\$15.60	\$0.00	\$60.41
5	75	\$35.69	\$11.50	\$15.60	\$0.00	\$62.79
6	80	\$38.06	\$11.50	\$15.60	\$0.00	\$65.16
7	85	\$40.44	\$11.50	\$15.60	\$0.00	\$67.54
8	90	\$42.82	\$11.50	\$15.60	\$0.00	\$69.92

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$26.77	\$11.50	\$0.00	\$0.00	\$38.27
2	60	\$29.21	\$11.50	\$15.60	\$0.00	\$56.31
3	65	\$31.64	\$11.50	\$15.60	\$0.00	\$58.74
4	70	\$34.08	\$11.50	\$15.60	\$0.00	\$61.18
5	75	\$36.51	\$11.50	\$15.60	\$0.00	\$63.61
6	80	\$38.94	\$11.50	\$15.60	\$0.00	\$66.04
7	85	\$41.38	\$11.50	\$15.60	\$0.00	\$68.48
8	90	\$43.81	\$11.50	\$15.60	\$0.00	\$70.91

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 - A	02/01/2018	\$44.11	\$12.20	\$24.12	\$2.41	\$82.84
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For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 103	09/01/2018	\$50.62	\$13.00	\$18.37	\$0.00	\$81.99
	03/01/2019	\$51.10	\$13.00	\$18.88	\$0.00	\$82.98

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 - A	02/01/2018	\$44.11	\$12.20	\$24.12	\$2.41	\$82.84
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For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING -WATER) PIPEFITTERS LOCAL 537	09/01/2018	\$52.94	\$9.95	\$18.74	\$0.00	\$81.63
	09/01/2019	\$54.44	\$9.95	\$18.74	\$0.00	\$83.13
	09/01/2020	\$55.94	\$9.95	\$18.74	\$0.00	\$84.63

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

HVAC MECHANIC PIPEFITTERS LOCAL 537	09/01/2018	\$52.94	\$9.95	\$18.74	\$0.00	\$81.63
	09/01/2019	\$54.44	\$9.95	\$18.74	\$0.00	\$83.13
	09/01/2020	\$55.94	\$9.95	\$18.74	\$0.00	\$84.63

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HYDRAULIC DRILLS <i>LABORERS - ZONE 1</i>	12/01/2018	\$39.40	\$7.85	\$15.35	\$0.00	\$62.60
	06/01/2019	\$40.40	\$7.85	\$15.35	\$0.00	\$63.60
	12/01/2019	\$41.40	\$7.85	\$15.35	\$0.00	\$64.60
	06/01/2020	\$42.39	\$7.85	\$15.35	\$0.00	\$65.59
	12/01/2020	\$43.37	\$7.85	\$15.35	\$0.00	\$66.57
	06/01/2021	\$44.39	\$7.85	\$15.35	\$0.00	\$67.59
	12/01/2021	\$45.40	\$7.85	\$15.35	\$0.00	\$68.60
For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2018	\$49.34	\$11.75	\$14.20	\$0.00	\$75.29
	09/01/2019	\$51.84	\$11.75	\$14.20	\$0.00	\$77.79

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

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.67	\$11.75	\$10.45	\$0.00	\$46.87
2	60	\$29.60	\$11.75	\$11.20	\$0.00	\$52.55
3	70	\$34.54	\$11.75	\$11.95	\$0.00	\$58.24
4	80	\$39.47	\$11.75	\$12.70	\$0.00	\$63.92

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.92	\$11.75	\$10.45	\$0.00	\$48.12
2	60	\$31.10	\$11.75	\$11.20	\$0.00	\$54.05
3	70	\$36.29	\$11.75	\$11.95	\$0.00	\$59.99
4	80	\$41.47	\$11.75	\$12.70	\$0.00	\$65.92

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (BOSTON AREA)</i>	09/16/2018	\$46.07	\$8.00	\$22.85	\$0.00	\$76.92
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - IRONWORKER - Local 7 Boston

Effective Date - 09/16/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$27.64	\$8.00	\$22.85	\$0.00	\$58.49
2	70	\$32.25	\$8.00	\$22.85	\$0.00	\$63.10
3	75	\$34.55	\$8.00	\$22.85	\$0.00	\$65.40
4	80	\$36.86	\$8.00	\$22.85	\$0.00	\$67.71
5	85	\$39.16	\$8.00	\$22.85	\$0.00	\$70.01
6	90	\$41.46	\$8.00	\$22.85	\$0.00	\$72.31

Notes:

** Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:**

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 1	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS - ZONE 1	12/01/2018	\$38.65	\$7.85	\$15.35	\$0.00	\$61.85
	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 1

Effective Date - 12/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.19	\$7.85	\$15.35	\$0.00	\$46.39
2	70	\$27.06	\$7.85	\$15.35	\$0.00	\$50.26
3	80	\$30.92	\$7.85	\$15.35	\$0.00	\$54.12
4	90	\$34.79	\$7.85	\$15.35	\$0.00	\$57.99

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.79	\$7.85	\$15.35	\$0.00	\$46.99
2	70	\$27.76	\$7.85	\$15.35	\$0.00	\$50.96
3	80	\$31.72	\$7.85	\$15.35	\$0.00	\$54.92
4	90	\$35.69	\$7.85	\$15.35	\$0.00	\$58.89

