

**EOHLC
#348178**

PROJECT MANUAL

MODERNIZATION OF STATE AIDED PUBLIC HOUSING

REAR DOOR AND LEAK REPAIRS



EOHLC

Massachusetts Executive Office of Housing and Livable Communities

STATE-AIDED DEVELOPMENT:

689-1 32 Oberlin Street
32 Oberlin Street
Worcester, MA 01610

WORCESTER HOUSING AUTHORITY

630 Plantation Street
Worcester, MA 01605
Telephone: 508-635-3302

BOARD MEMBERS

Joseph P. Carlson, Chairman
Joseph M. Capone, Vice Chairman
Jose Ramos, Treasurer
William J. Eddy, Member
Rane Bracey-Westbrook, Member
Alex Corrales, Chief Executive Officer

DATE: 02/24/2025

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PUBLIC NOTIFICATION FOR WRITTEN QUOTES

The **Worcester** Housing Authority, the Awarding Authority, invites written quotes from Contractors for the **Special Needs 689-1 32 Oberlin Street** Development for the **Worcester** Housing Authority in **Worcester** Massachusetts, in accordance with the documents prepared by **Worcester Housing Authority**.

The Project consists of: **Flooring, gypsum wallboard, and exterior door replacement due to water damage.**

The work is estimated to cost \$ **28,000.00**

Quotes are subject to M.G.L. c.149 §44A (2)(B) & to state prevailing wage rates as required by M.G.L. c.149 §§26 to 27H inclusive.

Written Quotes will be received until 2:00 **p.m., Thursday, March 27, 2025.**

All Quotes should be delivered to: **Worcester Housing Authority, via e-mail to Mod-Bids@worchesterha.org** and received no later than date and time specified above.

Contract Documents will be available at:

www.worcesterha.org/currentbids.html. *Documents may also be seen, but not removed, at the Worcester Housing Authority Department of Modernization, 630 Plantation Street, Worcester, MA 01605.)*

Contractors requesting Contract Documents to be mailed to them shall include a separate check for \$40 per set, payable to the Awarding Authority, to cover mail handling costs.

The job site and/or existing building will be available for inspection via appointment. Please email Mod-Bids@worchesterha.org to schedule.

INSTRUCTIONS TO BIDDER'S

ARTICLE 1 - BIDDER'S REPRESENTATION

- 1.1 Each Bidder (hereinafter called the "**Bidder**") by making a Quote (hereinafter called "**Quote**") represents that:
1. The Bidder has read and understands the Contract Documents and the Quote is made in accordance therewith.
 2. The Bidder has visited the site and is familiar with the local conditions under which the Work has to be performed.
- 1.2 Failure to so examine the Contract Documents and site will not relieve any Bidder from any obligation under the Quote as submitted.

ARTICLE 2 - BIDDER CERTIFICATIONS – OSHA & LEAD TRAINING

- 2.1 Massachusetts law requires all workers on this project construction site must have no less than 10 hours of OSHA-approved safety and health training.
- 2.2 The Contractor shall comply with requirements of EPA Regulation 40 CFR 745 including but not limited to Company, supervisor, and worker training.

ARTICLE 3 - MBE/WBE PARTICIPATION GOALS – NO REQUIREMENTS

ARTICLE 4 - REQUESTS FOR INTERPRETATION

- 4.1 Bidders shall promptly notify the Owner of any ambiguity, inconsistency, or error which they may discover upon examination of the Contract Documents, the site, and local conditions.
- 4.2 Bidders requiring clarification or interpretation of the Contract Documents shall make such request to the Owner.

ARTICLE 5 - PREPARATION AND SUBMISSION OF QUOTES

- 5.1 Quotes should be submitted on the "Form for Quotes" as appropriate, furnished at no cost by the Owner.
- 5.1.1 All entries on the Form for Quotes shall be made by typewriter or in ink.
- 5.1.2 Where so indicated on the Form for Quotes sums shall be expressed in both words and figures. Where there is a discrepancy between the Bid sum expressed in words and the Bid sum expressed in figures, the words shall control.
- 5.2 **Bid Deposits – No Requirements**
- 5.3 **Delivery of Quotes**
- 5.3.1 The Quote shall be submitted with the following clearly marked on the envelope, fax cover sheet, or email:
- QUOTE FOR:**
- **NAME OF HOUSING AUTHORITY AND PROJECT NUMBER**
 - **BIDDER'S NAME AND BUSINESS ADDRESS**
 - **PHONE NUMBER & CONTACT PERSON**
- 5.3.2 Date and time for receipt of Quotes is set forth in the Public Notification.
- 5.3.3 Timely delivery of a Quote at the location designated shall be the full responsibility of the Bidders.

ARTICLE 6 - ALTERNATES

- 6.1 Each General Bidder shall acknowledge Alternates in Section C on the Form for Quotes. Each General Bidder

shall acknowledge Alternates by listing the individual Alternate number in Section C on the Form for Quotes and enter the dollar amount of addition or subtraction necessitated by each Alternate listed in the corresponding space.

- 6.2** General Bidders shall enter on the Form for Quotes a single amount for each Alternate, the amount for work performed by the General Contractor.
- 6.3** In the event an Alternate does not involve a change in dollar value, the Bidder shall so indicate by listing the individual Alternate number and acknowledge the Alternate by inserting "No Change", "No Charge", "N/C" or "0" in the corresponding space provided for the dollar value of that Alternate.
- 6.4** The Low Bidder will be determined on the basis of the sum of the quote and the accepted alternates.

ARTICLE 7 - WITHDRAWAL OF QUOTES

7.1 Before Opening of Quotes

7.1.1 Any quote may be withdrawn prior to the time designated for receipt of quotes upon written request. Withdrawal of Quotes must be confirmed over the Bidder's signature by written notice post-marked or sent by email on or before the date and time set for receipt of Quotes.

7.1.2 Withdrawn quotes may be resubmitted up to the time designated for the receipt of Quotes.

7.2 After Opening of Quotes

7.2.1 Bidders may withdraw Quotes, without penalty, any time up to the time of Award as defined in paragraph 8.1, and upon demonstrating, to the satisfaction of the Housing Authority, that a bona fide clerical error was made during the preparation of the Quote.

7.3 In the event of a Quotes Withdrawal after Opening of Quotes, the Housing Authority shall consider the Quote from next lowest eligible and responsible bidder.

ARTICLE 8 - CONTRACT AWARD

8.1 **Award** means both the determination and selection of shall be awarded to the responsible person offering to perform the contract at the lowest price by the Owner.

8.2 As used herein, the term "responsible" shall mean the person:

8.2.1 Who demonstrably possessing the skill, ability and integrity necessary to faithfully perform the work called for by a particular contract, based upon a determination of competent workmanship and financial soundness in accordance with the provisions of M.G.L. c.149 (44)(d)

8.2.2 who shall certify, that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; and

8.2.3 who shall certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work, and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and

8.2.4 who, where the provisions of section 8B of chapter 29 apply, shall have been determined to be qualified thereunder; and

8.2.5 who is not debarred from bidding under M.G.L. c.149 §44C.

8.3 The Housing Authority reserves the right to waive any informalities in or to reject any or all Quotes if it be in the public interest to do so.

8.4 The Owner will award the contract to the lowest responsible within thirty days, Saturdays, Sundays, and legal holidays excluded, after the opening of quotes.

- 8.5** Bidder’s Attention is directed to 01.11.30 for any additional criteria that may be a condition of Award of this project.

ARTICLE 9 - FORMS REQUIRED AT CONTRACT APPROVAL

- 9.1** Upon award, the Bidder shall complete the following forms to ensure prompt contract validation. These forms will be provided to the Bidder by Owner, and three (3) originals must be submitted.
- .1 Owner-Contractor Agreement.**
 - .2 Form of Certificate of Vote of Authorization (If Applicable)**
 - .3 Form of Contractor's Equal Employment Certification** in accordance with Section 00.73.36 of the General Conditions.
 - .4 FOR PROJECTS with a bid/contract cost exceeding \$25,000: Form of Performance Bond and Form (00.61.13) and Form of Payment Bond (00.61.16)** must be submitted by the General Contractor on EOHL’s form, in accordance with the General Conditions. The dates on the bonds must coincide with the contract date, and a current Power-of-Attorney must be attached to each bond.
- 9.2 Insurance Certificates** for the coverage required by Article 9 of the General Provisions must be submitted prior to contract validation.
- General Contractors must indicate on Builders Risk insurance Certificate or installation floater if stored materials are covered.
- 9.3** Contractor’s Company Certification with EPA Regulation 40 CFR 745 must be submitted prior to contract validation.

ARTICLE 10 - CONTRACT VALIDATION

- 10.1** The Notice to Proceed for construction shall not be issued until the Owner/Contractor Agreement has been executed by the Contractor and the Awarding Authority.
- 10.2** Incomplete or unacceptable submissions of forms required by paragraphs **9.1 - 9.2** will delay the execution of the Owner/Contractor Agreement by the Awarding Authority.

**END OF SECTION INSTRUCTIONS TO BIDDERS
00.21.10**

FORM FOR QUOTES

TO THE AWARDING AUTHORITY: Worcester Housing Authority & EOHL # (348178)

A. The undersigned proposes to comply with all terms and conditions and furnish all labor and materials required to successfully complete the attached scope of work for the contract price specified below, subject to additions and deductions according to the terms of the specifications for the proposed contract price of: _____ dollars (\$ _____)

For Alternates: No. ____ Add \$ _____
 No. ____ Add\$ _____
 No. ____ Add\$ _____
 No. ____ Add\$ _____
 No. ____ Add\$ _____

B. This Quote includes Addendum No(s). _____

C. The undersigned hereby certifies that they are able to furnish labor that can work in harmony with all the other elements of labor employed or to be employed on the Work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that they will comply fully with all laws and regulations applicable to awards made subject to MGL. c.149 sec.44A-J.

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

E. Pursuant to M.G.L. c.62(c) §49(a), the individual signing this document on behalf of the Contractor, hereby certifies, under the penalties of perjury, that to the best of their knowledge and belief the Contractor has complied with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Name of Bidder

By:

Signature + Title of person signing Quote

Business Address

Date: _

City and State.

BIDDER'S CHECKLIST

**THIS CHECK LIST IS NOT PART OF THE FORM FOR QUOTE!
THIS FORM DOES NOT HAVE TO BE SUBMITTED WITH A QUOTE!**

To ensure that your bids are acceptable to the awarding authority and EOHLIC, and are not rejected due to mistakes, we are providing this Checklist for your convenience. It does not have to be included with a quote. If this checklist is submitted it is an informality that will not void the bid.

4.6. ALL BIDDERS

- 1. Have you used the appropriate quote form provided for this specific development?
- 2. Have you properly identified the development, architect (engineer), etc., on your quote form?
- 3. Do your quote amounts, as expressed in figures and words, coincide? The amount expressed in words shall control.
- 4. Have you added any information not called for, or acknowledged an addendum or alternate that does not exist, which would make your bid conditional or obscure, and lead to a bid protest?
- 5. Is your Quote Form **SIGNED** and dated?
- 6. **Bid Deposits are not required.**
- 7. **For BIDS/CONTRACTS exceeding \$25,000: 100% Performance and Payment Bonds are REQUIRED**
- 8. Have you acknowledged every alternate if applicable to this project?
- 9. If an alternate price is requested and you estimate that there is no change in price, did you indicate by writing "no change", "N/C" or "0"?

**Leaving this space blank, on your quote form, when alternates are requested,
may lead to rejection of your quote.**

- 10. Have you acknowledged all addenda issued, and followed the instructions contained therein?

This checklist is provided as guidance and assistance to bidders to avoid technical mistakes resulting in rejection of a quote. The full comprehensive instructions are located in section 00.21.30 Instructions to Bidders.

This in no way changes, affects, or supersedes the provisions set-forth in MGL c.149 §44A-J or c.30 §39m or any other sections or provisions contained in the contract documents.

THIS FORM DOES NOT HAVE TO BE SUBMITTED

BIDDER'S REFERENCE FORM

Provide with Form for Quotes

Bidders Name _____ Phone: () _____

LHA/Project Title: _____ Email: _____

The bidder must provide five (5) business references for projects performed & completed within the past five (5) years. Attach additional pages if necessary.

(1) Reference Name: _____ Phone: () _____

Address: _____ Email: _____

Description and date(s) of work: _____

(2) Reference Name: _____ Phone: () _____

Address: _____ Email: _____

Description and date(s) of work: _____

(3) Reference Name: _____ Phone: () _____

Address: _____ Email: _____

Description and date(s) of work: _____

(4) Reference Name: _____ Phone: () _____

Address: _____ Email: _____

Description and date(s) of work: _____

(5) Reference Name: _____ Phone: () _____

Address: _____ Email: _____

Description and date(s) of work: _____

References will be contacted to confirm the bidder's skills, abilities and qualifications to faithfully perform the work as specified. The Authority reserves the right to contact references not listed above. The Bidder will be given the opportunity to explain any unfavorable references received from such outreach.

OWNER-CONTRACTOR AGREEMENT

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF HOUSING AND LIVABLE COMMUNITIES

This agreement made the **NNth** day of **Month 20__** by and between _____ **Housing Authority** hereinafter called the "Owner", and _____ hereinafter called the "Contractor".
Contractor's Name

WITNESSETH, THAT THE OWNER AND THE CONTRACTOR, FOR THE CONSIDERATION HEREINUNDER NAMED, AGREE AS FOLLOWS:

ARTICLE 1. SCOPE OF WORK:

The Contractor shall perform all Work required by the Contract Documents for

Rear Door and Leak Repairs prepared by Worcester Housing Authority acting as and referred to in the Contract Documents as the "Architect/Engineer".

ARTICLE 2. TIME OF COMPLETION:

The Contractor shall commence work under this Contract on the date specified in the written "Notice to Proceed" and shall bring the Work to Substantial Completion within **NNN** calendar days of said date.

ARTICLE 3. CONTRACT SUM:

The Owner shall pay the Contractor, in current funds, for the performance of the Work, subject to additions and deductions by Change Order, of the Contract Sum of:

_____ **Dollars** _____
CONTRACT SUM IN WORDS CONTRACT SUM IN NUMBERS

ARTICLE 4. ALTERNATES:

The following Alternates have been accepted and their costs are included in the Contract Sum stated in Article 3 of this Agreement: Alternate No(s): _____ and total cost for accepted Alternates \$ ____

ARTICLE 5. THE CONTRACT DOCUMENTS:

The following, together with this Agreement, form the Contract and all are as fully a part of the contract as if attached to this Agreement or repeated herein: The Advertisement, Bidding Documents, Contract Forms, Conditions of the Contract, and Specifications as enumerated in the Table of Contents, the drawings as enumerated in the List of Contract Drawings, EOHLIC publication known as the Construction Handbook, and all Modifications issued after execution of the Contract. Terms used in this Agreement which are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.

ARTICLE 6. REAP CERTIFICATION:

Pursuant to M.G.L. c.62(c) §49(a), the individual signing this Contract on behalf of the Contractor, hereby certifies, under the penalties of perjury, that to the best of their knowledge and belief the Contractor has complied with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support

ARTICLE 7. WORKER DOCUMENTATION CERTIFICATION:

In accordance with Executive Order 481 the undersigned further certifies under the penalties of perjury that the Contractor shall not knowingly use undocumented workers in connection with the performance of this contract; that pursuant to federal requirements, the Contractor shall verify the immigration status of all workers assigned to such contract without engaging in unlawful discrimination; and that it shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker(s). The Contractor understands and agrees that breach of any of these terms during the contract period may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

ARTICLE 8. CONFLICT OF INTEREST:

The Contractor covenants, that (1) presently, there is no financial interest and shall not acquire any such interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement or which would violate M.G.L. c.268A, as amended; (2) in the performance of this Contract, no person having any such interest shall be employed by the Contractor or engaged as a subcontractor by the contractor; and (3) no partner or employee of the firm is related by blood or marriage to any Board Member or employee of the Awarding Authority."

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED UNDER SEAL.

¹ CONTRACTOR

Name of Contractor

Street

City State Zip

By: _____
Signature and Seal

Witness _____

¹ If a Corporation, attach a notarized copy of the Corporate Vote authorizing signatory to sign Contract.

² AWARDING AUTHORITY

Worcester Housing Authority

Name of Housing Authority

630 Plantation Street Worcester, MA 01605

Address

Signature and Seal

Title

Attest: _____

² If signed by someone other than a Housing Authority Board member, attach a copy of Certified Board Vote authorizing the signatory to sign Contract.

CERTIFICATE OF CORPORATE VOTE OF AUTHORIZATION

Date: _____ 20__

I hereby certify that a meeting of the Board of Directors of the:

NAME OF CORPORATION

duly called and held at _____ on the ___ day of _____ 20__

at which a quorum was present and acting, it was voted that _____

NAME OF CORPORATE OFFICER

of the _____, be and hereby is authorized to execute and deliver

NAME OF CORPORATION

for and on behalf of the Corporation, a Contract with _____ Housing Authority, for

work to be done at State-Aided Housing Development No. _____ in the City/Town of _____

And to act as principal to execute bonds in connection therewith, which Contract and Bonds were presented to and made part of the records of said meeting.

I further certify that _____ is duly qualified and acting

NAME OF CORPORATE OFFICER

_____ of the Corporation and that said vote has not been repealed,

TITLE

rescinded or amended.

A true copy of the record,

ATTEST: _____

(CORPORATE SEAL)

On this ___ day of _____ 20__, before me, the undersigned Notary Public, personally appeared _____, duly designated by the board of directors and proved to me, through satisfactory evidence of identification, which was _____, that s/he is the person whose name is signed on the foregoing documents, and acknowledged to me that s/he signed it voluntarily for its stated purpose and that it was her/his free act and deed.

Notary Public
My Commission Expires: _____

BOND NO. _____

PERFORMANCE BOND

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF HOUSING AND LIVABLE COMMUNITIES

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as **Principal**, and
_____, as **Surety**,
are held and firmly bound unto the _____ **HOUSING AUTHORITY**, as **Obligee**,
in the sum of _____ **dollars (\$ _____)**
to be paid to the Obligee, for which payments, well and truly to be made, we bind ourselves, our respective
heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said **Principal** has made a contract with the **Obligee**, bearing the date of _____, **20__**
for the _____ in _____, Massachusetts.

PROJECT TITLE

NOW, the condition of this obligation is such that if the **Principal** and all Subcontractors under said contract shall well and truly keep and perform all the undertakings, covenants, agreement, terms and conditions of said contract on its part to be kept and performed during the original term of said contract and any extensions thereof that may be granted by the Obligee, with or without notice to the **Surety**, and during the life and any guarantee required under the contract, and shall also well and truly keep and perform all the undertakings, covenants, agreements, terms and conditions of any and all duly authorized modifications, alterations changes or additions to said contract that may hereafter be made, notice to the **Surety** of such modifications, alterations, changes or additions being hereby waived, then this obligation shall become null and void; otherwise, it shall remain in full force and virtue.

IN THE EVENT, that the contract is abandoned by the **Principal**, or in the event that the Obligee, under the provisions of Article 19 of the General Conditions of said contract terminates the employment of the **Principal** or the authority of the **Principal** to continue the work, said **Surety** hereby further agrees that said **Surety** shall, if requested in writing by the Obligee, take such action as is necessary to complete said contract.

IN WITNESS WHEREOF, the **Principal** and **Surety** have hereunto set their hands and seals this:

_____ Day of _____ 20____

PRINCIPAL _____

SURETY _____

By: _____

By: _____

SEAL

ATTORNEY-IN FACT

Attest: _____

Attest: _____

The rate for this bond is _____% for the first \$ _____ and _____% for the next \$ _____

The total premium for this bond is \$ _____

BOND NO. _____

PAYMENT BOND

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF HOUSING AND LIVABLE COMMUNITIES

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as **Principal**, and
_____, as **Surety**,
are held and firmly bound unto the _____ **HOUSING AUTHORITY**, as **Obligee**,
in the sum of _____ **dollars (\$_____)**
to be paid to the Obligee, for which payments, well and truly to be made, we bind ourselves, our respective
heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said **Principal** has made a contract with the **Obligee**, bearing the date of _____, **20__**
for the _____ in _____, Massachusetts.
PROJECT TITLE

NOW the conditions of this obligation are such that if the **Principal** and all subcontractors under said contract shall pay for all labor performed or furnished and for all materials used or employed in said contract and in any and all duly authorized modifications, alterations, extensions of time, changes or additions to said contract that may hereafter be made, notice to the **Surety** of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, provisions of M.G.L. c.30 §39A, and M.G.L. c.149 §29, as amended, then this obligation shall become null and void; otherwise it shall remain in full force and virtue.

IN WITNESS WHEREOF, the **Principal** and **Surety** have hereunto set their hands and seals this:

_____ Day of _____ 20__

PRINCIPAL _____

SURETY _____

By: _____

By: _____

SEAL

ATTORNEY-IN FACT

Attest: _____

Attest: _____

The rate for this bond is _____% for the first \$_____ and _____% for the next \$_____

The total premium for this bond is \$_____

GENERAL CONDITIONS OF THE CONTRACT

for c.149 sec. 44A (2)(B) PROJECTS BETWEEN \$10,000 - \$50,000

ARTICLE 1 GENERAL PROVISIONS

1.1 THE CONTRACT DOCUMENTS

The Contract for Construction consists of the Contract Documents which include the Owner-Contractor Agreement, Public Notification, Bid Form, Contract Forms, Conditions of the Contract, Specifications, Drawings, all addenda issued prior to execution of the Contract, EOHLIC publication known as the [Construction Handbook](#), and other documents listed in the Agreement and Modifications issued after execution of the Contract.

1.2 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligation.

1.3 THE CONSTRUCTION HANDBOOK

The [Construction Handbook](#) is published by and available, free of charge, from EOHLIC. It outlines the procedures that the Contractor, Owner, Architect/Engineer, and EOHLIC shall follow during the construction of the Work. The most recent version, at the time of bid opening, of the [Construction Handbook](#) is incorporated by reference into the Contract Documents.

ARTICLE 2 OWNER

2.1 OWNER

The term "Owner" sometimes also referred to as the "Awarding Authority" or "Authority" means the Housing Authority identified in the Owner-Contractor Agreement, organized and existing under the provisions of M.G.L. c.121B.

2.2 BIDDER

The terms "Quote(s)", "Bid(s)" or "Bidder(s)" shall mean the person or firm from which prices have been submitted to the Owner for the work identified in these documents.

ARTICLE 3 EOHLIC

3.1 The term "EOHLIC" means the Commonwealth of Massachusetts, Executive Office of Housing and Livable Communities.

3.2 The term "Construction Advisor" means the person who may be designated by the Administrator to assist the Owner with the Administration of the Contract.

3.3 PROJECT FUNDING

The Work under this Contract is funded wholly or in part by the Commonwealth of Massachusetts through EOHLIC pursuant to a Contract for Financial Assistance between EOHLIC and the Owner.

ARTICLE 4 CONTRACTOR

4.1 The Contractor, sometimes referred to as the General Contractor, is the person or entity identified as such throughout the Contract Documents as if singular in number. The term Contractor means the Contractor or its authorized representative.

4.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work under the Contract.

4.2.2 Unless otherwise required by the Contract Documents, or directed in writing by the Owner, Work shall be done during regular working hours. However, if the Contractor desires to carry on the Work outside of regular working hours or on Saturdays, Sundays, or Massachusetts holidays it shall allow ample time to enable satisfactory arrangements to be

made for inspecting Work in progress and shall bear the costs of such inspection. The Owner shall bill the Contractor directly for such costs.

4.2.3 SUPERINTENDENT

4.2.3.1 The Contractor shall employ a Superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The Superintendent shall represent the Contractor, and communications given to the Superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case. The Superintendent shall attend each job meeting.

4.2.3.2 The Superintendent shall be a competent and responsible employee, satisfactory to the Owner, who is regularly employed by the Contractor and is designated by the Contractor as its representative to be in full time attendance at the Project site throughout the construction of the Work. The Superintendent shall be responsible for coordinating all the Work of the Contractor and the Subcontractors. The Superintendent shall be licensed consistent with the Massachusetts Building Code. The Superintendent's resume shall be submitted to the Owner prior to commencement of construction and must demonstrate to the Owner's reasonable satisfaction that the Superintendent has performed similar duties on previous construction projects similar to the Project.

4.3 SALES TAX EXEMPTION AND OTHER TAXES

4.3.1 To the extent that materials and supplies are used or incorporated in the performance of this Contract, the Contractor is considered an exempt purchaser under the Massachusetts Sales Act, Chapter 14 of the Acts of 1966.

4.3.2 The Contractor shall be responsible for paying all other taxes and tariffs of any sort, related to the work.

4.4 PERMITS, FEES, AND NOTICES

4.4.1 The Contractor shall secure and the Owner shall pay for any and all permits. The Contractor shall secure and pay for all licenses, and other fees required for the proper execution of the Work. The Contractor shall coordinate all efforts required to obtain these permits including having the permit issued in the name of the Contractor.

4.4.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work.

4.4.3 If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Owner, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs.

4.5 SAFETY REQUIREMENTS

The Contractor must comply with all Federal, State, and local safety laws and regulations applicable to work performed under this Contract.

4.6 PREVAILING WAGE RATES AND LABOR REGULATIONS

4.6.1 The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the Work shall not be less than the rate of wages in the attached "Minimum Wage Rates" as determined by the Commissioner of the Massachusetts Department of Labor Division of Occupational Safety. This schedule shall continue to be the minimum rate of wages for said employees during the life of this Contract. Any questions relative to the applicability of any wage rate shall be directed to the Division of Occupational Safety.

4.6.2 Keep a legible copy of said schedule posted on the site at all times. Provide the Owner, on a weekly basis by first class mail or by email, and keep an on-site file of the wage rates and classifications of labor employed on this Work in order that they may be available for inspection by the Owner, EOHL, Architect, or any agency having jurisdiction.

4.6.3 Pay reserve police officers employed on the Work the prevailing rate of wages paid to regular police officers as required by MGL c149 § 34B, as amended. Such police officers shall be covered by Worker's Compensation Insurance and Employers Liability Insurance provided by the Contractor.

4.6.4 The Contractor shall not have any claim for extra compensation from the Owner if the actual wages paid to employees on the Contract exceeds the rates listed on the Schedule.

4.6.5 WAGE RATE REPORTING

- .1 The Contractor and all subcontractors shall provide certified payroll affidavits verifying compliance with MGL c.149 §§26 - 27H.
- .2 The Contractor and all subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work. This statement shall be submitted to the Owner on the form found elsewhere in this section.

4.6.6 APPRENTICE REQUIREMENTS

Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council wherever rates for journeymen or apprentices are not listed.

4.6.7 EMPLOYEE OSHA SAFETY TRAINING

- .1 All employees who work on this construction site must have no less than 10 hours of OSHA-approved safety and health training.
- .2 The Contractor and all Subcontractors shall furnish to the Owner, with the certified payroll reports, documentation indicating that each employee has successfully completed 10 hours of a course in construction safety and health. This course must be approved by the United States Occupational Health and Safety Administration (OSHA).

ARTICLE 5 CONTRACT ADMINISTRATION

5.1 PRECONSTRUCTION CONFERENCE

Prior to commencement of the Work, the Contractor shall meet in conference with representatives of the Owner, to discuss and develop mutual understandings relative to administration of the quality assurance program, safety program, labor provisions, the schedule of work, and other Contract procedures.

5.2 REJECTION OF DEFECTIVE MATERIALS AND WORK

The Owner's inspection of the Work shall not relieve the Contractor of any of its responsibilities to fulfill the Contract obligations, and defective work shall be corrected. Unsuitable work may be rejected by the Owner, notwithstanding that such work and materials have been previously overlooked or misjudged by the Owner and accepted for payment. If the Work or any part thereof shall be found defective at any time before the final acceptance of the whole Work, the Contractor shall forthwith correct such defect in a manner satisfactory to the Owner, and if any material brought upon the site for use in the Work, or selected for the same, shall be rejected by the Owner as unsuitable or not in conformity with the Contract requirements, the Contractor shall forthwith remove such materials from the vicinity of the Work.

ARTICLE 6 CHANGES IN THE WORK

6.1 Changes in the Contract Sum shall be calculated in accordance with one or a combination of the following methods, as determined by the Architect:

- .1** Lump sum basis, provided the lump sum amount shall include the estimated cost of the change, broken down by Items **a** through **i** in the following Subparagraph **.3**.
- .2** Unit price basis, to be adjusted in accordance with contract unit prices, or other agreed upon unit prices provided that the unit prices shall be inclusive of all costs related to such equitable adjustment.
- .3** Time and materials basis, on a not-to-exceed predetermined upset amount determined by the Architect, to be subsequently adjusted on the basis of the Contractor's actual costs based on the following items **a** through **i**:
 - a.** Cost of labor at the rates found elsewhere in this document, including foremen;
 - b.** Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
 - c.** Rental cost of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others.
 - d.** A percent of the net increase or decrease of Item **a** to cover Worker's Compensation, F.I.C.A., and unemployment contributions.
 - e.** The percentage for Worker's Compensation in Item **d** above shall not exceed the standard manual rate for the involved trade, as set by the Worker's Compensation Rating and Inspection Bureau of Massachusetts. This rate shall not include any surcharges such as experience modifications and all risk factor adjustment programs, etc.

- f. For work performed by the Contractor's own forces, there shall be added an amount of 15% of items **a - d** for overhead, superintendence, and profit.
- g. For work performed by any Subcontractor, there shall be added an amount of 15% of the Subcontractor's costs for Items **a - d** for the Subcontractor's overhead, superintendence and profit. The Contractor shall be entitled to an additional 10% mark-up on the total amount of the Subcontractor's price as compensation for assuming full responsibility and supervision for the Subcontractor's work.
- h. Actual increases in the premium costs for performance and payment bonds required of the Contractor, provided there will be an appropriate credit for reduced premiums for a credit change order.
- i. On any change in the Contract Sum that involves a credit, the amount of the credit will not include an overhead and profit factor, however, the credit will include an amount for item **d**. which shall not be less than 25% of item **a**.

6.2 The method provided in Subparagraph 8.3.1, for compensating the Contractor and Subcontractors for changes in the Work, shall be considered to adequately compensate the Contractor and Subcontractors for any and all costs directly, indirectly, or consequentially related to, or caused by, such change in the work.

ARTICLE 7 PAYMENTS

7.1 CONTRACT SUM

The Contract Sum is stated in the Owner-Contractor Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

7.2 APPLICATIONS FOR PAYMENT

7.2.1 Once each month, on a date established at the beginning of the Work, the Contractor shall deliver to the Owner an itemized Application for Payment, supported by such data substantiating the Contractor's right to payment as the Owner may require, and reflecting a minimum of 5% retainage until the final acceptance and payment by the Owner.

7.2.2 The Owner shall make payment to the Contractor within 30 days of receipt of said application, less any applicable retainage.

7.2.3 The Owner may make changes in any application for payment submitted by the Contractor for:

- .1 Retention based on the value of its claims against the Contractor,
- .2 Retention of 5% of the approved amount of the Application for Payment.

7.3 FINAL PAYMENT

The acceptance by the Contractor of the last payment due under this Contract or the execution of the Final Certificate of Completion, shall operate as a release to the Owner from all claims and liability related to this Contract.

ARTICLE 8 GUARANTY AND WARRANTY

8.1 WARRANTY

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment furnished. The Owner reserves the right to reject said substituted materials even after requesting evidence.

8.2 GENERAL GUARANTY

If at any time during the period of one (1) year from the date of the Substantial Completion the Work to be performed under this Contract, or any part of the Work shall, in the reasonable determination of the Owner, require replacing or repairing due to the fact that it is broken, defective, or otherwise does not conform to the Contract Documents, the Owner will notify the Contractor to make the required repairs or replacement. If the Contractor shall neglect to commence such repairs or replacement to the satisfaction of the Owner within ten (10) days from the date of giving or mailing such notice, then the Owner may employ other persons to make said repairs or replacements. The Contractor agrees, upon demand, to pay to the Owner all amounts which the Owner expends for such repairs or replacements. During this one year guarantee period any corrective work shall be performed in accordance with the applicable terms of

this Contract. For items of work completed after substantial completion, the one year guarantee shall commence at the time the Owner accepts such items. This one year guarantee shall not limit any express guaranty or warranty provided elsewhere in the Contract.

ARTICLE 9 INSURANCE REQUIREMENTS

The Contractor shall provide insurance coverage as listed in subparagraphs 9.1 - 9.7. This insurance shall be provided at the Contractor's expense and shall be in full force and effect during the full term of this contract.

9.1 WORKERS' COMPENSATION and EMPLOYERS LIABILITY

| | | |
|------------------------|------------|---|
| Workers' Compensation: | Coverage A | Per G.L. c149 §34 and c152, as amended. |
| Employer's liability: | Coverage B | \$500,000 Bodily Injury by Accident each accident |
| | | \$500,000 Bodily Injury by Disease each employee |
| | | \$500,000 Bodily Injury by Disease policy limit |

9.2 COMMERCIAL GENERAL LIABILITY

Contractor shall provide to the Owner the "Commercial General Liability" policy form CG0001, or the exact equivalent with the limits of no less than:

| | |
|---|-------------|
| Each Occurrence | \$1,000,000 |
| General Aggregate | \$1,000,000 |
| Products-Completed Operations Aggregate | \$1,000,000 |
| Personal Injury & Advertising Injury | \$1,000,000 |
| Damages to Premises Rented by You- | |
| Not Specified Medical Expenses | \$5,000 |

Additional insured coverage for the Commercial General Liability policy should apply to both ongoing and completed operations with endorsements at least as broad as forms CG2010 0413, CG2038 0423 and CG2037 0412.