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER LABORERS - ZONE 1	12/01/2018	\$38.65	\$7.85	\$15.35	\$0.00	\$61.85
	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER LABORERS - ZONE 1	12/01/2018	\$38.65	\$7.85	\$15.35	\$0.00	\$61.85
	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS - ZONE 1	12/01/2018	\$38.80	\$7.85	\$15.35	\$0.00	\$62.00
	06/01/2019	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	12/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: MASON TENDER <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.65	\$7.85	\$15.35	\$0.00	\$61.85
	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.65	\$7.85	\$15.35	\$0.00	\$61.85
	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85
This classification applies to all tree work associated with the removal of standing trees, and trimming and removal of branches and limbs when the work is not done for a utility company for the purpose of operation, maintenance or repair of utility company equipment. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2019	\$40.91	\$10.75	\$18.97	\$0.00	\$70.63
	08/01/2019	\$41.99	\$10.75	\$19.11	\$0.00	\$71.85
	02/01/2020	\$42.50	\$10.75	\$19.11	\$0.00	\$72.36
	08/01/2020	\$43.58	\$10.75	\$19.26	\$0.00	\$73.59
	02/01/2021	\$44.09	\$10.75	\$19.26	\$0.00	\$74.10
	08/01/2021	\$45.21	\$10.75	\$19.42	\$0.00	\$75.38
	02/01/2022	\$45.68	\$10.75	\$19.42	\$0.00	\$75.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.46	\$10.75	\$18.97	\$0.00	\$50.18
2	60	\$24.55	\$10.75	\$18.97	\$0.00	\$54.27
3	70	\$28.64	\$10.75	\$18.97	\$0.00	\$58.36
4	80	\$32.73	\$10.75	\$18.97	\$0.00	\$62.45
5	90	\$36.82	\$10.75	\$18.97	\$0.00	\$66.54

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.00	\$10.75	\$19.11	\$0.00	\$50.86
2	60	\$25.19	\$10.75	\$19.11	\$0.00	\$55.05
3	70	\$29.39	\$10.75	\$19.11	\$0.00	\$59.25
4	80	\$33.59	\$10.75	\$19.11	\$0.00	\$63.45
5	90	\$37.79	\$10.75	\$19.11	\$0.00	\$67.65

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS, TILELAYERS & TERRAZZO MECH	02/01/2019	\$53.57	\$10.75	\$20.66	\$0.00	\$84.98
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2019	\$54.92	\$10.75	\$20.80	\$0.00	\$86.47
	02/01/2020	\$55.55	\$10.75	\$20.80	\$0.00	\$87.10
	08/01/2020	\$56.90	\$10.75	\$20.95	\$0.00	\$88.60
	02/01/2021	\$57.54	\$10.75	\$20.95	\$0.00	\$89.24
	08/01/2021	\$58.94	\$10.75	\$21.11	\$0.00	\$90.80
	02/01/2022	\$59.51	\$10.75	\$21.11	\$0.00	\$91.37

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.79	\$10.75	\$20.66	\$0.00	\$58.20
2	60	\$32.14	\$10.75	\$20.66	\$0.00	\$63.55
3	70	\$37.50	\$10.75	\$20.66	\$0.00	\$68.91
4	80	\$42.86	\$10.75	\$20.66	\$0.00	\$74.27
5	90	\$48.21	\$10.75	\$20.66	\$0.00	\$79.62

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.46	\$10.75	\$20.80	\$0.00	\$59.01
2	60	\$32.95	\$10.75	\$20.80	\$0.00	\$64.50
3	70	\$38.44	\$10.75	\$20.80	\$0.00	\$69.99
4	80	\$43.94	\$10.75	\$20.80	\$0.00	\$75.49
5	90	\$49.43	\$10.75	\$20.80	\$0.00	\$80.98

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 1) <i>MILLWRIGHTS LOCAL 1121 - Zone 1</i>	10/01/2018	\$41.32	\$9.90	\$18.50	\$0.00	\$69.72
	04/01/2019	\$42.22	\$9.90	\$18.50	\$0.00	\$70.62

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MILLWRIGHT - Local 1121 Zone 1

Effective Date - 10/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.73	\$9.90	\$5.31	\$0.00	\$37.94
2	65	\$26.86	\$9.90	\$15.13	\$0.00	\$51.89
3	75	\$30.99	\$9.90	\$16.10	\$0.00	\$56.99
4	85	\$35.12	\$9.90	\$17.06	\$0.00	\$62.08

Effective Date - 04/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$23.22	\$9.90	\$5.31	\$0.00	\$38.43
2	65	\$27.44	\$9.90	\$15.13	\$0.00	\$52.47
3	75	\$31.67	\$9.90	\$16.10	\$0.00	\$57.67
4	85	\$35.89	\$9.90	\$17.06	\$0.00	\$62.85

Notes:

Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER LABORERS - ZONE 1	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2018	\$23.06	\$11.50	\$15.60	\$0.00	\$50.16
	06/01/2019	\$23.61	\$11.50	\$15.60	\$0.00	\$50.71
	12/01/2019	\$24.18	\$11.50	\$15.60	\$0.00	\$51.28
	06/01/2020	\$24.73	\$11.50	\$15.60	\$0.00	\$51.83
	12/01/2020	\$25.30	\$11.50	\$15.60	\$0.00	\$52.40
	06/01/2021	\$25.85	\$11.50	\$15.60	\$0.00	\$52.95
	12/01/2021	\$26.43	\$11.50	\$15.60	\$0.00	\$53.53

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2018	\$27.42	\$11.50	\$15.60	\$0.00	\$54.52
	06/01/2019	\$28.07	\$11.50	\$15.60	\$0.00	\$55.17
	12/01/2019	\$28.74	\$11.50	\$15.60	\$0.00	\$55.84
	06/01/2020	\$29.39	\$11.50	\$15.60	\$0.00	\$56.49
	12/01/2020	\$30.07	\$11.50	\$15.60	\$0.00	\$57.17
	06/01/2021	\$30.71	\$11.50	\$15.60	\$0.00	\$57.81
	12/01/2021	\$31.39	\$11.50	\$15.60	\$0.00	\$58.49

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 1</i>	01/01/2019	\$50.36	\$8.15	\$20.85	\$0.00	\$79.36
	07/01/2019	\$51.46	\$8.15	\$20.85	\$0.00	\$80.46
	01/01/2020	\$52.56	\$8.15	\$20.85	\$0.00	\$81.56
	07/01/2020	\$53.66	\$8.15	\$20.85	\$0.00	\$82.66
	01/01/2021	\$54.76	\$8.15	\$20.85	\$0.00	\$83.76

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.18	\$8.15	\$0.00	\$0.00	\$33.33
2	55	\$27.70	\$8.15	\$5.64	\$0.00	\$41.49
3	60	\$30.22	\$8.15	\$6.15	\$0.00	\$44.52
4	65	\$32.73	\$8.15	\$6.66	\$0.00	\$47.54
5	70	\$35.25	\$8.15	\$17.78	\$0.00	\$61.18
6	75	\$37.77	\$8.15	\$18.29	\$0.00	\$64.21
7	80	\$40.29	\$8.15	\$18.80	\$0.00	\$67.24
8	90	\$45.32	\$8.15	\$19.83	\$0.00	\$73.30

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.73	\$8.15	\$0.00	\$0.00	\$33.88
2	55	\$28.30	\$8.15	\$5.64	\$0.00	\$42.09
3	60	\$30.88	\$8.15	\$6.15	\$0.00	\$45.18
4	65	\$33.45	\$8.15	\$6.66	\$0.00	\$48.26
5	70	\$36.02	\$8.15	\$17.78	\$0.00	\$61.95
6	75	\$38.60	\$8.15	\$18.29	\$0.00	\$65.04
7	80	\$41.17	\$8.15	\$18.80	\$0.00	\$68.12
8	90	\$46.31	\$8.15	\$19.83	\$0.00	\$74.29

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2019	\$47.05	\$8.15	\$20.85	\$0.00	\$76.05
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. <i>PAINTERS LOCAL 35 - ZONE 1</i>	07/01/2019	\$48.15	\$8.15	\$20.85	\$0.00	\$77.15
	01/01/2020	\$49.25	\$8.15	\$20.85	\$0.00	\$78.25
	07/01/2020	\$50.35	\$8.15	\$20.85	\$0.00	\$79.35
	01/01/2021	\$51.45	\$8.15	\$20.85	\$0.00	\$80.45

Apprentice - PAINTER Local 35 Zone 1 - Spray/Sandblast - New

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.53	\$8.15	\$0.00	\$0.00	\$31.68
2	55	\$25.88	\$8.15	\$5.64	\$0.00	\$39.67
3	60	\$28.23	\$8.15	\$6.15	\$0.00	\$42.53
4	65	\$30.58	\$8.15	\$6.66	\$0.00	\$45.39
5	70	\$32.94	\$8.15	\$17.78	\$0.00	\$58.87
6	75	\$35.29	\$8.15	\$18.29	\$0.00	\$61.73
7	80	\$37.64	\$8.15	\$18.80	\$0.00	\$64.59
8	90	\$42.35	\$8.15	\$19.83	\$0.00	\$70.33

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.08	\$8.15	\$0.00	\$0.00	\$32.23
2	55	\$26.48	\$8.15	\$5.64	\$0.00	\$40.27
3	60	\$28.89	\$8.15	\$6.15	\$0.00	\$43.19
4	65	\$31.30	\$8.15	\$6.66	\$0.00	\$46.11
5	70	\$33.71	\$8.15	\$17.78	\$0.00	\$59.64
6	75	\$36.11	\$8.15	\$18.29	\$0.00	\$62.55
7	80	\$38.52	\$8.15	\$18.80	\$0.00	\$65.47
8	90	\$43.34	\$8.15	\$19.83	\$0.00	\$71.32

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2019	\$45.11	\$8.15	\$20.85	\$0.00	\$74.11
PAINTERS LOCAL 35 - ZONE 1	07/01/2019	\$46.21	\$8.15	\$20.85	\$0.00	\$75.21
	01/01/2020	\$47.31	\$8.15	\$20.85	\$0.00	\$76.31
	07/01/2020	\$48.41	\$8.15	\$20.85	\$0.00	\$77.41
	01/01/2021	\$49.51	\$8.15	\$20.85	\$0.00	\$78.51

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 1 - Spray/Sandblast - Repaint

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.56	\$8.15	\$0.00	\$0.00	\$30.71
2	55	\$24.81	\$8.15	\$5.64	\$0.00	\$38.60
3	60	\$27.07	\$8.15	\$6.15	\$0.00	\$41.37
4	65	\$29.32	\$8.15	\$6.66	\$0.00	\$44.13
5	70	\$31.58	\$8.15	\$17.78	\$0.00	\$57.51
6	75	\$33.83	\$8.15	\$18.29	\$0.00	\$60.27
7	80	\$36.09	\$8.15	\$18.80	\$0.00	\$63.04
8	90	\$40.60	\$8.15	\$19.83	\$0.00	\$68.58

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.11	\$8.15	\$0.00	\$0.00	\$31.26
2	55	\$25.42	\$8.15	\$5.64	\$0.00	\$39.21
3	60	\$27.73	\$8.15	\$6.15	\$0.00	\$42.03
4	65	\$30.04	\$8.15	\$6.66	\$0.00	\$44.85
5	70	\$32.35	\$8.15	\$17.78	\$0.00	\$58.28
6	75	\$34.66	\$8.15	\$18.29	\$0.00	\$61.10
7	80	\$36.97	\$8.15	\$18.80	\$0.00	\$63.92
8	90	\$41.59	\$8.15	\$19.83	\$0.00	\$69.57

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (TRAFFIC MARKINGS) LABORERS - ZONE 1	12/01/2018	\$38.65	\$7.85	\$15.35	\$0.00	\$61.85
	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85

For Apprentice rates see "Apprentice- LABORER"

PAINTER / TAPER (BRUSH, NEW) *	01/01/2019	\$45.65	\$8.15	\$20.85	\$0.00	\$74.65
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 1	07/01/2019	\$46.75	\$8.15	\$20.85	\$0.00	\$75.75
	01/01/2020	\$47.85	\$8.15	\$20.85	\$0.00	\$76.85
	07/01/2020	\$48.95	\$8.15	\$20.85	\$0.00	\$77.95
	01/01/2021	\$50.05	\$8.15	\$20.85	\$0.00	\$79.05

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER - Local 35 Zone 1 - BRUSH NEW

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.83	\$8.15	\$0.00	\$0.00	\$30.98
2	55	\$25.11	\$8.15	\$5.64	\$0.00	\$38.90
3	60	\$27.39	\$8.15	\$6.15	\$0.00	\$41.69
4	65	\$29.67	\$8.15	\$6.66	\$0.00	\$44.48
5	70	\$31.96	\$8.15	\$17.78	\$0.00	\$57.89
6	75	\$34.24	\$8.15	\$18.29	\$0.00	\$60.68
7	80	\$36.52	\$8.15	\$18.80	\$0.00	\$63.47
8	90	\$41.09	\$8.15	\$19.83	\$0.00	\$69.07