9.3 AUTOMOBILE LIABILITY

Contractor shall provide automobile liability coverage for owned, non-owned, and hired autos using ISO Business Auto Coverage form CA0001, or the exact equivalent. If contractor owns no vehicles, this requirement may be met through a non-owned endorsement to the Commercial General Liability.

| | |
|-----------------|-----------------------------------|
| Bodily Injury | \$500,000 each person |
| | \$1,000,000 each accident |
| Property Damage | \$500,000 each accident |
| | or |
| | \$1,000,000 combined single limit |

9.4 POLLUTION/ABATEMENT CONTRACTORS

The policy shall:

- .1 Be written on a "true" occurrence basis without any "sunset" clause;
- .2 Have the pollution exclusion amended to add back coverage for all pollution claims;
- .3 Include separate products and completed operations coverage, which shall be maintained for (2) years after Substantial Completion, as defined by G.L 30 §39G; and
- .4 Provide the following limits of insurance:

| | |
|---|-------------|
| Each occurrence | \$1,000,000 |
| General Aggregate | \$2,000,000 |
| Products-Completed Operations Aggregate | \$2,000,000 |
| Personal Injury & Advertising Injury | \$1,000,000 |
| Damage to Premises Rented by You | \$50,000 |
| Medical Expense | \$5,000 |

9.5 OWNER AS CO-INSURED

The Owner, EOHLIC and where applicable, the Owner's Regional Capital Assistance Team (RCAT) as described in G.L. 121B, §26C or other agent, shall be named as additional insureds on the Contractor's liability policies. Coverage should apply on a primary and non-contributory basis.

9.6 CERTIFICATES OF INSURANCE, POLICIES

9.6.1 The Contractor shall not commence work on this contract until proof of compliance with this article has been furnished to the Owner by submitting one copy of a properly endorsed insurance certificate issued by a company authorized to write insurance in the Commonwealth. This certificate shall indicate that the Contractual Liability Coverage is in force.

9.6.2 The Contractor shall file the original and one certified copy of all policies with the Owner within sixty days after Contract award. If the Owner is damaged by the Contractor's failure to maintain such insurance and to so notify the Owner, then the Contractor shall be responsible for all reasonable costs attributable thereto.

9.7 CANCELLATION

Cancellation of any insurance required by this contract, whether by the insurer or the insured, shall not be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the Owner at least thirty days prior to the effective date thereof, which shall be expressed in said notice.

ARTICLE 10 INDEMNIFICATION

10.1 The Contractor shall take all responsibility for the Work and take all precautions for preventing injuries to persons and property in or about the Work and shall bear all losses resulting to or on account of the amount or character of the Work. The Contractor shall pay or cause payment to be made for all labor performed or furnished and for all materials used or employed in carrying out this Contract.

10.2 The Contractor shall assume the defense of, and indemnify and save harmless the Owner, EOHLIC, the Owner's Regional Capital Assistance Team (RCAT) as described in M.G.L. 121B, §26C or other agent, from all claims:

- .1 relating to labor performed or furnished and materials used or employed for the Work;
- .2 to inventions, patents and patent rights used in and in doing the Work unless such patent infringement is due to a product or process specified by the Owner;
- .3 to injuries to any person or corporation received or sustained by or from the Contractor and any employees, and subcontractors and employees, in doing the Work, or in consequence of any improper materials, implements or labor used or employed therein;
- .4 and to any act, omission or neglect of the Contractor and any employees therein.

ARTICLE 11 PERFORMANCE AND PAYMENT BONDS

11.1 CONTRACTOR BONDS

11.1.1 For Contracts exceeding \$25,000, the Contractor shall provide the Owner with a 100% performance and payment (labor and materials) bonds in the form provided by EOHLIC, executed by a surety licensed by the Commonwealth's Division of Insurance. Each such bond shall be in the amount of the Contract Sum.

11.1.2 If at any time prior to final payment to the Contractor, the Surety:

- .1 is adjudged bankrupt or has made a general assignment for the benefit of its creditors;
- .2 has liquidated all assets and has made a general assignment for the benefit of its creditors;
- .3 is placed in receivership;
- .4 otherwise petitions a state or federal court for protection from its creditors; or
- .5 allows its license to do business in Massachusetts to lapse or be revoked;

the Contractor shall, within 21 days of any such action listed above, provide the Owner with new performance and payment bonds as described in Paragraph 11.1.1. Such bonds shall be provided solely at the Contractor's expense.

ARTICLE 12 MISCELLANEOUS REQUIREMENTS AND EXECUTIVE ORDERS

12.1 The Contractor shall comply with the provisions of EPA Regulation 40 CFR 745; M.G.L. c.151B; Executive Order 526, Order regarding Non-Discrimination, Diversity, Equal Opportunity, and Affirmative Action; pertaining to minority and women owned business enterprises; Executive Order 527 establishing the Office of Access and Opportunity and Executive

Order 481, prohibiting the use of undocumented workers on state contracts and all regulations promulgated pursuant thereto. The aforementioned law, executive orders, regulations and any amendments are incorporated herein by reference and made a part of this Contract.

12.2 CONFLICT OF INTEREST

The Contractor covenants, that:

- .1 presently, there is no financial interest and shall not acquire any such interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement or which would violate M.G.L. c.268A, as amended;
- .2 in the performance of this Contract, no person having any such interest shall be employed by the Contractor or engaged as a subcontractor by the contractor; and
- .3 no partner or employee of the firm is related by blood or marriage to any Board Member or employee of the Awarding Authority."

ARTICLE 13 TERMINATION

13.1 TERMINATION FOR CAUSE

13.1.1 The Owner may terminate this contract for cause if it determines that any of the following circumstances have occurred:

- .1 The Contractor is adjudged bankrupt or has made a general assignment for the benefit of its creditors.
- .2 A receiver has been appointed of the Contractor's property.
- .3 All or a part of the Work has been abandoned.
- .4 The Contractor has sublet or assigned all or any portion of the Work, the Contract, or claims thereunder, without the prior written consent of the Owner, except as provided in the Contract Documents.
- .5 The Owner has determined that the rate of progress required on the project is not being met.
- .6 The Contractor has substantially violated any provisions of this Contract.

13.1.2 The Owner may complete the work, or any part thereof, and charge its expense of so completing the work or part thereof, to the Contractor.

13.1.3 The Owner may take possession of and use any materials, machinery, implements and tools found upon the site of said Work. The Owner shall not be liable for any depreciation, loss or damage to said materials, machinery, implements or tools during said use and the Contractor shall be solely responsible for their removal from the Project site after the Owner has no further use for them.

13.3 TERMINATION - NO FAULT

13.3.1 In the event that this Contract is terminated by the Owner, prior to the completion of construction and termination is not based on a reason listed in Paragraph 13.1, the Contractor shall be compensated for its costs incurred, including reasonable costs of de-mobilization, calculated on a percent completion basis covering the period of time between the last approved application for payment and the date of termination.

13.3.2 Payment by the Owner pursuant to Subparagraph 13.3.1 shall be considered to fully compensate the Contractor for all claims and expenses and those of any consultants, subcontractors, and suppliers, directly or indirectly attributable to the termination, including any claims for lost profits.

END OF GENERAL CONDITIONS

00.72.10

SECTION 00.73.36

EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

1. DEFINITIONS

For purposes of this Section 00.73.36, the following additional definitions shall apply:

- A.** "Minority" means a person who meets one or more of the following definitions:
 - (1.)** American Indian or Native American means: all persons having origins in any of the original peoples of North America and who are recognized as an Indian by a tribe or tribal organization.
 - (2.)** Asian means: All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian sub-continent, or the Pacific Islands, including, but Not limited to China, Japan, Korea, Samoa, India, and the Philippine Islands.
 - (3.)** Black means: All persons having origins in any of the Black racial groups of Africa, including, but not limited to, African-Americans, and all persons having origins in any of the original peoples of the Cape Verdean Islands.
 - (4.)** Eskimo or Aleut means: All persons having origins in any of the peoples of Northern Canada, Greenland, Alaska, and Eastern Siberia.
 - (5.)** Hispanic means: All persons having their origins in any of the Spanish-speaking peoples of Mexico, Puerto Rico, Cuba, Central or South America, or the Caribbean Islands.
- B.** "Commission" or "MCAD" means the Massachusetts Commission against Discrimination.
- C.** "E.E.O. Officer" or Equal Employment Opportunity Officer means those persons designated by the Contractor, the Owner, or any other agency or party having jurisdiction under this contract, that serve in a capacity to implement this Section.

2. CONDITIONS

- A.** The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age, handicap, or sex. The aforesaid provision shall include, but not be limited to, the following: employment upgrading, demotion or transfer; recruitment advertising; recruitment layoff; termination; rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship.
- B.** The Contractor shall post notices provided by the Commission, in conspicuous places, setting forth the provisions of the Fair Employment Practices Law of the Commonwealth.
- C.** The Contractor shall undertake in good faith affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, age, handicap, or sex, and to eliminate and remedy any effects of such discrimination in the past. Such affirmative action shall entail positive and aggressive measures to ensure equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, and in-service or apprenticeship training programs. This affirmative action shall include all action required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, age or sex.
- D.** The Contractor shall not discriminate on grounds of race, color, religious creed, national origin, age, or sex in employment practices, in the selection or retention of Subcontractors, or in the procurement of materials and rentals of equipment.
- E.** The Commission and a designee of the Owner shall have access to the construction site and all applicable records of the Contractor and Subcontractors.

- F. The Contractor's EEO Certificate must be signed by the low general and all filed sub-bidders as a condition of Contract validation by EOHLIC.

3. MINORITY GOAL **MINIMUM MINORITY PERCENTAGES**

- A. Pursuant to his/her obligations under the preceding section, the Contractor shall strive to achieve on this project the labor participation goals contained herein

The participation goals for this project shall be 15.3% for minorities and 6.9% for women.

- B. The participation goals, as set forth herein, shall not be construed as quotas or set-asides; rather, such participation goals will be used to measure the progress of the Commonwealth's equal opportunity, non-discrimination and affirmative action program. Additionally, the participation goals contained herein should not be seen or treated as a floor or as a ceiling for the employment of particular individuals or group of individuals.
- C. Such job categories shall include but not be limited to those "Classes of Work" enumerated in M.G.L. c.149 §44F and for trades covered by Item 1 of the Contractor's bid.
- D. These percentages shall apply to the Contractor and to all Subcontractors, regardless of tier, for all on-site Work.

4. REFERRALS

- A. In the hiring of minority journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals from a multi-employer affirmative action program approved by EOHLIC or the Commission; and traditional referral methods utilized by the construction industry, where such referrals are needed to meet minority hiring requirements. The Contractor shall keep accurate records of such requests for referrals.
- B. Records of employment referral orders, prepared by the Contractor, shall be made available to the Owner and to EOHLIC upon request.

5. EEO WORK FORCE REPORTING PROCEDURES

- A. The Contractor shall provide the following information to the Owner on copies of the forms found at the end of this Section.

(1.) Weekly Manpower Reports 00.73.36.04: The Contractor shall prepare a report after each week of activity, reflecting the actual working hours of all personnel identified as minority or non-minority.

- (a) This report shall be received by the Owner no later than the Friday following the week reported.
- (b) Failure to provide information shall result in sanctions as provided in this section.

6. COMPLIANCE - REPORTS AND INFORMATION

- A. The Contractor shall provide all information and reports required by the Owner or EOHLIC and will permit access to its facilities and to any books, records, accounts and other sources of information which may be determined by the Owner or EOHLIC to affect the employment of personnel. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Owner or EOHLIC as appropriate and shall set forth what efforts have been made to obtain the information.

7. COMPLIANCE - INVESTIGATIONS

- A.** Whenever the Owner's EEO Officer, the MCAD, or EOHLC believes the Contractor may not be operating in compliance with the terms of these requirements, EOHLC shall conduct an investigation, and may confer with the parties, to verify such allegations. EOHLC shall not initiate an investigation without prior notice to the Contractor.
- B.** If EOHLC finds the Contractor in non-compliance, it shall make a preliminary report, and notify the Contractor in writing of the steps necessary to bring such Contractor into compliance. A copy of this report shall be sent to EOHLC's Affirmative Action Officer.

8. COMPLIANCE – EPHLC - AFFIRMATIVE ACTION INVESTIGATION

- A.** If the Contractor fails or refuses to fully perform the steps necessary to achieve compliance, EOHLC shall make a report of non-compliance to EOHLC's Affirmative Action Officer, who will then conduct an investigation.
- B.** Should EOHLC's Affirmative Action Officer find the Contractor in non-compliance a final report recommending the imposition of one or more of the sanctions listed below shall be issued.
- C.** Within fifteen (15) days of said report EOHLC shall, after due notice and giving the Contractor an opportunity to respond, move to impose one or more of the following sanctions to attain compliance.
- D.** If EOHLC's Affirmative Action Office believes the Contractor has taken or is taking every possible measure to achieve compliance, a report shall show the Contractor is in compliance.

9. SANCTIONS

- A.** For each week that the Contractor fails or refuses to comply, EOHLC may recover from the Contractor, 1/100 of 1% of the original Contract Sum or \$1000 whichever sum is greater, in the nature of liquidated damages.
- B.** If a Subcontractor is in non-compliance, EOHLC may recover from the Contractor, 1/10 of 1% of the Subcontract Sum, or \$400 whichever sum is greater, in the nature of liquidated damages, to be assessed by the Contractor as a back charge against the Subcontractor for each week that Subcontractor fails or refuses to comply.
- C.** The Owner may suspend part or all of any payment due under the contract until such time as the Contractor or any Subcontractor is able to demonstrate compliance with the terms of the Contract;
- D.** The Owner may terminate, or cancel part or all of the Contract, in accordance with the provisions of Article 19 of the General Conditions, unless the Contractor or any Subcontractor is able to demonstrate, within a specified time, compliance with the terms of the Contract.
- E.** The Contractor may request EOHLC and Owner to suspend the sanctions conditionally. Whereupon EOHLC shall investigate corrective measures taken by the Contractor and shall either lift or re-impose the sanctions.

10. SEVERABILITY

- A.** The provisions of this section are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions of the Contract.

END OF EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

00.73.36

FORM OF CONTRACTOR'S EQUAL EMPLOYMENT CERTIFICATION

Commonwealth of Massachusetts
Executive Office of Housing and Livable Communities

This form must be completed and submitted by the Contractor prior to the signing of the Owner-Contractor Agreement.

This certifies that:

Contractor

Street Address

4.6. City/State/Zip Code

1. Intends to use the following listed construction trades in the work under this contract:

2. Will comply with the minority manpower ratio and specific affirmative action steps contained in Section 00.73.36 of this Contract; and

3. Will obtain similar certifications from each of its subcontractors and submit to the Owner prior to the award of any subcontract under this contract the subcontractor's certification.

SIGNATURE OF AUTHORIZED REPRESENTATIVE OF CONTRACTOR

NAME AND TITLE

DATE



**Massachusetts Executive Office of
Housing and Livable Communities**

EEO CONTRACTOR'S WEEKLY MANPOWER REPORT

_____ Housing Authority Development No. _____ Contract Amount \$ _____
 General Contractor: _____ **Minority Participation Goal 15.3%** **Women Participation Goal 6.9%**
 Name of Contractor Filing Report: _____ Trade(s): _____
 Week Ending: _____ Report No.: _____ Check Here if you are a non-filed Subcontractor
 Check Here if this is a Final Report Date Work Began: _____ Date Work Completed _____

| Job Category | # of Employees | Weekly Total Manhours | Total Manhours to Date | # of Minorities | Weekly Total Minority Manhours | Weekly % Minority Manhours | # of Women | Weekly Total Women Manhours | Weekly % Women Manhours | Total Manhours to Date | Total Minority Manhours to Date | % of Minority Manhours to Date | Total Women Manhours to Date | % of Women Manhours to Date |
|--------------|----------------|-----------------------|------------------------|-----------------|--------------------------------|----------------------------|------------|-----------------------------|-------------------------|------------------------|---------------------------------|--------------------------------|------------------------------|-----------------------------|
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Mail Reports to: Awarding Authority Prepared by: _____
 Title: _____
 Date: _____ 20____

SECTION 00.73.43 PREVAILING WAGES and LABOR REGULATIONS

4.1 PREVAILING WAGE RATES

- 4.6.1** The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the Work shall not be less than the rate of wages in the attached "Minimum Wage Rates" as determined by the Commissioner of the Massachusetts Department of Labor Division of Occupational Safety. This schedule shall continue to be the minimum rate of wages for said employees during the life of this Contract. Any questions relative to the applicability of any wage rate shall be directed to the Division of Occupational Safety.
- 4.6.1** Keep a legible copy of said schedule posted on the site at all times. Provide the Owner, on a weekly basis, and keep an on-site file of the wage rates and classifications of labor employed on this Work in order that they may be available for inspection by the Owner, EOHL, Architect, or any agency having jurisdiction.
- 4.6.1** Pay reserve police officers employed on the Work the prevailing rate of wages paid to regular police officers as required by MGL c149 § 34B, as amended. Such police officers shall be covered by Worker's Compensation Insurance and Employers Liability Insurance provided by the Contractor.

4.2 WAGE RATE REPORTING

- 4.6.1** The Contractor and all subcontractors shall provide certified payroll affidavits verifying compliance with MGL c.149 §§26 - 27H.
- 4.6.1** The Contractor and all subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work. This statement shall be submitted to the Owner on the form found elsewhere in this section.
- 4.6.1** [Weekly Payroll Form](http://www.mass.gov/lwd/docs/dos/prevaling-wage/pw-payroll.pdf) www.mass.gov/lwd/docs/dos/prevaling-wage/pw-payroll.pdf
- 4.6.1** [Statement of Compliance](http://www.mass.gov/lwd/docs/dos/prevaling-wage/pw-compliance.pdf) www.mass.gov/lwd/docs/dos/prevaling-wage/pw-compliance.pdf

4.3 APPRENTICE REQUIREMENTS

Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council wherever rates for journeymen or apprentices are not listed.

4.4 EMPLOYEE OSHA SAFETY TRAINING

- 4.6.1** All employees who work on this construction site must have no less than 10 hours of OSHA-approved safety and health training. See Chapter 306 of the Acts of 2004.
- 4.6.1** The Contractor and all Subcontractors shall furnish to the Owner, with the certified payroll reports, documentation indicating that each employee has successfully completed 10 hours of a course in construction safety and health. This course must be approved by the United States Occupational Health and Safety Administration (OSHA).

**INSERT WAGE RATES OBTAINED FROM
Department of Labor, Division of Occupational Safety**

**END OF PREVAILING WAGE AND LABOR REGULATION
00.73.43**



MAURA HEALEY
Governor

KIM DRISCOLL
Lt. Governor

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

Prevailing Wage Rates

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

LAUREN JONES
Secretary

MICHAEL FLANAGAN
Director

Awarding Authority: Worcester Housing Authority
Contract Number: 348178 **City/Town:** WORCESTER
Description of Work: Flooring, gypsum wallboard, and exterior door replacement due to water damage
Job Location: 32 Oberlin Street Worcester MA

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

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

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|---------------------------|------------|
| Construction | | | | | | |
| (2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i> | 01/01/2025 | \$39.95 | \$15.57 | \$20.17 | \$0.00 | \$75.69 |
| | 06/01/2025 | \$40.95 | \$15.57 | \$20.17 | \$0.00 | \$76.69 |
| | 12/01/2025 | \$40.95 | \$15.57 | \$21.78 | \$0.00 | \$78.30 |
| | 01/01/2026 | \$40.95 | \$16.17 | \$21.78 | \$0.00 | \$78.90 |
| | 06/01/2026 | \$41.95 | \$16.17 | \$21.78 | \$0.00 | \$79.90 |
| | 12/01/2026 | \$41.95 | \$16.17 | \$23.52 | \$0.00 | \$81.64 |
| | 01/01/2027 | \$41.95 | \$16.77 | \$23.52 | \$0.00 | \$82.24 |
| (3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i> | 01/01/2025 | \$40.02 | \$15.57 | \$20.17 | \$0.00 | \$75.76 |
| | 06/01/2025 | \$41.02 | \$15.57 | \$20.17 | \$0.00 | \$76.76 |
| | 12/01/2025 | \$41.02 | \$15.57 | \$21.78 | \$0.00 | \$78.37 |
| | 01/01/2026 | \$41.02 | \$16.17 | \$21.78 | \$0.00 | \$78.97 |
| | 06/01/2026 | \$42.02 | \$16.17 | \$21.78 | \$0.00 | \$79.97 |
| | 12/01/2026 | \$42.02 | \$16.17 | \$23.52 | \$0.00 | \$81.71 |
| | 01/01/2027 | \$42.02 | \$16.77 | \$23.52 | \$0.00 | \$82.31 |
| (4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i> | 01/01/2025 | \$40.14 | \$15.57 | \$20.17 | \$0.00 | \$75.88 |
| | 06/01/2025 | \$41.14 | \$15.57 | \$20.17 | \$0.00 | \$76.88 |
| | 12/01/2025 | \$41.14 | \$15.57 | \$21.78 | \$0.00 | \$78.49 |
| | 01/01/2026 | \$41.14 | \$16.17 | \$21.78 | \$0.00 | \$79.09 |
| | 06/01/2026 | \$42.14 | \$16.17 | \$21.78 | \$0.00 | \$80.09 |
| | 12/01/2026 | \$42.14 | \$16.17 | \$23.52 | \$0.00 | \$81.83 |
| | 01/01/2027 | \$42.14 | \$16.77 | \$23.52 | \$0.00 | \$82.43 |
| ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 2)</i> | 08/01/2024 | \$117.16 | \$10.08 | \$24.29 | \$0.00 | \$151.53 |
| For apprentice rates see "Apprentice- PILE DRIVER" | | | | | | |
| AIR TRACK OPERATOR <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.61 | \$9.65 | \$17.70 | \$0.00 | \$67.96 |
| | 06/01/2025 | \$42.00 | \$9.65 | \$17.70 | \$0.00 | \$69.35 |
| | 12/01/2025 | \$43.38 | \$9.65 | \$17.70 | \$0.00 | \$70.73 |
| | 06/01/2026 | \$44.82 | \$9.65 | \$17.70 | \$0.00 | \$72.17 |
| | 12/01/2026 | \$46.26 | \$9.65 | \$17.70 | \$0.00 | \$73.61 |
| | 06/01/2027 | \$47.71 | \$9.65 | \$17.70 | \$0.00 | \$75.06 |
| | 12/01/2027 | \$49.16 | \$9.65 | \$17.70 | \$0.00 | \$76.51 |
| | 06/01/2028 | \$50.66 | \$9.65 | \$17.70 | \$0.00 | \$78.01 |
| | 12/01/2028 | \$52.16 | \$9.65 | \$17.70 | \$0.00 | \$79.51 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.61 | \$9.65 | \$17.80 | \$0.00 | \$68.06 |
| | 06/01/2025 | \$42.00 | \$9.65 | \$17.80 | \$0.00 | \$69.45 |
| | 12/01/2025 | \$43.38 | \$9.65 | \$17.80 | \$0.00 | \$70.83 |
| | 06/01/2026 | \$44.82 | \$9.65 | \$17.80 | \$0.00 | \$72.27 |
| | 12/01/2026 | \$46.26 | \$9.65 | \$17.80 | \$0.00 | \$73.71 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" | | | | | | |
| ASBESTOS WORKER (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (WORCESTER)</i> | 12/01/2024 | \$42.80 | \$14.50 | \$11.05 | \$0.00 | \$68.35 |
| | 06/01/2025 | \$43.80 | \$14.50 | \$11.05 | \$0.00 | \$69.35 |
| | 12/01/2025 | \$44.80 | \$14.50 | \$11.05 | \$0.00 | \$70.35 |

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|---|-----------------------|------------------|---------------|----------------|----------------------------------|-------------------|
| ASPHALT RAKER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| | 12/01/2028 | \$51.66 | \$9.65 | \$17.70 | \$0.00 | \$79.01 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.80 | \$0.00 | \$67.56 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.80 | \$0.00 | \$68.95 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.80 | \$0.00 | \$70.33 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.80 | \$0.00 | \$71.77 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.80 | \$0.00 | \$73.21 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" | | | | | | |
| ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$57.03 | \$15.55 | \$16.50 | \$0.00 | \$89.08 |
| | 06/01/2025 | \$58.33 | \$15.55 | \$16.50 | \$0.00 | \$90.38 |
| | 12/01/2025 | \$59.78 | \$15.55 | \$16.50 | \$0.00 | \$91.83 |
| | 06/01/2026 | \$61.08 | \$15.55 | \$16.50 | \$0.00 | \$93.13 |
| | 12/01/2026 | \$62.53 | \$15.55 | \$16.50 | \$0.00 | \$94.58 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$57.03 | \$15.55 | \$16.50 | \$0.00 | \$89.08 |
| | 06/01/2025 | \$58.33 | \$15.55 | \$16.50 | \$0.00 | \$90.38 |
| | 12/01/2025 | \$59.78 | \$15.55 | \$16.50 | \$0.00 | \$91.83 |
| | 06/01/2026 | \$61.08 | \$15.55 | \$16.50 | \$0.00 | \$93.13 |
| | 12/01/2026 | \$62.53 | \$15.55 | \$16.50 | \$0.00 | \$94.58 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| | 12/01/2028 | \$51.66 | \$9.65 | \$17.70 | \$0.00 | \$79.01 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|--------|---------|---------------------------|------------|
| BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.61 | \$9.65 | \$17.70 | \$0.00 | \$67.96 |
| | 06/01/2025 | \$42.00 | \$9.65 | \$17.70 | \$0.00 | \$69.35 |
| | 12/01/2025 | \$43.38 | \$9.65 | \$17.70 | \$0.00 | \$70.73 |
| | 06/01/2026 | \$44.82 | \$9.65 | \$17.70 | \$0.00 | \$72.17 |
| | 12/01/2026 | \$46.26 | \$9.65 | \$17.70 | \$0.00 | \$73.61 |
| | 06/01/2027 | \$47.71 | \$9.65 | \$17.70 | \$0.00 | \$75.06 |
| | 12/01/2027 | \$49.16 | \$9.65 | \$17.70 | \$0.00 | \$76.51 |
| | 06/01/2028 | \$50.66 | \$9.65 | \$17.70 | \$0.00 | \$78.01 |
| | 12/01/2028 | \$52.16 | \$9.65 | \$17.70 | \$0.00 | \$79.51 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.61 | \$9.65 | \$17.80 | \$0.00 | \$68.06 |
| | 06/01/2025 | \$42.00 | \$9.65 | \$17.80 | \$0.00 | \$69.45 |
| | 12/01/2025 | \$43.38 | \$9.65 | \$17.80 | \$0.00 | \$70.83 |
| | 06/01/2026 | \$44.82 | \$9.65 | \$17.80 | \$0.00 | \$72.27 |
| | 12/01/2026 | \$46.26 | \$9.65 | \$17.80 | \$0.00 | \$73.71 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" | | | | | | |
| BOILER MAKER <i>BOILERMAKERS LOCAL 29</i> | 01/01/2024 | \$48.12 | \$7.07 | \$20.60 | \$0.00 | \$75.79 |

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2024

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

Notes:

Apprentice to Journeyworker Ratio:1:4

| | | | | | | |
|--|------------|---------|---------|---------|--------|----------|
| BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) <i>BRICKLAYERS LOCAL 3 (WORCESTER)</i> | 02/01/2025 | \$63.66 | \$11.49 | \$22.90 | \$0.00 | \$98.05 |
| | 08/01/2025 | \$65.81 | \$11.49 | \$22.90 | \$0.00 | \$100.20 |
| | 02/01/2026 | \$67.16 | \$11.49 | \$22.90 | \$0.00 | \$101.55 |
| | 08/01/2026 | \$69.36 | \$11.49 | \$22.90 | \$0.00 | \$103.75 |
| | 02/01/2027 | \$70.76 | \$11.49 | \$22.90 | \$0.00 | \$105.15 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$31.83 | \$11.49 | \$22.90 | \$0.00 | \$66.22 |
| 2 | 60 | \$38.20 | \$11.49 | \$22.90 | \$0.00 | \$72.59 |
| 3 | 70 | \$44.56 | \$11.49 | \$22.90 | \$0.00 | \$78.95 |
| 4 | 80 | \$50.93 | \$11.49 | \$22.90 | \$0.00 | \$85.32 |
| 5 | 90 | \$57.29 | \$11.49 | \$22.90 | \$0.00 | \$91.68 |

Effective Date - 08/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$32.91 | \$11.49 | \$22.90 | \$0.00 | \$67.30 |
| 2 | 60 | \$39.49 | \$11.49 | \$22.90 | \$0.00 | \$73.88 |
| 3 | 70 | \$46.07 | \$11.49 | \$22.90 | \$0.00 | \$80.46 |
| 4 | 80 | \$52.65 | \$11.49 | \$22.90 | \$0.00 | \$87.04 |
| 5 | 90 | \$59.23 | \$11.49 | \$22.90 | \$0.00 | \$93.62 |

Notes:

Apprentice to Journeyworker Ratio:1:5

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| BULLDOZER/GRADER/SCRAPER <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| CAISSON & UNDERPINNING BOTTOM MAN <i>LABORERS - FOUNDATION AND MARINE</i> | 12/01/2024 | \$48.10 | \$9.65 | \$18.22 | \$0.00 | \$75.97 |
| | 06/01/2025 | \$49.60 | \$9.65 | \$18.22 | \$0.00 | \$77.47 |
| | 12/01/2025 | \$51.10 | \$9.65 | \$18.22 | \$0.00 | \$78.97 |
| | 06/01/2026 | \$52.65 | \$9.65 | \$18.22 | \$0.00 | \$80.52 |
| | 12/01/2026 | \$54.15 | \$9.65 | \$18.22 | \$0.00 | \$82.02 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|--|------------|---------|--------|---------|--------|---------|
| CAISSON & UNDERPINNING LABORER <i>LABORERS - FOUNDATION AND MARINE</i> | 12/01/2024 | \$46.95 | \$9.65 | \$18.22 | \$0.00 | \$74.82 |
| | 06/01/2025 | \$48.45 | \$9.65 | \$18.22 | \$0.00 | \$76.32 |
| | 12/01/2025 | \$49.95 | \$9.65 | \$18.22 | \$0.00 | \$77.82 |
| | 06/01/2026 | \$51.50 | \$9.65 | \$18.22 | \$0.00 | \$79.37 |
| | 12/01/2026 | \$53.00 | \$9.65 | \$18.22 | \$0.00 | \$80.87 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|--|------------|---------|--------|---------|--------|---------|
| CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i> | 12/01/2024 | \$47.28 | \$9.65 | \$18.22 | \$0.00 | \$75.15 |
| | 06/01/2025 | \$48.78 | \$9.65 | \$18.22 | \$0.00 | \$76.65 |
| | 12/01/2025 | \$50.28 | \$9.65 | \$18.22 | \$0.00 | \$78.15 |
| | 06/01/2026 | \$51.83 | \$9.65 | \$18.22 | \$0.00 | \$79.70 |
| | 12/01/2026 | \$53.33 | \$9.65 | \$18.22 | \$0.00 | \$81.20 |

For apprentice rates see "Apprentice- LABORER"

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|--------|---------|---------------------------|------------|
| CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| | 12/01/2028 | \$51.66 | \$9.65 | \$17.70 | \$0.00 | \$79.01 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|--|------------|---------|--------|---------|--------|---------|
| CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i> | 03/01/2025 | \$49.62 | \$9.83 | \$19.97 | \$0.00 | \$79.42 |
| | 09/01/2025 | \$50.87 | \$9.83 | \$19.97 | \$0.00 | \$80.67 |
| | 03/01/2026 | \$52.12 | \$9.83 | \$19.97 | \$0.00 | \$81.92 |
| | 09/01/2026 | \$53.37 | \$9.83 | \$19.97 | \$0.00 | \$83.17 |
| | 03/01/2027 | \$54.62 | \$9.83 | \$19.97 | \$0.00 | \$84.42 |

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 03/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 45 | \$22.33 | \$9.83 | \$1.73 | \$0.00 | \$33.89 |
| 2 | 45 | \$22.33 | \$9.83 | \$1.73 | \$0.00 | \$33.89 |
| 3 | 55 | \$27.29 | \$9.83 | \$3.40 | \$0.00 | \$40.52 |
| 4 | 55 | \$27.29 | \$9.83 | \$3.40 | \$0.00 | \$40.52 |
| 5 | 70 | \$34.73 | \$9.83 | \$16.51 | \$0.00 | \$61.07 |
| 6 | 70 | \$34.73 | \$9.83 | \$16.51 | \$0.00 | \$61.07 |
| 7 | 80 | \$39.70 | \$9.83 | \$18.24 | \$0.00 | \$67.77 |
| 8 | 80 | \$39.70 | \$9.83 | \$18.24 | \$0.00 | \$67.77 |

Effective Date - 09/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 45 | \$22.89 | \$9.83 | \$1.73 | \$0.00 | \$34.45 |
| 2 | 45 | \$22.89 | \$9.83 | \$1.73 | \$0.00 | \$34.45 |
| 3 | 55 | \$27.98 | \$9.83 | \$3.40 | \$0.00 | \$41.21 |
| 4 | 55 | \$27.98 | \$9.83 | \$3.40 | \$0.00 | \$41.21 |
| 5 | 70 | \$35.61 | \$9.83 | \$16.51 | \$0.00 | \$61.95 |
| 6 | 70 | \$35.61 | \$9.83 | \$16.51 | \$0.00 | \$61.95 |
| 7 | 80 | \$40.70 | \$9.83 | \$18.24 | \$0.00 | \$68.77 |
| 8 | 80 | \$40.70 | \$9.83 | \$18.24 | \$0.00 | \$68.77 |

Notes:

Apprentice to Journeyworker Ratio:1:5

| | | | | | | |
|---|------------|---------|--------|--------|--------|---------|
| CARPENTER WOOD FRAME <i>CARPENTERS-ZONE 3 (Wood Frame)</i> | 10/01/2024 | \$26.65 | \$7.02 | \$4.80 | \$0.00 | \$38.47 |
| | 10/01/2025 | \$27.75 | \$7.02 | \$4.80 | \$0.00 | \$39.57 |
| | 10/01/2026 | \$28.85 | \$7.02 | \$4.80 | \$0.00 | \$40.67 |

Classification

All Aspects of New Wood Frame Work

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CARPENTER (Wood Frame) - Zone 3

Effective Date - 10/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 60 | \$15.99 | \$7.02 | \$0.00 | \$0.00 | \$23.01 |
| 2 | 60 | \$15.99 | \$7.02 | \$0.00 | \$0.00 | \$23.01 |
| 3 | 65 | \$17.32 | \$7.02 | \$1.00 | \$0.00 | \$25.34 |
| 4 | 70 | \$18.66 | \$7.02 | \$1.00 | \$0.00 | \$26.68 |
| 5 | 75 | \$19.99 | \$7.02 | \$4.80 | \$0.00 | \$31.81 |
| 6 | 80 | \$21.32 | \$7.02 | \$4.80 | \$0.00 | \$33.14 |
| 7 | 85 | \$22.65 | \$7.02 | \$4.80 | \$0.00 | \$34.47 |
| 8 | 90 | \$23.99 | \$7.02 | \$4.80 | \$0.00 | \$35.81 |

Effective Date - 10/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 60 | \$16.65 | \$7.02 | \$0.00 | \$0.00 | \$23.67 |
| 2 | 60 | \$16.65 | \$7.02 | \$0.00 | \$0.00 | \$23.67 |
| 3 | 65 | \$18.04 | \$7.02 | \$1.00 | \$0.00 | \$26.06 |
| 4 | 70 | \$19.43 | \$7.02 | \$1.00 | \$0.00 | \$27.45 |
| 5 | 75 | \$20.81 | \$7.02 | \$4.80 | \$0.00 | \$32.63 |
| 6 | 80 | \$22.20 | \$7.02 | \$4.80 | \$0.00 | \$34.02 |
| 7 | 85 | \$23.59 | \$7.02 | \$4.80 | \$0.00 | \$35.41 |
| 8 | 90 | \$24.98 | \$7.02 | \$4.80 | \$0.00 | \$36.80 |

Notes:

Apprentice to Journeyworker Ratio:1:5

| | | | | | | |
|--|------------|---------|---------|---------|--------|---------|
| CEMENT MASONRY/PLASTERING BRICKLAYERS LOCAL 3 (WORCESTER) | 07/01/2024 | \$49.19 | \$13.35 | \$24.21 | \$1.80 | \$88.55 |
|--|------------|---------|---------|---------|--------|---------|

Apprentice - CEMENT MASONRY/PLASTERING - Worcester

Effective Date - 07/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$24.60 | \$13.35 | \$16.43 | \$0.00 | \$54.38 |
| 2 | 60 | \$29.51 | \$13.35 | \$19.21 | \$1.80 | \$63.87 |
| 3 | 65 | \$31.97 | \$13.35 | \$20.21 | \$1.80 | \$67.33 |
| 4 | 70 | \$34.43 | \$13.35 | \$21.21 | \$1.80 | \$70.79 |
| 5 | 75 | \$36.89 | \$13.35 | \$22.21 | \$1.80 | \$74.25 |
| 6 | 80 | \$39.35 | \$13.35 | \$23.21 | \$1.80 | \$77.71 |
| 7 | 90 | \$44.27 | \$13.35 | \$24.21 | \$1.80 | \$83.63 |

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

Apprentice to Journeyworker Ratio:1:3

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| CHAIN SAW OPERATOR LABORERS - ZONE 2 | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| | 12/01/2028 | \$51.66 | \$9.65 | \$17.70 | \$0.00 | \$79.01 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|--|------------|---------|---------|---------|--------|---------|
| CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4 | 12/01/2024 | \$58.18 | \$15.55 | \$16.50 | \$0.00 | \$90.23 |
| | 06/01/2025 | \$59.51 | \$15.55 | \$16.50 | \$0.00 | \$91.56 |
| | 12/01/2025 | \$60.98 | \$15.55 | \$16.50 | \$0.00 | \$93.03 |
| | 06/01/2026 | \$62.31 | \$15.55 | \$16.50 | \$0.00 | \$94.36 |
| | 12/01/2026 | \$63.79 | \$15.55 | \$16.50 | \$0.00 | \$95.84 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|--|------------|---------|---------|---------|--------|---------|
| COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4 | 12/01/2024 | \$36.67 | \$15.55 | \$16.50 | \$0.00 | \$68.72 |
| | 06/01/2025 | \$37.52 | \$15.55 | \$16.50 | \$0.00 | \$69.57 |
| | 12/01/2025 | \$38.47 | \$15.55 | \$16.50 | \$0.00 | \$70.52 |
| | 06/01/2026 | \$39.33 | \$15.55 | \$16.50 | \$0.00 | \$71.38 |
| | 12/01/2026 | \$40.28 | \$15.55 | \$16.50 | \$0.00 | \$72.33 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| DELEADER (BRIDGE) PAINTERS LOCAL 35 - ZONE 2 | 01/01/2025 | \$58.46 | \$9.95 | \$23.95 | \$0.00 | \$92.36 |
|---|------------|---------|--------|---------|--------|---------|

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 50 | \$29.23 | \$9.95 | \$0.00 | \$0.00 | \$39.18 |
| 2 | 55 | \$32.15 | \$9.95 | \$6.66 | \$0.00 | \$48.76 |
| 3 | 60 | \$35.08 | \$9.95 | \$7.26 | \$0.00 | \$52.29 |
| 4 | 65 | \$38.00 | \$9.95 | \$7.87 | \$0.00 | \$55.82 |
| 5 | 70 | \$40.92 | \$9.95 | \$20.32 | \$0.00 | \$71.19 |
| 6 | 75 | \$43.85 | \$9.95 | \$20.93 | \$0.00 | \$74.73 |
| 7 | 80 | \$46.77 | \$9.95 | \$21.53 | \$0.00 | \$78.25 |
| 8 | 90 | \$52.61 | \$9.95 | \$22.74 | \$0.00 | \$85.30 |

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

| | | | | | | |
|------------------------------------|------------|---------|--------|---------|--------|---------|
| DEMO: ADZEMAN LABORERS - ZONE 2 | 12/02/2024 | \$47.00 | \$9.65 | \$18.40 | \$0.00 | \$75.05 |
| | 06/02/2025 | \$48.50 | \$9.65 | \$18.40 | \$0.00 | \$76.55 |
| | 12/01/2025 | \$50.00 | \$9.65 | \$18.40 | \$0.00 | \$78.05 |
| | 06/01/2026 | \$51.55 | \$9.65 | \$18.40 | \$0.00 | \$79.60 |
| | 12/07/2026 | \$53.05 | \$9.65 | \$18.40 | \$0.00 | \$81.10 |
| | 06/07/2027 | \$54.65 | \$9.65 | \$18.40 | \$0.00 | \$82.70 |
| | 12/06/2027 | \$56.25 | \$9.65 | \$18.40 | \$0.00 | \$84.30 |
| | 06/05/2028 | \$57.93 | \$9.65 | \$18.40 | \$0.00 | \$85.98 |
| | 12/04/2028 | \$59.60 | \$9.65 | \$18.40 | \$0.00 | \$87.65 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 2 | 12/02/2024 | \$48.00 | \$9.65 | \$18.40 | \$0.00 | \$76.05 |
| | 06/02/2025 | \$49.50 | \$9.65 | \$18.40 | \$0.00 | \$77.55 |
| | 12/01/2025 | \$51.00 | \$9.65 | \$18.40 | \$0.00 | \$79.05 |
| | 06/01/2026 | \$52.55 | \$9.65 | \$18.40 | \$0.00 | \$80.60 |
| | 12/07/2026 | \$54.05 | \$9.65 | \$18.40 | \$0.00 | \$82.10 |
| | 06/07/2027 | \$55.65 | \$9.65 | \$18.40 | \$0.00 | \$83.70 |
| | 12/06/2027 | \$57.25 | \$9.65 | \$18.40 | \$0.00 | \$85.30 |
| | 06/05/2028 | \$58.93 | \$9.65 | \$18.40 | \$0.00 | \$86.98 |
| | 12/04/2028 | \$60.60 | \$9.65 | \$18.40 | \$0.00 | \$88.65 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|------------------------------------|------------|---------|--------|---------|--------|---------|
| DEMO: BURNERS LABORERS - ZONE 2 | 12/02/2024 | \$47.75 | \$9.65 | \$18.40 | \$0.00 | \$75.80 |
| | 06/02/2025 | \$49.25 | \$9.65 | \$18.40 | \$0.00 | \$77.30 |
| | 12/01/2025 | \$50.75 | \$9.65 | \$18.40 | \$0.00 | \$78.80 |
| | 06/01/2026 | \$52.30 | \$9.65 | \$18.40 | \$0.00 | \$80.35 |
| | 12/07/2026 | \$53.80 | \$9.65 | \$18.40 | \$0.00 | \$81.85 |
| | 06/07/2027 | \$55.40 | \$9.65 | \$18.40 | \$0.00 | \$83.45 |
| | 12/06/2027 | \$57.00 | \$9.65 | \$18.40 | \$0.00 | \$85.05 |
| | 06/05/2028 | \$58.68 | \$9.65 | \$18.40 | \$0.00 | \$86.73 |
| | 12/04/2028 | \$60.35 | \$9.65 | \$18.40 | \$0.00 | \$88.40 |

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|---------------------------|------------|
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 2 | 12/02/2024 | \$48.00 | \$9.65 | \$18.40 | \$0.00 | \$76.05 |
| | 06/02/2025 | \$49.50 | \$9.65 | \$18.40 | \$0.00 | \$77.55 |
| | 12/01/2025 | \$51.00 | \$9.65 | \$18.40 | \$0.00 | \$79.05 |
| | 06/01/2026 | \$52.55 | \$9.65 | \$18.40 | \$0.00 | \$80.60 |
| | 12/07/2026 | \$54.05 | \$9.65 | \$18.40 | \$0.00 | \$82.10 |
| | 06/07/2027 | \$55.65 | \$9.65 | \$18.40 | \$0.00 | \$83.70 |
| | 12/06/2027 | \$57.25 | \$9.65 | \$18.40 | \$0.00 | \$85.30 |
| | 06/05/2028 | \$58.93 | \$9.65 | \$18.40 | \$0.00 | \$86.98 |
| | 12/04/2028 | \$60.60 | \$9.65 | \$18.40 | \$0.00 | \$88.65 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 2 | 12/02/2024 | \$47.75 | \$9.65 | \$18.40 | \$0.00 | \$75.80 |
| | 06/02/2025 | \$49.25 | \$9.65 | \$18.40 | \$0.00 | \$77.30 |
| | 12/01/2025 | \$50.75 | \$9.65 | \$18.40 | \$0.00 | \$78.80 |
| | 06/01/2026 | \$52.30 | \$9.65 | \$18.40 | \$0.00 | \$80.35 |
| | 12/07/2026 | \$53.80 | \$9.65 | \$18.40 | \$0.00 | \$81.85 |
| | 06/07/2027 | \$55.40 | \$9.65 | \$18.40 | \$0.00 | \$83.45 |
| | 12/06/2027 | \$57.00 | \$9.65 | \$18.40 | \$0.00 | \$85.05 |
| | 06/05/2028 | \$58.68 | \$9.65 | \$18.40 | \$0.00 | \$86.73 |
| | 12/04/2028 | \$60.35 | \$9.65 | \$18.40 | \$0.00 | \$88.40 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| DEMO: WRECKING LABORER LABORERS - ZONE 2 | 12/02/2024 | \$47.00 | \$9.65 | \$18.40 | \$0.00 | \$75.05 |
| | 06/02/2025 | \$48.50 | \$9.65 | \$18.40 | \$0.00 | \$76.55 |
| | 12/01/2025 | \$50.00 | \$9.65 | \$18.40 | \$0.00 | \$78.05 |
| | 06/01/2026 | \$51.55 | \$9.65 | \$18.40 | \$0.00 | \$79.60 |
| | 12/07/2026 | \$53.05 | \$9.65 | \$18.40 | \$0.00 | \$81.10 |
| | 06/07/2027 | \$54.65 | \$9.65 | \$18.40 | \$0.00 | \$82.70 |
| | 12/06/2027 | \$56.25 | \$9.65 | \$18.40 | \$0.00 | \$84.30 |
| | 06/05/2028 | \$57.93 | \$9.65 | \$18.40 | \$0.00 | \$85.98 |
| | 12/04/2028 | \$59.60 | \$9.65 | \$18.40 | \$0.00 | \$87.65 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4 | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| DIVER PILE DRIVER LOCAL 56 (ZONE 2) | 08/01/2024 | \$78.11 | \$10.08 | \$24.29 | \$0.00 | \$112.48 |
| as of 8-1-24, Apprentices with diving licenses begin at second year. % of Diver wage 70/80/90 2A \$69.83, 3A \$91.79,4A \$102.14 Total Rate | | | | | | |
| DIVER TENDER PILE DRIVER LOCAL 56 (ZONE 2) | 08/01/2024 | \$51.97 | \$10.08 | \$24.29 | \$0.00 | \$86.34 |
| as of 8-1-24, Apprentices with diving licenses begin at second year. % of Piledriver wage 70/80/90 2A \$54.20, 3A \$73.93,4A \$82.05 Total Rate | | | | | | |
| DIVER TENDER (EFFLUENT) PILE DRIVER LOCAL 56 (ZONE 2) | 08/01/2024 | \$83.69 | \$10.08 | \$24.29 | \$0.00 | \$118.06 |
| For apprentice rates see "Apprentice- PILE DRIVER" | | | | | | |

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|---------------------------|------------|
| DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i> | 08/01/2024 | \$117.16 | \$10.08 | \$24.29 | \$0.00 | \$151.53 |
| For apprentice rates see "Apprentice- PILE DRIVER" | | | | | | |
| DRAWBRIDGE OPERATOR (Construction) <i>DRAWBRIDGE - SEIU LOCAL 888</i> | 07/01/2020 | \$26.77 | \$6.67 | \$3.93 | \$0.16 | \$37.53 |
| ELECTRICIAN <i>ELECTRICIANS LOCAL 96</i> | 09/01/2024 | \$47.05 | \$13.99 | \$19.22 | \$0.00 | \$80.26 |
| | 09/07/2025 | \$48.16 | \$14.98 | \$19.60 | \$0.00 | \$82.74 |
| | 09/06/2026 | \$49.38 | \$15.96 | \$20.00 | \$0.00 | \$85.34 |

Apprentice - *ELECTRICIAN - Local 96*

Effective Date - 09/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 40 | \$18.82 | \$13.99 | \$0.56 | \$0.00 | \$33.37 |
| 2 | 45 | \$21.17 | \$13.99 | \$0.64 | \$0.00 | \$35.80 |
| 3 | 48 | \$22.58 | \$13.99 | \$15.79 | \$0.00 | \$52.36 |
| 4 | 55 | \$25.88 | \$13.99 | \$16.26 | \$0.00 | \$56.13 |
| 5 | 65 | \$30.58 | \$13.99 | \$16.91 | \$0.00 | \$61.48 |
| 6 | 80 | \$37.64 | \$13.99 | \$17.90 | \$0.00 | \$69.53 |

Effective Date - 09/07/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 40 | \$19.26 | \$14.98 | \$0.58 | \$0.00 | \$34.82 |
| 2 | 45 | \$21.67 | \$14.98 | \$0.65 | \$0.00 | \$37.30 |
| 3 | 48 | \$23.12 | \$14.98 | \$16.09 | \$0.00 | \$54.19 |
| 4 | 55 | \$26.49 | \$14.98 | \$16.57 | \$0.00 | \$58.04 |
| 5 | 65 | \$31.30 | \$14.98 | \$17.25 | \$0.00 | \$63.53 |
| 6 | 80 | \$38.53 | \$14.98 | \$18.26 | \$0.00 | \$71.77 |

Notes:

Steps 1-2 are 1000 hrs; Steps 3-6 are 1500 hrs.

Apprentice to Journeyworker Ratio:2:3***

| | | | | | | |
|---|------------|---------|---------|---------|--------|----------|
| ELEVATOR CONSTRUCTOR <i>ELEVATOR CONSTRUCTORS LOCAL 41</i> | 01/01/2025 | \$62.83 | \$16.28 | \$21.36 | \$0.00 | \$100.47 |
| | 01/01/2026 | \$63.68 | \$16.38 | \$21.76 | \$0.00 | \$101.82 |
| | 01/01/2027 | \$64.53 | \$16.48 | \$22.16 | \$0.00 | \$103.17 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELEVATOR CONSTRUCTOR - Local 41

Effective Date - 01/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$31.42 | \$16.28 | \$0.00 | \$0.00 | \$47.70 |
| 2 | 55 | \$34.56 | \$16.28 | \$21.36 | \$0.00 | \$72.20 |
| 3 | 65 | \$40.84 | \$16.28 | \$21.36 | \$0.00 | \$78.48 |
| 4 | 70 | \$43.98 | \$16.28 | \$21.36 | \$0.00 | \$81.62 |
| 5 | 80 | \$50.26 | \$16.28 | \$21.36 | \$0.00 | \$87.90 |

Effective Date - 01/01/2026

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$31.84 | \$16.38 | \$0.00 | \$0.00 | \$48.22 |
| 2 | 55 | \$35.02 | \$16.38 | \$21.76 | \$0.00 | \$73.16 |
| 3 | 65 | \$41.39 | \$16.38 | \$21.76 | \$0.00 | \$79.53 |
| 4 | 70 | \$44.58 | \$16.38 | \$21.76 | \$0.00 | \$82.72 |
| 5 | 80 | \$50.94 | \$16.38 | \$21.76 | \$0.00 | \$89.08 |

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 41</i> | 01/01/2025 | \$43.98 | \$16.28 | \$21.36 | \$0.00 | \$81.62 |
| | 01/01/2026 | \$44.58 | \$16.38 | \$21.76 | \$0.00 | \$82.72 |
| | 01/01/2027 | \$45.17 | \$16.48 | \$22.16 | \$0.00 | \$83.81 |

For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

| | | | | | | |
|--|------------|---------|--------|---------|--------|---------|
| FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.80 | \$0.00 | \$67.56 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.80 | \$0.00 | \$68.95 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.80 | \$0.00 | \$70.33 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.80 | \$0.00 | \$71.77 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.80 | \$0.00 | \$73.21 |

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

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i> | 11/01/2024 | \$51.78 | \$15.30 | \$16.40 | \$0.00 | \$83.48 |
| | 05/01/2025 | \$53.22 | \$15.30 | \$16.40 | \$0.00 | \$84.92 |
| | 11/01/2025 | \$54.51 | \$15.30 | \$16.40 | \$0.00 | \$86.21 |
| | 05/01/2026 | \$55.95 | \$15.30 | \$16.40 | \$0.00 | \$87.65 |
| | 11/01/2026 | \$57.24 | \$15.30 | \$16.40 | \$0.00 | \$88.94 |
| | 05/01/2027 | \$58.67 | \$15.30 | \$16.40 | \$0.00 | \$90.37 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i> | 11/01/2024 | \$53.37 | \$15.30 | \$16.40 | \$0.00 | \$85.07 |
| | 05/01/2025 | \$54.82 | \$15.30 | \$16.40 | \$0.00 | \$86.52 |
| | 11/01/2025 | \$56.12 | \$15.30 | \$16.40 | \$0.00 | \$87.82 |
| | 05/01/2026 | \$57.57 | \$15.30 | \$16.40 | \$0.00 | \$89.27 |
| | 11/01/2026 | \$58.87 | \$15.30 | \$16.40 | \$0.00 | \$90.57 |
| | 05/01/2027 | \$60.32 | \$15.30 | \$16.40 | \$0.00 | \$92.02 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|---------------------------|------------|
| FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i> | 11/01/2024 | \$25.37 | \$15.30 | \$16.40 | \$0.00 | \$57.07 |
| | 05/01/2025 | \$26.22 | \$15.30 | \$16.40 | \$0.00 | \$57.92 |
| | 11/01/2025 | \$26.98 | \$15.30 | \$16.40 | \$0.00 | \$58.68 |
| | 05/01/2026 | \$27.83 | \$15.30 | \$16.40 | \$0.00 | \$59.53 |
| | 11/01/2026 | \$28.59 | \$15.30 | \$16.40 | \$0.00 | \$60.29 |
| | 05/01/2027 | \$29.44 | \$15.30 | \$16.40 | \$0.00 | \$61.14 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 96</i> | 09/01/2024 | \$47.05 | \$13.99 | \$19.22 | \$0.00 | \$80.26 |
| | 09/07/2025 | \$48.16 | \$14.98 | \$19.60 | \$0.00 | \$82.74 |
| | 09/06/2026 | \$49.38 | \$15.96 | \$20.00 | \$0.00 | \$85.34 |
| For apprentice rates see "Apprentice- ELECTRICIAN" | | | | | | |
| FIRE ALARM REPAIR / MAINT/COMMISSIONING <i>ELECTRICIANS LOCAL 96</i> | 09/01/2024 | \$47.05 | \$13.99 | \$19.22 | \$0.00 | \$80.26 |
| | 09/07/2025 | \$48.16 | \$14.98 | \$19.60 | \$0.00 | \$82.74 |
| | 09/06/2026 | \$49.38 | \$15.96 | \$20.00 | \$0.00 | \$85.34 |
| For apprentice rates see "Apprentice- ELECTRICIAN" | | | | | | |
| FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$45.96 | \$15.55 | \$16.50 | \$0.00 | \$78.01 |
| | 06/01/2025 | \$47.02 | \$15.55 | \$16.50 | \$0.00 | \$79.07 |
| | 12/01/2025 | \$48.19 | \$15.55 | \$16.50 | \$0.00 | \$80.24 |
| | 06/01/2026 | \$49.25 | \$15.55 | \$16.50 | \$0.00 | \$81.30 |
| | 12/01/2026 | \$50.43 | \$15.55 | \$16.50 | \$0.00 | \$82.48 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| FLAGGER & SIGNALER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$27.01 | \$9.65 | \$17.80 | \$0.00 | \$54.46 |
| | 06/01/2025 | \$28.09 | \$9.65 | \$17.80 | \$0.00 | \$55.54 |
| | 12/01/2025 | \$28.09 | \$9.65 | \$17.80 | \$0.00 | \$55.54 |
| | 06/01/2026 | \$29.21 | \$9.65 | \$17.80 | \$0.00 | \$56.66 |
| | 12/01/2026 | \$29.21 | \$9.65 | \$17.80 | \$0.00 | \$56.66 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" | | | | | | |
| FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE II</i> | 03/01/2024 | \$49.47 | \$8.83 | \$20.27 | \$0.00 | \$78.57 |

Apprentice - FLOORCOVERER - Local 2168 Zone II

Effective Date - 03/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 50 | \$24.74 | \$8.83 | \$1.76 | \$0.00 | \$35.33 |
| 2 | 55 | \$27.21 | \$8.83 | \$1.76 | \$0.00 | \$37.80 |
| 3 | 60 | \$29.68 | \$8.83 | \$3.52 | \$0.00 | \$42.03 |
| 4 | 65 | \$32.16 | \$8.83 | \$3.52 | \$0.00 | \$44.51 |
| 5 | 70 | \$34.63 | \$8.83 | \$16.75 | \$0.00 | \$60.21 |
| 6 | 75 | \$37.10 | \$8.83 | \$16.75 | \$0.00 | \$62.68 |
| 7 | 80 | \$39.58 | \$8.83 | \$18.51 | \$0.00 | \$66.92 |
| 8 | 85 | \$42.05 | \$8.83 | \$18.51 | \$0.00 | \$69.39 |

Notes: Steps are 750 hrs.
 % After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)
 Step 1&2 \$32.63/ 3&4 \$39.28/ 5&6 \$59.86/ 7&8 \$66.52

Apprentice to Journeyworker Ratio:1:1

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|---------------------------|------------|
| FORK LIFT/CHERRY PICKER <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$57.03 | \$15.55 | \$16.50 | \$0.00 | \$89.08 |
| | 06/01/2025 | \$58.33 | \$15.55 | \$16.50 | \$0.00 | \$90.38 |
| | 12/01/2025 | \$59.78 | \$15.55 | \$16.50 | \$0.00 | \$91.83 |
| | 06/01/2026 | \$61.08 | \$15.55 | \$16.50 | \$0.00 | \$93.13 |
| | 12/01/2026 | \$62.53 | \$15.55 | \$16.50 | \$0.00 | \$94.58 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$36.67 | \$15.55 | \$16.50 | \$0.00 | \$68.72 |
| | 06/01/2025 | \$37.52 | \$15.55 | \$16.50 | \$0.00 | \$69.57 |
| | 12/01/2025 | \$38.47 | \$15.55 | \$16.50 | \$0.00 | \$70.52 |
| | 06/01/2026 | \$39.33 | \$15.55 | \$16.50 | \$0.00 | \$71.38 |
| | 12/01/2026 | \$40.28 | \$15.55 | \$16.50 | \$0.00 | \$72.33 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 2)</i> | 01/01/2025 | \$47.96 | \$9.95 | \$23.95 | \$0.00 | \$81.86 |

Apprentice - GLAZIER - Local 35 Zone 2

Effective Date - 01/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 50 | \$23.98 | \$9.95 | \$0.00 | \$0.00 | \$33.93 |
| 2 | 55 | \$26.38 | \$9.95 | \$6.66 | \$0.00 | \$42.99 |
| 3 | 60 | \$28.78 | \$9.95 | \$7.26 | \$0.00 | \$45.99 |
| 4 | 65 | \$31.17 | \$9.95 | \$7.87 | \$0.00 | \$48.99 |
| 5 | 70 | \$33.57 | \$9.95 | \$20.32 | \$0.00 | \$63.84 |
| 6 | 75 | \$35.97 | \$9.95 | \$20.93 | \$0.00 | \$66.85 |
| 7 | 80 | \$38.37 | \$9.95 | \$21.53 | \$0.00 | \$69.85 |
| 8 | 90 | \$43.16 | \$9.95 | \$22.74 | \$0.00 | \$75.85 |

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| HOISTING ENGINEER/CRANES/GRADALLS <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$57.03 | \$15.55 | \$16.50 | \$0.00 | \$89.08 |
| | 06/01/2025 | \$58.33 | \$15.55 | \$16.50 | \$0.00 | \$90.38 |
| | 12/01/2025 | \$59.78 | \$15.55 | \$16.50 | \$0.00 | \$91.83 |
| | 06/01/2026 | \$61.08 | \$15.55 | \$16.50 | \$0.00 | \$93.13 |
| | 12/01/2026 | \$62.53 | \$15.55 | \$16.50 | \$0.00 | \$94.58 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 55 | \$31.37 | \$0.00 | \$0.00 | \$0.00 | \$31.37 |
| 2 | 60 | \$34.22 | \$15.55 | \$16.50 | \$0.00 | \$66.27 |
| 3 | 65 | \$37.07 | \$15.55 | \$16.50 | \$0.00 | \$69.12 |
| 4 | 70 | \$39.92 | \$15.55 | \$16.50 | \$0.00 | \$71.97 |
| 5 | 75 | \$42.77 | \$15.55 | \$16.50 | \$0.00 | \$74.82 |
| 6 | 80 | \$45.62 | \$15.55 | \$16.50 | \$0.00 | \$77.67 |
| 7 | 85 | \$48.48 | \$15.55 | \$16.50 | \$0.00 | \$80.53 |
| 8 | 90 | \$51.33 | \$15.55 | \$16.50 | \$0.00 | \$83.38 |

Effective Date - 06/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 55 | \$32.08 | \$0.00 | \$0.00 | \$0.00 | \$32.08 |
| 2 | 60 | \$35.00 | \$15.55 | \$16.50 | \$0.00 | \$67.05 |
| 3 | 65 | \$37.91 | \$15.55 | \$16.50 | \$0.00 | \$69.96 |
| 4 | 70 | \$40.83 | \$15.55 | \$16.50 | \$0.00 | \$72.88 |
| 5 | 75 | \$43.75 | \$15.55 | \$16.50 | \$0.00 | \$75.80 |
| 6 | 80 | \$46.66 | \$15.55 | \$16.50 | \$0.00 | \$78.71 |
| 7 | 85 | \$49.58 | \$15.55 | \$16.50 | \$0.00 | \$81.63 |
| 8 | 90 | \$52.50 | \$15.55 | \$16.50 | \$0.00 | \$84.55 |

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) 01/01/2025 \$42.23 \$12.20 \$18.74 \$2.13 \$75.30
 SHEETMETAL WORKERS LOCAL 63

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) 09/01/2024 \$47.05 \$13.99 \$19.22 \$0.00 \$80.26
 ELECTRICIANS LOCAL 96
 09/07/2025 \$48.16 \$14.98 \$19.60 \$0.00 \$82.74
 09/06/2026 \$49.38 \$15.96 \$20.00 \$0.00 \$85.34

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) 01/01/2025 \$42.23 \$12.20 \$18.74 \$2.13 \$75.30
 SHEETMETAL WORKERS LOCAL 63

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING -WATER) 03/01/2025 \$56.40 \$9.90 \$17.77 \$0.00 \$84.07
 PLUMBERS LOCAL 4
 09/01/2025 \$57.80 \$9.90 \$17.77 \$0.00 \$85.47
 03/01/2026 \$59.20 \$9.90 \$17.77 \$0.00 \$86.87

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

HVAC MECHANIC 03/01/2025 \$56.40 \$9.90 \$17.77 \$0.00 \$84.07
 PLUMBERS LOCAL 4
 09/01/2025 \$57.80 \$9.90 \$17.77 \$0.00 \$85.47
 03/01/2026 \$59.20 \$9.90 \$17.77 \$0.00 \$86.87

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 2</i> | 12/01/2024 | \$40.61 | \$9.65 | \$17.70 | \$0.00 | \$67.96 |
| | 06/01/2025 | \$42.00 | \$9.65 | \$17.70 | \$0.00 | \$69.35 |
| | 12/01/2025 | \$43.38 | \$9.65 | \$17.70 | \$0.00 | \$70.73 |
| | 06/01/2026 | \$44.82 | \$9.65 | \$17.70 | \$0.00 | \$72.17 |
| | 12/01/2026 | \$46.26 | \$9.65 | \$17.70 | \$0.00 | \$73.61 |
| | 06/01/2027 | \$47.71 | \$9.65 | \$17.70 | \$0.00 | \$75.06 |
| | 12/01/2027 | \$49.16 | \$9.65 | \$17.70 | \$0.00 | \$76.51 |
| | 06/01/2028 | \$50.66 | \$9.65 | \$17.70 | \$0.00 | \$78.01 |
| | 12/01/2028 | \$52.16 | \$9.65 | \$17.70 | \$0.00 | \$79.51 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|--|------------|---------|--------|---------|--------|---------|
| HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.61 | \$9.65 | \$17.80 | \$0.00 | \$68.06 |
| | 06/01/2025 | \$42.00 | \$9.65 | \$17.80 | \$0.00 | \$69.45 |
| | 12/01/2025 | \$43.38 | \$9.65 | \$17.80 | \$0.00 | \$70.83 |
| | 06/01/2026 | \$44.82 | \$9.65 | \$17.80 | \$0.00 | \$72.27 |
| | 12/01/2026 | \$46.26 | \$9.65 | \$17.80 | \$0.00 | \$73.71 |

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

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (WORCESTER)</i> | 09/01/2024 | \$51.23 | \$14.75 | \$19.61 | \$0.00 | \$85.59 |
| | 09/01/2025 | \$54.31 | \$14.75 | \$19.61 | \$0.00 | \$88.67 |
| | 09/01/2026 | \$57.38 | \$14.75 | \$19.61 | \$0.00 | \$91.74 |

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

Effective Date - 09/01/2024

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

Effective Date - 09/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$27.16 | \$14.75 | \$14.32 | \$0.00 | \$56.23 |
| 2 | 60 | \$32.59 | \$14.75 | \$15.37 | \$0.00 | \$62.71 |
| 3 | 70 | \$38.02 | \$14.75 | \$16.43 | \$0.00 | \$69.20 |
| 4 | 80 | \$43.45 | \$14.75 | \$17.49 | \$0.00 | \$75.69 |

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

| | | | | | | |
|--|------------|---------|--------|---------|--------|---------|
| IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (WORCESTER AREA)</i> | 03/16/2024 | \$53.67 | \$8.35 | \$26.70 | \$0.00 | \$88.72 |
|--|------------|---------|--------|---------|--------|---------|

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - IRONWORKER - Local 7 Worcester

Effective Date - 03/16/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 60 | \$32.20 | \$8.35 | \$26.70 | \$0.00 | \$67.25 |
| 2 | 70 | \$37.57 | \$8.35 | \$26.70 | \$0.00 | \$72.62 |
| 3 | 75 | \$40.25 | \$8.35 | \$26.70 | \$0.00 | \$75.30 |
| 4 | 80 | \$42.94 | \$8.35 | \$26.70 | \$0.00 | \$77.99 |
| 5 | 85 | \$45.62 | \$8.35 | \$26.70 | \$0.00 | \$80.67 |
| 6 | 90 | \$48.30 | \$8.35 | \$26.70 | \$0.00 | \$83.35 |

Notes:

Apprentice to Journeyworker Ratio:1:4

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 2 | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| | 12/01/2028 | \$51.66 | \$9.65 | \$17.70 | \$0.00 | \$79.01 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|------------------------------|------------|---------|--------|---------|--------|---------|
| LABORER LABORERS - ZONE 2 | 12/01/2024 | \$39.86 | \$9.65 | \$17.70 | \$0.00 | \$67.21 |
| | 06/01/2025 | \$41.25 | \$9.65 | \$17.70 | \$0.00 | \$68.60 |
| | 12/01/2025 | \$42.63 | \$9.65 | \$17.70 | \$0.00 | \$69.98 |
| | 06/01/2026 | \$44.07 | \$9.65 | \$17.70 | \$0.00 | \$71.42 |
| | 12/01/2026 | \$45.51 | \$9.65 | \$17.70 | \$0.00 | \$72.86 |
| | 06/01/2027 | \$46.96 | \$9.65 | \$17.70 | \$0.00 | \$74.31 |
| | 12/01/2027 | \$48.41 | \$9.65 | \$17.70 | \$0.00 | \$75.76 |
| | 06/01/2028 | \$49.91 | \$9.65 | \$17.70 | \$0.00 | \$77.26 |
| | 12/01/2028 | \$51.41 | \$9.65 | \$17.70 | \$0.00 | \$78.76 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 2

Effective Date - 12/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 60 | \$23.92 | \$9.65 | \$17.70 | \$0.00 | \$51.27 |
| 2 | 70 | \$27.90 | \$9.65 | \$17.70 | \$0.00 | \$55.25 |
| 3 | 80 | \$31.89 | \$9.65 | \$17.70 | \$0.00 | \$59.24 |
| 4 | 90 | \$35.87 | \$9.65 | \$17.70 | \$0.00 | \$63.22 |

Effective Date - 06/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 60 | \$24.75 | \$9.65 | \$17.70 | \$0.00 | \$52.10 |
| 2 | 70 | \$28.88 | \$9.65 | \$17.70 | \$0.00 | \$56.23 |
| 3 | 80 | \$33.00 | \$9.65 | \$17.70 | \$0.00 | \$60.35 |
| 4 | 90 | \$37.13 | \$9.65 | \$17.70 | \$0.00 | \$64.48 |

Notes:

Apprentice to Journeyworker Ratio:1:5

| | | | | | | |
|-------------------------------------|------------|---------|--------|---------|--------|---------|
| LABORER (HEAVY & HIGHWAY) | 12/01/2024 | \$39.86 | \$9.65 | \$17.80 | \$0.00 | \$67.31 |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY) | 06/01/2025 | \$41.25 | \$9.65 | \$17.80 | \$0.00 | \$68.70 |
| | 12/01/2025 | \$42.63 | \$9.65 | \$17.80 | \$0.00 | \$70.08 |
| | 06/01/2026 | \$44.07 | \$9.65 | \$17.80 | \$0.00 | \$71.52 |
| | 12/01/2026 | \$45.51 | \$9.65 | \$17.80 | \$0.00 | \$72.96 |

Apprentice - LABORER (Heavy & Highway) - Zone 2

Effective Date - 12/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 60 | \$23.92 | \$9.65 | \$17.80 | \$0.00 | \$51.37 |
| 2 | 70 | \$27.90 | \$9.65 | \$17.80 | \$0.00 | \$55.35 |
| 3 | 80 | \$31.89 | \$9.65 | \$17.80 | \$0.00 | \$59.34 |
| 4 | 90 | \$35.87 | \$9.65 | \$17.80 | \$0.00 | \$63.32 |

Effective Date - 06/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 60 | \$24.75 | \$9.65 | \$17.80 | \$0.00 | \$52.20 |
| 2 | 70 | \$28.88 | \$9.65 | \$17.80 | \$0.00 | \$56.33 |
| 3 | 80 | \$33.00 | \$9.65 | \$17.80 | \$0.00 | \$60.45 |
| 4 | 90 | \$37.13 | \$9.65 | \$17.80 | \$0.00 | \$64.58 |

Notes:

Apprentice to Journeyworker Ratio:1:5

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|--------|---------|---------------------------|------------|
| LABORER: CARPENTER TENDER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$39.86 | \$9.65 | \$17.70 | \$0.00 | \$67.21 |
| | 06/01/2025 | \$41.25 | \$9.65 | \$17.70 | \$0.00 | \$68.60 |
| | 12/01/2025 | \$42.63 | \$9.65 | \$17.70 | \$0.00 | \$69.98 |
| | 06/01/2026 | \$44.07 | \$9.65 | \$17.70 | \$0.00 | \$71.42 |
| | 12/01/2026 | \$45.51 | \$9.65 | \$17.70 | \$0.00 | \$72.86 |
| | 06/01/2027 | \$46.96 | \$9.65 | \$17.70 | \$0.00 | \$74.31 |
| | 12/01/2027 | \$48.41 | \$9.65 | \$17.70 | \$0.00 | \$75.76 |
| | 06/01/2028 | \$49.91 | \$9.65 | \$17.70 | \$0.00 | \$77.26 |
| | 12/01/2028 | \$51.41 | \$9.65 | \$17.70 | \$0.00 | \$78.76 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$39.86 | \$9.65 | \$17.70 | \$0.00 | \$67.21 |
| | 06/01/2025 | \$41.25 | \$9.65 | \$17.70 | \$0.00 | \$68.60 |
| | 12/01/2025 | \$42.63 | \$9.65 | \$17.70 | \$0.00 | \$69.98 |
| | 06/01/2026 | \$44.07 | \$9.65 | \$17.70 | \$0.00 | \$71.42 |
| | 12/01/2026 | \$45.51 | \$9.65 | \$17.70 | \$0.00 | \$72.86 |
| | 06/01/2027 | \$46.96 | \$9.65 | \$17.70 | \$0.00 | \$74.31 |
| | 12/01/2027 | \$48.41 | \$9.65 | \$17.70 | \$0.00 | \$75.76 |
| | 06/01/2028 | \$49.91 | \$9.65 | \$17.70 | \$0.00 | \$77.26 |
| | 12/01/2028 | \$51.41 | \$9.65 | \$17.70 | \$0.00 | \$78.76 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 2</i> | 12/02/2024 | \$39.95 | \$9.65 | \$17.76 | \$0.00 | \$67.36 |
| | 06/02/2025 | \$41.34 | \$9.65 | \$17.76 | \$0.00 | \$68.75 |
| | 12/01/2025 | \$42.72 | \$9.65 | \$17.76 | \$0.00 | \$70.13 |
| | 06/01/2026 | \$44.16 | \$9.65 | \$17.76 | \$0.00 | \$71.57 |
| | 12/07/2026 | \$45.60 | \$9.65 | \$17.76 | \$0.00 | \$73.01 |
| | 06/07/2027 | \$47.05 | \$9.65 | \$17.76 | \$0.00 | \$74.46 |
| | 12/06/2027 | \$48.50 | \$9.65 | \$17.76 | \$0.00 | \$75.91 |
| | 06/05/2028 | \$50.00 | \$9.65 | \$17.76 | \$0.00 | \$77.41 |
| | 12/04/2028 | \$51.50 | \$9.65 | \$17.76 | \$0.00 | \$78.91 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| LABORER: MASON TENDER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| | 12/01/2028 | \$51.66 | \$9.65 | \$17.70 | \$0.00 | \$79.01 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| LABORER: MASON TENDER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.80 | \$0.00 | \$67.56 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.80 | \$0.00 | \$68.95 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.80 | \$0.00 | \$70.33 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.80 | \$0.00 | \$71.77 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.80 | \$0.00 | \$73.21 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" | | | | | | |

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|---------------------------|------------|
| LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$39.86 | \$9.65 | \$17.70 | \$0.00 | \$67.21 |
| | 06/01/2025 | \$41.25 | \$9.65 | \$17.70 | \$0.00 | \$68.60 |
| | 12/01/2025 | \$42.63 | \$9.65 | \$17.70 | \$0.00 | \$69.98 |
| | 06/01/2026 | \$44.07 | \$9.65 | \$17.70 | \$0.00 | \$71.42 |
| | 12/01/2026 | \$45.51 | \$9.65 | \$17.70 | \$0.00 | \$72.86 |
| | 06/01/2027 | \$46.96 | \$9.65 | \$17.70 | \$0.00 | \$74.31 |
| | 12/01/2027 | \$48.41 | \$9.65 | \$17.70 | \$0.00 | \$75.76 |
| | 06/01/2028 | \$49.91 | \$9.65 | \$17.70 | \$0.00 | \$77.26 |
| | 12/01/2028 | \$51.41 | \$9.65 | \$17.70 | \$0.00 | \$78.76 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| LABORER: TREE REMOVER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$39.86 | \$9.65 | \$17.70 | \$0.00 | \$67.21 |
| | 06/01/2025 | \$41.25 | \$9.65 | \$17.70 | \$0.00 | \$68.60 |
| | 12/01/2025 | \$42.63 | \$9.65 | \$17.70 | \$0.00 | \$69.98 |
| | 06/01/2026 | \$44.07 | \$9.65 | \$17.70 | \$0.00 | \$71.42 |
| | 12/01/2026 | \$45.51 | \$9.65 | \$17.70 | \$0.00 | \$72.86 |
| | 06/01/2027 | \$46.96 | \$9.65 | \$17.70 | \$0.00 | \$74.31 |
| | 12/01/2027 | \$48.41 | \$9.65 | \$17.70 | \$0.00 | \$75.76 |
| | 06/01/2028 | \$49.91 | \$9.65 | \$17.70 | \$0.00 | \$77.26 |
| | 12/01/2028 | \$51.41 | \$9.65 | \$17.70 | \$0.00 | \$78.76 |
| This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER" | | | | | | |
| LASER BEAM OPERATOR <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| | 12/01/2028 | \$51.66 | \$9.65 | \$17.70 | \$0.00 | \$79.01 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| LASER BEAM OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.80 | \$0.00 | \$67.56 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.80 | \$0.00 | \$68.95 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.80 | \$0.00 | \$70.33 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.80 | \$0.00 | \$71.77 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.80 | \$0.00 | \$73.21 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" | | | | | | |
| MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i> | 02/01/2025 | \$50.36 | \$11.49 | \$21.62 | \$0.00 | \$83.47 |
| | 08/01/2025 | \$52.08 | \$11.49 | \$21.62 | \$0.00 | \$85.19 |
| | 02/01/2026 | \$53.16 | \$11.49 | \$21.62 | \$0.00 | \$86.27 |
| | 08/01/2026 | \$54.92 | \$11.49 | \$21.62 | \$0.00 | \$88.03 |
| | 02/01/2027 | \$56.04 | \$11.49 | \$21.62 | \$0.00 | \$89.15 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$25.18 | \$11.49 | \$21.62 | \$0.00 | \$58.29 |
| 2 | 60 | \$30.22 | \$11.49 | \$21.62 | \$0.00 | \$63.33 |
| 3 | 70 | \$35.25 | \$11.49 | \$21.62 | \$0.00 | \$68.36 |
| 4 | 80 | \$40.29 | \$11.49 | \$21.62 | \$0.00 | \$73.40 |
| 5 | 90 | \$45.32 | \$11.49 | \$21.62 | \$0.00 | \$78.43 |

Effective Date - 08/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$26.04 | \$11.49 | \$21.62 | \$0.00 | \$59.15 |
| 2 | 60 | \$31.25 | \$11.49 | \$21.62 | \$0.00 | \$64.36 |
| 3 | 70 | \$36.46 | \$11.49 | \$21.62 | \$0.00 | \$69.57 |
| 4 | 80 | \$41.66 | \$11.49 | \$21.62 | \$0.00 | \$74.77 |
| 5 | 90 | \$46.87 | \$11.49 | \$21.62 | \$0.00 | \$79.98 |

Notes:

Apprentice to Journeyworker Ratio:1:3

| | | | | | | |
|---|------------|---------|---------|---------|--------|----------|
| MARBLE MASONS, TILELAYERS & TERRAZZO MECH | 02/01/2025 | \$65.82 | \$11.49 | \$23.56 | \$0.00 | \$100.87 |
| BRICKLAYERS LOCAL 3 - MARBLE & TILE | 08/01/2025 | \$67.97 | \$11.49 | \$23.56 | \$0.00 | \$103.02 |
| | 02/01/2026 | \$69.32 | \$11.49 | \$23.56 | \$0.00 | \$104.37 |
| | 08/01/2026 | \$71.52 | \$11.49 | \$23.56 | \$0.00 | \$106.57 |
| | 02/01/2027 | \$72.92 | \$11.49 | \$23.56 | \$0.00 | \$107.97 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$32.91 | \$11.49 | \$23.56 | \$0.00 | \$67.96 |
| 2 | 60 | \$39.49 | \$11.49 | \$23.56 | \$0.00 | \$74.54 |
| 3 | 70 | \$46.07 | \$11.49 | \$23.56 | \$0.00 | \$81.12 |
| 4 | 80 | \$52.66 | \$11.49 | \$23.56 | \$0.00 | \$87.71 |
| 5 | 90 | \$59.24 | \$11.49 | \$23.56 | \$0.00 | \$94.29 |

Effective Date - 08/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$33.99 | \$11.49 | \$23.56 | \$0.00 | \$69.04 |
| 2 | 60 | \$40.78 | \$11.49 | \$23.56 | \$0.00 | \$75.83 |
| 3 | 70 | \$47.58 | \$11.49 | \$23.56 | \$0.00 | \$82.63 |
| 4 | 80 | \$54.38 | \$11.49 | \$23.56 | \$0.00 | \$89.43 |
| 5 | 90 | \$61.17 | \$11.49 | \$23.56 | \$0.00 | \$96.22 |

Notes:

Apprentice to Journeyworker Ratio:1:5

| | | | | | | |
|--|------------|---------|---------|---------|--------|---------|
| MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| MILLWRIGHT (Zone 3) <i>MILLWRIGHTS LOCAL 1121 - Zone 3</i> | 01/06/2025 | \$43.48 | \$10.08 | \$21.22 | \$0.00 | \$74.78 |
| | 01/05/2026 | \$45.76 | \$10.08 | \$21.22 | \$0.00 | \$77.06 |

Apprentice - MILLWRIGHT - Local 1121 Zone 3

Effective Date - 01/06/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 55 | \$23.91 | \$10.08 | \$5.36 | \$0.00 | \$39.35 |
| 2 | 65 | \$28.26 | \$10.08 | \$6.34 | \$0.00 | \$44.68 |
| 3 | 75 | \$32.61 | \$10.08 | \$18.78 | \$0.00 | \$61.47 |
| 4 | 85 | \$36.96 | \$10.08 | \$19.76 | \$0.00 | \$66.80 |

Effective Date - 01/05/2026

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 55 | \$25.17 | \$10.08 | \$5.36 | \$0.00 | \$40.61 |
| 2 | 65 | \$29.74 | \$10.08 | \$6.34 | \$0.00 | \$46.16 |
| 3 | 75 | \$34.32 | \$10.08 | \$18.78 | \$0.00 | \$63.18 |
| 4 | 85 | \$38.90 | \$10.08 | \$19.76 | \$0.00 | \$68.74 |

Notes: Step 1&2 Appr. indentured after 1/6/2020 receive no pension, but do receive annuity. (Step 1 \$5.72, Step 2 \$6.66)
Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:4

| | | | | | | |
|--------------------------|------------|---------|--------|---------|--------|---------|
| MORTAR MIXER | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| <i>LABORERS - ZONE 2</i> | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| | 12/01/2028 | \$51.66 | \$9.65 | \$17.70 | \$0.00 | \$79.01 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| OILER (OTHER THAN TRUCK CRANES,GRADALLS) | 12/01/2024 | \$25.37 | \$15.30 | \$16.40 | \$0.00 | \$57.07 |
| <i>OPERATING ENGINEERS LOCAL 4</i> | 06/01/2025 | \$25.97 | \$15.30 | \$16.40 | \$0.00 | \$57.67 |
| | 12/01/2025 | \$26.63 | \$15.30 | \$16.40 | \$0.00 | \$58.33 |
| | 06/01/2026 | \$27.22 | \$15.30 | \$16.40 | \$0.00 | \$58.92 |
| | 12/01/2026 | \$27.89 | \$15.30 | \$16.40 | \$0.00 | \$59.59 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|---------------------------------------|------------|---------|---------|---------|--------|---------|
| OILER (TRUCK CRANES, GRADALLS) | 12/01/2024 | \$31.08 | \$15.30 | \$16.40 | \$0.00 | \$62.78 |
| <i>OPERATING ENGINEERS LOCAL 4</i> | 06/01/2025 | \$31.80 | \$15.30 | \$16.40 | \$0.00 | \$63.50 |
| | 12/01/2025 | \$32.60 | \$15.30 | \$16.40 | \$0.00 | \$64.30 |
| | 06/01/2026 | \$33.32 | \$15.30 | \$16.40 | \$0.00 | \$65.02 |
| | 12/01/2026 | \$34.12 | \$15.30 | \$16.40 | \$0.00 | \$65.82 |

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> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|--|------------|---------|--------|---------|--------|---------|
| PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 2</i> | 01/01/2025 | \$58.46 | \$9.95 | \$23.95 | \$0.00 | \$92.36 |
|--|------------|---------|--------|---------|--------|---------|

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 50 | \$29.23 | \$9.95 | \$0.00 | \$0.00 | \$39.18 |
| 2 | 55 | \$32.15 | \$9.95 | \$6.66 | \$0.00 | \$48.76 |
| 3 | 60 | \$35.08 | \$9.95 | \$7.26 | \$0.00 | \$52.29 |
| 4 | 65 | \$38.00 | \$9.95 | \$7.87 | \$0.00 | \$55.82 |
| 5 | 70 | \$40.92 | \$9.95 | \$20.32 | \$0.00 | \$71.19 |
| 6 | 75 | \$43.85 | \$9.95 | \$20.93 | \$0.00 | \$74.73 |
| 7 | 80 | \$46.77 | \$9.95 | \$21.53 | \$0.00 | \$78.25 |
| 8 | 90 | \$52.61 | \$9.95 | \$22.74 | \$0.00 | \$85.30 |

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

| | | | | | | |
|-------------------------------------|------------|---------|--------|---------|--------|---------|
| PAINTER (SPRAY OR SANDBLAST, NEW) * | 01/01/2025 | \$49.36 | \$9.95 | \$23.95 | \$0.00 | \$83.26 |
|-------------------------------------|------------|---------|--------|---------|--------|---------|

* If 30% or more of surfaces to be painted are new construction,
NEW paint rate shall be used.*PAINTERS LOCAL 35 - ZONE 2*

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

Effective Date - 01/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 50 | \$24.68 | \$9.95 | \$0.00 | \$0.00 | \$34.63 |
| 2 | 55 | \$27.15 | \$9.95 | \$6.66 | \$0.00 | \$43.76 |
| 3 | 60 | \$29.62 | \$9.95 | \$7.26 | \$0.00 | \$46.83 |
| 4 | 65 | \$32.08 | \$9.95 | \$7.87 | \$0.00 | \$49.90 |
| 5 | 70 | \$34.55 | \$9.95 | \$20.32 | \$0.00 | \$64.82 |
| 6 | 75 | \$37.02 | \$9.95 | \$20.93 | \$0.00 | \$67.90 |
| 7 | 80 | \$39.49 | \$9.95 | \$21.53 | \$0.00 | \$70.97 |
| 8 | 90 | \$44.42 | \$9.95 | \$22.74 | \$0.00 | \$77.11 |

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|--------|---------|---------------------------|------------|
| Painter (Spray or Sandblast, Repaint) <i>Painters Local 35 - Zone 2</i> | 01/01/2025 | \$47.42 | \$9.95 | \$23.95 | \$0.00 | \$81.32 |

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

Effective Date - 01/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 50 | \$23.71 | \$9.95 | \$0.00 | \$0.00 | \$33.66 |
| 2 | 55 | \$26.08 | \$9.95 | \$6.66 | \$0.00 | \$42.69 |
| 3 | 60 | \$28.45 | \$9.95 | \$7.26 | \$0.00 | \$45.66 |
| 4 | 65 | \$30.82 | \$9.95 | \$7.87 | \$0.00 | \$48.64 |
| 5 | 70 | \$33.19 | \$9.95 | \$20.32 | \$0.00 | \$63.46 |
| 6 | 75 | \$35.57 | \$9.95 | \$20.93 | \$0.00 | \$66.45 |
| 7 | 80 | \$37.94 | \$9.95 | \$21.53 | \$0.00 | \$69.42 |
| 8 | 90 | \$42.68 | \$9.95 | \$22.74 | \$0.00 | \$75.37 |

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| Painter / Taper (Brush, New) * <i>Painters Local 35 - Zone 2</i> | 01/01/2025 | \$47.96 | \$9.95 | \$23.95 | \$0.00 | \$81.86 |
|---|------------|---------|--------|---------|--------|---------|

* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW

Effective Date - 01/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 50 | \$23.98 | \$9.95 | \$0.00 | \$0.00 | \$33.93 |
| 2 | 55 | \$26.38 | \$9.95 | \$6.66 | \$0.00 | \$42.99 |
| 3 | 60 | \$28.78 | \$9.95 | \$7.26 | \$0.00 | \$45.99 |
| 4 | 65 | \$31.17 | \$9.95 | \$7.87 | \$0.00 | \$48.99 |
| 5 | 70 | \$33.57 | \$9.95 | \$20.32 | \$0.00 | \$63.84 |
| 6 | 75 | \$35.97 | \$9.95 | \$20.93 | \$0.00 | \$66.85 |
| 7 | 80 | \$38.37 | \$9.95 | \$21.53 | \$0.00 | \$69.85 |
| 8 | 90 | \$43.16 | \$9.95 | \$22.74 | \$0.00 | \$75.85 |

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| Painter / Taper (Brush, Repaint) <i>Painters Local 35 - Zone 2</i> | 01/01/2025 | \$46.02 | \$9.95 | \$23.95 | \$0.00 | \$79.92 |
|---|------------|---------|--------|---------|--------|---------|

Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT

Effective Date - 01/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 50 | \$23.01 | \$9.95 | \$0.00 | \$0.00 | \$32.96 |
| 2 | 55 | \$25.31 | \$9.95 | \$6.66 | \$0.00 | \$41.92 |
| 3 | 60 | \$27.61 | \$9.95 | \$7.26 | \$0.00 | \$44.82 |
| 4 | 65 | \$29.91 | \$9.95 | \$7.87 | \$0.00 | \$47.73 |
| 5 | 70 | \$32.21 | \$9.95 | \$20.32 | \$0.00 | \$62.48 |
| 6 | 75 | \$34.52 | \$9.95 | \$20.93 | \$0.00 | \$65.40 |
| 7 | 80 | \$36.82 | \$9.95 | \$21.53 | \$0.00 | \$68.30 |
| 8 | 90 | \$41.42 | \$9.95 | \$22.74 | \$0.00 | \$74.11 |

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

| | | | | | | |
|---|--|---------|---------|---------|--------|---------|
| PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) | 12/01/2024 | \$39.86 | \$9.65 | \$17.80 | \$0.00 | \$67.31 |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY) | 06/01/2025 | \$41.25 | \$9.65 | \$17.80 | \$0.00 | \$68.70 |
| | 12/01/2025 | \$42.63 | \$9.65 | \$17.80 | \$0.00 | \$70.08 |
| | 06/01/2026 | \$44.07 | \$9.65 | \$17.80 | \$0.00 | \$71.52 |
| | 12/01/2026 | \$45.51 | \$9.65 | \$17.80 | \$0.00 | \$72.96 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway) | | | | | | |
| PANEL & PICKUP TRUCKS DRIVER | 01/01/2025 | \$39.78 | \$15.57 | \$20.17 | \$0.00 | \$75.52 |
| TEAMSTERS JOINT COUNCIL NO. 10 ZONE B | 06/01/2025 | \$40.78 | \$15.57 | \$20.17 | \$0.00 | \$76.52 |
| | 12/01/2025 | \$40.78 | \$15.57 | \$21.78 | \$0.00 | \$78.13 |
| | 01/01/2026 | \$40.78 | \$16.17 | \$21.78 | \$0.00 | \$78.73 |
| | 06/01/2026 | \$41.78 | \$16.17 | \$21.78 | \$0.00 | \$79.73 |
| | 12/01/2026 | \$41.78 | \$16.17 | \$23.52 | \$0.00 | \$81.47 |
| | 01/01/2027 | \$41.78 | \$16.77 | \$23.52 | \$0.00 | \$82.07 |
| PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) | 08/01/2024 | \$51.97 | \$10.08 | \$24.29 | \$0.00 | \$86.34 |
| PILE DRIVER LOCAL 56 (ZONE 2) | For apprentice rates see "Apprentice- PILE DRIVER" | | | | | |
| PILE DRIVER | 08/01/2024 | \$51.97 | \$10.08 | \$24.29 | \$0.00 | \$86.34 |
| PILE DRIVER LOCAL 56 (ZONE 2) | | | | | | |

Apprentice - PILE DRIVER - Local 56 Zone 2

Effective Date - 08/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 45 | \$23.39 | \$10.08 | \$2.53 | \$0.00 | \$36.00 |
| 2 | 55 | \$28.58 | \$10.08 | \$5.07 | \$0.00 | \$43.73 |
| 3 | 70 | \$36.38 | \$10.08 | \$19.22 | \$0.00 | \$65.68 |
| 4 | 80 | \$41.58 | \$10.08 | \$21.76 | \$0.00 | \$73.42 |

Notes:
 % Indentured BEFORE 8/1/2020, 50/60/70/75/80/80/90/90
 Step 1 \$60.36/2 \$65.75/3 \$70.75/4 \$73.35/5&6 \$75.95/7&8 81.14

Apprentice to Journeyworker Ratio:1:5

| | | | | | | |
|---------------------------------------|------------|---------|--------|---------|--------|---------|
| PIPELAYER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| | 12/01/2028 | \$51.66 | \$9.65 | \$17.70 | \$0.00 | \$79.01 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| PIPELAYER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.80 | \$0.00 | \$67.56 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.80 | \$0.00 | \$68.95 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.80 | \$0.00 | \$70.33 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.80 | \$0.00 | \$71.77 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.80 | \$0.00 | \$73.21 |

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

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| PLUMBER & PIPEFITTER <i>PLUMBERS LOCAL 4</i> | 03/01/2025 | \$56.40 | \$9.90 | \$17.77 | \$0.00 | \$84.07 |
| | 09/01/2025 | \$57.80 | \$9.90 | \$17.77 | \$0.00 | \$85.47 |
| | 03/01/2026 | \$59.20 | \$9.90 | \$17.77 | \$0.00 | \$86.87 |

Apprentice - PLUMBER/PIPEFITTER - Local 4

Effective Date - 03/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1 | 40 | \$22.56 | \$9.90 | \$0.00 | \$0.00 | \$32.46 |
| 2 | 50 | \$28.20 | \$9.90 | \$0.00 | \$0.00 | \$38.10 |
| 3 | 60 | \$33.84 | \$9.90 | \$0.00 | \$0.00 | \$43.74 |
| 4 | 70 | \$39.48 | \$9.90 | \$8.06 | \$0.00 | \$57.44 |
| 5 | 80 | \$45.12 | \$9.90 | \$8.06 | \$0.00 | \$63.08 |

Notes:
 Steps - 2000 hrs; Step 4 w/lic 75%, Step 5 w/lic 85%
 Step 4 w/lic \$52.59, Step 5 w/lic \$57.44

Apprentice to Journeyworker Ratio:1:3

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|---------------------------|------------|
| PNEUMATIC CONTROLS (TEMP.) <i>PLUMBERS LOCAL 4</i> | 03/01/2025 | \$56.40 | \$9.90 | \$17.77 | \$0.00 | \$84.07 |
| | 09/01/2025 | \$57.80 | \$9.90 | \$17.77 | \$0.00 | \$85.47 |
| | 03/01/2026 | \$59.20 | \$9.90 | \$17.77 | \$0.00 | \$86.87 |
| For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER" | | | | | | |
| PNEUMATIC DRILL/TOOL OPERATOR <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.61 | \$9.65 | \$17.70 | \$0.00 | \$67.96 |
| | 06/01/2025 | \$42.00 | \$9.65 | \$17.70 | \$0.00 | \$69.35 |
| | 12/01/2025 | \$43.38 | \$9.65 | \$17.70 | \$0.00 | \$70.73 |
| | 06/01/2026 | \$44.82 | \$9.65 | \$17.70 | \$0.00 | \$72.17 |
| | 12/01/2026 | \$46.26 | \$9.65 | \$17.70 | \$0.00 | \$73.61 |
| | 06/01/2027 | \$47.71 | \$9.65 | \$17.70 | \$0.00 | \$75.06 |
| | 12/01/2027 | \$49.16 | \$9.65 | \$17.70 | \$0.00 | \$76.51 |
| | 06/01/2028 | \$50.66 | \$9.65 | \$17.70 | \$0.00 | \$78.01 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.80 | \$0.00 | \$67.56 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.80 | \$0.00 | \$68.95 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.80 | \$0.00 | \$70.33 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.80 | \$0.00 | \$71.77 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.80 | \$0.00 | \$73.21 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" | | | | | | |
| POWDERMAN & BLASTER <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.86 | \$9.65 | \$17.70 | \$0.00 | \$68.21 |
| | 06/01/2025 | \$42.25 | \$9.65 | \$17.70 | \$0.00 | \$69.60 |
| | 12/01/2025 | \$43.63 | \$9.65 | \$17.70 | \$0.00 | \$70.98 |
| | 06/01/2026 | \$45.07 | \$9.65 | \$17.70 | \$0.00 | \$72.42 |
| | 12/01/2026 | \$46.51 | \$9.65 | \$17.70 | \$0.00 | \$73.86 |
| | 06/01/2027 | \$47.96 | \$9.65 | \$17.70 | \$0.00 | \$75.31 |
| | 12/01/2027 | \$49.41 | \$9.65 | \$17.70 | \$0.00 | \$76.76 |
| | 06/01/2028 | \$50.91 | \$9.65 | \$17.70 | \$0.00 | \$78.26 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> | 12/01/2024 | \$40.86 | \$9.40 | \$17.55 | \$0.00 | \$67.81 |
| | 06/01/2025 | \$42.25 | \$9.40 | \$17.55 | \$0.00 | \$69.20 |
| | 12/01/2025 | \$43.63 | \$9.40 | \$17.55 | \$0.00 | \$70.58 |
| | 06/01/2026 | \$45.07 | \$9.40 | \$17.55 | \$0.00 | \$72.02 |
| | 12/01/2026 | \$46.51 | \$9.40 | \$17.55 | \$0.00 | \$73.46 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" | | | | | | |
| POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$57.03 | \$15.55 | \$16.50 | \$0.00 | \$89.08 |
| | 06/01/2025 | \$58.33 | \$15.55 | \$16.50 | \$0.00 | \$90.38 |
| | 12/01/2025 | \$59.78 | \$15.55 | \$16.50 | \$0.00 | \$91.83 |
| | 06/01/2026 | \$61.08 | \$15.55 | \$16.50 | \$0.00 | \$93.13 |
| | 12/01/2026 | \$62.53 | \$15.55 | \$16.50 | \$0.00 | \$94.58 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|---------------------------|------------|
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$36.67 | \$15.55 | \$16.50 | \$0.00 | \$68.72 |
| | 06/01/2025 | \$37.52 | \$15.55 | \$16.50 | \$0.00 | \$69.57 |
| | 12/01/2025 | \$38.47 | \$15.55 | \$16.50 | \$0.00 | \$70.52 |
| | 06/01/2026 | \$39.33 | \$15.55 | \$16.50 | \$0.00 | \$71.38 |
| | 12/01/2026 | \$40.28 | \$15.55 | \$16.50 | \$0.00 | \$72.33 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| READY-MIX CONCRETE DRIVER <i>TEAMSTERS 170 - Dauphinais (Bellingham)</i> | 01/01/2025 | \$27.60 | \$11.26 | \$6.15 | \$0.00 | \$45.01 |
| RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 2</i> | 12/01/2024 | \$40.11 | \$9.65 | \$17.70 | \$0.00 | \$67.46 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.70 | \$0.00 | \$68.85 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.70 | \$0.00 | \$70.23 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.70 | \$0.00 | \$71.67 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.70 | \$0.00 | \$73.11 |
| | 06/01/2027 | \$47.21 | \$9.65 | \$17.70 | \$0.00 | \$74.56 |
| | 12/01/2027 | \$48.66 | \$9.65 | \$17.70 | \$0.00 | \$76.01 |
| | 06/01/2028 | \$50.16 | \$9.65 | \$17.70 | \$0.00 | \$77.51 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| ROOFER (Inc.Roofer Waterproofing &Roofer Damproofg) <i>ROOFERS LOCAL 33</i> | 02/01/2025 | \$52.03 | \$13.28 | \$21.70 | \$0.00 | \$87.01 |
| | 08/01/2025 | \$53.53 | \$13.28 | \$21.70 | \$0.00 | \$88.51 |
| | 02/01/2026 | \$54.78 | \$13.28 | \$21.70 | \$0.00 | \$89.76 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ROOFER - Local 33

Effective Date - 02/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$26.02 | \$13.28 | \$15.55 | \$0.00 | \$54.85 |
| 2 | 60 | \$31.22 | \$13.28 | \$21.70 | \$0.00 | \$66.20 |
| 3 | 65 | \$33.82 | \$13.28 | \$21.70 | \$0.00 | \$68.80 |
| 4 | 75 | \$39.02 | \$13.28 | \$21.70 | \$0.00 | \$74.00 |
| 5 | 85 | \$44.23 | \$13.28 | \$21.70 | \$0.00 | \$79.21 |