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$8.15	\$0.00	\$0.00	\$31.53
2	55	\$25.71	\$8.15	\$5.64	\$0.00	\$39.50
3	60	\$28.05	\$8.15	\$6.15	\$0.00	\$42.35
4	65	\$30.39	\$8.15	\$6.66	\$0.00	\$45.20
5	70	\$32.73	\$8.15	\$17.78	\$0.00	\$58.66
6	75	\$35.06	\$8.15	\$18.29	\$0.00	\$61.50
7	80	\$37.40	\$8.15	\$18.80	\$0.00	\$64.35
8	90	\$42.08	\$8.15	\$19.83	\$0.00	\$70.06

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2019	\$43.71	\$8.15	\$20.85	\$0.00	\$72.71
PAINTERS LOCAL 35 - ZONE 1	07/01/2019	\$44.81	\$8.15	\$20.85	\$0.00	\$73.81
	01/01/2020	\$45.91	\$8.15	\$20.85	\$0.00	\$74.91
	07/01/2020	\$47.01	\$8.15	\$20.85	\$0.00	\$76.01
	01/01/2021	\$48.11	\$8.15	\$20.85	\$0.00	\$77.11

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 1 - BRUSH REPAINT

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.86	\$8.15	\$0.00	\$0.00	\$30.01
2	55	\$24.04	\$8.15	\$5.64	\$0.00	\$37.83
3	60	\$26.23	\$8.15	\$6.15	\$0.00	\$40.53
4	65	\$28.41	\$8.15	\$6.66	\$0.00	\$43.22
5	70	\$30.60	\$8.15	\$17.78	\$0.00	\$56.53
6	75	\$32.78	\$8.15	\$18.29	\$0.00	\$59.22
7	80	\$34.97	\$8.15	\$18.80	\$0.00	\$61.92
8	90	\$39.34	\$8.15	\$19.83	\$0.00	\$67.32

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.41	\$8.15	\$0.00	\$0.00	\$30.56
2	55	\$24.65	\$8.15	\$5.64	\$0.00	\$38.44
3	60	\$26.89	\$8.15	\$6.15	\$0.00	\$41.19
4	65	\$29.13	\$8.15	\$6.66	\$0.00	\$43.94
5	70	\$31.37	\$8.15	\$17.78	\$0.00	\$57.30
6	75	\$33.61	\$8.15	\$18.29	\$0.00	\$60.05
7	80	\$35.85	\$8.15	\$18.80	\$0.00	\$62.80
8	90	\$40.33	\$8.15	\$19.83	\$0.00	\$68.31

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PANEL & PICKUP TRUCKS DRIVER <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2018	\$34.18	\$11.91	\$12.70	\$0.00	\$58.79
	06/01/2019	\$35.18	\$11.91	\$12.70	\$0.00	\$59.79
	08/01/2019	\$35.18	\$12.41	\$12.70	\$0.00	\$60.29
	12/01/2019	\$35.18	\$12.41	\$13.72	\$0.00	\$61.31
	06/01/2020	\$36.08	\$12.41	\$13.72	\$0.00	\$62.21
	08/01/2020	\$36.08	\$12.91	\$13.72	\$0.00	\$62.71
	12/01/2020	\$36.08	\$12.91	\$14.82	\$0.00	\$63.81
	06/01/2021	\$36.88	\$12.91	\$14.82	\$0.00	\$64.61
	08/01/2021	\$36.88	\$13.41	\$14.82	\$0.00	\$65.11
	12/01/2021	\$36.88	\$13.41	\$16.01	\$0.00	\$66.30
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$46.57	\$9.90	\$21.15	\$0.00	\$77.62
<i>For apprentice rates see "Apprentice- PILE DRIVER"</i>	08/01/2019	\$48.94	\$9.90	\$21.15	\$0.00	\$79.99
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$46.57	\$9.90	\$21.15	\$0.00	\$77.62
	08/01/2019	\$48.94	\$9.90	\$21.15	\$0.00	\$79.99

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.29	\$9.90	\$21.15	\$0.00	\$54.34
2	60	\$27.94	\$9.90	\$21.15	\$0.00	\$58.99
3	70	\$32.60	\$9.90	\$21.15	\$0.00	\$63.65
4	75	\$34.93	\$9.90	\$21.15	\$0.00	\$65.98
5	80	\$37.26	\$9.90	\$21.15	\$0.00	\$68.31
6	80	\$37.26	\$9.90	\$21.15	\$0.00	\$68.31
7	90	\$41.91	\$9.90	\$21.15	\$0.00	\$72.96
8	90	\$41.91	\$9.90	\$21.15	\$0.00	\$72.96

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.47	\$9.90	\$21.15	\$0.00	\$55.52
2	60	\$29.36	\$9.90	\$21.15	\$0.00	\$60.41
3	70	\$34.26	\$9.90	\$21.15	\$0.00	\$65.31
4	75	\$36.71	\$9.90	\$21.15	\$0.00	\$67.76
5	80	\$39.15	\$9.90	\$21.15	\$0.00	\$70.20
6	80	\$39.15	\$9.90	\$21.15	\$0.00	\$70.20
7	90	\$44.05	\$9.90	\$21.15	\$0.00	\$75.10
8	90	\$44.05	\$9.90	\$21.15	\$0.00	\$75.10

Notes:

Apprentice to Journeyworker Ratio:1:5

PIPEFITTER & STEAMFITTER	09/01/2018	\$52.94	\$9.95	\$18.74	\$0.00	\$81.63
PIPEFITTERS LOCAL 537	09/01/2019	\$54.44	\$9.95	\$18.74	\$0.00	\$83.13
	09/01/2020	\$55.94	\$9.95	\$18.74	\$0.00	\$84.63

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PIPEFITTER - Local 537

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$21.18	\$9.95	\$7.75	\$0.00	\$38.88
2	45	\$23.82	\$9.95	\$18.74	\$0.00	\$52.51
3	60	\$31.76	\$9.95	\$18.74	\$0.00	\$60.45
4	70	\$37.06	\$9.95	\$18.74	\$0.00	\$65.75
5	80	\$42.35	\$9.95	\$18.74	\$0.00	\$71.04