Effective Date - 08/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$26.77 | \$13.28 | \$15.55 | \$0.00 | \$55.60 |
| 2 | 60 | \$32.12 | \$13.28 | \$21.70 | \$0.00 | \$67.10 |
| 3 | 65 | \$34.79 | \$13.28 | \$21.70 | \$0.00 | \$69.77 |
| 4 | 75 | \$40.15 | \$13.28 | \$21.70 | \$0.00 | \$75.13 |
| 5 | 85 | \$45.50 | \$13.28 | \$21.70 | \$0.00 | \$80.48 |

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 ROOFERS LOCAL 33 | 02/01/2025 | \$52.28 | \$13.28 | \$21.70 | \$0.00 | \$87.26 |
| | 08/01/2025 | \$53.78 | \$13.28 | \$21.70 | \$0.00 | \$88.76 |
| | 02/01/2026 | \$55.03 | \$13.28 | \$21.70 | \$0.00 | \$90.01 |
| For apprentice rates see "Apprentice- ROOFER" | | | | | | |
| SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 63 | 01/01/2025 | \$42.23 | \$12.20 | \$18.74 | \$2.13 | \$75.30 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SHEET METAL WORKER - Local 63

Effective Date - 01/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 45 | \$19.00 | \$5.49 | \$4.86 | \$0.85 | \$30.20 |
| 2 | 50 | \$21.12 | \$6.10 | \$5.40 | \$0.94 | \$33.56 |
| 3 | 55 | \$23.23 | \$6.71 | \$9.71 | \$1.15 | \$40.80 |
| 4 | 60 | \$25.34 | \$7.32 | \$9.71 | \$1.23 | \$43.60 |
| 5 | 65 | \$27.45 | \$7.93 | \$9.71 | \$1.31 | \$46.40 |
| 6 | 70 | \$29.56 | \$8.54 | \$9.71 | \$1.39 | \$49.20 |
| 7 | 75 | \$31.67 | \$9.15 | \$9.71 | \$1.47 | \$52.00 |
| 8 | 80 | \$33.78 | \$9.76 | \$17.66 | \$1.78 | \$62.98 |
| 9 | 85 | \$35.90 | \$10.37 | \$17.66 | \$1.86 | \$65.79 |
| 10 | 90 | \$38.01 | \$10.98 | \$17.66 | \$1.94 | \$68.59 |

Notes:

Apprentice to Journeyworker Ratio:1:3

| | | | | | | |
|--|------------|---------|---------|---------|--------|---------|
| SPECIALIZED EARTH MOVING EQUIP < 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i> | 01/01/2025 | \$40.24 | \$15.57 | \$20.17 | \$0.00 | \$75.98 |
| | 06/01/2025 | \$41.24 | \$15.57 | \$20.17 | \$0.00 | \$76.98 |
| | 12/01/2025 | \$41.24 | \$15.57 | \$21.78 | \$0.00 | \$78.59 |
| | 01/01/2026 | \$41.24 | \$16.17 | \$21.78 | \$0.00 | \$79.19 |
| | 06/01/2026 | \$42.24 | \$16.17 | \$21.78 | \$0.00 | \$80.19 |
| | 12/01/2026 | \$42.24 | \$16.17 | \$23.52 | \$0.00 | \$81.93 |
| | 01/01/2027 | \$42.24 | \$16.77 | \$23.52 | \$0.00 | \$82.53 |
| SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i> | 01/01/2025 | \$40.53 | \$15.57 | \$20.17 | \$0.00 | \$76.27 |
| | 06/01/2025 | \$41.53 | \$15.57 | \$20.17 | \$0.00 | \$77.27 |
| | 12/01/2025 | \$41.53 | \$15.57 | \$21.78 | \$0.00 | \$78.88 |
| | 01/01/2026 | \$41.53 | \$16.17 | \$21.78 | \$0.00 | \$79.48 |
| | 06/01/2026 | \$42.53 | \$16.17 | \$21.78 | \$0.00 | \$80.48 |
| | 12/01/2026 | \$42.53 | \$16.17 | \$23.52 | \$0.00 | \$82.22 |
| | 01/01/2027 | \$42.53 | \$16.77 | \$23.52 | \$0.00 | \$82.82 |
| SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 669</i> | 04/01/2023 | \$47.43 | \$11.45 | \$16.61 | \$0.00 | \$75.49 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SPRINKLER FITTER - Local 669

Effective Date - 04/01/2023

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 45 | \$21.34 | \$8.22 | \$0.00 | \$0.00 | \$29.56 |
| 2 | 50 | \$23.72 | \$8.22 | \$0.00 | \$0.00 | \$31.94 |
| 3 | 55 | \$26.09 | \$11.45 | \$7.20 | \$0.00 | \$44.74 |
| 4 | 60 | \$28.46 | \$11.45 | \$8.35 | \$0.00 | \$48.26 |
| 5 | 65 | \$30.83 | \$11.45 | \$8.35 | \$0.00 | \$50.63 |
| 6 | 70 | \$33.20 | \$11.45 | \$8.60 | \$0.00 | \$53.25 |
| 7 | 75 | \$35.57 | \$11.45 | \$8.60 | \$0.00 | \$55.62 |
| 8 | 80 | \$37.94 | \$11.45 | \$8.60 | \$0.00 | \$57.99 |
| 9 | 85 | \$40.32 | \$11.45 | \$8.60 | \$0.00 | \$60.37 |
| 10 | 90 | \$42.69 | \$11.45 | \$8.60 | \$0.00 | \$62.74 |

Notes:

Apprentice to Journeyworker Ratio:1:1

| | | | | | | |
|--|------------|---------|---------|---------|--------|---------|
| STEAM BOILER OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| | | | | | | |
|---|------------|---------|---------|---------|--------|----------|
| TERRAZZO FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i> | 02/01/2025 | \$64.74 | \$11.49 | \$23.59 | \$0.00 | \$99.82 |
| | 08/01/2025 | \$66.89 | \$11.49 | \$23.59 | \$0.00 | \$101.97 |
| | 02/01/2026 | \$68.24 | \$11.49 | \$23.59 | \$0.00 | \$103.32 |
| | 08/01/2026 | \$70.44 | \$11.49 | \$23.59 | \$0.00 | \$105.52 |
| | 02/01/2027 | \$71.84 | \$11.49 | \$23.59 | \$0.00 | \$106.92 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$32.37 | \$11.49 | \$23.59 | \$0.00 | \$67.45 |
| 2 | 60 | \$38.84 | \$11.49 | \$23.59 | \$0.00 | \$73.92 |
| 3 | 70 | \$45.32 | \$11.49 | \$23.59 | \$0.00 | \$80.40 |
| 4 | 80 | \$51.79 | \$11.49 | \$23.59 | \$0.00 | \$86.87 |
| 5 | 90 | \$58.27 | \$11.49 | \$23.59 | \$0.00 | \$93.35 |

Effective Date - 08/01/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$33.45 | \$11.49 | \$23.59 | \$0.00 | \$68.53 |
| 2 | 60 | \$40.13 | \$11.49 | \$23.59 | \$0.00 | \$75.21 |
| 3 | 70 | \$46.82 | \$11.49 | \$23.59 | \$0.00 | \$81.90 |
| 4 | 80 | \$53.51 | \$11.49 | \$23.59 | \$0.00 | \$88.59 |
| 5 | 90 | \$60.20 | \$11.49 | \$23.59 | \$0.00 | \$95.28 |

Notes:

Apprentice to Journeyworker Ratio:1:3

| | | | | | | |
|---|------------|---------|---------|---------|--------|---------|
| TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i> | 12/01/2024 | \$51.28 | \$9.65 | \$18.22 | \$0.00 | \$79.15 |
| | 06/01/2025 | \$52.78 | \$9.65 | \$18.22 | \$0.00 | \$80.65 |
| | 12/01/2025 | \$54.28 | \$9.65 | \$18.22 | \$0.00 | \$82.15 |
| | 06/01/2026 | \$55.83 | \$9.65 | \$18.22 | \$0.00 | \$83.70 |
| | 12/01/2026 | \$57.33 | \$9.65 | \$18.22 | \$0.00 | \$85.20 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i> | 12/01/2024 | \$47.07 | \$9.65 | \$18.22 | \$0.00 | \$74.94 |
| | 06/01/2025 | \$48.57 | \$9.65 | \$18.22 | \$0.00 | \$76.44 |
| | 12/01/2025 | \$50.07 | \$9.65 | \$18.22 | \$0.00 | \$77.94 |
| | 06/01/2026 | \$51.62 | \$9.65 | \$18.22 | \$0.00 | \$79.49 |
| | 12/01/2026 | \$53.12 | \$9.65 | \$18.22 | \$0.00 | \$80.99 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i> | 12/01/2024 | \$46.95 | \$9.65 | \$18.22 | \$0.00 | \$74.82 |
| | 06/01/2025 | \$48.45 | \$9.65 | \$18.22 | \$0.00 | \$76.32 |
| | 12/01/2025 | \$49.95 | \$9.65 | \$18.22 | \$0.00 | \$77.82 |
| | 06/01/2026 | \$51.50 | \$9.65 | \$18.22 | \$0.00 | \$79.37 |
| | 12/01/2026 | \$53.00 | \$9.65 | \$18.22 | \$0.00 | \$80.87 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$56.40 | \$15.55 | \$16.50 | \$0.00 | \$88.45 |
| | 06/01/2025 | \$57.68 | \$15.55 | \$16.50 | \$0.00 | \$89.73 |
| | 12/01/2025 | \$59.12 | \$15.55 | \$16.50 | \$0.00 | \$91.17 |
| | 06/01/2026 | \$60.40 | \$15.55 | \$16.50 | \$0.00 | \$92.45 |
| | 12/01/2026 | \$61.84 | \$15.55 | \$16.50 | \$0.00 | \$93.89 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|---------------------------|------------|
| TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i> | 01/01/2025 | \$40.82 | \$15.57 | \$20.17 | \$0.00 | \$76.56 |
| | 06/01/2025 | \$41.82 | \$15.57 | \$20.17 | \$0.00 | \$77.56 |
| | 12/01/2025 | \$41.82 | \$15.57 | \$21.78 | \$0.00 | \$79.17 |
| | 01/01/2026 | \$41.82 | \$16.17 | \$21.78 | \$0.00 | \$79.77 |
| | 06/01/2026 | \$42.82 | \$16.17 | \$21.78 | \$0.00 | \$80.77 |
| | 12/01/2026 | \$42.82 | \$16.17 | \$23.52 | \$0.00 | \$82.51 |
| | 01/01/2027 | \$42.82 | \$16.77 | \$23.52 | \$0.00 | \$83.11 |
| TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i> | 12/01/2024 | \$59.18 | \$9.65 | \$19.00 | \$0.00 | \$87.83 |
| | 06/01/2025 | \$60.68 | \$9.65 | \$19.00 | \$0.00 | \$89.33 |
| | 12/01/2025 | \$62.18 | \$9.65 | \$19.00 | \$0.00 | \$90.83 |
| | 06/01/2026 | \$63.73 | \$9.65 | \$19.00 | \$0.00 | \$92.38 |
| | 12/01/2026 | \$65.23 | \$9.65 | \$19.00 | \$0.00 | \$93.88 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i> | 12/01/2024 | \$61.18 | \$9.65 | \$19.00 | \$0.00 | \$89.83 |
| | 06/01/2025 | \$62.68 | \$9.65 | \$19.00 | \$0.00 | \$91.33 |
| | 12/01/2025 | \$64.18 | \$9.65 | \$19.00 | \$0.00 | \$92.83 |
| | 06/01/2026 | \$65.73 | \$9.65 | \$19.00 | \$0.00 | \$94.38 |
| | 12/01/2026 | \$67.23 | \$9.65 | \$19.00 | \$0.00 | \$95.88 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i> | 12/01/2024 | \$51.25 | \$9.65 | \$19.00 | \$0.00 | \$79.90 |
| | 06/01/2025 | \$52.75 | \$9.65 | \$19.00 | \$0.00 | \$81.40 |
| | 12/01/2025 | \$54.25 | \$9.65 | \$19.00 | \$0.00 | \$82.90 |
| | 06/01/2026 | \$55.80 | \$9.65 | \$19.00 | \$0.00 | \$84.45 |
| | 12/01/2026 | \$57.30 | \$9.65 | \$19.00 | \$0.00 | \$85.95 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i> | 12/01/2024 | \$53.25 | \$9.65 | \$19.00 | \$0.00 | \$81.90 |
| | 06/01/2025 | \$54.75 | \$9.65 | \$19.00 | \$0.00 | \$83.40 |
| | 12/01/2025 | \$56.25 | \$9.65 | \$19.00 | \$0.00 | \$84.90 |
| | 06/01/2026 | \$57.80 | \$9.65 | \$19.00 | \$0.00 | \$86.45 |
| | 12/01/2026 | \$59.30 | \$9.65 | \$19.00 | \$0.00 | \$87.95 |
| For apprentice rates see "Apprentice- LABORER" | | | | | | |
| VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i> | 01/01/2025 | \$40.24 | \$15.57 | \$20.17 | \$0.00 | \$75.98 |
| | 06/01/2025 | \$41.24 | \$15.57 | \$20.17 | \$0.00 | \$76.98 |
| | 12/01/2025 | \$41.24 | \$15.57 | \$21.78 | \$0.00 | \$78.59 |
| | 01/01/2026 | \$41.24 | \$16.17 | \$21.78 | \$0.00 | \$79.19 |
| | 06/01/2026 | \$42.24 | \$16.17 | \$21.78 | \$0.00 | \$80.19 |
| | 12/01/2026 | \$42.24 | \$16.17 | \$23.52 | \$0.00 | \$81.93 |
| | 01/01/2027 | \$42.24 | \$16.77 | \$23.52 | \$0.00 | \$82.53 |
| VOICE-DATA-VIDEO TECHNICIAN <i>ELECTRICIANS LOCAL 96</i> | 09/01/2024 | \$35.29 | \$13.99 | \$17.57 | \$0.00 | \$66.85 |
| | 09/07/2025 | \$36.12 | \$14.98 | \$17.91 | \$0.00 | \$69.01 |
| | 09/06/2026 | \$37.04 | \$15.96 | \$18.27 | \$0.00 | \$71.27 |

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - VOICE-DATA-VIDEO TECHNICIAN - Local 96

Effective Date - 09/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$17.65 | \$13.99 | \$4.41 | \$0.00 | \$36.05 |
| 2 | 55 | \$19.41 | \$13.99 | \$4.46 | \$0.00 | \$37.86 |
| 3 | 60 | \$21.17 | \$13.99 | \$17.15 | \$0.00 | \$52.31 |
| 4 | 65 | \$22.94 | \$13.99 | \$17.20 | \$0.00 | \$54.13 |
| 5 | 70 | \$24.70 | \$13.99 | \$17.25 | \$0.00 | \$55.94 |
| 6 | 75 | \$26.47 | \$13.99 | \$17.30 | \$0.00 | \$57.76 |
| 7 | 80 | \$28.23 | \$13.99 | \$17.36 | \$0.00 | \$59.58 |
| 8 | 85 | \$30.00 | \$13.99 | \$17.41 | \$0.00 | \$61.40 |

Effective Date - 09/07/2025

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1 | 50 | \$18.06 | \$14.98 | \$4.51 | \$0.00 | \$37.55 |
| 2 | 55 | \$19.87 | \$14.98 | \$4.57 | \$0.00 | \$39.42 |
| 3 | 60 | \$21.67 | \$14.98 | \$17.48 | \$0.00 | \$54.13 |
| 4 | 65 | \$23.48 | \$14.98 | \$17.53 | \$0.00 | \$55.99 |
| 5 | 70 | \$25.28 | \$14.98 | \$17.59 | \$0.00 | \$57.85 |
| 6 | 75 | \$27.09 | \$14.98 | \$17.64 | \$0.00 | \$59.71 |
| 7 | 80 | \$28.90 | \$14.98 | \$17.70 | \$0.00 | \$61.58 |
| 8 | 85 | \$30.70 | \$14.98 | \$17.75 | \$0.00 | \$63.43 |

Notes:

Apprentice to Journeyworker Ratio:1:1

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| WAGON DRILL OPERATOR LABORERS - ZONE 2 | 12/01/2024 | \$40.61 | \$9.65 | \$17.70 | \$0.00 | \$67.96 |
| | 06/01/2025 | \$42.00 | \$9.65 | \$17.70 | \$0.00 | \$69.35 |
| | 12/01/2025 | \$43.38 | \$9.65 | \$17.70 | \$0.00 | \$70.73 |
| | 06/01/2026 | \$44.82 | \$9.65 | \$17.70 | \$0.00 | \$72.17 |
| | 12/01/2026 | \$46.26 | \$9.65 | \$17.70 | \$0.00 | \$73.61 |
| | 06/01/2027 | \$47.71 | \$9.65 | \$17.70 | \$0.00 | \$75.06 |
| | 12/01/2027 | \$49.16 | \$9.65 | \$17.70 | \$0.00 | \$76.51 |
| | 06/01/2028 | \$50.66 | \$9.65 | \$17.70 | \$0.00 | \$78.01 |
| | 12/01/2028 | \$52.16 | \$9.65 | \$17.70 | \$0.00 | \$79.51 |

For apprentice rates see "Apprentice- LABORER"

| | | | | | | |
|---|------------|---------|--------|---------|--------|---------|
| WAGON DRILL OPERATOR (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY) | 12/01/2024 | \$40.11 | \$9.65 | \$17.80 | \$0.00 | \$67.56 |
| | 06/01/2025 | \$41.50 | \$9.65 | \$17.80 | \$0.00 | \$68.95 |
| | 12/01/2025 | \$42.88 | \$9.65 | \$17.80 | \$0.00 | \$70.33 |
| | 06/01/2026 | \$44.32 | \$9.65 | \$17.80 | \$0.00 | \$71.77 |
| | 12/01/2026 | \$45.76 | \$9.65 | \$17.80 | \$0.00 | \$73.21 |

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

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|--|-----------------------|------------------|---------------|----------------|----------------------------------|-------------------|
| WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2024 | \$57.03 | \$15.55 | \$16.50 | \$0.00 | \$89.08 |
| | 06/01/2025 | \$58.33 | \$15.55 | \$16.50 | \$0.00 | \$90.38 |
| | 12/01/2025 | \$59.78 | \$15.55 | \$16.50 | \$0.00 | \$91.83 |
| | 06/01/2026 | \$61.08 | \$15.55 | \$16.50 | \$0.00 | \$93.13 |
| | 12/01/2026 | \$62.53 | \$15.55 | \$16.50 | \$0.00 | \$94.58 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" | | | | | | |
| WATER METER INSTALLER <i>PLUMBERS LOCAL 4</i> | 03/01/2025 | \$56.40 | \$9.90 | \$17.77 | \$0.00 | \$84.07 |
| | 09/01/2025 | \$57.80 | \$9.90 | \$17.77 | \$0.00 | \$85.47 |
| | 03/01/2026 | \$59.20 | \$9.90 | \$17.77 | \$0.00 | \$86.87 |
| For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER" | | | | | | |

Additional Apprentice Information:

All apprentices must be registered with the Division of Apprenticeship Training (DAS) in accordance with M.G.L. c. 23, §§ 11E-11L. Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the hourly prevailing wage rate established by the Commissioner under the provisions of M.G.L. c. 149, §§ 26-27D. Apprentice ratios are established by DAS pursuant to M.G.L. c. 23, §§ 11E-11L. Ratios are expressed as the allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified. The ratios listed herein have been taken from relevant private collective bargaining agreements (CBAs) and are provided for illustrative purposes only. They have not been independently verified as being accurate or continuing to be accurate. Parties having questions regarding what ratio to use should contact DAS.

SECTION 01.11.10 SUMMARY OF WORK

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** This section includes the following:
 - a. Project Information
 - b. Work covered by Contract Documents
 - c. Access to Site
 - d. Work Restrictions
 - e. Specifications and Drawing Conventions
 - f. Miscellaneous Provisions
- B.** Related Sections include the following:
 - a. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
 - b. Division Sections 02-09

1.03 PROJECT INFORMATION

- A.** Project Identification: Rear Door and Leak Repairs, 689-1 Oberlin Street Homes, Job No. #348178
 - a. Project Location: 32 Oberlin Street Worcester, MA 01610.
- B.** Owner: Worcester Housing Authority

1.04 WORK COVERED BY CONTRACT DOCUMENTS

- A.** The Work is defined by the Contract Documents and includes, but is not limited to the following:
 - a. Selective demolition of the existing flooring, exterior door, and gypsum wallboard as indicated on the Drawings.
 - b. Install a new exterior door, vinyl composition tile with resilient wall base, and gypsum board as indicated on the Drawings.

1.05 SCHEDULE

- A.** General: The Contractor shall prepare a detailed construction schedule, to be submitted to the Owner for review and approval.

- a. The schedule must clearly demonstrate the proper sequencing of construction activities.
- b. Include a phasing plan based on the construction schedule, including means and methods for temporary facilities and controls.

1.06 ACCESS TO SITE

- A.** General: Contractor shall have limited use of the Project site for construction operations as indicated on the Drawings by the contract limits and as indicated by requirements of this Section.
 - a. Contractor is responsible to restore site at Project completion. Document existing site conditions by photographs and/or video and submit copies to the Owner.
- B.** Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of the Project site beyond areas in which the Work is indicated.
 - a. Parking is permitted on site.
 - b. Owner Occupancy: Allow for Owner and tenant occupancy of the Project site.
 - c. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to the Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for storage of materials.
 - i. Schedule deliveries to minimize use of driveways and entrances.
 - ii. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.07 COORDINATION WITH OCCUPANTS

- A.** The Awarding Authority (WHA) will use a Tenant Coordinator to provide notifications and/or access to coordinate all activities with tenants. It is the responsibility of the Contractor to provide one (1) week notice or other as required by the Owner's Project Manager for the work, in the event it interferes with the Tenants.
- B.** Provide a minimum 72-hour notice to residents prior to any work which may disrupt their daily lives including, but not limited to, disruption to services, entrance into apartments, and work taking place immediately outside apartments.
- C.** Full Owner Occupancy: Owner and tenants will occupy the site and building during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's and tenants' day-to-day operations. Maintain existing exits unless otherwise indicated.
 - a. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from the Owner and approval of authorities having jurisdiction.
 - b. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.08 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions or construction operations.
 - a. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
 - b. Leave work areas clean and safe for Tenants' use at the end of each workday.
 - c. Provide safety warning signage in and around work areas.

- B. On-Site Work Hours: Work shall be generally performed during normal business hours of 8:00AM to 4:00PM, Monday through Friday unless otherwise indicated.
 - a. Work may commence at 8:00 a.m. and is limited to non-disruptive work including mobilization and preparation of work that does not involve noisy operations.
 - b. Contractor is responsible for Owner issued Sign-In Sheet daily.
 - c. No work shall be performed on WHA property, on Saturdays, Sundays, or the following holidays other than for emergencies or unless specifically authorized by the Awarding Authority.
 - i. New Year's Day
 - ii. Martin Luther King Day
 - iii. President's Day
 - iv. Patriot's Day Observed
 - v. Juneteenth (June 19th)
 - vi. Memorial Day
 - vii. Independence Day Observed
 - viii. Labor Day
 - ix. Veteran's Day
 - x. Thanksgiving
 - xi. Day after Thanksgiving
 - xii. Christmas Day

- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - a. Notify Owner not less than 72 hours in advance of proposed utility interruptions.
 - b. Notify Owner not less than 72 hours in advance for access to tenants' apartments.
 - c. Do not proceed with utility interruptions without Owner's written permission.

- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to abutters with Owner.
 - a. Notify Owner's Representative not less than 72 hours in advance of proposed disruptive operations.
 - b. Obtain Owner's Representative's permission before proceeding with disruptive operations.

- E. Nonsmoking Building: Smoking and vaping are not permitted within the building or on site.

- F. Employee Identification: Provide company branded clothing and or identification tags for Contractor personnel working on Project site.

- G. Contractor will be responsible for all costs to the Owner associated with overtime and weekend work performed by owner representatives (including but not limited to the Architect, Engineers, OPM or COW) related to site observation and materials testing when such work has been scheduled by the Contractor to maintain the contractor's schedule.

1.09 SPECIFICATIONS AND DRAWING CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 48-division format and CSI/CSC's "Master Format" numbering system.
 - a. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - a. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - b. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - c. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- D. In case of disagreement within the Specifications, the Architect shall interpret the Documents to require the better quality or greater quantity of work for the Owner that can reasonably be construed therefrom. Any work performed by the Contractor without consulting the Architect, when the same requires a decision, shall be performed at the Contractor's risk.
- E. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products.
 - a. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - b. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.

1.10 CODE, STANDARDS AND PERMITS

- A.** Code Enforcement and Approvals: Secure and pay for the general building permit for the work and conform to all conditions and requirements of the permit and code enforcement authorities.
- B.** Identify all permits (other than general building permit) required from authorities having jurisdiction over the Project for the construction and occupancy of the work. Prepare the necessary applications and submit required plans and documents to obtain such permits in a timely manner.
 - a. Display all permit cards as required by the authorities and deliver legible photocopies of all permits to the Owner's Representative and Owner promptly upon their receipt.
 - b. Arrange for all inspections, testing and approvals required for all permits. Notify the Owner, Owner's Representative and Architect at least three business days in advance, so they may arrange to observe.
 - c. Comply with all conditions and provide all notices required by all permits.
 - d. Perform and/or arrange for and pay for all testing and inspections required by the governing codes and authorities, other than those provided by the Owner, and notify the Owner, Owner's Representative, and Architect of such inspections at least three business days in advance, so they may arrange to observe.
 - e. Where inspecting authorities require corrective work in conjunction with applicable codes and authorities, promptly comply with such requirements, except in cases where such requirements clearly exceed the requirements of the Contract Documents, in which case proceed in accordance with the procedures for modifications to the Work established in the Contract Documents.
- C.** All work under this contract shall conform to all codes and standards in effect as of the date of receipt of Bids which are applicable to this Project. All work shall also conform to specific requirements and interpretations of local authorities having jurisdiction over the Project. These Codes, standards, and authorities are referred to collectively as "the governing codes and authorities" and similar terms throughout the Specifications. Determination of applicable codes and standards and requirements of the authorities having jurisdiction shall be the responsibility of the Contractor; as shall be the analysis of all such codes and standards in regard to their applicability to the Project for the purposes of determining necessary construction to conform to such code requirements, for securing all approvals and permits necessary to proceed with construction, and to obtain all permits necessary for the Owner to occupy the facility for their intended use. In the case of conflicts between the requirements of different codes and standards, the most restrictive or stringent requirements shall be met.

1.11 OCCUPATIONAL HEALTH AND SAFETY ACT

- A.** The Contractor and each Subcontractor shall comply with the requirements of the Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, including all standards and regulations which have been promulgated by the Governmental Authorities which administer such Acts. Said requirements, standards and regulations are incorporated herein by reference.

- a. Each Contractor and Subcontractor shall comply with M.G.L. Chapter 306 of the Acts of 2004 which requires that all employees on the Project site complete a course in construction safety and health approved by the U.S. Occupational Safety and Health Administration (OSHA), known as the “OSHA 10-hour course.”
- B. The Contractor and each Subcontractor shall comply with said regulations, requirements and standards and require and be directly responsible for compliance therewith on the part of his agents, employees material men and Subcontractors; and shall directly receive and be responsible for all citations, assessments, fines or penalties which may be incurred by reason of his agents, employees, material men or Subcontractors failing to so comply.

PART 2 – PRODUCTS (NOT USED)

PART 3 – PRODUCTS (NOT USED)

**END OF SECTION OF SUMMARY OF WORK
01.11.00**

SECTION 01.31.00

PROJECT MANAGEMENT AND COORDINATION

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This section includes administrative provision for coordinating construction operation and the Project including, but not limited to, the following:
 - a. General coordination procedures
 - b. Requests for Information (RFI's)
 - c. Project meetings
- B. Related Sections include the following:
 - a. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - b. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.03 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.04 INFORMATION SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - a. Name, address, and telephone number of entity performing subcontract or supplying products.
 - b. Number and title of related Specification Section(s) covered by subcontract.
 - c. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 10 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
 - a. Keep list current at all times, resubmit upon update.

1.05 GENERAL COORDINATION PROCEDURES

- A. General: Coordination:** Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
- a. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - b. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - c. Make adequate provisions to accommodate items scheduled for later installation.
 - d. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
 - e. No claim for additional compensation or extension of Contract Time will be permitted for conditions resulting from lack of coordination.
- B.** Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
- a. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures:** Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
- a. Preparation of Contractor's Construction Schedule.
 - b. Preparation of the Schedule of Values.
 - c. Installation and removal of temporary facilities and controls.
 - d. Delivery and processing of submittals.
 - e. Pre-installation conferences.
 - f. Progress meetings.
 - g. Startup and adjustment of systems.
 - h. Project closeout activities.
- D. Conservation:** Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
- a. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.06 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A.** General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.

1.07 PROJECT MEETINGS

- A.** General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 - a. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner, Owner's Representative and Architect of scheduled meeting dates and times.
 - b. Agenda: Prepare the meeting agenda and distribute the agenda to all invited attendees.
 - c. Minutes: Record significant discussions and agreements achieved and distribute the meeting minutes to everyone concerned, including Owner, Owner's Representative and Architect, within three days of the meeting.
- B.** Preconstruction Conference: Arrange for attendance of subcontractors at Preconstruction Conference convened by Architect, together with any other persons necessary for full review of scheduling and coordination matters for the Project.
 - a. Attendees: Authorized representatives of Owner, Owner's Representative, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - b. Agenda: Include the following:
 - i. Tentative construction schedule.
 - ii. Phasing.
 - iii. Critical work sequencing and long-lead items.
 - iv. Designation of key personnel and their duties.
 - v. Procedures for processing field decisions and Change Orders.
 - vi. Procedures for RFIs.
 - vii. Procedures for testing and inspecting.
 - viii. Procedures for processing Applications for Payment.
 - ix. Distribution of the Contract Documents.
 - x. Submittal procedures.
 - xi. Preparation of Record Documents.
 - xii. Use of the premises.
 - xiii. Work restrictions.

- xiv. Owner's occupancy requirements.
 - xv. Responsibility for temporary facilities and controls.
 - xvi. Construction waste management and recycling.
 - xvii. Parking availability.
 - xviii. Office, work, and storage areas.
 - xix. Equipment deliveries and priorities.
 - xx. First aid.
 - xxi. Security.
 - xxii. Progress cleaning.
 - xxiii. Working hours.
 - xxiv. Owner-furnished and provided items.
 - xxv. Work performed under separate contracts.
- c. Minutes: Architect will record and distribute meeting minutes.
- C. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.**
- a. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and Owner's Representative of scheduled meeting dates.
 - b. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - i. The Contract Documents.
 - ii. Options.
 - iii. Related RFIs.
 - iv. Related Change Orders.
 - v. Purchases.
 - vi. Deliveries.
 - vii. Submittals.
 - viii. Review of mockups.
 - ix. Possible conflicts.
 - x. Compatibility problems.
 - xi. Time schedules.
 - xii. Weather limitations.
 - xiii. Manufacturer's written recommendations.
 - xiv. Warranty requirements.

- xv. Compatibility of materials.
 - xvi. Acceptability of substrates.
 - xvii. Temporary facilities and controls.
 - xviii. Space and access limitations.
 - xix. Regulations of authorities having jurisdiction.
 - xx. Testing and inspecting requirements.
 - xxi. Installation procedures.
 - xxii. Coordination with other work.
 - xxiii. Required performance results.
 - xxiv. Protection of adjacent work.
 - xxv. Protection of construction and personnel.
- c. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - d. Reporting: Distribute minutes of the meeting to each party present, the Owner, Owner's Representative and Architect, and to parties who should have been present.
 - e. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings:** Schedule progress meetings as needed. Dates of meetings may coincide with preparation of payment requests.
- a. Attendees: In addition to representatives of Owner, Owner's Representative and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - b. Agenda: Review minutes of previous progress meeting. Review other items of significance that could affect progress.
 - i. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1. Review schedule for next period.
 - ii. Review present and future needs of each entity present, including the following:
 - 1. Interface requirements.
 - 2. Sequence of operations.

3. Deliveries.
 4. Access.
 5. Site utilization.
 6. Temporary facilities and controls.
 7. Work hours.
 8. Hazards and risks.
 9. Progress cleaning.
 10. Quality and work standards.
 11. Status of correction of deficient items.
 12. Field observations.
 13. RFIs.
 14. Status of proposal requests.
 15. Pending changes.
 16. Status of Change Orders.
 17. Pending claims and disputes.
 18. Documentation of information for payment requests.
- iii. Minutes: Architect will record and distribute the meeting minutes.
 - iv. Reporting: Architect will distribute minutes of the meeting to each party present.
 1. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
- E. Coordination Meetings:** Schedule Project coordination meetings at weekly intervals. Project coordination meetings are in addition to specific meetings held for other purposes.
- a. Attendees: In addition to representatives of the Contractor, each subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - b. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - i. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to Combined Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss

whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

- ii. Schedule Updating: Revise Combined Contractor's Construction Schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
- iii. Review present and future needs of each contractor present, including the following:
 1. Interface requirements.
 2. Sequence of operations.
 3. Deliveries.
 4. Access.
 5. Site utilization.
 6. Temporary facilities and controls.
 7. Work hours.
 8. Hazards and risks.
 9. Progress cleaning.
 10. Quality and work standards.
 11. Change Orders.
- c. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.08 REQUESTS FOR INFORMATION (RFI'S)

- A.** Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI, to the Architect, in the form specified.
 - a. RFIs shall originate with Contractor or Subcontractor. RFIs submitted by entities other than the Contractor will be returned with no response.
 - b. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B.** Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
 - a. Project name.
 - b. Date.
 - c. Name of Contractor.
 - d. Name of Architect.
 - e. RFI number, numbered sequentially.
 - f. Specification Section number and title and related paragraphs, as appropriate.
 - g. Drawing number and detail references, as appropriate.
 - h. Field dimensions and conditions, as appropriate.

- i. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 - j. Contractor's signature.
 - k. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - i. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow five working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
- a. The following RFI's will be returned without action:
 - i. Requests for approval of submittals.
 - ii. Requests for approval of substitutions.
 - iii. Requests for coordination information already indicated in the Contract Documents.
 - iv. Requests for adjustments in the Contract Time or the Contract Sum.
 - v. Requests for interpretation of Architect's actions on submittals.
 - vi. Incomplete RFIs or RFIs with numerous errors.
 - b. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
 - c. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal.
 - i. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- D. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within five days if Contractor disagrees with response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log biweekly. Include the following:
- a. Project name.
 - b. Name and address of Contractor.
 - c. Name and address of Architect.
 - d. RFI number including RFIs that were dropped and not submitted.
 - e. RFI description.
 - f. Date the RFI was submitted.
 - g. Date Architect's response was received.
 - h. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

PART 2 – PRODUCTS (NOT USED)

PART 3 – PRODUCTS (NOT USED)

**END OF SECTION OF PROJECT MANAGEMENT AND COORDINATION
01.31.10**

SECTION 01.33.00 SUBMITTAL PROCEDURES

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - a. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - b. Division 01 Section "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
 - c. Division 01 Section "Closeout Procedures" for submitting warranties.
 - d. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - e. Divisions 02 through 32 Sections for specific requirements for submittals in those Sections.

1.03 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.04 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - a. Initial Submittal: Submit concurrently with preliminary network diagram. Include submittals required during the first 15 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - b. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.
 - c. At the request, provide reports capable of being sorted by the following criteria:

- i. Approved Status
- ii. Subcontractor/Supplier
- iii. Submission Date
- iv. Number of days late for return
- v. Number of days under review

1.05 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Coordination:** Coordinate preparation and processing of submittals with performance of construction activities.
 - a. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - b. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 - c. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 - d. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - i. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Processing Time:** Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - a. Initial Review: Allow two weeks for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - b. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 - c. Concurrent Consultant Review: Submittals shall be transmitted simultaneously to Architect and to Architect's consultants. Allow two weeks for review of each submittal. Consultant will return submittal to Architect before being returned to Contractor.
- C. Electronic Submittals:** Identify and incorporate information in each electronic submittal file as follows:
 - a. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.

- b. Name file with submittal number or other unique identifier, including revision identifier.
 - i. File name shall be formatted as follows: WHA-064023.01-8-2.4A.
 - 1. Project Name-
 - 2. Specification Section number followed by a decimal point and then a sequential number for the submittal number of that product-
 - 3. Specification Section page number-
 - 4. Paragraph number where product is specified.
- c. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
- d. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software acceptable to Owner, containing the following information:
 - i. Project name.
 - ii. Date.
 - iii. Name of Architect.
 - iv. Name of Contractor.
 - v. Name of firm or entity that prepared submittal.
 - vi. Names of subcontractor, manufacturer, and supplier.
 - vii. Category and type of submittal.
 - viii. Submittal purpose and description.
 - ix. Specification Section number and title.
 - x. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - xi. Drawing number and detail references, as appropriate.
 - xii. Location(s) where product is to be installed, as appropriate.
 - xiii. Related physical samples submitted directly.
 - xiv. Indication of full or partial submittal.
 - xv. Transmittal number, numbered consecutively.
 - xvi. Submittal and transmittal distribution record.
 - xvii. Other necessary identification.
 - xviii. Remarks.

D. Options: Identify options requiring selection by Architect.

- E. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- F. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 - a. Note date and content of previous submittal.
 - b. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - c. Resubmit submittals until they are marked "Reviewed" or "Reviewed as Modified."
- G. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- H. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 – PRODUCTS

2.01 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - a. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - b. Mark each copy of each submittal to show which products and options are applicable.
 - c. Include the following information, as applicable:
 - i. Manufacturer's written recommendations.
 - ii. Manufacturer's product specifications.
 - iii. Manufacturer's installation instructions.

- iv. Standard color charts.
 - v. Manufacturer's catalog cuts.
 - vi. Wiring diagrams showing factory-installed wiring.
 - vii. Printed performance curves.
 - viii. Operational range diagrams.
 - ix. Mill reports.
 - x. Standard product operation and maintenance manuals.
 - xi. Compliance with specified referenced standards.
 - xii. Testing by recognized testing agency.
 - xiii. Application of testing agency labels and seals.
 - xiv. Notation of coordination requirements.
- d. For equipment, include the following in addition to the above, as applicable:
- i. Wiring diagrams showing factory-installed wiring.
 - ii. Printed performance curves.
 - iii. Operational range diagrams.
- e. Submit Product Data before or concurrent with Samples.
- f. Submit Product Data in the following format:
- i. PDF electronic file.
- C. Shop Drawings:** Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect's digital data drawing files is otherwise permitted.
- a. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
- i. Dimensions.
 - ii. Identification of products.
 - iii. Fabrication and installation drawings.
 - iv. Roughing-in and setting diagrams.
 - v. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - vi. Shop work manufacturing instructions.
 - vii. Templates and patterns.
 - viii. Schedules.
 - ix. Compliance with specified standards.
 - x. Notation of coordination requirements.

- xi. Notation of dimensions established by field measurement.
 - xii. Relationship to adjoining construction clearly indicated.
 - xiii. Seal and signature of professional engineer if specified.
 - xiv. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - b. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
 - c. Submit Shop Drawings in the following format:
 - i. PDF electronic file.
- D. Samples:** Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component delivered and installed.
 - a. Transmit samples that contain multiple, related components such as accessories together in one submittal package.
 - b. Identification: Attach label on unexposed side of Samples that includes the following:
 - i. Generic description of Sample.
 - ii. Product name and name of manufacturer.
 - iii. Sample source.
 - iv. Number and title of appropriate Specification Section.
 - c. Disposition: Maintain sets of approved Samples at the project site, available for quality-control comparisons throughout the course of construction activity. Sample Sets may be used to determine final acceptance of construction associated with each set.
 - i. Samples that may be incorporated into the work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - ii. Samples not incorporated into the work, or otherwise designated as Owner's property, are the property of the Contractor.
 - d. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - i. Number of Samples: Submit two full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

- e. Samples for Verification: Submit full-size units of Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use. And that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, or pattern; color range sets; and components used for independent testing and inspection.
 - i. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned sample set as a Project Record Sample.
 - 1. Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2. If variation in color, pattern, or other characteristics is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits in variations.

- E. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - a. Type of product. Include unique identifier for each product.
 - b. Number and name of room or space.
 - c. Location within room or space.
 - d. Number of Copies: Submit five copies of product schedule or list, unless otherwise indicated. Architect will return four copies.
 - i. Mark up and retain one returned copy as a Project Record Document.

- F. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - a. Name, address, and telephone number of entity performing subcontract or supplying products.
 - b. Number and title of related Specification Section(s) covered by subcontract.
 - c. Drawing number and detail references, as appropriate, covered by subcontract.
 - d. Number of Copies: Submit five copies of subcontractor list, unless otherwise indicated. Architect will return four copies.
 - i. Mark up and retain one returned copy as a Project Record Document.

- G.** Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- H.** Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- I.** Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, name and address of the Owner, and other information specified.
- J.** Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- K.** Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- L.** Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- M.** Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- N.** Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- O.** Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- P.** Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - a. Name of evaluation organization.
 - b. Date of evaluation.
 - c. Time period when report is in effect.
 - d. Product and manufacturers' names.
 - e. Description of product.

- f. Test procedures and results.
 - g. Limitations of use.
- Q.** Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."
- R.** Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- S.** Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- T.** Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- U.** Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
- a. Preparation of substrates.
 - b. Required substrate tolerances.
 - c. Sequence of installation or erection.
 - d. Required installation tolerances.
 - e. Required adjustments.
 - f. Recommendations for cleaning and protection.
- V.** Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
- a. Name, address, and telephone number of factory-authorized service representative making report.
 - b. Statement on condition of substrates and their acceptability for installation of product.

- c. Statement that products at Project site comply with requirements.
 - d. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - e. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - f. Statement whether conditions, products, and installation will affect warranty.
 - g. Other required items indicated in individual Specification Sections.
- W.** Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

2.02 DELEGATED DESIGN

- A.** Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
- a. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B.** Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit five copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
- a. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 – EXECUTION

3.01 CONTRACTOR'S REVIEW

- A.** Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B.** Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of

reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.02 ARCHITECT'S ACTION

- A.** General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

- B.** Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - a. Reviewed as required by the contract documents and approved, but only for conformance to the design concept of the work, and subject to further limitations and requirements contained in the contract documents.
 - b. Reviewed and approved, except as noted, subject to limitations noted above.
 - c. Resubmission Required.
 - d. Disapproved.

- C.** Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

- D.** Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

END OF SECTION OF SUBMITTAL PROCEDURES

01.33.00

SECTION 01.40.00

QUALITY REQUIREMENTS

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control, and mockup requirements.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - a. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - b. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - c. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, Owner's Representative, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - a. Division 01 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
 - b. Divisions 02 through 32 Sections for specific test and inspection requirements.
 - c. Divisions 02 through 32 Sections for specific mock-up requirements.

1.03 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by WHA.
- C. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

- D. **Product Testing:** Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- E. **Source Quality-Control Testing:** Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- F. **Field Quality-Control Testing:** Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. **Installer/Applicator/Erector:** Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
- H. **Experienced:** When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.04 CONFLICTING REQUIREMENTS

- A. **General:** If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.05 SUBMITTALS

- A. **Qualification Data:** For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. **Schedule of Tests and Inspections:** Prepare in tabular form and include the following:
 - a. Specification Section number and title.
 - b. Description of test and inspection.
 - c. Identification of applicable standards.
 - d. Identification of test and inspection methods.

- e. Number of tests and inspections required.
 - f. Time schedule or time span for tests and inspections.
 - g. Entity responsible for performing tests and inspections.
 - h. Requirements for obtaining samples.
 - i. Unique characteristics of each quality-control service.
- C. Reports:** Prepare and submit certified written reports that include the following:
- a. Assemble Date of issue.
 - b. Project title and number.
 - c. Name, address, and telephone number of testing agency. Dates and locations of samples and tests or inspections.
 - d. Names of individuals making tests and inspections.
 - e. Description of the Work and test and inspection method.
 - f. Identification of product and Specification Section.
 - g. Complete test or inspection data.
 - h. Test and inspection results and an interpretation of test results.
 - i. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - j. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - k. Name and signature of inspector.
 - l. Recommendations on retesting and re-inspecting.
- D. Permits, Licenses, and Certificates:** For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.06 QUALITY ASSURANCE

- A. General:** Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - a. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- F. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
 - a. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.07 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - a. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - b. Payment for these services will be made by the Owner.
 - c. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 - a. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - i. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

- b. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 - c. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 - d. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - e. Submit additional copies of each written report directly to authorities having jurisdiction when they so direct.
- C. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. **Retesting/Re-inspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- a. Retesting to be performed by the Inspection and Testing Agency that performed the original tests.
 - b. Retest original failed test and perform one additional test at new locations to be determined by Architect and Testing Agency.
 - c. Continue retesting until compliance is achieved.
 - i. Costs associated with retesting and re-inspecting beyond one additional test are the responsibility of the Contractor.
- E. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
- a. Access to the Work.
 - b. Incidental labor and facilities necessary to facilitate tests and inspections.
 - c. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - d. Facilities for storage and field curing of test samples.
 - e. Delivery of samples to testing agencies.
 - f. Preliminary design mix proposed for use for material mixes that require control by testing agency.

- g. Security and protection for samples and for testing and inspecting equipment at Project site.
- F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - a. Schedule times for tests, inspections, obtaining samples, and similar activities.
 - b. Provide the Testing Agency with a complete set of Contract Documents.
- G. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.
 - a. Distribution: Distribute schedule to Owner, Architect, Owner's Representative, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.08 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency and special inspector to conduct special tests and inspections required by the Massachusetts State Building Code and by authorities having jurisdiction as the responsibility of Owner, and as follows:
 - a. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 - b. Notifying Architect, Owner's Representative, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - c. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 - d. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 - e. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - f. Retesting and re-inspecting corrected work.
 - i. Costs associated with retesting and re-inspecting are the responsibility of the Contractor.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 TEST AND INSPECTION LOG

- A.** Prepare a record of tests and inspections. Include the following:
 - a. Date test or inspection was conducted.
 - b. Description of the Work tested or inspected.
 - c. Date test or inspection results were transmitted to Architect.
 - d. Identification of testing agency or special inspector conducting test or inspection.

- B.** Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's and Owner's Representative's reference during normal working hours.

3.02 REPAIR AND PROTECTION

- A.** General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - a. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

- B.** Protect construction exposed by or for quality-control service activities.

- C.** Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION OF QUALITY REQUIREMENTS

01.40.00

SECTION 01.50.00

TEMPORARY FACILITIES AND CONTROLS

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections include the following:
 - a. Division 01 Section "Summary" for Contractor's construction schedule, limitations on utility interruptions and other work restrictions.
 - b. Division 01 Section "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
 - c. Division 01 Section "Execution" for progress cleaning requirements.
- C. Temporary Facilities and Controls to be provided by the Contractor, unless identified specifically as the work of a Filed Subcontractor.

1.03 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Temporary Water Service and Distribution: Water is available in limited quantities at the Project Site. Make arrangements with Authority and building manager for hookup locations. Provide piping and hoses for construction purposes, including water for drinking and fire protection. Install branch piping with taps located so water is available through hoses throughout construction. Authority will pay for water used for construction purposes.
 - a. Contractor is responsible for any damage done to water service as a result of the Contractors' use for duration of the Contract.
- C. Electric Power Service: Electric power from Owner's existing system is available for use without metering and without payment of use charges at standard 120V outlets. Provide connections and extensions of services as required for construction operations.
 - a. Contractor is responsible for any damage done to electric service as a result of the Contractors' use for duration of the Contract.
 - b. Provide circuit and branch wiring, with area distribution boxes located so power and lighting is available throughout construction by use of construction-type power cords.
 - c. Provide adequate artificial lighting where natural light is not adequate for work, and for areas accessible to public.

1.04 SUBMITTALS

- A. Schedule: Submit a schedule indicating implementation and termination of each temporary utility within fifteen days of date established for Commencement of the Work.
- B. Implementation and Termination Schedule: Within 15 days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.
- C. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.
- D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- E. Noise and Vibration Control Plan: Identify construction activities that may impact the occupancy and use of existing spaces within the building or adjacent existing buildings, whether occupied by others, or occupied by the Owner. Include the following:
 - a. Methods used to meet the goals and requirements of the Owner.
 - b. Location of construction devices on the site.
 - c. Show compliance with the use and maintenance of quieted construction devices for the duration of the Project.
 - d. Indicate activities that may disturb building occupants and that are planned to be performed during non-standard working hours as coordinated with the Owner.
 - e. Indicate locations of sensitive areas or other areas requiring special attention as identified by Owner. Indicate means for complying with Owner's requirements.
- F. Dust Control Plan: Submit coordination drawing and narrative that indicates the dust control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:
 - a. Locations of dust control partitions at each phase of work.
 - b. Waste-handling procedures.
 - c. Other dust control measures.

1.05 QUALITY ASSURANCE

- A. General: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to the following:
 - a. Massachusetts State Building Code and referenced standards.
 - b. Health and safety regulations.
 - c. Utility company regulations.
 - d. Police and Fire Department rules and regulations.
 - e. Environmental Protection Agency regulations.
- B. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.06 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.
- B. Protection of Property in Occupied Units: The Contractor shall be responsible for the providing proper protection against damage, loss, or theft, any personal property or belongings in occupied buildings and individual units during construction under the work of this Contract. The Contractor may relocate furnishings on a daily basis with the prior approval of the occupants of the unit(s) affected, and the building management. The Contractor shall pay all costs of moving furniture (including providing all protective coverings), and all costs for safeguarding existing units and property of the unit's occupants.
- C. The Contractor shall be aware that special consideration must be made to the fact that they are working in a housing development. Tools, construction equipment, and construction materials are not to be left unattended at any time. Open areas left during the course of construction must be covered or otherwise made safe. Any considerations made for the safety of the residents shall made to the Authority's approval.
- D. The Contractor shall, at all times, leave an unobstructed way along corridors, roadways and walks. The Contractor shall maintain barriers and lights for protection of all persons and property in all locations where he/she has material stored or work going on and during the entire time such work is going on or material is stored.

- E. Comply with the requirements of the Owner.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Materials may be new or used but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

2.02 TEMPORARY FACILITIES

- A. Site Mobilization: On-site mobilization area to be provided to the Contractor by the Housing Authority.
 - a. The Contractor will be responsible to repair any damaged areas of mobilization area.
 - b. The Contractor is responsible to restore mobilization / staging area to original condition following completion of the Project.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
 - a. Clean, restock supplies and maintain facilities on minimum weekly basis.

2.03 EQUIPMENT

- A. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress.

PART 3 – EXECUTION

3.01 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

- a. Locate facilities to limit site disturbance as specified in Section 01 11 10 "Summary of Work."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary services.
 - a. Arrange with utility company and Architect for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- C. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
 - a. Perform daily construction cleanup and final cleanup using approved, HEPA- filter-equipped vacuum equipment.
- D. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
 - a. Connect temporary service to Owner's existing power source, as directed by Owner.
- E. Provide superintendent with cellular telephone so that the Contractor may be reached on-site during daily working hours.

3.03 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Security Procedures: Contractor and Subcontractor personnel must sign-in at the beginning and end of each workday. The "Sign-In" sheets shall be maintained in a central location check in with building security staff each time they enter the building. Secure project against unauthorized entry at all times.
- B. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.

- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lightning.
- D. Temporary Fire Protection: Provide and maintain suitable fire protection equipment and services. Establish procedures for fire protection for welding and other potentially hazardous construction operations. Ascertain and comply with requirements of Project insurance carrier and the City of Worcester Fire Department. Permanent fire protection system may be activated to meet these requirements.
 - a. Prohibit smoking in construction areas.
 - b. Store combustible materials in containers in fire-safe locations that meet the approval of the Architect.
 - c. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways, and other access routes.
 - d. Provide minimum 48-hour notice to Authority prior to the temporary shut-down of fire and other alarm systems. In the event that the work unintentionally alerts the City of Worcester Fire Department through an alarm signal, the Contractor shall be liable for any fees or charges levied by the City of Worcester Fire Department in connection with such alarm.
 - e. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - f. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.04 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - a. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - a. Materials and facilities that constitute temporary facilities are property of Contractor.

3.05 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - a. Maintain support facilities until near substantial completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable by the owner.
- B. Traffic Controls:
 - a. Protect existing site improvements to remain including curbs, pavements, and utilities.
- C. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with the NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Separate, salvage, recycle, and dispose of materials in accordance with the Commonwealth of Massachusetts "Waste Ban" 310 CMR 19.017.
 - a. Comply with Division 01 Section "Execution" for progress cleaning requirements.
 - b. Do not pass materials through open windows, or through window openings when any portion of the window remains in the opening.
 - c. Do not haul debris through tenant units.
 - d. The Contractor shall provide sufficient quantity of dumpsters at strategic locations within the Contract limit lines for collection of waste on site.

END OF SECTION OF TEMPORARY FACILITIES AND CONTROLS
01.50.00

SECTION 01.60.00 PRODUCT REQUIREMENTS

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
 - a. Divisions 02 through 32 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.03 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - a. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - b. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise.
 - i. Products salvaged or recycled from other projects are not considered new products.
 - ii. Products manufactured and stored for more than one year prior to the start date of this project are not considered new products.
 - c. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
 - d. "Or Equal" Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
 - i. An item equal to that named or described in the specifications may be furnished; and an item shall be considered equal to the item so named or described if, in the opinion of the awarding authority: (1) it is at least equal in quality, durability, appearance, strength and design, (2) it will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased, and (3) it conforms

substantially, even with deviations, to the detailed requirements for the item in the said specifications.

- B.** Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification, or for purposes of evaluating "or equal" products.
- C.** Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - a. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - b. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.04 SUBMITTALS

- A.** Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and product names for each product.
 - a. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 - b. Form: Tabulate information for each product under the following column headings:
 - i. Specification Section number and title.
 - ii. Generic name used in the Contract Documents
 - iii. Name, model number, and similar designations
 - iv. Manufacturer's name and address
 - v. Supplier's name and address
 - vi. Installer's name and address
 - vii. Projected delivery date or time span of delivery period
 - viii. Identification of items that require early submittal approval for scheduled delivery date.
 - c. Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - i. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.

- d. Completed List: Within 90 days after date of commencement of the Work, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - e. Architect's Action: Architect will respond in writing to Contractor within 15 days of receipt of completed product list. Architect's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.
- B. Substitution Requests:** Submit three copies of each request for consideration during bid process. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
- a. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - i. Statement indicating why specified material or product cannot be provided.
 - ii. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - iii. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - iv. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - v. Samples, where applicable or requested.
 - vi. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - vii. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - viii. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - ix. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.

- x. Cost information, including a proposal of change, if any, in the Contract Sum.
 - xi. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - xii. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
 - b. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - i. Form of Acceptance: Change Order
 - ii. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.
- C. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - a. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - i. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
 - ii. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.
- D. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.05 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
 - a. The Contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.

- b. If a dispute arises between contractors over concurrently selectable but incompatible products, Owner will determine which products shall be used.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A.** Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

- B.** Delivery and Handling:
 - a. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - b. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - c. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - d. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

- C.** Storage:
 - a. Store products to allow for inspection and measurement of quantity or counting of units.
 - b. Store materials in a manner that will not endanger Project structure.
 - c. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - d. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - e. Protect stored products from damage and liquids from freezing.
 - f. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.07 PRODUCT WARRANTIES

- A.** Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

- a. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - b. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties:** Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
- a. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - b. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
 - c. Refer to Divisions 02 through 26 Sections for specific content requirements and particular requirements for submitting special warranties.

PART 2 – PRODUCTS

2.01 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements:** Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
- a. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - b. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - c. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - d. Where products are accompanied by the term "as selected," Architect will make selection.
 - e. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
 - f. Or Equal: Where products are specified by name and accompanied by the term "or equal", comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:**
- a. Products:

- i. Non-restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed equal product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
- b. Manufacturers:
 - i. Non-restricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed equal manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
- c. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
- d. 4. Basis-of-Design Products: Where Specifications name a product and include a list of manufacturers, provide the specified product, a comparable product, or equal by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.

2.02 COMPARABLE PRODUCTS

- A. Conditions: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Evidence that the proposed product does not require extensive revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 - b. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - c. Evidence that proposed product provides specified warranty.
 - d. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 - e. Samples, if requested.

2.03 PRODUCT SUBSTITUTIONS

- A. Substitutions for Cause:** Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
- a. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - i. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - ii. Requested substitution provides sustainable design characteristics that specified product provided.
 - iii. Substitution request is fully documented and properly submitted.
 - iv. Requested substitution will not adversely affect Contractor's construction schedule.
 - v. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - vi. Requested substitution is compatible with other portions of the Work.
 - vii. Requested substitution has been coordinated with other portions of the Work.
 - viii. Requested substitution provides specified warranty.
 - ix. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience:** Architect will consider requests for substitution if received during bid process. Requests received after that time may be considered or rejected at discretion of Architect.
- a. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - i. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - ii. Requested substitution does not require extensive revisions to the Contract Documents.

- iii. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- iv. Requested substitution provides sustainable design characteristics that specified product provided.
- v. Substitution request is fully documented and properly submitted.
- vi. Requested substitution will not adversely affect Contractor's construction schedule.
- vii. Requested substitution has received necessary approvals of authorities having jurisdiction.
- viii. Requested substitution is compatible with other portions of the Work.
- ix. Requested substitution has been coordinated with other portions of the Work.
- x. Requested substitution provides specified warranty.
- xi. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 – EXECUTION (NOT IN USE)

**END OF SECTION OF PRODUCT REQUIREMENTS
01.60.00**

SECTION 01.73.00

EXECUTION

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - a. General installation of products.
 - b. Progress cleaning.
 - c. Cutting and patching
 - d. Protection of installed construction.
 - e. Correction of the Work.
- B.** Related Sections include the following:
 - a. Divisions 01 Section “Project Management and Coordination” for procedures for coordinating field engineering with other construction activities.
 - b. Division 01 Section “Cutting, Patching, and Coring” for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.

1.03 DEFINITIONS

- A.** Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B.** Patching: Fitting and repairing work required to restore construction to original conditions after installation of subsequent work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 EXAMINATION

- A.** Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - a. Before construction, verify the location and points of connection of utility service.

- B. Acceptance of Conditions:** Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - a. **Written Report:** Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - i. Description of the Work.
 - ii. List of detrimental conditions, including substrates.
 - iii. List of unacceptable installation tolerances.
 - iv. Recommended corrections.
 - b. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - c. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - d. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.02 PREPARATION

- A. Field Measurements:** Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements:** Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions:** Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.03 INSTALLATION

- A. General:** Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - a. Make vertical work plumb and make horizontal work level.
 - b. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - c. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.**
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.**

- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - a. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - b. Allow for building movement, including thermal expansion and contraction.
 - c. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.04 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - a. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - b. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 degrees F.
 - c. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - a. Remove liquid spills promptly.
 - b. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials

specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.05 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.06 CORRECTION OF THE WORK

- A. Provide Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting, Patching and Coring."
 - a. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

**END OF SECTION OF EXECUTION
01.73.00**

SECTION 01.73.29

CUTTING, PATCHING, AND CORING

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - a. General Install specified work in existing construction. Restore all components to “as new condition.
 - b. Remove and replace defective work.
 - c. Protection of installed construction.
 - d. Correction of the Work.
- B. Do not endanger any work by cutting, coring, or altering work or any part of it.
- C. Do not cut, core, or otherwise alter work of other contractors and subcontractors without written consent of the Architect.
- D. Filed cutting by torching and welding will require Fire Watch. Contractor to comply with local and state requirements.

1.03 DEFINITIONS

- A. Cutting: Penetration of in-place construction necessary to permit installation or performance of other Work, including the removal of debris.
- B. Patching: Fitting and repairing work required to restore construction to original conditions after installation of subsequent work.

1.04 SUBMITTALS

- A. Cutting, Patching, and Coring Proposal: Submit a proposal describing procedures at least 10 days before the time cutting, patching, and coring will be performed, requesting approval to proceed. Include the following:
 - a. Extent: Describe cutting, patching, and coring, show how they will be performed, and indicate why they cannot be avoided.
 - b. Changes to In-Place Construction: Describe anticipated results. Include changes to the structural elements and operating components as well as changes in the building’s appearance and other significant visual elements.
 - c. Products: List products to be used.
 - d. Dates: Indicate when cutting and patching will be performed.

- e. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
- f. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive Architect's right to later require removal or replacement of unsatisfactory work.

1.05 QUALITY ASSURANCE

- A. Structural Elements: Do not cut or patch structural elements that could change their load-carrying capacity or load-deflection ratio unless otherwise indicated in the Drawings.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
 - a. Primary operational systems and equipment.
 - b. Air or smoke barriers.
 - c. Fire-suppression systems.
 - d. Mechanical systems piping and ducts.
 - e. Control systems.
 - f. Communication systems.
 - g. Electrical wiring systems.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
 - a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Piping, ductwork, vessels, and equipment.
 - d. Noise and vibration control elements and systems.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 – PRODUCTS

2.01 PRODUCTS

- A. General: Comply with all requirements specified in in other Sections.

- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - a. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - a. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - b. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Temporary Support: Provide temporary support for work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.03 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - a. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations using methods least likely to damage elements retained or adjoining construction.
 - a. Cutting and Coring Responsibility:
 - i. All general cutting work is the responsibility of the Contractor.
 - b. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - c. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - d. Proceed with patching after construction operations requiring cutting are complete.

- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are unnoticeable as possible. Provide materials and comply with installation requirements specified in other Sections.
 - a. Patching Responsibility:
 - i. All patching is the responsibility of the Contractor.
 - b. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate the integrity of installation.
 - c. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

- D. Cleaning: Clean areas and spaces where cutting and patching are performed.

CUTTING, PATCHING, AND CORING
01.73.29

SECTION 01.78.23

OPERATION AND MAINTENANCE DATA

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing maintenance manuals, including the following:
 - a. Maintenance manuals for the care and maintenance of products, materials, and finishes, systems and equipment.
- B. Related Sections include the following:
 - a. Division 01 Section "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
 - b. Division 01 Section "Project Record Documents" for preparing Record Drawings for operation and maintenance manuals.
 - c. Divisions 02 through 32 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.03 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - a. Architect will comment on whether content of operations and maintenance submittals are acceptable.
 - b. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect and Commissioning Authority will comment on whether general scope and content of manual are acceptable.
 - a. Format: Submit initial operations and maintenance manuals in the following format:
 - i. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.
 - 1. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - 2. Enable inserted reviewer comments on draft submittals.
- C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect and Commissioning Authority will return copy with comments.

- a. Correct or revise each manual to comply with Architect's and Commissioning Authority's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's and Commissioning Authority's comments and prior to commencing demonstration and training.
- D. Format:** Submit final operations and maintenance manuals in the following formats:
- a. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.
 - i. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Three paper copies in 3-ring binders. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves.

1.04 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

PART 2 – PRODUCTS

2.01 REQUIREMENTS FOR MAINTENANCE MANUALS

- A. Organization:** Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - a. Title page.
 - b. Table of contents.
 - c. Manual contents.
- B. Title Page:** Enclose title page in transparent plastic sleeve. Include the following information:
 - a. Subject matter included in manual.
 - b. Name and address of Project.
 - c. Name and address of Owner.
 - d. Date of submittal.
 - e. Name, address, and telephone number of Contractor.
 - f. Name and address of Architect.
 - g. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents:** List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
 - a. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

- D. Manual Contents:** Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- a. **Binders:** Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - i. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - ii. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 - b. **Dividers:** Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 - c. **Protective Plastic Sleeves:** Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
 - d. **Supplementary Text:** Prepared on 8-1/2-by-11-inch white bond paper.
 - e. **Drawings:** Attach reinforced, punched binder tabs on drawings and bind with text.
 - i. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - ii. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.02 PRODUCT MAINTENANCE MANUALS

- A. Content:** Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information:** List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information:** Include the following, as applicable:
- a. Product name and model number.
 - b. Manufacturer's name.
 - c. Color, pattern, and texture.
 - d. Material and chemical composition.
 - e. Reordering information for specially manufactured products.

- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Schedule for routine cleaning and maintenance.
 - e. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - a. Include procedures to follow and required notifications for warranty claims.

PART 3 – EXECUTION

3.01 MANUAL PREPARATION

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Warranty Manual: Assemble a complete set of warranties including contact information for all warranty items identified.
- C. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 - a. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - b. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- D. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

OPERATION AND MAINTENANCE DATA

01.78.23

SECTION 01.78.39

PROJECT RECORD DOCUMENTS

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - a. Record Specifications.
 - b. Record Specifications
 - c. Record Product Data.
 - d. Miscellaneous record submittals.
- B. Related Sections include the following:
 - a. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - b. Divisions 02 through 32 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.03 CLOSEOUT SUBMITTALS

- A. Manual Content: Record Drawings: Comply with the following:
 - a. Number of Copies: Submit copies of record Drawings as follows:
 - i. Initial Submittal:
 - 1. Submit PDF electronic files of scanned record prints and two sets of prints.
 - 2. Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - i. Submit two paper-copy sets of marked-up record prints.
 - ii. Submit PDF electronic files of scanned record prints.
 - iii. Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications:
 - a. Submit two paper copies of Project's Specifications, including addenda and contract modifications.
 - b. Submit two CD's of annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data:
 - a. Submit two paper copies of each submittal.
 - b. Submit two CD's with annotated PDF electronic files and directories of each submittal.

- c. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.
- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one paper copy of each submittal.
- E. Reports: Submit written report bi-weekly indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

PART 2 – PRODUCTS

2.01 RECORD DRAWINGS

- A. Record Prints: Maintain one set of black-line white prints of the Contract Drawings and Shop Drawings.
 - a. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - i. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - ii. Accurately record information in an understandable drawing technique.
 - iii. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - b. Content: Types of items requiring marking include, but are not limited to, the following:
 - i. Dimensional changes to Drawings.
 - ii. Revisions to details shown on Drawings.
 - iii. Depths of foundations below first floor.
 - iv. Locations and depths of underground utilities.
 - v. Revisions to routing of piping and conduits.
 - vi. Revisions to electrical circuitry.
 - vii. Actual equipment locations.
 - viii. Duct size and routing.
 - ix. Locations of concealed internal utilities.
 - x. Changes made by Change Order or Construction Change Directive.
 - xi. Changes made following Architect's written orders.
 - xii. Details not on the original Contract Drawings.
 - xiii. Field records for variable and concealed conditions.
 - xiv. Record information on the Work that is shown only schematically.
 - c. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 - d. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.

- e. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - f. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files:** Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
- a. Format: Same digital data software program, version, and operating system as the original Contract Drawings.
 - b. Format: Annotated PDF electronic file with comment function enabled.
 - c. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
 - d. Refer instances of uncertainty to Architect for resolution.
 - e. Architect will furnish Contractor one set of digital data files of the Contract Drawings for use in recording information.
 - i. See Division 01 Section "Submittal Procedures" for requirements related to use of Architect's digital data files.
 - ii. Architect will provide data file layer information. Record markups in separate layers.
- C. Newly Prepared Record Drawings:** Prepare new Drawings instead of preparing record Drawings where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
- a. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
 - b. Consult Architect for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared record Drawings into record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.
- D. Format:** Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
- a. Record Prints: Organize Record Prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - b. Format: Annotated PDF electronic file with comment function enabled.
 - c. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 - d. Identification: As follows:
 - i. Project name.
 - ii. Date.
 - iii. Designation "PROJECT RECORD DRAWINGS."
 - iv. Name of Architect.
 - v. Name of Contractor.