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$21.78	\$9.95	\$7.75	\$0.00	\$39.48
2	45	\$24.50	\$9.95	\$18.74	\$0.00	\$53.19
3	60	\$32.66	\$9.95	\$18.74	\$0.00	\$61.35
4	70	\$38.11	\$9.95	\$18.74	\$0.00	\$66.80
5	80	\$43.55	\$9.95	\$18.74	\$0.00	\$72.24

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	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
LABORERS - ZONE 1	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

PLUMBERS & GASFITTERS	09/01/2018	\$55.69	\$11.82	\$16.01	\$0.00	\$83.52
PLUMBERS & GASFITTERS LOCAL 12	03/01/2019	\$57.19	\$11.82	\$16.01	\$0.00	\$85.02
	09/01/2019	\$58.69	\$11.82	\$16.01	\$0.00	\$86.52
	03/01/2020	\$60.19	\$11.82	\$16.01	\$0.00	\$88.02
	09/01/2020	\$61.69	\$11.82	\$16.01	\$0.00	\$89.52
	03/01/2021	\$63.19	\$11.82	\$16.01	\$0.00	\$91.02

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.49	\$11.82	\$5.81	\$0.00	\$37.12
2	40	\$22.28	\$11.82	\$6.59	\$0.00	\$40.69
3	55	\$30.63	\$11.82	\$8.98	\$0.00	\$51.43
4	65	\$36.20	\$11.82	\$10.53	\$0.00	\$58.55
5	75	\$41.77	\$11.82	\$12.13	\$0.00	\$65.72

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$20.02	\$11.82	\$5.81	\$0.00	\$37.65
2	40	\$22.88	\$11.82	\$6.59	\$0.00	\$41.29
3	55	\$31.45	\$11.82	\$8.98	\$0.00	\$52.25
4	65	\$37.17	\$11.82	\$10.53	\$0.00	\$59.52
5	75	\$42.89	\$11.82	\$12.13	\$0.00	\$66.84

Notes:

** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
Step4 with lic\$62.12, Step5 with lic\$69.27

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.) PIPEFITTERS LOCAL 537	09/01/2018	\$52.94	\$9.95	\$18.74	\$0.00	\$81.63
	09/01/2019	\$54.44	\$9.95	\$18.74	\$0.00	\$83.13
	09/01/2020	\$55.94	\$9.95	\$18.74	\$0.00	\$84.63

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

PNEUMATIC DRILL/TOOL OPERATOR LABORERS - ZONE 1	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

POWDERMAN & BLASTER LABORERS - ZONE 1	12/01/2018	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	06/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	12/01/2019	\$41.65	\$7.85	\$15.35	\$0.00	\$64.85
	06/01/2020	\$42.64	\$7.85	\$15.35	\$0.00	\$65.84
	12/01/2020	\$43.62	\$7.85	\$15.35	\$0.00	\$66.82
	06/01/2021	\$44.64	\$7.85	\$15.35	\$0.00	\$67.84
	12/01/2021	\$45.65	\$7.85	\$15.35	\$0.00	\$68.85

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.58	\$11.50	\$15.60	\$0.00	\$74.68
	06/01/2019	\$48.68	\$11.50	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.83	\$11.50	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.93	\$11.50	\$15.60	\$0.00	\$78.03
	12/01/2020	\$52.08	\$11.50	\$15.60	\$0.00	\$79.18
	06/01/2021	\$53.18	\$11.50	\$15.60	\$0.00	\$80.28
	12/01/2021	\$54.33	\$11.50	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.58	\$11.50	\$15.60	\$0.00	\$74.68
	06/01/2019	\$48.68	\$11.50	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.83	\$11.50	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.93	\$11.50	\$15.60	\$0.00	\$78.03
	12/01/2020	\$52.08	\$11.50	\$15.60	\$0.00	\$79.18
	06/01/2021	\$53.18	\$11.50	\$15.60	\$0.00	\$80.28
	12/01/2021	\$54.33	\$11.50	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$32.03	\$11.50	\$15.60	\$0.00	\$59.13
	06/01/2019	\$32.78	\$11.50	\$15.60	\$0.00	\$59.88
	12/01/2019	\$33.57	\$11.50	\$15.60	\$0.00	\$60.67
	06/01/2020	\$34.32	\$11.50	\$15.60	\$0.00	\$61.42
	12/01/2020	\$35.10	\$11.50	\$15.60	\$0.00	\$62.20
	06/01/2021	\$35.85	\$11.50	\$15.60	\$0.00	\$62.95
	12/01/2021	\$36.64	\$11.50	\$15.60	\$0.00	\$63.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY MIX CONCRETE DRIVERS after 4/30/10 (Drivers Hired After 4/30/2010) <i>TEAMSTERS LOCAL 25a</i>	07/01/2017	\$28.18	\$8.48	\$9.72	\$0.00	\$46.38
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 25a</i>	07/01/2017	\$31.44	\$8.48	\$9.72	\$0.00	\$49.64
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg) <i>ROOFERS LOCAL 33</i>	02/01/2019	\$43.36	\$11.50	\$15.90	\$0.00	\$70.76

Apprentice - ROOFER - Local 33

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.68	\$11.50	\$3.69	\$0.00	\$36.87
2	60	\$26.02	\$11.50	\$15.90	\$0.00	\$53.42
3	65	\$28.18	\$11.50	\$15.90	\$0.00	\$55.58
4	75	\$32.52	\$11.50	\$15.90	\$0.00	\$59.92
5	85	\$36.86	\$11.50	\$15.90	\$0.00	\$64.26

Notes: ** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1
 Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.
 (Hot Pitch Mechanics' receive \$1.00 hr. above ROOFER)

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE <i>ROOFERS LOCAL 33</i>	02/01/2019	\$43.61	\$11.50	\$15.90	\$0.00	\$71.01
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2018	\$44.11	\$12.20	\$24.12	\$2.41	\$82.84

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SHEET METAL WORKER - Local 17-A