2.02 RECORD SPECIFICATIONS

- A.** Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - a. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - b. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - c. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - d. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 - e. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

- B.** Format: Submit record Specifications as scanned PDF electronic files of marked-up paper copy of Specifications, or as annotated PDF electronic file.

2.03 RECORD PRODUCT DATA

- A.** Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - a. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - b. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - c. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

- B.** Format: Submit record Product Data as scanned PDF electronic file(s) of marked-up paper copy of Product Data, or as annotated PDF electronic file.
 - a. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

2.04 MISCELLANEOUS RECORD SUBMITTALS

- A.** Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

- B.** Format: Submit miscellaneous record submittals as scanned PDF electronic file(s) of marked-up miscellaneous record submittals, or as annotated PDF electronic file.
 - a. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

PART 3 – EXECUTION

3.01 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

OPERATION AND MAINTENANCE DATA

01.78.23

SECTION 02.41.19 SELECTIVE DEMOLITION

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - a. Demolition of existing flooring, gypsum wallboard, and doors.
- B. Related Sections include the following:
 - a. Section 01 10 00 "Summary" for use of premises and Owner-occupancy requirements.
 - b. Section 01 73 29 "Cutting and Patching" for cutting and patching procedures.
 - c. Division 9 Finishes Sections

1.03 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Reinstall: Detach items from existing conditions, prepare them for reuse, and reinstall them where indicated.
- C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.04 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of the Contractor.

1.05 PRE-DEMOLITION MEETINGS

- A. Unless Pre-Demolition Conference: Conduct a conference at Project site. Review method and procedures related to selective demolition including, but not limited to, the following:
 - a. Inspect and discuss conditions of construction to be selectively demolished.
 - b. Review structural load limitations of existing structure.
 - c. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - d. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

- e. Review areas where existing construction is to remain and requires protection.

1.06 INFORMATIONAL SUBMITTALS

- A.** Proposed Protection Measures: Submit report, including drawings that indicates the measures proposed for protecting individuals and property for environmental protection and for noise control. Indicate proposed locations and construction of barriers.
- B.** Schedule of Selective Demolition Activities: Indicate the following:
 - a. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
 - b. Interruption of utility services. Indicate how long utility services will be interrupted.
 - c. Coordination for shutoff, capping, and continuation of utility services.
 - d. Locations of proposed dust- and noise-control temporary partitions and means of egress.
 - e. Use of stairs.
 - f. Coordination of Owner's continuing occupancy of building.
 - g. Means of protection for items to remain and items in path of waste removal from building.
- C.** Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.

1.07 CLOSEOUT SUBMITTALS

- A.** Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.

1.08 PROJECT CONDITIONS

- A.** Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B.** Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C.** Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D.** Storage or sale of removed items or materials on-site is not permitted.
- E.** Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - a. Maintain fire-protection facilities in service during selective demolition operations.

1.09 PROJECT CONDITIONS

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties. Notify warrantor before proceeding.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout

PART 2 – PRODUCTS

2.01 PRODUCT REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
 - a. Comply with waste ban regulations of the Massachusetts Department Of Environmental Protection (Mass DEP), 310 CMR 19.017, for disposal of metal and wood.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to the Architect.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.
 - a. Inventory and record the condition of items to be removed and salvaged. Provide photographs of conditions that might be misconstrued as damage caused by salvage operations.
 - b. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.02 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - a. Comply with requirements for access and protection specified in Section 01 50 00 "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - a. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - b. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - c. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - d. Cover and protect furniture, furnishings, and equipment that have not been removed.
 - e. Comply with requirements for temporary enclosures and dust control specified in Section 01 50 00 "Temporary Facilities and Controls."

3.03 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - a. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - b. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - c. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - d. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire suppression devices during flame-cutting operations.
 - e. Maintain adequate ventilation when using cutting torches.
 - f. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - g. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - h. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - i. Dispose of demolished items and materials promptly.

- B. Remove and Reinstalled Items:**
 - a. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
 - b. Pack or crate items after cleaning and repairing. Identify contents of containers.
 - c. Protect items from damage during transport and storage.
 - d. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

- C. Existing Items to Remain:** Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by WHA Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.04 DISPOSE OF DEMOLISHED MATERIALS

- A. General:** Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them.
 - a. Do not allow demolished materials to accumulate on site.
 - b. Remove and transport debris in a manner that will prevent spillage or adjacent surfaces and areas.
 - c. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

- B. Burning:** Do not burn demolished materials.

- C. Disposal:** Transport demolished materials off Owner's property. Separate, salvage, recycle, and legally dispose of materials in accordance with the Commonwealth of Massachusetts Waste Ban, 310 CMR 19.017.
 - a. Include all costs of all transportation and disposal.
 - b. Provide verification of all disposal trips.
 - c. Hazardous materials are to be handled and disposed of in accordance with all State, Local, and Federal regulations.

3.05 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.** Return adjacent areas to condition existing before selective demolition operations began.

SELECTIVE DEMOLITION 02.41.19

SECTION 06.10.53 MISCELLANEOUS ROUGH CARPENTRY

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Pressure-preservative-treated wood.
 - b. Wood blocking fully secured to structure at existing masonry opening to receive new door steel frames.
 - c. Prepare masonry opening to receive new wood blocking.
 - d. Provide interior wood trim as indicated on Drawings.
- B.** Related Requirements:
 - a. Section 08 10 00 "Doors and Frames".
 - b. Section 09 90 00 "Painting" for wood casing and moulding finish-coating.

1.03 DEFINITIONS

- A.** Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.
- B.** Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - a. NeLMA: Northeastern Lumber Manufacturers' Association.
 - b. NHLA: National Hardwood Lumber Association.
 - c. NLGA: National Lumber Grades Authority.
 - d. SPIB: The Southern Pine Inspection Bureau.
 - e. WCLIB: West Coast Lumber Inspection Bureau.
 - f. WWPA: Western Wood Products Association.

1.04 ACTION SUBMITTALS

- A.** Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - a. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

- b. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
- c. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
- d. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
- e. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.05 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
 - a. Preservative-treated wood.
 - b. Expansion anchors.

1.06 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 – PRODUCTS

2.01 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - a. Factory mark each piece of lumber with grade stamp of grading agency.
 - b. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified.

- B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal (38-mm actual) thickness or less unless otherwise indicated.

2.02 WOOD PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 for interior construction not in contact with the ground. Use Category UC3b for exterior construction not in contact with the ground.
 - a. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat all miscellaneous carpentry unless otherwise indicated.

2.03 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - a. Blocking
 - b. Nailers
- B. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:
 - a. Mixed southern pine, No. 3 grade; SPIB.
 - b. Hem-fir or hem-fir (north), Standard or No. 3 Common grade; NLGA, WCLIB, or WWPA.
 - c. Spruce-pine-fir (south) or spruce-pine-fir, Standard or No. 3 Common grade; NeLMA, NLGA, WCLIB, or WWPA.
 - d. Eastern softwoods, No. 3 Common grade; NELMA.
 - e. Northern species, No. 3 Common grade; NLGA.
 - f. Western woods, Standard or No. 3 Common grade; WCLIB or WWPA.
- C. For blocking not used for attachment of other construction, No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

2.04 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
- B. Fasteners: Provide Type 304 stainless-steel fasteners for exterior and interior use. Select fasteners for type, grade, and class required.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

2.05 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

- A. Grade: Premium
- B. Certified Wood: Interior trim for opaque finish shall be certified as "FSC Pure" according to FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and FSC STD-40-004, "FSC Standard for Chain of Custody Certification."
- C. Wood Species: Any closed-grain hardwood. Finger joints trim is not acceptable.

2.06 WOOD MATERIALS

- A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of wood trim and quality grade specified unless otherwise indicated.
 - a. Wood Moisture Content for Interior Materials: 5 to 10 percent.
- B. VOC Limits for Installation Adhesives and Sealants: Use products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - a. Wood Glues: 30 g/L.
 - b. Multipurpose Construction Adhesives: 70 g/L.
 - c. Architectural Sealants: 250 g/L.

2.07 FABRICATION

- A. Fabricate wood trim to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - a. Edges of Solid-Wood (Lumber) Members: 1/16 inch unless otherwise indicated.
- B. Backout or groove backs of flat trim members and kerf backs of other wide, flat members except for members with ends exposed in finished work.
- C. Assemble casings in shop except where shipping limitations require field assembly.
- D. Assemble moldings in shop to maximum extent possible. Miter corners in shop and
- E. prepare for field assembly with bolted fittings designed to pull connections together.

PART 3 – EXECUTION

3.01 INSTALLATION, GENERAL

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Provide blocking and framing as indicated and as required to support galvanized pressed metal door frames.
- D. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- E. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative treated lumber.
 - a. Use inorganic boron for items that are continuously protected from liquid water.
 - b. Use copper naphthenate for items not continuously protected from liquid water.
- F. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - a. NES NER-272 for power-driven fasteners.
 - b. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
 - c. Table R602.3(1), "Fastener Schedule for Structural Members,".

3.02 INSTALLATION

- A.** Grade: Install wood trim to comply with same grade as item to be installed.
- B.** Assemble wood trim and complete fabrication at Project site to the extent that it was not completed in the shop.
- C.** Install wood trim level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
- D.** Scribe and cut wood trim to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

3.03 PROTECTION

- A.** Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- B.** Protect miscellaneous rough carpentry from weather. If, despite protection, miscellaneous rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

MISCELLANEOUS ROUGH CARPENTRY 06.10.53

SECTION 06.20.13

EXTERIOR FINISH CARPENTRY

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Cellular PVC Trim and moldings.
- B.** Related Requirements:
 - a. Division 06 Section "Miscellaneous Rough Carpentry" for wood blocking.
 - b. Division 07 Section "Joint Sealants."

1.03 SUBMITTALS

- A.** Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, profiles, textures, and colors and include construction and application details.
- B.** Samples for Verification:
 - a. For cellular PVC trim, with 1/2 of exposed surface finished; 50 sq. in.
 - b. 12-inch- long-by-actual-width Sample of soffit.
- C.** Warranties: Special warranties specified in this Section.

1.04 QUALITY ASSURANCE

- A.** Preinstallation Conference: Conduct conference at Project site.
- B.** Mockups: Build mockups to set quality standard for installation.
 - a. Build mockups of each type of cellular PVC trim installation, as directed by the Architect.
 - b. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store trim materials and sheets on a flat and level surface on a full shipping pallet. Handle materials to prevent damage to product ends and corners. Provide for air circulation within and around stacks and under temporary coverings.

1.06 WARRANTY

- A. Manufacturer's Warranty for Cellular PVC Trim: Manufacturer agrees to repair or replace trim that fails due to defects in manufacturing within specified warranty period. Failures include, but are not limited to, deterioration, delamination, and excessive swelling from moisture.

PART 2 – PRODUCTS

2.01 STANDING AND RUNNING TRIM

- A. Cellular PVC Trim: Extruded, expanded PVC with a small-cell microstructure, made from UV- and heat-stabilized, rigid material.
 - a. Product: Subject to compliance with requirements, provide products by one of the following, or equal:
 - i. Azek Building Products, Inc.
 - ii. Kloor.
 - iii. Versatex.
 - b. Performance and physical characteristic requirements:
 - i. Coefficient of Linear Expansion: Not more than 3.2×10^{-5} inches/inch x deg F.
 - ii. Water Absorption: Not more than 1 percent, per ASTM D 570.
 - iii. Flame-Spread Index: 25 or less, per ASTM E 84.
 - c. Trim Boards: As indicated on the Drawings.
 - d. Mouldings: Profiles as indicated on Drawings.
 - e. Color: White.
 - f. Texture: Smooth.

2.02 MISCELLANEOUS MATERIALS

- A. Fasteners for Exterior Finish Carpentry: Provide stainless steel nails screws recommended by manufacturer in sufficient length to penetrate into wood substrate.
 - a. The use of staples, brads, finish nails and wire nails is not permitted.
 - b. Provide hidden fastening system complete with screws, plugs and setting tools for concealed fastening.
 - i. Product: Subject to compliance with requirements, provide the following, or equal for use with cellular PVC trim product selected:
 - 1. Cortex Hidden Fastening System.
 - c. Adhesive for Cellular PVC Trim: Cellular PVC cement product recommended by trim manufacturer to bond trim joints.

- d. Membrane Flashing: Provide continuous self-adhesive through wall membrane flashing 40 mil thickness at masonry openings.
- e. Sealants: Urethane based sealants without silicone, complying with applicable requirements in Division 07 Section "Joint Sealants"; recommended by sealant manufacturer and manufacturer of substrates for intended application.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected. Commencement of the work indicates acceptance of substrates.

3.02 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.

3.03 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
 - a. Do not use manufactured units with defective surfaces, sizes, or patterns.
- B. Install exterior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - a. Scribe and cut exterior finish carpentry to fit adjoining work.
 - b. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining exterior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
 - c. Coordinate exterior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate exterior finish carpentry.
- C. Install vinyl soffit and related accessories according to ASTM D 4756.

3.04 STANDING AND RUNNING TRIM INSTALLATION

- A. Install cellular PVC trim to comply with manufacturer's written instructions.

- B. Install trim with minimum number of joints practical, using full-length pieces from maximum lengths of trim available. Do not use pieces less than 24 inches long except where necessary.
 - a. Use scarf joints for end-to-end joints.
 - b. Stagger end joints in adjacent and related members.
- C. Fit exterior joints to exclude water. Cope at returns and miter at corners to produce tightfitting joints with full-surface contact throughout length of joint. Plane backs of casings to provide uniform thickness across joints, where necessary for alignment.
- D. Install trim boards with two fasteners per every framing member. Trimboards 12-inches and wider, and sheets, require additional fasteners per manufacturer's recommendation. Install fasteners no more than 2-inches from the end of the board.
 - a. Fasten all trim boards and sheets with stainless steel screws.
 - b. Predrilling for fasteners may be required in low temperatures. Comply with manufacturer's recommendations.
 - c. Allow for 1/8-inch per 18 foot of run for expansion and contraction.
- E. Glue all PVC to PVC joints with cellular PVC cement to prevent joint separation. Secure glue joint with fasteners on each side of the joint to allow adequate bonding time.
- F. Provide plugs in all fastener holes.

3.05 ADJUSTING

- A. Replace exterior finish carpentry that is damaged or does not comply with requirements. Exterior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.06 CLEANING

- A. Clean exterior finish carpentry on exposed and semi-exposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

3.07 PROTECTION

- A. Protect installed products from damage from weather and other causes during construction.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 - a. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - b. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

EXTERIOR FINISH CARPENTRY 06.20.13

SECTION 06.40.23

INTERIOR ARCHITECTURAL WOODWORK

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Interior standing and running wood trim.
 - b. Shop priming of interior architectural woodwork.
 - c. Shop finishing of interior architectural woodwork.
- B.** Related Requirements:
 - a. Division 06 Section "Miscellaneous Rough Carpentry" for wood furring, blocking, and shims required for installing woodwork.
 - b. Division 07 Section "Joint Sealants."
 - c. Division 09 Section "Painting" for shop finishing interior standing and running trim.

1.03 DEFINITIONS

- A.** Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

1.04 ACTION SUBMITTALS

- A.** Product Data: For high-pressure decorative laminate, adhesive for bonding plastic laminate, and cabinet hardware and accessories.
- B.** Shop Drawings: Show location of each item, dimensioned plans and elevations, largescale details, attachment devices, and other components.
 - a. Show details full size.
 - b. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.

1.05 INFORMATIONAL SUBMITTALS

- A.** Product Certificates: For each type of product, signed by product manufacturer.

- B. Qualification Data: For Fabricator.

1.06 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Fabricator of products, or installer approved by fabricator.
- C. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.
 - a. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with those selections and requirements in addition to the quality standard.
- D. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - a. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.08 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during the remainder of the construction period.
- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - a. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.

1.09 COORDINATION

- A.** Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 – PRODUCTS

2.01 MATERIALS

- A.** General: Provide materials that comply with requirements of AWI's quality standards for each type of woodwork and quality grade specified, unless otherwise indicated.

2.02 MISCELLANEOUS MATERIALS

- A.** Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B.** Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- C.** Adhesives, General: Do not use adhesives that contain urea formaldehyde.
- D.** VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - a.** Wood Glues: 30 g/L.
 - b.** Multipurpose Construction Adhesives: 70 g/L.

2.03 FABRICATION, GENERAL

- A.** Interior Woodwork Grade: Unless otherwise indicated, provide Custom-grade interior woodwork complying with referenced quality standard.
- B.** Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- C.** Fabricate woodwork to dimensions, profiles, and details indicated.
- D.** Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and

installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

- a. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening device that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.

2.04 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

- A. Grade: Premium. (Finger joints are not allowed).
- B. Wood Species: Poplar or pine, factory primed all sides and paint finish at exposed sides only.
- C. For rails wider or thicker than available lumber, use veneered construction. Do not glue for width or thickness.
- D. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.02 INSTALLATION

- A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

- E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- F. Standing and Running Trim: Install with minimum number of joints possible, using full length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 96 inches long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.
 - a. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.
- G. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.
- H. Refer to Division 09 Section "Painting" for final finishing of installed architectural woodwork.

3.03 FIELD QUALITY CONTROL

- A. Inspections: Provide inspection of installed Work through AWI's Quality Certification Program certifying that woodwork, including installation, complies with requirements of the Architectural Woodwork Standards for the specified grade.

3.04 REPAIR

- A. Repair damaged and defective interior architectural woodwork, where possible, to eliminate functional and visual defects and to result in interior architectural woodwork being in compliance with requirements of Architectural Woodwork Standards for the specified grade.
- B. Where not possible to repair, replace defective woodwork.
- C. Shop Finish: Touch up finishing work specified in this Section after installation of interior architectural woodwork.
 - a. Fill nail holes with matching filler where exposed.
 - b. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats are shop applied.
- D. See Division 09 Section "Painting" for final finishing of installed interior architectural woodwork not indicated to be shop finished.

3.05 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.

- B.** Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

**INTERIOR ARCHITECTURAL WOODWORK
06.40.23**

SECTION 07.92.00 JOINT SEALANTS

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Urethane joint sealants.
 - b. Latex joint sealants.
- B.** Related Requirements:
 - a. Division 06 Section "Exterior Finish Carpentry" for joint sealants specified in this Section furnished and installed with cellular PVC trim.
 - b. Division 06 Section "Interior Architectural Woodwork."
 - c. Division 08 Section "Doors and Frames."

1.03 PRECONSTRUCTION TESTING

- A.** Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
 - a. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
 - b. Submit not fewer than eight pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
 - c. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
 - d. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
 - e. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

1.04 PERFORMANCE REQUIREMENTS

- A.** Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.05 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Joint Sealant Schedule: Include the following information:
 - a. Joint-sealant application, joint location, and designation.
 - b. Joint-sealant manufacturer and product name.
 - c. Joint-sealant formulation.
 - d. Joint-sealant color.

1.06 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.
- B. Qualification Data: For Installer.
- C. Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
 - a. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
 - b. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- D. Product Test Reports: Based on comprehensive testing of product formulations performed by a qualified testing agency, indicating that sealants comply with requirements.
- E. Preconstruction Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
 - a. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
 - b. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- F. Warranties: Special warranties specified in this Section.

1.07 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized installer who is approved of licenses for installation of elastomeric sealants required for this Project.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- C. Product Testing: Test joint sealants using a qualified testing agency.
 - a. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.
 - b. Test according to SWRI's Sealant Validation Program for compliance with requirements specified by reference to ASTM C 920 for adhesion and cohesion under cyclic movement, adhesion-in-peel, and indentation hardness.
- D. Mockups: Build mockups incorporating sealant joints, as follows, to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution:
 - a. Joints in mockups of assemblies specified in other Sections that are indicated to receive elastomeric joint sealants, which are specified by reference to this Section.
 - b. Each type of sealant and joint substrate indicated.
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.08 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - a. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
 - b. When joint substrates are wet.
 - c. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - d. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.09 WARRANTY

- A. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - a. Warranty Period for Urethane: Five years from date of Substantial Completion.

- B. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - a. Warranty Period: Two years from date of Substantial Completion.
- C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
 - a. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
 - b. Disintegration of joint substrates from natural causes exceeding design specifications.
 - c. Mechanical damage caused by individuals, tools, or other outside agents.
 - d. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 – PRODUCTS

2.01 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by the joint-sealant manufacturer, based on testing and field experience.
- B. VOC Content of Interior Sealants: Provide sealants and sealant primers for use inside the weatherproofing system that comply with the following limits for VOC content when calculated according to 40 CFR 59, Part 59, Subpart D (EPA Method 24):
 - a. Architectural Sealants: 250 g/L.
 - b. Sealant Primers for Nonporous Substrates: 250 g/L.
 - c. Sealant Primers for Porous Substrates: 775 g/L.
- C. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- D. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.02 URETHANE JOINT SEALANTS

- A. Multicomponent, Nonsag, Urethane Joint Sealant: ASTM C 920, Type M, Grade NS, Class 50, for Use NT.
 - a. Products: Subject to compliance with requirements, provide one of the following:
 - i. BASF Corporation–Construction Systems; MasterSeal NP 2.
 - ii. Pecora Corporation; Dynatrol II.
 - iii. Tremco; Dymeric 240 FC.

2.03 LATEX JOINT SEALANTS

- A.** Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
 - a. Products: Subject to compliance with requirements, provide one of the following:
 - i. American Sealants, Inc.; ASI 174.
 - ii. Pecora Corporation; AC-20+.
 - iii. Sherwin Williams; PowerHouse Siliconized Acrylic Latex Sealant.
 - iv. Tremco; Tremflex 834.

2.04 JOINT-SEALANT BACKING

- A.** General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B.** Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C.** Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.05 MISCELLANEOUS MATERIALS

- A.** Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B.** Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C.** Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - a. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - b. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - i. Concrete.
 - ii. Masonry.
 - c. Remove laitance and form-release agents from concrete.
 - d. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - i. Metal.
 - ii. Glass.
 - iii. Porcelain enamel.
- B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.03 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - a. Do not leave gaps between ends of sealant backings.
 - b. Do not stretch, twist, puncture, or tear sealant backings.
 - c. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - a. Place sealants so they directly contact and fully wet joint substrates.
 - b. Completely fill recesses in each joint configuration.
 - c. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - a. Remove excess sealant from surfaces adjacent to joints.
 - b. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 - c. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.04 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.05 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.06 JOINT SEALANT SCHEDULE

- A. Joint Sealant Application: Exterior joints in vertical surfaces.

- a. Joint Locations:
 - i. Joints between cellular PVC trim and other materials.
 - ii. Other joints as indicated.
 - b. Urethane Joint Sealant: Multicomponent, Nonsag, Urethane Joint Sealant.
 - c. Joint-Sealant Color: As selected by Architect from manufacturer's full range.
- B. Joint-Sealant Application: Interior joints in all vertical surfaces and horizontal nontraffic surfaces.**
- a. Joint Locations:
 - i. Between door trim and other materials.
 - ii. Perimeter joints between interior wall surfaces and frames of windows.
 - iii. Joints between dissimilar materials.
 - iv. Other joints as indicated.
 - b. Joint Sealant: Latex.
 - c. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

**JOINT SEALANTS
07.92.00**

SECTION 08.10.00 DOORS AND FRAMES

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Fiberglass entry doors with frames.
 - b. Spray foam insulation between the door frame and existing construction.
- B.** Related Requirements:
 - a. Division 06 Section "Miscellaneous Rough Carpentry."
 - b. Division 06 Section "Interior Architectural Woodwork."
 - c. Division 08 Section "Door Hardware"
 - d. Division 08 Section "Aluminum Storm Doors."
 - e. Division 09 Section "Painting"

1.03 PERFORMANCE REQUIREMENTS

- A.** Door Unit Air Leakage, NFRC 400, 1.57psf (25mph): 0.50 cfm per square foot of frame or less.
- B.** Door Unit Water Penetration: No water penetration through door unit when tested in accordance with ASTM E331 or ASTM E547 with water applied at rate of 5 gallons per hour per square foot at 0psf.
- C.** Doors shall qualify for Energy Star Rating.

1.04 SUBMITTALS

- A.** Submittals for Review:
 - a. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - b. Shop Drawings: Submit shop drawings indicating dimensions, construction, components, connections, anchorage methods and locations, accessories, hardware locations, and installation details.

1.05 QUALITY REQUIRMENTS

- A. Comply with governing codes and regulations.
- B. Applicator Qualifications: Minimum 5 years documented experience in work of this Section.
- C. Deliver, handle, and store materials in accordance with manufacturer's instructions.

1.06 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.07 WARRANTIES

- A. Standard limited warranty for fiberglass Door Product and genuine components, including rot-resistance frames, mullions, and brickmould sourced from frames, and non-rot resistant mullions and brickmould used in commercial and multi-residential projects will be free from material workmanship defects for a period of three years subject to certain limitations and restrictions.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturers:
 - a. Pella Fiberglass Entry Doors
 - b. Jeld Wen Fiberglass Entry Doors
 - c. Feather River Doors
 - d. Masonite
 - e. Novatech Group
 - f. Cline Aluminum Doors, Inc.
 - g. Taylor Entrance Systems, Inc.
 - h. Therma-Tru Doors
- B. Substitutions: Refer to Division 01 provisions.

2.02 FIBERGLASS ENTRY DOORS

- A. Fiberglass Entry Doors: Pre-hung fiberglass doors and complete entry systems.
 - a. Construction:
 - i. 1/16-inch minimum thickness, proprietary fiberglass-reinforced thermoset composite, surface lightly textured. Door edges are machinable kiln-dried pie, primed, lock edge reinforced with engineered lumber core, lockset area reinforced with solid blocking for hardware backup. Door boEom edge is moisture-and decay-

resistant composite. Core is foamed-in-place polyurethane, density 1.9 pcf minimum.

ii. Single bore, 2 ¾" backset.

B. Frames: Provide and assembled by third party fabricators to exacting. Specifications from Manufacturer to help maximize system performance. Use rot-resistant frames sourced from Manufacturer.

- a. Milled from 5/4 kiln-dried material with profiled ½" stop and 6-degree sill gain prep.
- b. Jamb Width: Standard 4 9/16" with PVC extensions jambs, as needed.
- c. Rot-Resistant – frames sourced through Manufacturer.
- d. Extension jambs milled from 5/4 kiln dried material.

C. Finishing: Factory Finishing.

D. Glazing: Clear Tempered Glass.

- a. Standard: ASTM C 1048, Kind FT, ANSI 297.1.
 - i. Door Sweeps: Manufacturer's standard fiberglass pound on finned
 - ii. sweep.
 - iii. Stiles: Composite material, full-length door.
 - iv. Cores: 100 percent CFC-free polyurethane insulation.
 - v. Door Lites: As scheduled and indicated on Drawings.
 - vi. Adjustable Hinge Plates: Installed into hinge edge of door.

2.03 HARDWARE

A. Hinges: Steel, manufacturer's standard, finished to match hardware, plated screws to match.

- a. Finish: Satin Chrome.

B. Provide non-removable hinge pins for out swinging doors.

C. Heavy-duty door sweep, bottom door sweep made of dual bulbs and dual fins to form a tight seal against air drafts and water leaks.

D. Removable weatherstrip, Compression weatherstrip filled with foam that remains flexible and helps seal entryway against moisture and air infiltration. Set into kerf of door frame.

2.04 GLAZING

A. Factory glazed with double pane Low E, tempered glass construction.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Prepare substrates using the methods recommended by the manufacturer for achieving best result for the substrates under project conditions.
- B. Do not proceed with installation until substrates have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.
- C. If substrate preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
- D. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved submittals.
 - a. Install door frames level, plumb, true, and in proper relationship with adjacent materials.
 - b. Use concealed shims where necessary for alignment.
 - c. Hardware: Refer to Division 8 Section for hardware.

3.03 TESTING AND ADJUSTING

- A. Factory Finished Doors:
 - a. Replace doors that are damaged or do not comply with requirements.
 - b. Repair or refinish doors if work complies with requirements and shows no evidence of repair or refinishing.
- B. Adjust hinge sets, locksets and other hardware as recommended by manufacturer. Rehang or replace doors that do not swing or operate freely.
- C. Lubricate using a manufacturer recommended lubricant compatible with door and frame coatings.

3.04 FINISHING

- A. Finish in compliance with Manufacturer's written recommendations. Finish painting to be provided under Division 09 Section "Painting".

3.05 CLEANING AND PROTECTION

- A. Clean installed products in accordance with manufacturer's recommendations prior to Substantial Completion.

- B.** Remove temporary coverings and protection of adjacent work areas. Remove construction debris from project site and legally dispose of debris.
- C.** Touch-up, repair or replace damaged products before Substantial Completion.
- D.** Protection: Protect installed product and finish surfaces from damage during construction

3.06 DOOR SCHEDULE

- A.** Refer to the Drawings.

DOORS AND FRAMES

08.10.00

SECTION 08.11.63 ALUMINUM STORM DOORS

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Pre-hung aluminum security storm door.
- B. Related Requirements:
 - a. Division 06 Section "Miscellaneous Rough Carpentry."
 - b. Division 07 Section "Joint Sealants"
 - c. Division 08 Section "Door Hardware"
 - d. Division 08 Section "Doors and Frames"

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Pre-installation Meetings: Conduct pre-installation meeting to clarify Project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements.

1.04 PERFORMANCE REQUIREMENTS

- A. Structural Performance Requirements:
 - a. Comply with requirements of NAFS.

1.05 SUBMITTALS

- A. Product Data: For door and frame specified, including details of construction, materials, dimensions, hardware preparation, core, sound ratings, profiles, and finishes.
- B. Shop Drawings: Showing methods of installation, plans, sections, elevations and details of walls, specified loads, flashings, sealants, and interfaces with all materials not supplied by the storm door manufacturer, and identification of proposed component parts and finishes.
- C. Samples: Selection and verification samples for finishes, colors and textures. Submit two complete sample sets of each type of material required.

- D. Certificates: Signed by manufacturer certifying materials comply with specified performance characteristics, criteria and physical requirements.
- E. Test and Evaluation Reports: Showing compliance with specified performance characteristics and physical properties.
- F. Manufacturer's Instructions: Manufacturer installation, storage, and other instructions.
- G. Sustainable Design Submittals in Compliance with ISO 14021.
- H. Qualification Statements: For manufacturer and installer.

1.06 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - a. Member in good standing of the Insulating Glass Certification Council (IGCC).
 - b. Member in good standing of the U.S. Green Building Council.
 - c. U.S. ENERGY STAR Partner.
 - d. Capable of demonstrating an extended history of window and door design, production and innovation.
- B. Installer's Qualifications:
 - a. Minimum five years' experience in the commercial installation of products required for the Project.
 - b. Experience on at least five projects of similar size, type and complexity as the Project.
 - c. An entity utilizing workers competent in techniques required by manufacturer for product types and applications indicated.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project in manufacturer's original unopened, undamaged containers with identification labels intact.
- B. Storage and Protection: Store materials and accessories protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by manufacturer off ground, under cover and not exposed to weather and construction activities.
- C. Store doors and frames at building site under cover. If wrappers on doors become wet, remove cartons immediately. Place units on minimum 4-inch high wood blocking. Provide minimum 1/4-inch spaces between stacked doors to promote air circulation.

1.08 WARRANTIES

- A. Provide standard manufacturer's warranty on the door, hardware, and all the moving components after the date of Substantial Completion.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance, provide products by one of the following:
 - a. Aluminum Self-Storing Security Storm Door (1/2 View) with SS Wire-mesh:
 - i. Rusco Manufacturing Inc.
 - ii. Lansing Housing Products
 - iii. Provia
 - b. Aluminum Storm Door Specifications:
 - i. Style: Rusco Model 2900A- Pre-hung on Z-Bar Frame, Self-Storing with S.S.Screen
 - ii. Color: White, baked-on powder-coated, standard colors.
 - iii. Quantity: As indicated on drawings
 - iv. Size: 36" x 80", v.i.f.
 - v. Glass: Single-pane clear, 3 mm tempered float glass fully tempered.
 - vi. Construction: Extruded 6005-T5 aluminum alloy with tensile strength of 38,000 psi with a wall thickness of 0.090".
 - vii. Frame Style: Pre-hung. Z-bar thickness 0.062" & 0.024" glass & screen insert.
 - viii. Kick Panel: 0.062, aluminum diamond embossed for rigidity.
 - ix. Weatherstrip: Resilient, water and moth repellent, wool pile, polyvinyl plastic.
 - x. Hardware: KT386T ADA Torsion Closer Hardware Kit; vandal resistant, stainless steel four tamper proof hinges by Rusco or equal.
 - xi. Insect Screen: Sliding, 800 lbs. Tensile, 0.028 Stainless steel wire mesh.
 - xii. Door Sweep: Senior Sweep, Santoprene rubber; Alum. powder-coated to match door.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Installation shall be in accordance with manufacturer's printed instructions. Verify that all substrate conditions are suitable for installation in compliance with manufacturer's recommendations. Do not begin installation until substrates have been properly prepared and any conditions not in compliance with manufacturer's recommendations have been corrected
- B. Apply sealant around perimeter of storm door unit between door unit and framing.

- C. Install storm door unit square, level and plumb. Shim, as needed. Center storm door unit in opening and secure storm door unit by nailing through frame and screw through jambs as indicated in manufacturer's instructions.
- D. Thoroughly caulk the full perimeter of frame to casing.