Effective Date - 02/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.64	\$12.20	\$5.61	\$0.00	\$35.45
2	40	\$17.64	\$12.20	\$5.61	\$0.00	\$35.45
3	45	\$19.85	\$12.20	\$10.85	\$1.29	\$44.19
4	45	\$19.85	\$12.20	\$10.85	\$1.29	\$44.19
5	50	\$22.06	\$12.20	\$11.80	\$1.38	\$47.44
6	50	\$22.06	\$12.20	\$12.05	\$1.39	\$47.70
7	60	\$26.47	\$12.20	\$13.70	\$1.57	\$53.94
8	65	\$28.67	\$12.20	\$14.65	\$1.67	\$57.19
9	75	\$33.08	\$12.20	\$16.56	\$1.86	\$63.70
10	85	\$37.49	\$12.20	\$17.96	\$2.03	\$69.68

Notes:
Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SIGN ERECTOR PAINTERS LOCAL 35 - ZONE 1	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93
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Apprentice - SIGN ERECTOR - Local 35 Zone 1

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP < 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2018	\$34.64	\$11.91	\$12.70	\$0.00	\$59.25
	06/01/2019	\$35.64	\$11.91	\$12.70	\$0.00	\$60.25
	08/01/2019	\$35.64	\$12.41	\$12.70	\$0.00	\$60.75
	12/01/2019	\$35.64	\$12.41	\$13.72	\$0.00	\$61.77
	06/01/2020	\$36.54	\$12.41	\$13.72	\$0.00	\$62.67
	08/01/2020	\$36.54	\$12.91	\$13.72	\$0.00	\$63.17
	12/01/2020	\$36.54	\$12.91	\$14.82	\$0.00	\$64.27
	06/01/2021	\$37.34	\$12.91	\$14.82	\$0.00	\$65.07
	08/01/2021	\$37.34	\$13.41	\$14.82	\$0.00	\$65.57
	12/01/2021	\$37.34	\$13.41	\$16.01	\$0.00	\$66.76
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2018	\$34.93	\$11.91	\$12.70	\$0.00	\$59.54
	06/01/2019	\$35.93	\$11.91	\$12.70	\$0.00	\$60.54
	08/01/2019	\$35.93	\$12.41	\$12.70	\$0.00	\$61.04
	12/01/2019	\$35.93	\$12.41	\$13.72	\$0.00	\$62.06
	06/01/2020	\$36.83	\$12.41	\$13.72	\$0.00	\$62.96
	08/01/2020	\$36.83	\$12.91	\$13.72	\$0.00	\$63.46
	12/01/2020	\$36.83	\$12.91	\$14.82	\$0.00	\$64.56
	06/01/2021	\$37.63	\$12.91	\$14.82	\$0.00	\$65.36
	08/01/2021	\$37.63	\$13.41	\$14.82	\$0.00	\$65.86
	12/01/2021	\$37.63	\$13.41	\$16.01	\$0.00	\$67.05
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1</i>	01/01/2019	\$57.98	\$9.47	\$19.10	\$0.00	\$86.55
	03/01/2019	\$58.98	\$9.47	\$19.60	\$0.00	\$88.05
	10/01/2019	\$60.48	\$9.47	\$19.60	\$0.00	\$89.55
	03/01/2020	\$61.98	\$9.47	\$19.60	\$0.00	\$91.05
	10/01/2020	\$63.48	\$9.47	\$19.60	\$0.00	\$92.55
	03/01/2021	\$64.98	\$9.47	\$19.60	\$0.00	\$94.05

Apprentice - SPRINKLER FITTER - Local 550 (Section A) Zone 1

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$20.29	\$9.47	\$9.10	\$0.00	\$38.86
2	40	\$23.19	\$9.47	\$9.10	\$0.00	\$41.76
3	45	\$26.09	\$9.47	\$9.10	\$0.00	\$44.66
4	50	\$28.99	\$9.47	\$9.10	\$0.00	\$47.56
5	55	\$31.89	\$9.47	\$9.10	\$0.00	\$50.46
6	60	\$34.79	\$9.47	\$10.60	\$0.00	\$54.86
7	65	\$37.69	\$9.47	\$10.60	\$0.00	\$57.76
8	70	\$40.59	\$9.47	\$10.60	\$0.00	\$60.66
9	75	\$43.49	\$9.47	\$10.60	\$0.00	\$63.56
10	80	\$46.38	\$9.47	\$10.60	\$0.00	\$66.45

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$20.64	\$9.47	\$9.10	\$0.00	\$39.21
2	40	\$23.59	\$9.47	\$9.10	\$0.00	\$42.16
3	45	\$26.54	\$9.47	\$9.10	\$0.00	\$45.11
4	50	\$29.49	\$9.47	\$9.10	\$0.00	\$48.06
5	55	\$32.44	\$9.47	\$9.10	\$0.00	\$51.01
6	60	\$35.39	\$9.47	\$10.60	\$0.00	\$55.46
7	65	\$38.34	\$9.47	\$10.60	\$0.00	\$58.41
8	70	\$41.29	\$9.47	\$10.60	\$0.00	\$61.36
9	75	\$44.24	\$9.47	\$10.60	\$0.00	\$64.31
10	80	\$47.18	\$9.47	\$10.60	\$0.00	\$67.25

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

Apprentice to Journeyworker Ratio:1:3

STEAM BOILER OPERATOR	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
OPERATING ENGINEERS LOCAL 4	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2018	\$37.97	\$13.00	\$16.35	\$0.00	\$67.32
	03/01/2019	\$38.33	\$13.00	\$16.82	\$0.00	\$68.15

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$15.19	\$13.00	\$0.46	\$0.00	\$28.65
2	40	\$15.19	\$13.00	\$0.46	\$0.00	\$28.65
3	45	\$17.09	\$13.00	\$13.06	\$0.00	\$43.15
4	45	\$17.09	\$13.00	\$13.06	\$0.00	\$43.15
5	50	\$18.99	\$13.00	\$13.37	\$0.00	\$45.36
6	55	\$20.88	\$13.00	\$13.67	\$0.00	\$47.55
7	60	\$22.78	\$13.00	\$13.96	\$0.00	\$49.74
8	65	\$24.68	\$13.00	\$14.26	\$0.00	\$51.94
9	70	\$26.58	\$13.00	\$14.56	\$0.00	\$54.14
10	75	\$28.48	\$13.00	\$14.85	\$0.00	\$56.33