3.02 ADJUSTING

- A. General: Comply with manufacturer's product recommendations, including but not limited to the Manufacturer's Unit Installation Guide, installation information in product literature and on product packaging. Comply with Drawings [and Shop Drawings] for installing storm doors, hardware, accessories, and other components.
- B. Install storm doors plumb, level and square. Anchor doors securely to structure in correct orientation to flashing and adjacent construction as indicated. Comply with product installation instructions for proper flashing integration into wall system. Install doors so as to drain water penetration to the exterior.
- C. Adjust storm door units for smooth operation without binding or racking. Adjust storm door, insect screens, hardware and accessories as applicable for correct fit. Adjust weatherstrip for smooth operation and weathertight closure.
- D. Manufacturer's Field Services: If requested by Owner, provide manufacturer's field service consisting of product use recommendations and periodic site visits for observation of product installation in accordance with manufacturer's recommendations.

3.03 CLEANING

- A. Remove protective films and non-permanent labels prior to 90 days after installation.
- B. Remove excess sealant, soiling, dirt and other substances. Clean storm door frame and glass surfaces. Avoid damaging coatings and finishes.
- C. Touch-up, repair or replace glass or other storm door components broken, scratched or damaged during construction prior to Substantial Completion.

3.04 PROTECTION

- A. Protect storm door units from damage until Substantial Completion. Replace damaged units.

ALUMINUM STORM DOORS 08.11.63

SECTION 08.71.00 DOOR HARDWARE

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Door Hardware.
- B.** Related Requirements:
 - a. Division 06 Section "Miscellaneous Rough Carpentry."
 - b. Division 06 Section "Exterior Finish Carpentry"
 - c. Division 06 Section "Interior Architectural Woodwork"
 - d. Division 07 Section "Joint Sealants"
 - e. Division 08 Section "Doors and Frames"

1.03 SUBMITTALS

- A.** General:
 - a. Submit in accordance with Conditions of Contract and Division 01 Sections.
 - b. Prior to forwarding submittal:
 - i. Review drawings and Sections from related trades to verify compatibility with specified hardware.
 - ii. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
- B.** Action Submittals:
 - a. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
 - b. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.
 - i. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.
 - c. Door Hardware Schedule:
 - i. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements

- of other work to facilitate fabrication of other work critical in Project construction schedule.
- ii. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
 - iii. Indicate complete designations of each item required for each opening, include:
 1. Door Index: door number, heading number, and Architect's hardware set number.
 2. Quantity, type, style, function, size, and finish of each hardware item.
 3. Name and manufacturer of each item.
 4. Fastenings and other pertinent information.
 5. Location of each hardware set cross-referenced to indications on Drawings.
 6. Explanation of all abbreviations, symbols, and codes contained in schedule.
 7. Mounting locations for hardware.
 8. Door and frame sizes and materials.
 9. Degree of door swing and handing.
 - iv. Key Schedule:
 1. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
 2. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
 3. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
 4. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
 5. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
 6. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.
 - v. Informational Submittals:
 1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
 2. Provide Product Data:
 - a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
 - b. Include warranties for specified door hardware.
 - vi. Closeout Submittals:
 1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

- a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
 - b. Catalog pages for each product.
 - c. Final approved hardware schedule edited to reflect conditions as installed.
 - d. Final keying schedule.
 - e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
- vii. Inspections and Testing:
- 1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:
 - a. Fire door assemblies, in compliance with NFPA 80.
 - b. Required egress door assemblies, in compliance with NFPA 101.

1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

- a. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
- b. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
- c. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:
 - i. For door hardware: DHI certified AHC or DHC.
 - ii. Can provide installation and technical data to Architect and other related subcontractors.
 - iii. Can inspect and verify components are in working order upon completion of installation.
- d. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Fire-Rated Door Openings:

- a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.
- b. Provide only items of door hardware that are listed products tested by UL LLC, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

- C. Pre-Installation Meetings:
 - a. Keying Conference:
 - i. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system include:
 - 1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 - 2. Preliminary key system schematic diagram.
 - 3. Requirements for key control system.
 - 4. Requirements for access control.
 - 5. Address for delivery of keys.
 - b. Pre-Installation Conference:
 - i. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - ii. Inspect and discuss preparatory work performed by other trades.
 - iii. Inspect and discuss electrical roughing-in for electrified door hardware.
 - iv. Review sequence of operation for each type of electrified door hardware.
 - v. Review required testing, inspecting, and certifying procedures.
 - vi. Review questions or concerns related to proper installation and adjustment of door hardware.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping.
- B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.
- C. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
- D. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
- E. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
- F. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.06 COORDINATION

- A.** Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.
- B.** Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- C.** Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

1.07 WARRANTY

- A.** Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.
 - a.** Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.
 - b.** Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.
 - i.** Mechanical Warranty:
 - 1.** Locks
 - a.** Falcon: 10 years

1.08 MAINTENANCE

- A.** Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
- B.** Turn over unused materials to Owner for maintenance purposes.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A.** Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
- B.** Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fabrication

- a. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer's recognized installation standards for application intended.
- b. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
- c. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with "Doors and Frames" to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.

B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

- a. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.03 HINGES

A. Manufacturers and Products:

- a. Scheduled Manufacturer and Product:
 - i. Ives 5BB series
- b. Acceptable Manufacturer and Products:
 - i. McKinney TB series
 - ii. Best FBB series

B. Requirements:

- a. Provide hinges conforming to ANSI/BHMA A156.1.
- b. Provide five knuckle, ball bearing hinges.
- c. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:
 - i. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
 - ii. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high
- d. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
 - i. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
 - ii. Interior: Heavy weight, steel, 5 inches (127 mm) high
- e. 2 inches or thicker doors:
 - i. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
 - ii. Interior: Heavy weight, steel, 5 inches (127 mm) high
- f. Adjust hinge width for door, frame, and wall conditions to allow proper degree of opening.
- g. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
- h. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
 - i. Steel Hinges: Steel pins
 - ii. Non-Ferrous Hinges: Stainless steel pins
 - iii. Out-Swinging Exterior Doors: Non-removable pins
 - iv. Out-Swinging Interior Lockable Doors: Non-removable pins
 - v. Interior Non-lockable Doors: Non-rising pins

2.04 INTERCONNECTED LOCKS

- A. Manufacturers and Products:
 - a. Scheduled Manufacturer and Product:
 - i. Falcon H2 Series
 - b. Acceptable Manufacturers and Products:
 - i. Hager 3710 series
 - ii. Stanley QCI200 series

- B. Requirements:
 - a. Provide interlocked locksets conforming to ANSI/BHMA A156.12-2013, Series 5000, Grade 2 with simultaneous retraction of deadbolt and latch for single motion egress. Cylinders: Refer to "KEYING" article, herein. UL listed 3-hour fire door, A label.
 - b. Provide locks with 2-3/8 inches (60 mm) or 2-3/4 inches (70 mm) backset, based on door detail, with 1/2-inch (13 mm) latch throw latchbolt and 1 inch (25 mm) throw deadbolt.
 - c. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
 - d. Provides an Indicator option for outside indication
 - e. Provides lock with field-configurable for 4" or 5-1/2" door prep
 - f. Provides Standard & SFIC
 - g. Provide manufacturers standard T-strike, unless extended lip strike is necessary to protect trim, and deadbolt strike.
 - h. Lever Design: Quantum

2.05 CYLINDRICAL LOCKS – GRADE I

- A. Manufacturers and Products:
 - a. Scheduled Manufacturer and Product:
 - i. Falcon T series
 - b. Acceptable Manufacturers and Products:
 - i. Best 9K series
 - ii. Marks 95 series

- B. Requirements:
 - a. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3-hour fire doors.
 - b. Cylinders: Refer to "KEYING" article, herein.
 - c. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2-inch latch throw. Provide proper latch throw for UL listing at pairs.
 - d. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
 - e. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
 - f. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
 - g. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.
 - i. Lever Design: Quantum

2.06 CYLINDERS

- A. Manufacturers:
 - a. Scheduled Manufacturer and Product:
 - i. Match existing keying system.
- B. Requirements:
 - a. Provide cylinders/cores to match Owner's existing key system, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.

2.07 KEYING

- A. Scheduled System:
 - a. Existing factory registered system:
 - i. Provide cylinders/cores keyed into Owner's existing factory registered keying system. Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.
 - b. Permanent Keying:
 - i. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
 - 1. Master Keying system as directed by the Owner.
 - ii. Forward biting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
 - iii. Provide keys with the following features:
 - 1. Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
 - iv. Identification:
 - 1. Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
 - 2. Identification stamping provisions must be approved by the Architect and Owner.
 - 3. Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
 - 4. Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
 - 5. Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.
 - v. Quantity: Furnish in the following quantities:
 - 1. Change (Day) Keys: 3 per cylinder/core.
 - 2. Permanent Control Keys: 3.
 - 3. Master Keys: 3.

2.08 KEY CONTROL SYSTEM

- A. Manufacturers:
 - a. Scheduled Manufacturer:
 - i. Telkee
 - b. Acceptable Manufacturers:
 - i. HPC
 - ii. Lund

- B. Requirements:
 - a. Provide key control system, including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150% of number of locks required for Project.
 - i. Provide complete cross index system set up by hardware supplier, and place keys on markers and hooks in cabinet as determined by final key schedule.
 - ii. Provide hinged-panel type cabinet for wall mounting.

2.09 THRESHOLDS, SEALS, DOOR SWEEPS, AND GASKETING

- A. Manufacturers:
 - a. Scheduled Manufacturer:
 - i. Zero International.
 - b. Acceptable Manufacturers:
 - i. Pemko

- B. Requirements:
 - a. Provide thresholds, weather-stripping, and gasketing systems as specified and per architectural details. Match finish of other items.
 - b. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
 - c. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
 - d. Size thresholds 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width unless otherwise specified in the hardware sets or detailed in the drawings.

2.10 FINISHES

- A. Finish: BHMA 626/652 (US26D); Except:
 - a. Hinges at Exterior Doors: BHMA 630 (US32D)
 - b. Aluminum Geared Continuous Hinges: BHMA 628 (US28)
 - c. Push Plates, Pulls, and Push Bars: BHMA 630 (US32D)
 - d. Protection Plates: BHMA 630 (US32D)
 - e. Overhead Stops and Holders: BHMA 630 (US32D)

- f. Door Closers: Powder Coat to Match
- g. Wall Stops: BHMA 630 (US32D)
- h. Latch Protectors: BHMA 630 (US32D)
- i. Weatherstripping: Clear Anodized Aluminum
- j. Thresholds: Mill Finish Aluminum

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.
- B. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
 - a. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 - b. Custom Steel Doors and Frames: HMMA 831.
 - c. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
 - d. Installation Guide for Doors and Hardware: DHI TDH-007-20
- B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
- C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
- D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
- E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
- F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

- G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.
- H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.
- I. Lock Cylinders:
 - a. Install construction cores to secure building and areas during construction period.
 - b. Replace construction cores with permanent cores as indicated in keying section.
 - c. Furnish permanent cores to Owner for installation.
- J. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- K. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
- L. Stops: Provide floor stops for doors. Do not mount floor stops where they may impede traffic or present tripping hazard.
- M. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- N. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- O. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

3.03 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 - a. Spring Hinges: Adjust to achieve positive latching when door can close freely from an open position of 30 degrees.
- B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.04 CLEANING AND PROTECTION

- A. Cleaning adjacent surfaces soiled by door hardware installation.
- B. Clean operating items per manufacturer's instructions to restore proper function and finish.

- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

DOOR HARDWARE
08.71.00

SECTION 09.21.10 GYPSUM BOARD ASSEMBLIES

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Interior Gypsum Wallboard
- B.** Related Requirements:
 - a. Division 06 Section "Miscellaneous Rough Carpentry."
 - b. Division 07 Section "Joint Sealants"
 - c. Division 09 Section "Painting"

1.03 SUBMITTALS

- A.** Product Data: For each type of product indicated.
- B.** Shop Drawings: If materials and systems other than those specified and those indicated on the Drawings are proposed for use, submit shop drawings.

1.04 QUALITY ASSURANCE

- A.** Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent agency.
- B.** STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
- C.** Drywall Recycling: All new paper-faced gypsum wallboard scrap (cuts from construction but not demolition waste) shall be recycled by Gypsum Recycling America LLC or approved equal.

1.05 STORAGE AND HANDLING

- A.** Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack panels flat to prevent sagging.

1.06 PROJECT CONDITIONS

- A.** Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B.** Do not install interior products until install areas are enclosed and conditioned.
- C.** Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
 - a.** Indications that panels are wet, or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - b.** Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 – PRODUCTS

2.01 INTERIOR GYPSUM BOARD

- A.** Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a.** USG Corporation
 - b.** Georgia-Pacific (G-P) Gypsum LLC.
 - c.** National Gypsum Company
- B.** Gypsum Wallboard: ASTM C 1396
 - a.** Thickness: 5/8 inch.
 - b.** Long Edges: Tapered.
- C.** Fire Resistant Type X: ASTM C 1396
 - a.** Thickness: 5/8 inch,
 - b.** Long Edges: Tapered.
- D.** Moisture and Mold Resistant Gypsum Board: ASTM C 1396. With moisture and mold resistant core and paperless surface.
 - a.** Core: 5/8 inch, Type X.
 - b.** Long Edges: Tapered.
 - c.** Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.02 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047
 - a. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
 - b. Shapes:
 - i. Cornerbead.
 - ii. Bullnose bead.
 - iii. LC-Bead: exposed long flange received joint compound.
 - iv. Expansion joint.
 - v. Curved-Edge Cornerbead: With notched or flexible flanges.

2.03 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
 - a. Interior Gypsum Wallboard: Paper.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 - a. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
 - b. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
 - c. Fill Coat: For second coat, use setting-type, sandable topping compound.
 - d. Finish Coat: For third coat, use setting-type, sandable topping compound.
 - e. Skim Coat: For final coat of Level 5 finish, use setting-type, sandable topping compound.

2.04 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
- C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine areas, substrates, and framing for compliance with requirements and other conditions affecting performance.

- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 840.
- B. Install supplementary framing and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing framing members. Frame both sides of joints independently.

3.03 INSTALLATION FRAMED ASSEMBLIES

- A. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.
- B. Install studs so flanges within framing system point in same direction.
- C. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceilings.
 - a. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
 - b. Door Openings: Screw vertical studs at jambs to jamb anchor clips on doorframes; install runner track section (for cripple studs) at head and secure to jamb studs.
 - i. Install two studs at each jamb, unless otherwise indicated.
 - ii. Install cripple studs at each head adjacent to each jamb stud, with a minimum ½ inch clearance from jamb stud to allow for installation of control joint in finished assembly.
 - iii. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.
 - c. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of opening to match framing required above door heads.
- D. Direct Furring: Attach to concrete with sub nails, screws designed for masonry attachment, or powder driven fasteners spaced 24 inches o.c.

3.04 APPLYING AND FINISHING PANELS, GENERAL

- A.** Comply with ASTM C 840.
- B.** Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.
- C.** Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- D.** Form control and expansion joints with space between edges or adjoining gypsum panels.
- E.** Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - a.** Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
 - b.** Fit gypsum panels around ducts, pipes, and conduits.
 - c.** Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8- inch- wide joints to install sealant.
- F.** Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with sealant.

3.05 APPLYING INTERIOR GYPSUM BOARD

- A.** Single Layer Application:
 - a.** On partitions/walls, apply gypsum panels to minimize end joints.
 - b.** On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing, unless otherwise indicated.
 - c.** Fastening Methods: Apply gypsum panels to supports with drill screws.
- B.** Multilayer Application:
 - a.** On ceilings, apply gypsum board indicated for base layers before applying base layers on walls/partitions; apply face layers in same sequence. Apply base layers at right angles to framing members and offset face-layer joints 1 framing member, 16 inches minimum, from parallel base-layer joints, unless otherwise indicated or required by fire-resistance- rated assembly.
 - b.** On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with baselayer joints, unless

otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.

- c. Fastening Methods: Fasten base layers and face layers separately to supports with screws.

3.06 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.
- C. Interior Trim: Install in the following locations:
 - a. Cornerbead: Use at outside corners, unless otherwise indicated.
 - b. LC-Bead: Use at exposed panel edges.
 - c. Curved-Edge Cornerbead: Use at curved openings

3.07 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below:
 - a. Level 1: Ceiling plenum areas and concealed areas not exposed to view.
 - b. Level 4: Panel surfaces that will be exposed to view (typical panels).
- E. Cementitious Backer Units: Finish according to manufacturer's written instructions.

3.08 PROTECTION

- A. Protect installed products from damage from weather, condensation, direct sunlight construction, and other causes during remainder of the construction period.
- B. Remove and replace panels that are wet, moisture damaged, or exhibit mold growth. Repair of damaged panels in place is not acceptable.

GYPSUM BOARD ASSEMBLIES

09.21.10

SECTION 09.65.13 RESILIENT BASE AND ACCESSORIES

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Resilient Base adhered to interior walls and partitions.
- B. Related Requirements:
 - a. Division 09 Section "Resilient Tile Flooring"

1.03 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples:
 - a. Resilient Base: 150 mm (6 inches) long, each type and color.
- C. Operation and Maintenance Data:
 - a. Care instructions for each exposed product.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's original sealed packaging.
- B. Mark packaging legibly. Indicate manufacturer's name or brand, type, color, product run number, and manufacture date.
- C. Before Installation, return or dispose of products within distorted, damaged, or opened packaging.
- D. Store products indoors in dry, weathertight facility.
- E. Protect products from damage when handling and during construction operations.

1.05 WARRANTY

- A.** General Warranty: Special warranties specified in this Section shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B.** Installer Warranty: Written warranty, signed by Installer agreeing to repair or replace resilient flooring, installed according to manufacturer's written recommendations, that fails in performance, materials, or workmanship within specified warranty period.
 - a.** Warranty Period: One year from date of Substantial Completion.

PART 2 – PRODUCTS

2.01 RESILIENT BASE

- A.** Resilient Base: 3 mm (1/8 inch) thick, 100 mm (4 inches) high. ASTM F1861
 - a.** Type: Rubber or vinyl; use one type throughout.
- B.** Applications:
 - a.** Vinyl Tile Flooring Locations.
- C.** Basis of Design Product: Subject to compliance with requirements. Provide Tarkett; Duracover or a comparable product by one of the following:
 - a.** Mannington Commercial; Edge Wall Base.
 - b.** Roppe Corporation; 700 Series Wall Base.
 - c.** Color: As selected by the Architect, manufacturer's full range for series indicated.

2.02 ADHESIVES

- A.** Adhesives: Low pollutant-emitting, water-based type recommended by adhered product manufacturer for each application.

PART 3 – EXECUTION

3.01 EXAMINATION

- A.** Examine substrates for compliance with requirements for maximum moisture content and other conditions affecting performance of Work.

- a. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient base.
- B. Proceed with installation only after unsatisfactory conditions have been corrected. Commencement of work indicates acceptance of substrates.

3.02 PREPARATION

- A. Protect existing construction and completed work from damage.
- B. Remove existing base and stair treads to permit new installation.
 - a. Dispose of removed materials.
- C. Allow substrate to dry and cure.
- D. Perform manufacturer's recommended bond, substrate moisture content, and pH tests.

3.03 RESILIENT BASE INSTALLATION

- A. Applications:
 - a. Install resilient base in rooms scheduled on Drawings.
 - b. Extend resilient base into closets, alcoves, and cabinet knee spaces, and around columns within scheduled rooms.
- B. Installation:
 - a. Apply adhesive uniformly for full contact between resilient base and substrate.
 - b. Set resilient base with hairline butted joints aligned along top edge.
- C. Roll Resilient Base ensuring complete adhesion.
- D. Form Corners and End Stops:
 - a. V-Groove back of outside corner.
 - b. V-Groove face of inside corner and notch cove for miter joint.

3.04 CLEANING

- A. Remove excess adhesive before adhesive sets.
- B. Clean exposed resilient base and resilient stair tread surfaces. Remove contaminants and stains.

3.05 PROTECTION

- A.** Protect products from construction traffic and operations.
- B.** Replace damaged products and re-clean.
 - a. Damaged products include cut, gouged, scraped, torn, and unbonded products.

RESILIENT BASE AND ACCESSORIES 09.65.13

SECTION 09.65.19 RESILIENT TILE FLOORING

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Vinyl Composition Tile.
- B. Related Requirements:
 - a. Division 09 Section "Resilient Base and Accessories"

1.03 ACTION SUBMITTALS

- A. Product data: For each type of product indicated.
- B. Shop Drawings: For each type of floor tile.
- C. Samples for Initial Selection: For each product indicated.
- D. Samples for Verification: For each type of product indicated, in manufacturer's standard size Samples but not less than 12 inches long, of each resilient product color, texture, and pattern required.

1.04 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of floor tile to include maintenance manuals.
- B. Warranty: Special warranties specified in this Section.

1.05 MAINTENANCE MATERIALS SUBMITTALS

- A. Furnish extra materials described below that match products installed that are packaged with protective covering for storage and identified with labels describing contents.
 - a. Floor Tile: Furnish 1 box for every 50 boxes or fraction thereof, of each type, color, and pattern of floor tile installed.

1.06 QUALITY ASSURANCE

- A.** Installer Qualifications: A qualified installer who is competent in techniques required by manufacturer for floor tile installation indicated.
 - a. Engage an installer who is trained or certified by manufacturer for installation techniques required. Provide one Master Installer for each product specified.

1.07 DELIVERY, STORAGE, AND HANDLING

- A.** Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

1.08 PROJECT CONDITIONS

- A.** Maintain temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile during the following time periods:
 - a. 48 hours before installation.
 - b. During installation.
 - c. 48 hours after installation.
- B.** After post installation period, maintain temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C.** Close spaces to traffic during floor covering installation.
- D.** Close spaces to traffic for 48 hours after floor covering installation.
- E.** Install resilient products after other finishing operations, including painting, have been completed.

1.09 WARRANTY

- A.** General Warranty: Special warranties specified in this Section shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B.** Manufacturer Warranty: Written warranty, signed by manufacturer agreeing to repair or replace resilient flooring and adhesives that fails in performance, materials, or workmanship within specified warranty period.
 - a. Warranty Period: Commencing from date of Substantial Completion:
 - i. Vinyl Tile: 5 years.
 - b. Exclusions from warranty include the following:
 - i. Problems caused by moisture, hydrostatic pressure, or alkali in the subfloor.

- ii. Damage to flooring products from high heels or spiked shoes.
- C. Installer Warranty: Written warranty, signed by Installer agreeing to repair or replace resilient flooring, installed according to manufacturer's written recommendations, that fails in performance, materials, or workmanship within specified warranty period.
 - a. Warranty Period: One year from date of Substantial Completion.

PART 2 – PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
 - a. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

2.02 VINYL COMPOSITION FLOOR TILE

- A. Vinyl Composition Tile:
 - a. Basis of Design Product: Subject to compliance with requirements, provide Armstrong; Premium Excelon Stonetex, or comparable product by one of the following:
 - i. American Brattle; Texas Granite.
 - ii. Tarkett; VCT.
 - b. Tile Standard: ASTM F 1066.
 - c. Thickness: 0.125 inch.
 - d. Static Load Limit: ASTM F 970, 125 psi minimum.
 - e. Size 12 by 12 inches.
 - f. Color: As selected by Architect from, manufacturer's full range for series indicated.

2.03 INSTALLATION MATERIALS

- A. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit tile floor and substrate conditions indicated.
 - a. Provide manufacturer's recommended trowel-applied, full-spread, high moisture adhesive for each flooring product specified as required to maintain manufacturer and installer warranty requirements. Comply with manufacturer's requirements for installation on porous or non-porous substrates, and for maximum relative humidity and alkalinity in accordance with testing procedures indicated.
 - b. Adhesives shall comply with the following limits for VOC content:
 - i. Vinyl Tile Adhesives: 50 g/L or less.
- B. Floor Polish: Provide protective, liquid floor polish products recommended by floor tile manufacturer.

2.04 SUBSTRATE PREPARATION

- A.** Primer: ASTM C1059, Type I, latex formulation for use with underlayments.
 - a. Product: Subject to compliance with requirements, provide one of the following:
 - i. Ardex; P 51 Primer.
 - ii. Laticrete; NXT Primer.
 - iii. MAPEI Corporation; Primer T for underlayments.

PART 3 – EXECUTION

3.01 EXAMINATION

- A.** Examine substrates for compliance with requirements for maximum moisture content and other conditions affecting performance of Work.
 - a. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.
- B.** Proceed with installation only after unsatisfactory conditions have been corrected. Commencement of work indicates acceptance of substrates.

3.02 PREPARATION

- A.** Prepare substrates according to manufacturer's written instructions to ensure adhesion of all flooring products.

3.03 FLOOR TILE INSTALLATION

- A.** Comply with manufacturer's written instructions for installing floor tile.
 - a. Installation is not to begin until the HVAC system is operational, and the following conditions are maintained for at least 48 hours before, during and 72 hours after completion:
 - i. Ambient Temperature: Between 65 and 85 degrees F, unless otherwise stated by installed products manufacturer.
 - ii. Ambient Humidity: Between 35 and 55 percent, unless otherwise stated by installed products manufacturers.
 - iii. Substrate Temperature: Not less than 65 degrees F or more than 85 degrees F before, during and after installation, unless otherwise stated by installed products manufacturer.
 - iv. Do not install flooring unless substrate temperature is at least 5 degrees above dew point with temperature rising.

- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, floor outlets, and door frames.
 - a. Install tiles flush with adjacent materials where transition strips or thresholds are not specified.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent, non-staining marking device.
- G. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.04 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of floor tile.
- B. Perform the following operations immediately after completing floor tile installation.
 - a. Remove adhesive and other blemishes from exposed surfaces.
 - b. Sweep and vacuum surfaces thoroughly.
 - c. Damp-mop surfaces to remove marks and soil.
- C. Protect floor tile products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Cover floor tile until Substantial Completion.

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SECTION 09.90.00 PAINTING

1.01 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A.** Section Includes: Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete work as shown on Drawings and specified in this Section.
 - a. Paint Exposed interior items and surfaces.
 - b. Surface preparation for painting.
- B.** Related Requirements:
 - a. Division 08 Section "Doors and Frames"
 - b. Division 09 Section "Gypsum Board Assemblies"

1.03 DEFINITIONS

- A.** General: Standard coating terms defined in ASTM D 16 apply to this Section.
 - a. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
 - b. Eggshell refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
 - c. Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
 - d. Full Gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.
- B.** This Section includes surface preparation and field painting of interior items and surfaces.
 - a. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- C.** Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.
- D.** Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
 - a. Prefinished items include the following factory-finished components:
 - i. Architectural Woodwork.
 - ii. Kitchen Appliances.

- iii. Finished Mechanical and electrical equipment.
 - iv. Light Fixtures.
- b. Concealed surfaces include walls or ceiling in the following generally inaccessible spaces:
 - i. Crawl spaces.
 - ii. Furred areas.
 - iii. Ceiling plenums.
 - iv. Utility tunnels.
 - v. Pipe spaces.
 - vi. Duct shafts.
- c. Finished metal surfaces include the following:
 - i. Anodized aluminum.
 - ii. Stainless Steel.
 - iii. Chromium plate.
 - iv. Copper and copper alloys.
 - v. Bronze and Brass.
- d. Operating parts include moving parts of operating equipment and the following:
 - i. Valve and damper operators.
 - ii. Linkages.
 - iii. Sensing devices.
 - iv. Motor and fan shafts.
- e. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

1.04 SUBMITTALS

- A. Product Data:** For each paint system indicated. Include primers.
 - a. Material List: An inclusive list of required coating materials. Indicate each material and cross reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
 - i. Disclose material ingredients b name and Chemical Abstract Service (CAS) Registry Number.
 - b. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.
- B. Samples for Verification:** For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
 - a. Provide stepped Samples, defining each separate coat, including primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
 - b. Provide a list of materials and applications for each coat of each Sample. Label each Sample for location and application.
 - c. Submit two eight inches by 12-inch Samples for each type of finishing for Architect's review of color and texture only.
- C. Qualification Data:** For Applicator.

1.05 QUALITY ASSURANCE

- A.** Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B.** Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.

1.06 DELIVERY, STORAGE, AND HANDLING

- A.** Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information.
 - a. Product name or title of material.
 - b. Product description (generic classification or binder type)
 - c. Manufacturer's stock number and date of manufacture.
 - d. Contents by volume, for pigment and vehicle constituents.
 - e. Thinning instructions.
 - f. Application instructions.
 - g. Color name and number.
 - h. VOC content (low or no VOC will be accepted).
- B.** Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.
 - a. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

1.07 PROJECT CONDITIONS

- A.** Apply waterborne paint only when temperatures of surfaces to be painted or surrounding air are between 50 and 90 deg F.
- B.** Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.
- C.** Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent or temperatures than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A.** Available Products: Subject to compliance with requirements, products that may be incorporated into the Work are listed in the Finish Schedule at the end of this Section.

2.02 PAINT MATERIALS, GENERAL

- A.** Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B.** Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint material containers not displaying manufacturer's product identification will not be acceptable.
 - a.** Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.
- C.** Colors: Architect to select from manufacturer's full line.

PART 3 – EXECUTION

3.01 EXAMINATION

- A.** Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application.
 - a.** Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 - b.** Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
- B.** Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
 - a.** Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

3.02 PREPARATION

- A.** General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible

because of size or weight of the item, provide surface-applied protection before surface preparation and painting.

- a. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning:** Before applying paint or other surface treatments, clean substrates that could impair bond of the various coatings. Remove oil and grease before cleaning.
- a. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on the wet, newly painted surfaces.
- C. Surface Preparation:** Clean and prepare surfaces to be painted according to manufacturer's written instructions and technical bulletins for each substrate condition and as specified.
- a. Provide barrier coats over incompatible primers or remove and reprime.
 - b. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
 - i. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - ii. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including cabinets, counters, cases, and paneling.
 - iii. If transparent finish is required, back prime with spar varnish.
 - iv. Back prime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on the back side.
 - v. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.
 - c. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.
 - i. Interior Exposed Steel, in Humid Environments: Clean steel surfaces in accordance with SSPC-SP 6/NACE No. 3 Commercial Blast Cleaning. Abrasive blast cleaned surfaces shall exhibit a uniform, angular profile of 1.5-3.0 mils. Prime cleaned surfaces within 8 hours and prior to surface rusting.
 - ii. Interior Exposed Steel, in Dry Environments: Clean steel surfaces in accordance with SSPC-SP2 or SP3 Hand or Power Tool Cleaning.
 - d. Galvanized Surfaces: Clean galvanized surfaces in accordance with SSPC-SP16 Brush off Blast Cleaning of Galvanized Steel and Nonferrous Metals, to achieve a minimum 1 mil anchor profile.
- D. Material Preparation:** Mix and prepare paint materials according to manufacturer's written instructions.
- a. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 - b. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir film into material. If necessary, remove surface film and strain material before using.
 - c. Use only thinners approved by paint manufacturer and only within recommended limits.

- E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.03 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
 - a. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
 - b. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 - c. Provide finish coats that are compatible with primers used.
 - d. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, convector covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
 - e. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - f. Paint backsides of access panels and removable or hinged covers to match exposed surfaces.
 - g. Sand lightly between each succeeding enamel or varnish coat.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 - a. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
 - b. Omit primer over metal surfaces that have been shop primed and touchup painted.
 - c. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 - d. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
 - a. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
 - b. Rollers: Use rollers of carpet, velvet black, or high pile sheeps' wool as recommended by manufacturer for material and texture required.

- c. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.
- E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and occupied spaces.
- F. Mechanical items to be painted include but not limited to, the following:
 - a. Uninsulated metal piping.
 - b. Uninsulated plastic piping.
 - c. Pipe hangers and supports.
 - d. Tanks that do not have factory-applied finishes.
 - e. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
 - f. Duct, equipment, and pipe insulation having "all service jacket" or other paintable jacket material.
 - g. Mechanical equipment that is indicated to have a factory primed finish for field painting.
- G. Electrical items to be painted include but not limited to, the following:
 - a. Panelboards.
 - b. Electrical equipment that is indicated to have a factory primed finish for field painting.
- H. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- I. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- J. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
 - a. Provide satin finish for final coats.
- K. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.04 FIELD QUALITY CONTROL

- A. Architect reserves the right to invoke the following test procedure at any time and as often as Architect deems necessary during the period when paint is being applied:

- a. Architect may engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to Project will be taken, identified, sealed, and certified in the presence of Contractor.

3.05 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
 - a. After completing painting, clean glass and paint spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.06 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing, or replacing, and repainting, as approved by Architect.
- B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
 - a. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.07 PAINT SCHEDULE

- A. Schedule: Provide products and number of coats specified. Use of manufacturer's proprietary product names to designate colors, materials, generic class, standard of quality and performance criteria and is not intended to imply that products named are required to be used to the exclusion of equivalent performing products of other manufacturers.
- B. Interior Paint Schedule:
 - a. Interior Gypsum Wallboard, Latex Paint Finish:
 - i. One Coat, Primer:
 1. Moore Eco Spec WB Interior Latex Primer 372.
 2. Duron Genesis Latex Primer.
 3. S-W ProMar 400 Zero-VOC Latex Wall Primer.
 4. PPG Pure Performance Latex Primer.
 5. California Paint Envirotech Zero VOC Primer 646.
 - ii. And Two Coats, Flat Finish: At Ceilings and elsewhere indicated:
 1. Moore Eco Spec WB Interior Latex Flat 373.
 2. Duron Genesis Latex Flat.
 3. S-W ProMar 400 Zero-VOC Latex Flat.
 4. PPG Pure Performance Latex Eggshell.
 5. California Paint Enivrotech Zero VOC Flat 633.
 - iii. And Two Coats, Eggshell Finish: At Walls, and elsewhere indicated:
 1. S-W ProMar 400 Marble White SW6162

- b. Mechanical and Electrical Work: Paint all exposed items throughout the project except factory finished items with factory-applied baked enamel finishes which occur in mechanical rooms or areas, and excepting chrome or nickel plating, stainless steel, and aluminum other than mill finished. Paint all exposed ductwork and inner portion of all ductwork. Same as specified for other interior metals, hereinabove.

PAINTING
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