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$15.33	\$13.00	\$0.46	\$0.00	\$28.79
2	40	\$15.33	\$13.00	\$0.46	\$0.00	\$28.79
3	45	\$17.25	\$13.00	\$13.42	\$0.00	\$43.67
4	45	\$17.25	\$13.00	\$13.42	\$0.00	\$43.67
5	50	\$19.17	\$13.00	\$13.73	\$0.00	\$45.90
6	55	\$21.08	\$13.00	\$14.03	\$0.00	\$48.11
7	60	\$23.00	\$13.00	\$14.34	\$0.00	\$50.34
8	65	\$24.91	\$13.00	\$14.66	\$0.00	\$52.57
9	70	\$26.83	\$13.00	\$14.96	\$0.00	\$54.79
10	75	\$28.75	\$13.00	\$15.27	\$0.00	\$57.02

Notes:

Apprentice to Journeyworker Ratio:1:1

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TERRAZZO FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2019	\$52.49	\$10.75	\$20.66	\$0.00	\$83.90
	08/01/2019	\$53.84	\$10.75	\$20.80	\$0.00	\$85.39
	02/01/2020	\$54.48	\$10.75	\$20.80	\$0.00	\$86.03
	08/01/2020	\$55.83	\$10.75	\$20.95	\$0.00	\$87.53
	02/01/2021	\$56.47	\$10.75	\$20.95	\$0.00	\$88.17
	08/01/2021	\$57.87	\$10.75	\$21.11	\$0.00	\$89.73
	02/01/2022	\$58.46	\$10.75	\$21.11	\$0.00	\$90.32

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.25	\$10.75	\$20.03	\$0.00	\$57.03
2	60	\$31.49	\$10.75	\$20.03	\$0.00	\$62.27
3	70	\$36.74	\$10.75	\$20.03	\$0.00	\$67.52
4	80	\$41.99	\$10.75	\$20.03	\$0.00	\$72.77
5	90	\$47.24	\$10.75	\$20.03	\$0.00	\$78.02

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.92	\$10.75	\$20.80	\$0.00	\$58.47
2	60	\$32.30	\$10.75	\$20.80	\$0.00	\$63.85
3	70	\$37.69	\$10.75	\$20.80	\$0.00	\$69.24
4	80	\$43.07	\$10.75	\$20.80	\$0.00	\$74.62
5	90	\$48.46	\$10.75	\$20.80	\$0.00	\$80.01

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2018	\$40.00	\$7.85	\$15.55	\$0.00	\$63.40
	06/01/2019	\$41.00	\$7.85	\$15.55	\$0.00	\$64.40
	12/01/2019	\$42.00	\$7.85	\$15.55	\$0.00	\$65.40
	06/01/2020	\$42.99	\$7.85	\$15.55	\$0.00	\$66.39
	12/01/2020	\$43.97	\$7.85	\$15.55	\$0.00	\$67.37
	06/01/2021	\$44.99	\$7.85	\$15.55	\$0.00	\$68.39
	12/01/2021	\$46.00	\$7.85	\$15.55	\$0.00	\$69.40

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2018	\$38.72	\$7.85	\$15.55	\$0.00	\$62.12
	06/01/2019	\$39.72	\$7.85	\$15.55	\$0.00	\$63.12
	12/01/2019	\$40.72	\$7.85	\$15.55	\$0.00	\$64.12
	06/01/2020	\$41.71	\$7.85	\$15.55	\$0.00	\$65.11
	12/01/2020	\$42.69	\$7.85	\$15.55	\$0.00	\$66.09
	06/01/2021	\$43.71	\$7.85	\$15.55	\$0.00	\$67.11
	12/01/2021	\$44.72	\$7.85	\$15.55	\$0.00	\$68.12

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>	12/01/2018	\$38.60	\$7.85	\$15.55	\$0.00	\$62.00
	06/01/2019	\$39.60	\$7.85	\$15.55	\$0.00	\$63.00
	12/01/2019	\$40.60	\$7.85	\$15.55	\$0.00	\$64.00
	06/01/2020	\$41.59	\$7.85	\$15.55	\$0.00	\$64.99
	12/01/2020	\$42.57	\$7.85	\$15.55	\$0.00	\$65.97
	06/01/2021	\$43.59	\$7.85	\$15.55	\$0.00	\$66.99
	12/01/2021	\$44.60	\$7.85	\$15.55	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.10	\$11.50	\$15.60	\$0.00	\$74.20
	06/01/2019	\$48.19	\$11.50	\$15.60	\$0.00	\$75.29
	12/01/2019	\$49.33	\$11.50	\$15.60	\$0.00	\$76.43
	06/01/2020	\$50.41	\$11.50	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.55	\$11.50	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.64	\$11.50	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.78	\$11.50	\$15.60	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2018	\$35.22	\$11.91	\$12.70	\$0.00	\$59.83
	06/01/2019	\$36.22	\$11.91	\$12.70	\$0.00	\$60.83
	08/01/2019	\$36.22	\$12.41	\$12.70	\$0.00	\$61.33
	12/01/2019	\$36.22	\$12.41	\$13.72	\$0.00	\$62.35
	06/01/2020	\$37.12	\$12.41	\$13.72	\$0.00	\$63.25
	08/01/2020	\$37.12	\$12.91	\$13.72	\$0.00	\$63.75
	12/01/2020	\$37.12	\$12.91	\$14.82	\$0.00	\$64.85
	06/01/2021	\$37.92	\$12.91	\$14.82	\$0.00	\$65.65
	08/01/2021	\$37.92	\$13.41	\$14.82	\$0.00	\$66.15
	12/01/2021	\$37.92	\$13.41	\$16.01	\$0.00	\$67.34
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2018	\$50.88	\$7.85	\$15.95	\$0.00	\$74.68
	06/01/2019	\$51.88	\$7.85	\$15.95	\$0.00	\$75.68
	12/01/2019	\$52.88	\$7.85	\$15.95	\$0.00	\$76.68
	06/01/2020	\$53.87	\$7.85	\$15.95	\$0.00	\$77.67
	12/01/2020	\$54.85	\$7.85	\$15.95	\$0.00	\$78.65
	06/01/2021	\$55.87	\$7.85	\$15.95	\$0.00	\$79.67
	12/01/2021	\$56.88	\$7.85	\$15.95	\$0.00	\$80.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2018	\$52.88	\$7.85	\$15.95	\$0.00	\$76.68
	06/01/2019	\$53.88	\$7.85	\$15.95	\$0.00	\$77.68
	12/01/2019	\$54.88	\$7.85	\$15.95	\$0.00	\$78.68
	06/01/2020	\$55.87	\$7.85	\$15.95	\$0.00	\$79.67
	12/01/2020	\$56.85	\$7.85	\$15.95	\$0.00	\$80.65
	06/01/2021	\$57.87	\$7.85	\$15.95	\$0.00	\$81.67
	12/01/2021	\$58.88	\$7.85	\$15.95	\$0.00	\$82.68
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2018	\$42.95	\$7.85	\$15.95	\$0.00	\$66.75
	06/01/2019	\$43.95	\$7.85	\$15.95	\$0.00	\$67.75
	12/01/2019	\$44.95	\$7.85	\$15.95	\$0.00	\$68.75
	06/01/2020	\$45.94	\$7.85	\$15.95	\$0.00	\$69.74
	12/01/2020	\$46.92	\$7.85	\$15.95	\$0.00	\$70.72
	06/01/2021	\$47.94	\$7.85	\$15.95	\$0.00	\$71.74
	12/01/2021	\$48.95	\$7.85	\$15.95	\$0.00	\$72.75
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2018	\$44.95	\$7.85	\$15.95	\$0.00	\$68.75
	06/01/2019	\$45.95	\$7.85	\$15.95	\$0.00	\$69.75
	12/01/2019	\$46.95	\$7.85	\$15.95	\$0.00	\$70.75
	06/01/2020	\$47.94	\$7.85	\$15.95	\$0.00	\$71.74
	12/01/2020	\$48.92	\$7.85	\$15.95	\$0.00	\$72.72
	06/01/2021	\$49.94	\$7.85	\$15.95	\$0.00	\$73.74
	12/01/2021	\$50.95	\$7.85	\$15.95	\$0.00	\$74.75
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2018	\$34.64	\$11.91	\$12.70	\$0.00	\$59.25
	06/01/2019	\$35.64	\$11.91	\$12.70	\$0.00	\$60.25
	08/01/2019	\$35.64	\$12.41	\$12.70	\$0.00	\$60.75
	12/01/2019	\$35.64	\$12.41	\$13.72	\$0.00	\$61.77
	06/01/2020	\$36.54	\$12.41	\$13.72	\$0.00	\$62.67
	08/01/2020	\$36.54	\$12.91	\$13.72	\$0.00	\$63.17
	12/01/2020	\$36.54	\$12.91	\$14.82	\$0.00	\$64.27
	06/01/2021	\$37.34	\$12.91	\$14.82	\$0.00	\$65.07
	08/01/2021	\$37.34	\$13.41	\$14.82	\$0.00	\$65.57
	12/01/2021	\$37.34	\$13.41	\$16.01	\$0.00	\$66.76
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2018	\$38.90	\$7.85	\$15.35	\$0.00	\$62.10
	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2018	\$47.58	\$11.50	\$15.60	\$0.00	\$74.68
	06/01/2019	\$48.68	\$11.50	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.83	\$11.50	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.93	\$11.50	\$15.60	\$0.00	\$78.03
	12/01/2020	\$52.08	\$11.50	\$15.60	\$0.00	\$79.18
	06/01/2021	\$53.18	\$11.50	\$15.60	\$0.00	\$80.28
	12/01/2021	\$54.33	\$11.50	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
WATER METER INSTALLER <i>PLUMBERS & GASFITTERS LOCAL 12</i>	09/01/2018	\$55.69	\$11.82	\$16.01	\$0.00	\$83.52
	03/01/2019	\$57.19	\$11.82	\$16.01	\$0.00	\$85.02
	09/01/2019	\$58.69	\$11.82	\$16.01	\$0.00	\$86.52
	03/01/2020	\$60.19	\$11.82	\$16.01	\$0.00	\$88.02
	09/01/2020	\$61.69	\$11.82	\$16.01	\$0.00	\$89.52
	03/01/2021	\$63.19	\$11.82	\$16.01	\$0.00	\$91.02
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>	09/03/2017	\$27.14	\$7.75	\$1.81	\$0.00	\$36.70
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$38.45	\$7.75	\$9.53	\$0.00	\$55.73
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$31.66	\$7.75	\$9.44	\$0.00	\$48.85
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$24.88	\$7.75	\$1.75	\$0.00	\$34.38
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$38.45	\$7.75	\$13.61	\$0.00	\$59.81
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$33.92	\$7.75	\$10.21	\$0.00	\$51.88
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$24.88	\$7.75	\$1.75	\$0.00	\$34.38
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$20.35	\$7.75	\$1.61	\$0.00	\$29.71
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$45.23	\$7.75	\$16.61	\$0.00	\$69.59

Apprentice - LINEMAN (Outside Electrical) - East Local 104

Effective Date - 09/03/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$27.14	\$7.75	\$3.31	\$0.00	\$38.20
2	65	\$29.40	\$7.75	\$3.38	\$0.00	\$40.53
3	70	\$31.66	\$7.75	\$3.45	\$0.00	\$42.86
4	75	\$33.92	\$7.75	\$5.02	\$0.00	\$46.69
5	80	\$36.18	\$7.75	\$5.09	\$0.00	\$49.02
6	85	\$38.45	\$7.75	\$5.15	\$0.00	\$51.35
7	90	\$40.71	\$7.75	\$7.22	\$0.00	\$55.68

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/04/2019	\$30.73	\$4.70	\$3.17	\$0.00	\$38.60
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TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
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TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
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TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/31/2016	\$18.51	\$3.55	\$0.00	\$0.00	\$22.06
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This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is not on the ground. This classification does not apply to wholesale tree removal.

TREE TRIMMER GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/31/2016	\$16.32	\$3.55	\$0.00	\$0.00	\$19.87
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This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is on the ground. This classification does not apply to wholesale tree removal.

Additional Apprentice Information:

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

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

All steps are six months (1000 hours.)

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

** Multiple ratios are listed in the comment field.

*** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.

**** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.